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LETTER FROM CHIEF EDITOR

Dear Academic colleagues, industry associates and research enthusiasts!

It is indeed heartening to present you with this journal. Your association with Sydenham Management Review is a treasured one. India and its economy stand at the cusp of an important phase. It is obvious that India's importance globally is steadily growing. In order to maintain this momentum, one needs to imbibe change and move ahead in the current changing business environment.

In the context, the current edition of the SMR has been bejeweled with articles we received from foreign as well as Indian scholars. This edition of SMR has contributions from Dr Bhanot and Dr Srivastava on the Study on *the Purchase Behavior of Indian Consumers During Coronavirus Lock-Down*, Prof. Gaanyesh Kulkarni and Dr. R. K. Srivastava on *How Consumer's Buying Pattern, Culture, and Subculture Results in Influencing the Purchase Decision of Urban Indian Households for Branded Edible Oil*, Dr. Sangeeta Pandit on *the Role of Prudent Decisions on Corporate Success*, Rama Singh and Dr. Arunava Mukherjee on *Factors Affecting the Buying Behavior of Consumers' Towards Waste Management Products*, R. Srinivasan, Sandeep Bhanot and R.K. Srivastava on *Perception Towards Participation in Online Teaching Instruction among the Faculties of MBA During COVID-19*, Rishika Bhojwani on *a Study of Brand image and Customer perception of Public and Private Sector Banks among Generation X and Generation Y*, P Jena on *a study on Adoption of Digital Banking Services in Indian Public Sector Banks*, Manoj Pansare on *Understanding The Maturity Level Regarding Corporate Social Responsibility (CSR) Activities by the Indian Hospitality Sector Vendors During Pandemic Disasters (Covid19 Situation)*, Arismita Deka, Sarvesh Ramesh and Sangeeta Bagal on *Transient Impact of Covid-19 on Employment in India* and Anushri Prashant Ghatole on *Impact of Oil and Domestic Gold prices on GDP*.

Finally, we would like to thank our guest editor for this issue, Dr. R.K. Srivastava, HOD Marketing and Research, SIMSREE for his inputs, guidance and mentorship.

Thanks, and Regards,

Aashish Pawaskar

Chief Editor

Index No.	Topic	Author	Page No.
1.	Study on the Purchase Behavior of Indian Consumers During Coronavirus Lock-Down	R.K. Srivastava, SIMSREE ,India E.mail: rks_pmc@yahoo.com & Sandeep Bhanot, SIESCOMS, India, Email: bhanot.sandeep@gmail.com	1-13
2.	How Consumer's Buying Pattern, Culture, and Subculture Results in Influencing the Purchase Decision of Urban Indian Households for Branded Edible Oil	Prof. Gaanyesh Kulkarni, Faculty Atharva Institute of Management Studies, Mumbai, Maharashtra. Email: gkulkarni2005@yahoo.com Dr. R. K. Srivastava, HOD & Professor of Marketing & Research. PhD guide at SIMSREE, Mumbai. Email: rks_pmc@yahoo.com ;	14-45
3.	Role of Prudent Decisions on Corporate Success	Dr. Sangeeta Pandit;HOD Finance, Sydenham Institute of Management-SIMSREE. Mumbai Email: sangeeta@pdkunte.com	46-58
4.	Factors Affecting the Buying Behavior of Consumers' Towards Waste Management Products	Rama Singh, Research Scholar-School of Commerce and Management, Arka Jain E.mail: rama.s@arkajainuniversity.ac.in ; Dr. Arunava Narayan Mukherjee; Professor & Dean, School of Commerce and Management, Arka Jain University, Jharkhand, India. E.mail: dr.arunava@arkajainuniversity.ac.in .	59-82
5.	Perception towards Participation in Online Teaching Instruction among the Faculties of MBA during COVID-19	R .Srinivasan, Professor,JBIMS E.mail: srinipmc@gmail.com Sandeep Bhanot ,Associate Professor, SIESCOMS E.mail: bhanot.sandeep@gmail.com R.K Srivastava,Prof and HOD, SIMSREE E.mail: rks_pmc@yahoo.com	83-103
6.	A Study of Brand Image and Customer Perception of Public and Private Sector Banks among Generation X and Generation Y	Rishika Bhojwani, Research Scholar, SIMSREE E-mail: rish.29stars@gmail.com	104-122
7.	A study on Adoption of Digital Banking Services in Indian Public Sector Banks	P Jena Chief Manager ,SBI E.mail: baadal.spidey@gmail.com	123-152

8.	Understand the Maturity Level Regarding Corporate Social Responsibility (CSR) Activities by the Indian Hospitality Sector Vendors During Pandemic Disasters (Covid19 Situation).	Manoj Pansare Vp-Group Internal Audit, Taj Group of Hotels Email: manoj.panasare@gmail.com	153-196
9.	Transient Impact of Covid-19 on Employment in India	Arismita Deka, student, Gokhale Institute of Politics and Economics Email: arismita.deka@gipe.ac.in Sarvesh Ramesh, student, Gokhale Institute of Politics and Economics Sangeeta Bagal, student, Gokhale Institute of Politics and Economics	197-223
10.	Impact of Oil and Domestic Gold prices on GDP	Anushri Prashant Ghatole, student, M.Sc. I (Statistics) Email: anushrighatole@gmail.com	224-238
11	Policies of the Journal		239-240
12	Journal Subscription Form		241

Study on the Purchase Behavior of Indian Consumers During Coronavirus Lock-Down

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Abstract

This study surveyed the purchase behavior of Indian consumers regarding online purchases during lock-down. It also studied their perception of their job security during lock-down. The survey data was collected using a sample of 328 individuals in India. The results indicate that there has been an increase in the purchase of essential products and hygiene products during COVID-19. The theory of fear (Ruiter, et al., 2001) has been applied to explain the purchase behavior during COVID -19 in emerging markets like India.

Keywords: Lock-down; Corona, COVID-19, purchase behavior, online purchase; consumer purchase behavior, e-commerce

1. Introduction

The coronavirus (COVID-19) pandemic has not only upended the economy but has also been instrumental in causing changes in purchase behavior. Consumers' panic buying has the potential to exaggerate the consequences of supply disruption. According to Mathew (2020), India is under a lock-down, that began on March, 25th, 2020, until May 31, 2020, to curb the spread of the coronavirus (COVID-19). It will likely affect the economic conditions of the country and may extend until 2021. New Delhi Television (NDTV) (2020) reported that India's GDP growth for the year 2020 will be reduced to 2.5% from 5.3%, estimated 10 days ago before the lock-down. Economic Times (E.T) (2020) reported that the lock-down, announced by Prime Minister Narendra Modi, would lead to a sharp loss in incomes and domestic demand. At the same time, E.T, (2020) expected a sharp rebound in India's growth in the year 2021 to 5.8%. NDTV (2020) reported that depression, unemployment, with supply chain hurdles will affect millions of Indians due to the lock-down condition.

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Consumers are panicking due to the communication gap, even though the government is trying its best. Their confidence level has gone down based on informal discussions during this present its best. Their confidence level has gone down based on informal discussions during this present study ([Mohanty, 2020](#)). Consumers think that the economy is not doing well and there are not enough jobs (E.T, 2020), however, they are hopeful for improvement after a year. The Reserve Bank of India (RBI), as per its September round of the Consumer Confidence Surveys, has said that households' perceptions and expectations of the general economic situation, employment scenario, the overall price situation, and their income and spending are pessimistic (E. T., 2020).

However, as per the Nielson study (2020), there is a rapid rise in the sales of hand sanitizer, medical masks, and household maintenance masks. As per NDTV TV reports (2020), consumers are panic buying groceries and medicine. Such behavior reflects tension, demotivation, fear, and anxiety among consumers. There is research available on the COVID-19 concerning medical research, but few research data are available on social science research related to COVID-19. However, earlier research work of Hojin Jung, Minjae Park, Kihoon Hong, and Eunjung Hyun (2016) studied the impact of an epidemic outbreak on consumer expenditures for Middle East Respiratory Syndrome (MERS) in Korea and reported considerable disruption in total consumer expenditure. Customers alter their behaviors to reduce the risk of infection. [Bish & Michie](#) (2010) mentioned three types of protective behaviors during a pandemic: preventive, avoidant, and management of illness behaviors during the swine flu pandemic. The response to COVID-19 may vary depending upon the demographics (e.g., [Bish & Michie, 2010](#); [Bhanot & Srivastava, 2015](#); [Srivastava, 2017](#)). Therefore, the present study aims to find out the response to COVID-19 by different demographic variables on purchase behavior. It addresses one key research question: Will purchase behavior change under lock-down conditions vary based on demographic variables?

2. Literature review

Impact of COVID-19 on Purchase Behavior

Research (Yu, & Bastin, 2010; Yasir, Hu, Rauf, Shi, & Saba, 2020) pointed out that "planned (conscious) or impulse (subconscious) buying behaviors are greatly influenced by emotional or hedonic and utilitarian motivations under crisis" (Yu, & Bastin, 2010, p107). Abnormally high demand leads to substantial stock-outs, increasing-price, and the possible quota buying imposition. The rapid escalation of the COVID-19 epidemic has caused the affected population to engage in raid shopping (INSEAD, 2020; BBC, 2020). Rusell, Moldoveanu

Ogra & Mestecky (2020) explain that in response to the spread of the novel coronavirus, consumers are changing their shopping behaviors in ways that could shape future buying patterns. There is a paucity of data on purchase behavior under COVID-19 due to lock-down conditions. Online purchasing could be a better option for consumers.

COVID19 and Online Purchases

The effect of an epidemic outbreak led to disruption on consumer expenditures (Hojin, et. al, 2016). There was more use on technology-based payment compared to traditional cash transactions (Hojin, et. al., 2016). A sharp increase in online purchases as related to the COVID-19 is reported (Clement, Jiaming, Kulbo, & Liangqiang, 2020). The number of buyers increased by 29% during COVID-19 in March of 2020 compared to before COVID-19, and weekly purchase has the highest percentage for 20–34-year-olds in comparison with 35-45-year-olds and 46-55-year-olds as mentioned (Butu, Brumă, Tanasă, Rodino, Codrin, Doboş, & Butu, 2020). Pruett (2020) also reported a new consumer trend in how people buy, and what they buy during COVID-19. Consumers are changing their habits of spending, and this has led to some product categories increasing their sales. Criteo's research (2020) reported that more than half (52%) of Americans will shop online more as a result of COVID-19 and 51% will buy more groceries online (Pruett,2020). How have the Indians' purchase behavior during COVID-19, when compared to American or Romanian studies, motivated the researcher to take on this topic?

3. Methodology

The participants of the study were Indian respondents of different ages, gender, occupations, and income groups. The study was conducted to find out the online purchasing behavior of Indian consumers during the Corona lock-down from March, 25th to May, 15th of 2020, using an online structured questionnaire as a research tool. Primary data is collected using a structured questionnaire through an online mode. Respondents are selected using judgment sampling based on the availability of their e-mail

IDs through organizations that provide data. This is because many e-mail IDs are not correct but still listed. Therefore, e-mailing helped to filter and select the right e-mail address. This becomes important as it is difficult to contact people under lockdown as recommended by Srivastava, (2020). Judgment sampling is a good method when it is difficult to get respondents (Sekharan, 2005), especially in a situation like COVID-19. Judgment sampling is useful for research as sampling represents the universe when selected appropriately (Sekharan,2005, Hair, Black, Babin, & Anderson, 2010; Srivastava, 2020)The participants of the study were Indian respondents of different ages, gender, occupations, and income groups. The study was conducted to find out the online purchasing behavior of Indian consumers during the Corona lock-down from March, 25th to May, 15th of 2020,

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Table 1: Sample profile

	N	%
<i>Gender</i>		
Male	179	54.6
Female	149	45.4
Sub total	328	100.0
<i>Age group-Years</i>		
20-30	174	53.0
31-40	149	45.4
41-50	5	1.5
<i>Income group (Rs) /per annum (1\$=Rs 75)</i>		
Up to Rs 300000 per annum (\$4000)	45	13.7
310000- 600000(\$4133-8000)	92	28.0

610000-900000(\$8133-12000)	93	28.4
910000-1200000(\$12133-16000)	98	29.9
Homemaker	16	4.9
Retired	8	2.4
Private service	193	58.8
Government service	18	5.5
Business	21	6.4
Total	328	100.0

The percentage of male and female respondents are as per the distribution of the population in the last census, 2011-12. The majority of the respondents taken in the sample (98.4%) are in the age group of 20-40 years and 65% of Indians are below 35 years old (Srivastava,2020). The high number of younger respondents is mainly due to the ease of managing the online survey. The majority of the 2021 respondents (58.8%) are in private service and earning well with income more than Rs.610000 (\$8133 per annum) which is more than the average income of Indian consumers as per the census of India 2011. A structured questionnaire was prepared based on the validated scales from the earlier studies (Srivastava, 2019, Yasir, 2020, Clement, et. al., 2020) to collect the responses. The survey items were adapted from various studies and measured on a five-point Likert scale.

The questionnaire is prepared based on variables like Purchase behavior (Items-12) from Srivastava, 2019; an online usage behavior (Items-6) based on Yasir, (2020), Clement, et. al., (2020) studies; Work-related fear (Items-3) adopted from Xie, Huang, Li, & Zhu, (2020) and [Li, Wang, Xue, Zhao, & Zhu, \(2020\)](#); Business status of organization (Item-1) and Time spent during lock-down besides working from home (Items-2) from Srivastava, (2019).

Purchase behavior is measured on the following variables: (1) to subscribe to more Over The Top (OTT) apps; use more e-learning apps, (2) more about health and fitness apps, (3) availability of essential goods is more important than a brand name; will buy essential goods even at a higher price, and buy more of immunity boosters, (4) keep extra recharge for mobile; stock more hygiene products; stock more masks and sanitizers, and (5) stock more essential medicines; stock more essential food items. These were measured on a scale of 1-5

(Strongly disagree, disagree, neutral, agree, strongly agree). Online usage behavior is measured through the recording of data on the following: prefer to buy online during lock-down; the use of utility apps more than before; prefer to order medicines online; prefer to get groceries and other food items online; the use of online apps more than before; online purchases have increased during lock-down. These were measured on a scale of 1-5 (strongly disagree, disagree, neutral, agree, strongly agree). Work-related fear consists of the following items: My organization may retrench employees; expect salary cuts; their job is secure feeling; don't face any problems working from home. These are measured on a scale of 1-5 (Strongly disagree, disagree, neutral, agree, strongly agree). All the questions on the Likert scale have been taken on a 5-point scale (Strongly disagree = 1, disagree = 2, Neutral = 3, Agree = 4, and Strongly agree = 5), except for two questions. The question of “Whether the business of your organization has decreased, remained same or increased” and of “time spent on TV’ and ‘time spent on social media” were taken on an ordinal scale.

A pilot study involving 30 respondents through a telephonic interview was done to understand the difficulties in collecting the data. Once the survey was analyzed, the face and content validity of the instrument was tested. A minor change in the wording was made, as suggested by the experts, to improve the understanding. The pilot study was conducted during the Corona lock-down period in the last week of March, of 2020, by the researchers and his team by following guidelines given by Hair, et.al (2010).

Three statistical methods, Z-test, t-test, and ANOVA, were used for data analysis. Z-test of proportions is used to compare a sample proportion with the population proportion where the sample size is large ($n \geq 30$). Z-test is used in the case of large samples ($N \geq 30$) and in Z-test of proportions we compare a sample proportion with the population proportion (Levin & Rubin, 1997; Stine & Foster, 2000). This is used when we have attributes where we can calculate percentages and compare with a fixed population proportion, say 50% of the population. Taking an example of Z-test of proportion. Suppose the population proportion is 0.5 and sample proportion is 0.65 with sample size 328, then $Z_{cal} = \frac{\text{mod}(\text{sample proportion } \bar{p} - \text{population proportion } p)}{\sqrt{pq/n}}$ where $q = 1 - p$. Therefore, $Z_{cal} = \frac{\text{mod}(0.6 - 0.5)}{\sqrt{0.5 \times 0.5 / 328}} = 3.7$. In addition, independent samples t-test was used to compare the average values for two samples. Analysis of variance (ANOVA) was used to compare the average values of more than two samples.

4. Results

Table 2 summarizes the results of the z-test on the percentage of participants who agreed or strongly agreed to survey questions on the impact of business, work-related concerns, online purchase behavior, and purchase behavior of products during the lock-down. Specifically, (1) impact of business (COVID-19 had a significant impact on business); (2) work-related concerns (COVID-19 resulted in a lot of work-related concerns); (3) online purchase behavior (COVID-19 led to a significant increase in online purchase behavior) and

(4) purchase behavior of products (COVID-19 led to a lot of spending by people on essential medicines, sanitizers, immunity boosters & a subscription to e-learning apps. Table-2 is given below:

Table-2: Impact of business, work related, usage of online for purchase and purchase behavior of products during lock down

Survey Question	% of agrees or strongly agreed	Z-Test results
1. Impacts on Business	91%	Z =3.54, p< .05
2. Work related concerns		
Don't face any problems working from home	89%	Z = 3.17, p<.05
Hope my job is secure	63%	Z = 2.01, p<.05
May have to go through salary cuts	30%	Z =1.34, p>.05
Organisation may retrench employees	27%	Z = 1.11, p>.05
3. Online purchase behavior		
Online purchases have increased	60%	Z = 1.87, p< .05
Use of online apps more than before	68%	Z = 2.87, p< .05
Prefer to get grocery and other food items online	63%	Z = 2.13, p< .05
Prefer to order medicines online	35%	Z = 1.17, p> .05
Make use of utility apps more than before	54%	Z = 1.56, p > .05
Do more banking transactions online now	67%	Z = 2.36, p< .05
4. Purchase behavior for		

products		
Stock more of essential food items	Agree/ Strongly agree-76%	Z = 3.12, p < .05
Stock more of essential medicines	Agree/ Strongly agree-84%	Z = 3.67, p < .05
Stock more of masks and sanitisers	Agree/ Strongly agree-78.6%	Z = 3.11, p < .05
Stock more of hygiene products	Agree/ Strongly agree-72.5%	Z = 3.24, p < .05
Keep extra recharge for mobile phones	Agree/ Strongly agree-90%	Z = 3.89, p < .05
Buy more of immunity boosters	Agree/ Strongly agree-83%	Z = 3.54, p < .05
Will buy essential goods even at higher price	Agree/ Strongly agree-50.3%	Z = 1.35, p > 0.05
Availability of essential goods is more important than brand name	Agree/ Strongly agree-68%	Z = 2.56, p < .05
Subscribe to more OTT apps	Agree/ Strongly agree-22%	Z = 1.14, p > 0.05
use more of e-learning apps	Agree/ Strongly agree-53.1%	Z = 1.46, p > 0.05
Use more of health and fitness apps	Agree/ Strongly agree-51%	Z = 1.26, p > .05

Andre (2020) explains that all of those now living in lock-down conditions due to the coronavirus pandemic has had to adapt their lives to some degree. This could be the reason for consumers buying more especially through online purchases, and the increase in the use of online apps as mentioned in table 2. People get groceries and other food items online and make more banking transactions online. This is possible due to fear as per the theory of fear (Ruiter, et al., 2001) during the corona period (Srivastava,2020).

Results Based on t-test and ANOVA

Table 3, 4, 5, and 6 indicates that there was a significant difference in the online purchases and subscription of e-learning apps among people of different age groups, occupations, gender, and income under COVID-19.

Specifically, (1) difference exists in online purchases among people of different age groups, occupations, gender, and income under COVID-19, (2) difference exists in subscription of e-learning apps among people of different age groups, occupations, gender, and income under COVID-19, Table 3 indicates a *gender* difference in work-related concerns, online purchase behavior, and purchase behavior of products during the lock-down.

Table 3: Results of t-test examining gender differences in work related concerns, online purchase behavior, and purchase behavior of products during the lock down

Group	N	Mean	SD	t	df	p
Work related concerns						
Female	149	3.38	1.043	1.061	326	0.289
Male	179	3.25	1.07			
Online purchase behavior						
Female	149	3.77	1.042	2.284	326	0.023
Male	179	3.50	1.03			
Purchase behavior of products						
Female	149	3.87	0.89	2.401	326	0.017
Male	179	4.09	0.795			

It is seen that online purchases and purchase behavior of products like hygiene, essential products, masks, and sanitizers have increased more for female respondents than male respondents during lock-down. Similarly, results of ANOVA examining *age* differences in work-related concerns, online purchase behavior, and purchase behavior of products during the lock-down is given in table-4.

Table 4: Results of ANOVA examining age differences in work related concerns, online purchase behavior, and purchase behavior of products during the lock down

Group	SS	df	MS	F	p
Work related concerns					
With groups	364.085	325	1.12	0.81	0.446
Between group	1.815	2	0.907		
Total	365.899	327			

Online purchase behavior

With groups	346.053	325	1.065	4.259	0.015
Between group	9.069	2	4.535		
Total	355.122	327			

Purchase behavior of products

With groups	229.369	325	0.706	3.246	0.04
Between group	4.582	2	2.291		
Total	233.951	327			

There is also a significant difference in online purchases for different age groups. Online purchases have increased more for the age group of 30-50 years as compared to other age groups. People in the age group of 30-40 years stock more masks and sanitizers as compared to other age groups. People in the age group of 40-50 years show a higher tendency of stocking more essential food items. Occupation is another demographic variable that was studied. Results of ANOVA examining *occupation* differences in work-related concerns, online purchase behavior, and purchase behavior of products during the lock-down are given in table-5.

Table 5: Results of ANOVA examining occupation differences in work related concerns, online purchase behavior, and purchase behavior of products during the lock down

Group	SS	df	MS	F	p
Work related concerns					
With groups	353.663	322	1.098	2.228	0.051
Between group	12.237	5	2.447		
Total	365.899	327			
Online purchase behavior					
With groups	343.474	322	1.067	2.184	0.056
Between group	11.648	5	2.33		
Total	355.122	327			
Purchase behavior of products					
With groups	227.504	322	0.707	1.825	0.108
Between group	6.447	5	1.289		
Total	233.951	327			

The application of online purchase behavior is moderated by demographic variables like occupation as per the

above table. A significant difference in subscription of e-learning apps for people of different occupations is reported in the present study. Students and business people subscribe more to e-learning apps as compared to people of other occupations. Results of ANOVA examining *income* level differences in work-related concerns, online purchase behavior, and purchase behavior of products during the lock-down are given in table-6.

Table 6: Results of ANOVA examining income level differences in work related concerns, online purchase behavior, and purchase behavior of products during the lock down

Group	SS	df	MS	F	p
Work related concerns					
With groups	356.56	324	1.1	2.829	0.039
Between group	9.34	3	3.113		
Total	365.899	327			
Online purchase behavior					
With groups	339.885	324	1.049	4.842	0.003
Between group	15.237	3	5.079		
Total	355.122	327			
Purchase behavior of products					
With groups	232.612	324	0.718	0.622	0.601
Between group	1.339	3	0.446		
Total	233.951	327			

Differences in online purchases for respondents of different income groups are also observed. Respondents in the higher income groups stock more hygiene products as compared to people in lower-income groups. Online purchases have increased more in the middle-income group i.e., up to Rs. 10 lakhs per annum as compared to higher-income groups. The next section relates to the conclusion.

5. Conclusion

One of the major findings of the study is that there is a significant difference in online purchases for different groups of people in the Indian sample of the present study. Online purchases have increased more for people in the age group of 30-50 years as compared to people in the other age groups. Online purchases have increased more for people in the middle-income group as compared to higher-income groups. And online purchases have increased more for female respondents than male.

Furthermore, this case study indicated that people in the age group of 40-50 years showed a higher tendency of

stocking more essential food items. Stocking more essential food items is seen more for male respondents than female respondents. People in the age group of 30-40 years stock more masks and sanitizers as compared to other age groups. People in the higher-income groups stock more hygiene products as compared to people in the lower-income groups. Students and retired people stock more hygiene products as compared to the people of other occupations. Online purchases have increased more for people in the age group of 30-50 years as compared to people in the other age groups. Most of the respondents stock more essential food items, essential medicines, hygiene products, and immunity boosters. They keep sufficient recharge for their mobiles and subscribe to e-learning apps. 50.3% of the respondents will buy essential goods even at a higher price and will buy essential goods without considering the brand. This case study has practical implications.

As COVID-19 becomes a global pandemic, consumer patterns of customers' need to be understood and it will be imperative for companies to learn from these scenarios so they can sustain growth even in times when this pandemic has drastically affected people's lives. The manager must understand how people will respond to COVID-19 and act accordingly. The present study gives an insight to managers on consumer purchase behavior during the COVID-19 period. Advertisers who see this as an opportunity to help, provide utility, and solve consumer problems will be able to curb the slump and come out the other side stronger than before. Taking a more empathetic view can reveal opportunities and silver linings for communities, organizations, and brands. Managers should focus on e-commerce with improved logistics to do better post-COVID-19. Managers should relook at the brand mix and try to focus on the categories which are acceptable in the current environment. Organizations have to relook on work from home facilities as many activities can be performed from home, thus saving space and cost.

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How consumer's buying pattern, culture, and subculture results in influencing the purchase decision of urban Indian households for branded edible oil

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Abstract

Aim/Need for study: This article throws light on the effects of consumer's buying patterns of edible oil and the demographics on purchase decision of branded edible oil among urban Indian households. Marketers need to concede that they need to understand and analyze consumer buying patterns in order to stay ahead of the competition in order to build a sustainable competitive advantage for their businesses (Daniel, Kumar, & Narayana, 2016). The objective of this study was to examine the usage pattern of branded edible oil, user preferences in terms of edible oil types, and impact of cultures and subcultures impact on purchase decision of edible oil consumption by urban households, as India being the multicultural country (Sukhdev, 2016).

Design/methodology/approach: Descriptive frequency analysis was used for this study to determine the urban household characteristics that influenced their purchase decision for edible oil. This study adopted the random sampling method with a self-administered questionnaire, covering 300 ($n=300$) urban households as the respondents. Data analysis and data interpretation was done using suitable statistical techniques on SPSS tools.

Findings: Consumer buying pattern and demographics found to have an influence on forming the purchase decision of edible oil of the urban household customers.

Limitations: Area coverage was one of the key limitations of this study, as it covered the respondents from Tier-I (urban) cities across PAN India.

Practical implications: This study will prove to be useful for edible oil marketers in devising appropriate MARCOMM strategies and tactics for creating brand awareness and enhancing the brand image in Indian FMCG market.

Keywords: *Edible oil, consumer buying behavior, purchase decision, consumer's buying pattern, urban Indian households, multiculturalism, cultures, sub-cultures.*

1. Introduction

1.1 Indian Edible Oil Scenario

Edible oil has been a crucial part of part of Indian cooking having generous to modest usage; as the Indian inhabitants prefer profuse to moderate spicy meals and cuisines. Indians have developed diverse food habits, tastes and preferences due to an impact of many religions, cultures, and subcultures. Geographical regions and religions are essential in the formation of sub-culture. The preference of individuals who live very close to each other can be different. Individuals belonging to different regions have different subculture values, attitudes and social structures of the members of other sub-culture. These differences, subcultural segmentation of the market activity has made an important variable (Yakup, Mücahit, & Reyhan, 2011). Although, oil is one of the major commodities consumed in every household kitchen; health consciousness among the metro households has altered its usage by the edible oil type, namely, refined or filtered (*kachhi ghani*) and the amount of nutrients the edible oil encompasses (Kulkarni & Srivastava, 2018). With an advent of new innovations, changes in taste, likes and dislikes related to food items; consumer's behavior keeps on changing frequently as the edible oil being an important element household cooking (Kulkarni & Kolhatkar, 2017). In a highly fragmented Indian edible oil industry, marketers of edible oils need to keep abreast of consumers' tastes, forestalling the consumer preferences, vis-à-vis envisaging what products/brands of edible oil would they opt for, from those available in the market (Kulkarni & Kolhatkar, 2017). The marketers devise their marketing strategies for edible oil based on the backdrop of an Indian culture & subculture which is strongly entrenched in the consumer psyche, and amidst changes in the social environment. Each year, India consumes over 10 million tonnes of edible oils (Rajaveni & M.Ramasamy). The importance of edible oil in our daily diet was well recognized by our ancestors; as a result, it became a part of our food. Oils and fats are basically esters of glycerol and fatty acids. The fatty acids may be either saturated or unsaturated (Sarwade, 2011). Conventionally, Indians use two types of edible cooking mediums, namely *vegetable oils* and *vegetable ghee*; wherein, the first cooking medium - vegetable oil - was extracted from the seeds, like, groundnut, sesame, mustard, rapeseed, sunflower, etc. while the inhabitants of Gujarat, Maharashtra, Andhra Pradesh, and Karnataka use groundnut oil as a prime medium of cooking oil, the inhabitants of Tamil Nadu use groundnut and sesame oil, whereas, North Indian inhabitants prefer mustard/rapeseed oil, sesame oil or sunflower oil; while coconut oil is extensively used in the state of Kerala, as Kerala being the number one state in production of coconuts. Mustard, sesame, groundnut and coconut oils were traditionally extracted through bullock-driven (wooden) cold presses, called "*kachi ghani*" that extracted oils at the temperature below 48⁰~50⁰ Celsius, which was the normal heat produced through friction. The share of raw oil & refined oil in the total edible oil market is respectively 42.0% and 42.7% as per the Department of Food & Public Distribution (Sarwade, 2011). At one end, the affluent class uses virgin or extra virgin oil (price band Rs.

590/- ~ Rs. 896/- per litre), on the other end, the poor or lower class, which is a major class in India, primarily uses palmolein oil (price band Rs. 40/- to Rs. 55/- per litre) (Kulkarni & Srivastava, 2018). Till the early seventies, groundnut accounted for almost 60 per cent of India's edible oil consumption, followed by mustard, cottonseed and other domestically produced oils (coconut, sesame, etc). But in 2014-15, groundnut oil's share had plunged to hardly 1 per cent and mustard to 10 per cent. Their place has been taken over by palm oil (45 per cent) and soybean (20 per cent), with even sunflower registering a significant jump (Kulkarni & Srivastava, 2018). As per industry data, only about 31% of urban households and about 9% of rural households consume branded edible oils, with the national average at 16% (Narayana, Sarabhai, & Khan, May, 2014). Newer oils, which were not known before have entered the kitchen, like those of cottonseed, sunflower, palm oil or its liquid fraction, polyolefin, soybean and ricebran. All of them are again essentially bland, processed edible oils (Sarwade, 2011). Thus, edible oil businesses in India are working harder than ever before to achieve some degree of differentiation for their products and trying to build strong brand image and started highlighting the product features with specific brand names offering distinct value propositions in the edible oil market and helping the quality conscious consumers differentiate and choose the products which are best suited to their requirements (Narayana, Sarabhai, & Khan, May, 2014). Through technological means such as refining, bleaching and deodorization, all oils have been rendered practically colorless, odorless and tasteless and therefore, have become easily interchangeable in the kitchen. Today, the organized sector in Indian edible oil business has emerged as one of the fastest growing sectors in recent times creating branded oil sales, though branded oils marked currently low in India, both in terms of volumes and share, they are expected to grow due to improved thrust by major players like Marico Limited, Cargill India Private Limited, Adani Wilmar Limited, Ruchi Soya Industries Limited, Con Agro Foods, ITC Agro-Tech, Godrej Foods, Vippy Industries, Prestige Foods, SM Dyechem, Vijaya Oils and a few mid-sized, regional edible oil companies such as Mantora Oil Products Ltd, Modi Naturals, Amrit Banaspati, Tara Health Foods, Priya Foods, Healthy Heart Foods, Gemini Oils, KS Oils etc; offering a larger number of product choices before consumers to choose from and given these choices, consumers are now able to compare many features such as quality, price, and value for money, absorption capacity, brand image etc. to decide which product they want to buy for their need satisfaction (Narayana, Sarabhai, & Khan, May, 2014).

1.1 Role of consumer buying pattern in changing the purchase decision of urban Indian households for branded edible oil

Dawson and Boroadbridge (1988) have stated that as the economy and society has changed over the years, the consumer buying pattern has also changed, and so the retailers' response, and enormous alteration in the shopping as an activity (Mishra, 2007). There are incidences of depleting asset base, reduction in savings, increased expenditure on education, increased liabilities due to various types of loans an average urban household has, which has impacted the consumption pattern of edible oils (Singh & Vatta, 2013). Socio-cultural factors

such as religion, beliefs, food preferences, gender discrimination, education and women's employment all have a noticeable influence on food consumption patterns in this region. Mass media, especially televised food advertisements, play an important role in modifying the dietary habits (Musaiger, 1993). As stated by [Neeraj Kaushik & Deepak Gupta](#) (2009) in their article that quality and price were found to be the most important criterion for buying patterns in cosmetics, the same factors have also been found to have an influence on the consumption pattern of edible oil on urban Indian households (Kaushik & Gupta, 2009). The buying frequency of people was observed to be daily basis for chocolate bar and milk, while items like edible oil, bath soap and shampoo being purchased on weekly or monthly basis (Vibhuti et.al, 2014). (Brown et.al., 2000; Davis and Smith, 2004) have emphasized the need for nutritional awareness, and the rise of disposable income which has led to fast food preferences of young consumers in Malaysia; similarly, the Indian urban households are also giving importance to the nutritional values of the edible oils they consume (Habib & et.al, 2011). Nine major factors affect fast-food consumption, i.e. Social Development, Economic Forces, Political Climate, Technological Development, Ecological Development, Market Forecasts, Buying Groups, Equilibrium of Power and Regulatory Framework have been found to be affecting the fast-food consumption, and so has been its effect on edible oil consumption (Habib & et.al, 2011).

1.2 Role of culture & subculture as one of the key demographic variables in changing the purchase decision of urban Indian households for branded edible oil

As per Jablonski (2012), cultural factors have significant impact on customer's buying decision (Durmaz, 2014). Culture involves society's thoughts, words, their traditions, language, materials, attitudes and feelings. One of the elements that makes culture is beliefs. Beliefs of the people in a community can show similarities. One market segment that is breaking down cultural and global boundaries in an unprecedented way is the urban segment. The urban segment is a unique and diverse blend of ethnicities that is heavily influenced in tastes, attitudes, which may influence the purchase decision of customers for edible oils (Towns, 2013). For carrying out this research, almost 70 research papers were thoroughly studied to find the research gaps, and surprisingly it was found that there was no significant research done correlating the key variables of this research topic, viz.- buying pattern, culture & subculture, and its impact on purchase decision on Indian urban households, for usage of branded edible oil. Hence, in the above context, an attempt was made to fill-in these gaps by understanding as to how consumer buying pattern and culture & subculture would result in influencing the purchase decision of urban Indian households for branded edible oils in the urban India.

Thus, the aim / objective of this study was to examine the correlation between usage pattern of branded edible oil, user preferences in terms of edible oil types, and how buying pattern, cultures and subcultures impact the purchase decision of branded edible oil consumption by urban households, as India being the multicultural country.

2. Literature review

2.1 Consumer Behavior and Consumption Of Edible Oil

The consumption phenomenon is described as a natural process that goes on from birth until death. ‘Consumer’ can be defined as an individual who fulfills the act of consumption. And according to the consumer, having a better lifestyle is only possible through fulfilling the act of consumption. The act of consumption influences consumers’ purchasing decisions, while allowing them to develop new behaviors and attitudes (Akpınar, Aykin, Sayin, & Ozkan, 2009). Consumers are the people or organizations that purchase products or services. The term also refers to hiring goods and services. They are humans or other economic entities that use a good or service. Furthermore, they do not sell on that item that they bought. They are the end users in the distribution chain of goods and services. Consumers are the major factors influencing the sales of any product in the market, but now-a-days large scale adoption of latest technology has empowered consumers in an unimagined way (Ambujakshan & Srivastava, 2012). In fact, sometimes the consumer might not be the buyer. Foxall (1987) argues that in the marketing context, the term ‘consumer’ refers not only to the act of purchase itself, but also to patterns of aggregate buying which include pre-purchase and post-purchase activities. Pre-purchase activity might consist of the growing awareness of a need or want, and a search for and evaluation of information about the products and brands that might satisfy it. Post-purchase activities include the evaluation of the purchased item in use and the reduction of any anxiety which accompanies the purchase of expensive and infrequently-bought items. Each of these has implications for purchase and repurchase of edible oil (Kulkarni & Srivastava, 2018). As per Dittmar (2008), number of research studies conducted by psychologists have repeatedly shown that consumption is an integral part of people’s lives. It has been found that consumer activities, such as problem definition, search, buying, usage, and disposal of the product or service, can impact upon people’s identities and how individuals convey their social status through the use of certain products and services, vis-à-vis how buying pattern, culture & subculture can have an influence of the purchase decision of a customer for any product or service. For example, by using Saffola Gold used by HIG (higher income group) and/or extra virgin olive oil used by affluent class (Jansson-Boyd, 2010).

2.2 Consumer Buying Behavior of Edible Oil

As per Solomon (1995), “consumer behavior” is the study “of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires”.

Consumer behavior has been defined by the researchers Arnould, Price, and Zinkhan (2004, p. 9) as, “individuals or groups acquiring, using, and disposing of products, services, ideas, or experiences” (Kulkarni & Srivastava,

2018). As stated by Thompson, Haziris, & Alekos, (1994), consumption of edible oil is associated with healthy eating and avoidance of saturated fats amongst the educated households, and also about enhancing the taste of cooked/fried foods, salads; where, in most cases, consumption of the types of oils is discretionary (Kulkarni & Srivastava, 2018). Consumer buying behavior refers to the selection, purchase and consumption of goods and services for the satisfaction of their wants. There are different processes involved in the consumer behavior. Many factors, specificities and characteristics influence the individual in what he is and the consumer in his decision-making process, shopping habits, purchasing behavior, the brands he buys or the retailers he goes. All consumption is location and time bound. Consumers develop habits over time about what to consume, when and where (Sheth, 2020). A purchase decision is the result of each and every one of these factors. Initially the consumer tries to find what commodities he would like to consume, then he selects only those commodities that promise greater utility. After selecting the commodities, the consumer makes an estimate of the available money which he can spend. Lastly, the consumer analyzes the prevailing prices of commodities and takes the decision about the commodities he should consume (Ramya & Ali, 2016).

2.3 Consumer's Buying Pattern of Edible Oil

While investigating on consumers' buying patterns Ehrenberg et.al. (1986, 1990, 1994, and 1995) have systematically identified several regularities amongst which, some of the significant ones are: i) only about 10% consumers are 100% loyal to one brand over repeated purchases; ii) consumers tend to show brand repertoire comprising of 3-4 brands among which they make their choices; iii) every brand possesses a small share of 100% loyal consumers; iv) each brand's market share is distinct from that of other brands; v) an average amount of product bought by consumers across repeated purchases shows little variation, despite the brand they buy; vi) the number of purchases per period (e.g.- 1 year) tend to be stable and similar for all brands; and vii) 100% brand loyal consumers are not necessarily heavy buyers (Cavalcanti, Oliveira-Castro, & Foxall, 2013).

2.4 Purchase Decision of Edible Oil

As per (Peter and James, 2004: 48; Wibowo & Karimah, 2012: 6) the purchasing decision is the process by which consumers make the decision to purchase a variety of products and brands that began with the introduction of needs, information research, evaluation of information, making purchase and then evaluate the decision after purchasing. Purchase decision process consists of five stages, viz. - 1. Recognition of the need; 2. Search for information; 3. Evaluate the alternatives; 4. *Purchase decision*; and 5. Post-purchase behavior. It is clear that the procurement process begins long before the actual purchase. Marketers need to focus on the entire purchase process, rather than focus only on the purchase decision (Kotler & Keller, 2009). Also, according to Schiffman, Kanuk (2004: 547), purchasing decision is "the election of two or more alternative purchasing decision, it means

that someone can make a decision, it should be available some alternative options. So, the outlines is the decision to purchase can lead to how the process in the decision was made (Foster, 2016). As for Peter and Olson in the Fransisca's journal (2013) describes the purchasing decision as the process of integration that combines the knowledge to evaluate the behavior of two or more alternatives and choose the one of them (Foster, 2016). This study has made efforts in understanding the needs & wants of consumers, and the buying motives that are based on the usage of edible oil, hence the buying pattern, and how culture & subculture can impact the decision making while buying a branded edible oil, by Indian urban households.

2.5 Culture, Subculture, and Its Influence of Purchase Decision

2.5.1 Culture

As early as 1874, British anthropologist, Taylor, defined culture as a complex whole of knowledge, belief, art, law, morals, customs and any other talents and habits acquired by individuals as members of the society. Redfield (1941), later defined culture as the conventional understandings displayed in the act and artifact, which characterizes societies. Herskovits (1969) said that cultures of no two peoples were identical, and that culture is the most fundamental determinant of a person's want and behavior; hence, culture considerably influences the pattern of consumption and the pattern of decision-making; as for example, Bengalis primarily use mustard oil as a medium of cooking, while south Indians primarily use sesame oil or coconut oil as a medium of cooking (Kulkarni & Srivastava, 2018). (Hofstede, 1980; Schew et al; 1998) highlighted culture as a broad collective pattern of cognition, results, and actions that have important effects for functioning societies, of groups within those societies and individual members of such groups; and added that culture is a set of learned values and beliefs, attitudes, practices and forms of behavior that are shared by a society (Spiers, Gundala, & Singh, 2014). Culture does have significant variations among the social life and people have respect for their own culture (Jayanthi, 2016). Markus and Kitayama (1991) pointed out that cultural norms and beliefs are powerful forces shaping people's perceptions, dispositions, and behaviors and failure to take these cultural differences into consideration could be the cause for failure of businesses. As opined by (Hofstede, 1980; Markus and Kitayama, 1991; Havilland, 1996; Schew et al; 1998), cultures are learned, mostly through beliefs, rather than inherited biologically, and parts of the culture work as an integrated whole; hence cultural literacy is of critical importance to success in international marketing (Chiu; et.al., 2012). The cultural dimension deserves serious consideration in the design of every element of the marketing mix (Chiu; et.al., 2012). Based on the literature reviewed, culture for this research study is defined as, a set of socially acquired behavior patterns and meanings common to members of a particular society or social group, including the key elements of family structure (Roberts, Gwin, & Martinez, 2004), language (Takada & Jain, 1991), beliefs and values (Sojka & Tansuhaj, 1995). Rani (2014), identifies cultural, social, personal and psychological factors as the four major influences on consumer's buying

behavior, adding that these factors cause consumers to develop product and brand preferences (Akpan, 2016).

2.5.2 Subculture and Its Importance in Consumption of Edible Oil

Schiffman & Kanuk (1991) have defined ‘*subculture*’ as a distinct cultural group that exists as an identifiable segment within a larger, more complex society; adding further that the members of a subculture usually possess beliefs, values and customs that are distinct from other members of the same society. Two distinct elements exist in a culture that includes: (1) the unique beliefs, values and customs pertaining to the specific subculture and (2) the core theme within a culture that is common to most of the population. For example, African and Hispanic American subcultures have their own unique norms, traits and orientation; however, both groups still share the dominant traits of the American culture. Similarly in India, Hindu, Muslim, Jain, Sikh, Buddhist have their unique customs, traits and orientation; yet collectively all the subcultures share the dominant traits of Indian culture. Thus, it is important for marketers to acknowledge the advent of subcultures and have a microscopic look at smaller market segments and maximize profits in today's competitive yet fragmented market place (Pleasant, 2001). Clarke (1974) views the term 'subculture' as having some underlying utility even if it is coupled with a superficial lack of clarity. He analyses the underlying validity of the concept of subculture by looking at three issues: (1) the general issue of culture and structure as perspectives on social problems & differences, (2) the problem of the definition of the boundaries of a subculture and (3) the question of the genesis, maintenance and change of subcultures. Clark (1974) states that very little attention has been given to whether 'subculture' is a useful concept, whether it should be abandoned or broken into components for clearer understanding and analyses (Pleasant, 2001). The genesis, maintenance and change of subcultures are based heavily on endogenous and exogenous means. Subcultures are formed exogenously based heavily on contact within the culture whereas; endogenous means have dominated most of the previous research concerning subcultures. This brings one back to the relationship between culture and structure. Cohen's theory (1955) argued that for individuals in certain positions in society that could not reach their desired goals, deviance followed the weakening of the adherence to the prescribed means to obtain certain goals and thus subculture formulation began. Merton (1967) argues that culture and social structure are not properly aligned and integrated and that the discontinuities create tensions that are only extinguished by deviance (Pleasant, 2001).

2.5.3 Multiculturalism and Its Importance in Consumption of Edible Oil

Multiculturalism is a body of thought in political philosophy about the proper way to respond to cultural and religious diversity. Multiculturalism or Cultural Pluralism is a policy, ideal or reality that emphasizes the unique characteristics of different cultures in the world, especially as they relate to one another in immigrant receiving nations (Kavitha, 2017). Cultural diversity is not an ancient phenomenon. History witnesses several examples of

diverse communities and cultures living coherently within the same society peacefully. In India, people of diverse religions and languages have lived together for several centuries. In some pre-modern societies, differences of religion were even legally recognized and accommodated (Kavitha, 2017). The multicultural framework that was initially devised protected diversity by giving communities the right to govern themselves in some respects. As per Kramsch et.al. (2011), the term multiculturalism is most often used in reference to Western nation-states, which had seemingly achieved a de facto single national identity during the 18th and/or 19th centuries (Jayanthi, 2016). Multiculturalism describes the existence, acceptance, and/or promotion of multiple cultural traditions within a single jurisdiction, usually considered in terms of the culture associated with an aboriginal ethnic group and foreigner ethnic groups. The Indian caste system describes the social stratification and social restrictions in the Indian subcontinent, in which social classes are defined by thousands of endogamous hereditary groups, often termed *jātis* or castes. This study delves into multiculturalism in an urban society, and how the buying pattern impacts the purchase decision of this multicultural urban society, while purchasing a branded edible oil. Religiously, Hindus form the majority, followed by Muslims. The statistics are: Hindu (80.5%), Muslim (13.4%), Christian (2.3%), Sikh (1.72%), Buddhist (0.69%), Jain (0.37%), and other populations (1.02%), and India's state boundaries are largely drawn based on linguistic groups (Sukhdev, 2016) (GOI, 2011).

2.6 Urban Indian Households

Families do not exist in isolation and family dynamics are often best interpreted in the context of their societal and cultural background. Culture has been shown to determine the family structure by shaping the family type, size, and form (McGill D. 1983; McGoldrick M, Giordano J, Pearce J, 1996) and the family functioning by delineating boundaries, rules for interaction, communication patterns, acceptable practices, discipline and hierarchy in the family. McGill DW and McGoldrick M (1992) have argued that the roles of family members are determined largely by cultural factors (as well as stages of the family life cycle), (McGoldrick M. and Schwartzman J. 1983) and finally, culture also explains families' ways of defining problems and solving them as stated by Schwartzman J. (1983) (Chadda & Deb, 2013). India is classified into 450 districts and approximately 6,30,000 villages, which can be further segmented on different parameters such as literacy levels, accessibility, distribution networks, income levels, market penetration, distances from nearest towns, etc (GOI, 2011). The Indian rural market comprises of around 840 million people which generates around 50 per cent of the country's Gross Domestic Product (GDP) (Patil, 2017). As per 2011 Census, the urban population is 37.7 crore (31.16%) as against the total population of 121 crore, while rural population is 83.3 crore (68.84%). Post-independence, there has been an absolute increase in urban population which has grown by about 32%, almost two-and-a-half times the rise of rural population (13%) (Patil, 2017). In India, majority of food consumption is still at home.

Nevertheless, out-of-home food consumption is increasing due to increase in urbanization, breaking up of the traditional joint family system, desire for quality, time which translates into an increased need for convenience, increasing number of working women, rise in per capita income, changing lifestyles and increasing level of affluence in the middle-income group had brought about changes in food habits (Upadhyay & Pathania, 2013). Nagaraja (2004) opined that, buying behavior is very much influenced by experience of their own and of neighbours, family, and friends; also, product quality and easy availability were one of the primary factors of the urban household's buying decisions (Upadhyay & Pathania, 2013).

3. Developing theoretical construct and developing hypothesis

The variables identified for this study are: *purchase decision, consumer's buying pattern, urban Indian households, culture, and sub-culture*; which are categorized as independent and dependent variables as depicted in the Table-1 below, followed by the conceptual framework vide Figure-I below:

Table-1:

Independent Variables	Dependent Variable
Consumer's buying pattern	Purchase decision
Culture	
Sub-culture	
Urban Indian households	

3.1 Definition of Each Variables

Consumer buying pattern

Buying pattern of the consumers differ from one people to other people. Each and every necessity must be fulfilled and all their desires must be satisfied by the textile industry. Consumer behavior focuses on how an individual make decisions to spend their available resources (time, money, effort) on consumer related items (Santhi & et.al, 2020). Similarly, in case of purchasing a branded edible oil, buying pattern greatly depends on the factors like, availability, affordability, country of origin, brand trust, brand recall, brand image, sales promotion of a particular brand of oil, usage pattern of edible oil (e.g.- 1 litre, 2 litre, 5 litres, etc.), type of edible oil seed, filtered or refined oil, etc; hence, this independent variable would be tested against the hypothesis in relation to its impact on purchase decision of branded edible oil by Indian urban households.

Culture

Hofstede, (1980) and Schew et al; (1998) highlighted culture as a broad collective pattern of cognition, results, and actions that have important effects for functioning societies, of groups within those societies and individual

members of such groups; and added that culture is a set of learned values and beliefs, attitudes, practices and forms of behavior that are shared by a society (Spiers, Gundala, & Singh, 2014). Culture does have significant variations among the social life and people have respect for their own culture (Jayanthi, 2016). And hence, this independent variable would be tested against the hypothesis in relation to its impact on purchase decision of branded edible oil by Indian urban households.

Subculture

Schiffman & Kanuk (1991) have defined ‘*subculture*’ as a distinct cultural group that exists as an identifiable segment within a larger, more complex society; adding further that the members of a subculture usually possess beliefs, values and customs that are distinct from other members of the same society. Two distinct elements exist in a culture that includes: (1) the unique beliefs, values and customs pertaining to the specific subculture and (2) the core theme within a culture that is common to most of the population. Similarly in India, Hindu, Muslim, Jain, Sikh, Buddhist have their unique customs, traits and orientation; yet collectively all the subcultures share the dominant traits of Indian culture. And hence, this independent variable would be tested against the hypothesis in relation to its impact on purchase decision of branded edible oil by Indian urban households.

Urban Indian households

Families do not exist in isolation and family dynamics are often best interpreted in the context of their societal and cultural background. Culture has been shown to determine the family structure by shaping the family type, size, and form (McGill D. 1983; McGoldrick M, Giordano J, Pearce J, 1996) and the family functioning by delineating boundaries, rules for interaction, communication patterns, acceptable practices, discipline and hierarchy in the family. Nagaraja (2004) opined that, buying behavior is very much influenced by experience of their own and of neighbours, family, and friends; also, product quality and easy availability were one of the primary factors of the urban households’ buying decisions (Upadhyay & Pathania, 2013). And hence, this variable would be tested against the hypothesis in relation to its impact on purchase decision of branded edible oil by Indian urban households.

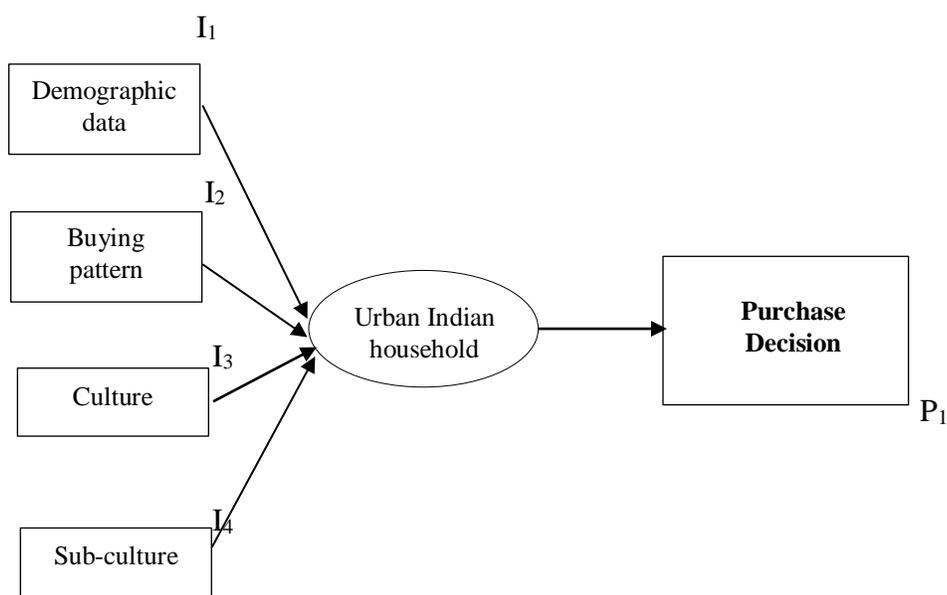
Purchase decision

As per (Peter and James, 2004: 48; Wibowo & Karimah, 2012: 6) the purchasing decision is the process by which consumers make the decision to purchase a variety of products and brands that began with the introduction of needs, information research, evaluation of information, making purchase and then evaluate the decision after purchasing. Purchase decision process consists of five stages, viz. - 1. Recognition of the need; 2. Search for information; 3. Evaluate the alternatives; 4. *Purchase decision*; and 5. Post-purchase behavior. It is clear that the procurement process begins long before the actual purchase. Marketers need to focus on the entire purchase process, rather than focus only on the purchase decision (Kotler & Keller, 2009). And hence, this *dependent variable* would be tested against the hypothesis in relation to an impact of independent variables enlisted above,

for branded edible oil by Indian urban households.

Consumer's behavior is also being influenced by *social factors* and *family* (Shukla, 2009; Engel, Blackwell, & Kollat, 1978; Kotler e. , 2012; Magnisalis, 1997; Martínez and Polo, 1999; Sandhusen, 1993), *nation*, and *religion*. Companies must take into account these factors during the planning of their marketing strategies (Papafotikas, Chatzoudes, & Kamenidou, 2014). Based on the above *independent variables* and a *dependent variable*, following conceptual framework is depicted vide Figure-I:

Figure-I: Conceptual framework of independent variables influencing the purchase decision of urban Indian households.



The above theoretical framework can be articulated in mathematical expression as follows:-

$$p_1 = \sum_{i=1}^n \{i_1 + i_2 + i_3 + i_4\}$$

3.2 Hypothesis Development

As mentioned in the forgoing paragraphs, following three hypotheses were formulated for testing the influence of buying pattern, culture, and subculture on the purchase decision of urban Indian households for branded edible oil (Sekaran & Bougie, Theoretical framework and hypothesis development , 2010):

H₁: *buying pattern influences the purchase decision of urban Indian households for branded edible oil*

Consumer behavior focuses on how an individual make decisions to spend their available resources (time, money, effort) on consumer related items (Santhi & et.al, 2020). Thus, while purchasing a branded edible oil,

buying pattern greatly depends on few factors like, availability, affordability, country of origin, brand trust, brand recall, brand image, sales promotion of a particular brand of oil, usage pattern of edible oil (e.g.- 1 litre, 2 litre, 5 litres, etc.), type of edible oil seed, filtered or refined oil, etc; hence, this independent variable would be tested against the hypothesis in relation to its impact on purchase decision of branded edible oil by Indian urban households. Hence, this hypothesis would test the correlation between buying pattern and purchase decision, in terms of the influence of the former with the latter.

H₂: culture influences the purchase decision of urban Indian households for branded edible oil

Culture does have significant variations among the social life and people have respect for their own culture (Jayanthi, 2016). And hence, this independent variable would be tested against the hypothesis in relation to its impact on purchase decision of branded edible oil by Indian urban households.

H₃: subculture influences the purchase decision of urban Indian households for branded edible oil

Cohen's theory (1955) argued that for individuals in certain positions in society that could not reach their desired goals, deviance followed the weakening of the adherence to the prescribed means to obtain certain goals and thus subculture formulation began. Since subculture would have either a positive or negative, or neutral impact on purchase decision of a consumer product/service; this hypothesis would test an influence of subculture on purchase decision of branded edible oil by the Indian household.

4. Research Methodology

4.1 Research Design

This research being a descriptive research, the first part of the questionnaire consisted of certain demographic information like age of the consumer, gender, monthly household income and number of family members, and religion. The survey was conducted for the households from tier I that is, the urban cities of India. Respondents were primarily women, who were involved in purchasing the provisions for their households, including the graduates and postgraduate, working vis-à-vis non-working, that is, the housewives (homemakers).

4.1.1 Sample Design

Sample size of 289 respondents ($n = 289$) was taken for this research, with a target audience of urban households, comprising of working, and non-working women, as they make the purchase decision for household provisions of the family. However, as per Sekaran & Bougie (2010) the Population above the size of 10000 are statistically infinite and hence, the percentage of sample required remains to be at 4% when the population size is above 10000. Hence in such cases, a sample size of 384 is to be considered to be sufficient. But in case of this research, the sample size remains to be 289 respondents; which is 24.74% lesser than as prescribed sample hereabove. Convenience sampling technique was used for this study.

4.1.2 Selection of sample

Table-1 below shows that the sample (response) was collected from I, II, III tier cities & towns of Maharashtra state (viz.- Mumbai, Pune, Lonavala, Nasik, Thane, Navi Mumbai, Panvel, and Khopoli), in an assured time frame of 90 days (January 2, 2019 to March 29, 2019). Though the sample was collected from public places, and societies; majority of the samples were collected from the supermarkets like *Big Bazar, Reliance Fresh, D-Mart*, etc.

Table-1: Sampling design:

Cities Respondents	Mumbai / Thane	Pune / Nasik / Nagpur / Lonavala	Total respondents
1 Households comprising of women as Decision Makers	68	221	289
2. Percentage distribution of the sample =	23.53%	76.47%	100%

The demographic profile of the sample size is given below in table-2

Table-2 Demographic profile of respondents:

Descriptive Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
i. Gender:				
Male	143	49.5	49.5	49.5
Valid Female	146	50.5	50.5	100.0
Total	289	100.0	100.0	
ii. Age:				
22-29 years	207	71.6	71.6	71.6
30-39 years	78	27.0	27.0	98.6
Valid 40-49 years	2	0.7	0.7	99.3
50-59 years	2	0.7	0.7	100.0
Total	289	100.0	100.0	

iii. Education:				
Undergraduate	33	11.4	11.4	11.4
Graduate	137	47.4	47.4	58.8
Valid Post graduate	117	40.5	40.5	99.3
MPhil/PhD	2	0.7	0.7	100.0
Total	289	100.0	100.0	
iv. Occupation:				
Housewife	44	15.2	15.2	15.2
Public sector	16	5.5	5.5	20.8
Private sector	110	38.1	38.1	58.8
Valid Self-employed	54	18.7	18.7	77.5
Professional	12	4.2	4.2	81.7
Others	53	18.3	18.3	100.0
Total	289	100.0	100.0	
v. Religion:				
Hindu	243	84.1	84.1	84.1
Muslim	18	6.2	6.2	90.3
Sikh	12	4.2	4.2	94.5
Valid Christian	1	0.3	0.3	94.8
Buddhist	3	1.0	1.0	95.8
Jain	11	3.8	3.8	99.7
Others	1	0.3	0.3	100.0
Total	289	100.0	100.0	
vi. Monthly household income:				
Up to Rs. 10000	78	27.0	27.0	27.0
Rs. 10001-20000	30	10.4	10.4	37.4
Rs. 20001-35000	37	12.8	12.8	50.2
Rs. 35001-50000	51	17.6	17.6	67.8
Valid Rs. 50001-75000	36	12.5	12.5	80.3
Rs. 75001-100000	21	7.3	7.3	87.5
More than Rs. 100000	36	12.5	12.5	100.0
Total	289	100.0	100.0	

Amongst the total respondents of 289 ($n=289$), 49.5% were males, while 50.5% were females; which depicts that the ratio of males vs. females was almost equal. It, thus, can be termed that there has been a gender equality of Generation Y in this research; hence, it being unbiased. As stated by Myers & Sadaghiani (2010); Solnet & Hood (2008), Generation-Y is classified according to different time-frames by various scholars such as a *generation of workforce born between 1979 until 1994*; or those *born between 1978 until 1998* (Raman et al., 2011) and widely known as an 'aggressive' generation, and is also known as 'Millennials' (Millennium) generation (Kultalahti & Viitala, 2015). The Generation Y cohort, sometimes called Millennials, is an important cohort and target audience for retailers and consumer product companies alike because it is sizeable and has significant purchasing power (Parment, 2013). As defined by (Myers & Sadaghiani, 2010; Solnet & Hood, 2008; Raman et al., 2011); as high as 207, that is 71.6% respondents in this study were in the cohorts of Generation-Y or Millennials, that is, the age group 22-29; followed by 78, that is 27% in the age group of 30-39; while only 2 respondents each, that is only 0.7% were in the age groups of 40-49, and 50-59 respectively; which indicates that the sample taken was from the cohort Generation-Y. Since the cohort of Generation-Y comprises of those *born between 1978 until 1998* (Raman et al., 2011); 256 respondents, that is 88.58%, were falling in Generation-Y cohort, while 33 respondents, that is only 11.4% respondents were nearing the borderline of Generation-Y. As high as 192 respondents (66.44%) were having professional/work background; while 15.22% respondents were housewives, and 18.34% were from 'others' category. Thus, it may be assumed that 66.5% respondents having work-professional background, can be health conscious-brand conscious-price conscious; nevertheless, the same has been tested with relevant hypothesis, ahead in this research. Out of the total sample of 289; 84.1% respondents (243) were Hindu; while 15.9% comprised of other religions; wherein, 6.2% were Muslims, 4.2% respondents were Sikhs, Jain respondents were 3.8%, Buddhists were 1%; while Christians and Others were 0.3% each. Interestingly, it is observed from the above table that as high as 78 respondents (27%) were having a monthly household income below INR 10,000; while 17.6% were from the income group of Rs. 35001-50001. As per Hunt and Lautzenheiser (2011), part of the neo-classical microeconomic theory depicts that consumers constantly react to maximizing their utilities when buying commodities (Saleh, Alothman, & Alhoshan, 2013). 12.8% respondents were from the income group of Rs. 20001-35001; 12.5% each from Rs. 50001-75001, and more than Rs. 100,000; 10.4% respondents were from the income group of Rs. 10001-20000; while only 7.3%, that is only 21 respondents were from the monthly household income of Rs. 75001-100000.

4.2 Data Collection Procedures and Questionnaire Design & Validation

Since the variables for the research were identified to evaluate the relationship between independent variables, and the dependent variables. This research was descriptive in nature, which was based on both secondary and

primary data collection. *Secondary data* was collected via research papers, journals, books, articles in periodicals, conference proceedings, and websites. While the method used for *primary data* collection was by way of structured questionnaire, with a mix of dichotomous, rank order, likert scale (1 being strongly disagree to 5 being strongly), and semantic differential questions. Convenience sampling method was used by approaching consumers who were coming out of the stores and willing to answer the questions, vis-à-vis by visiting the households and interviewing the housewives. The women respondents comprised of married, single, vis-à-vis widows as well. Questionnaires were given to only those consumers who were aware about branded edible oils. Out of 300 planned respondents 289 participated in the survey, and the questionnaire was completed and validated accordingly through Cronbach reliability test.

4.2.1 Questionnaire Design & Validation:

Cronbach alpha test was used for assessing the reliability of the questionnaire; which was found to be reliable as per the table shown in Table-3 below:

Table- 3: Reliability test for variables

Scale	Cronbach alpha
Purchase factors	0.71
Buying pattern factors	0.73
Culture factors	0.756
Subculture factors	0.708

4.3 Data Design:

The data of 289 respondents was tabulated and was fed to SPSS for analysis. Descriptive analysis was done for demographic data vis-à-vis edible oil usage data. Regression (ANOVA) was used to test H1 hypothesis (*H1: buying pattern influences the purchase decision of urban Indian households for branded edible oil*); while, for H2, Pearson Chi Square test was used (*H2: Age, gender, education, income, occupation and religion has a significant relationship with purchase decision of urban households for edible oil in India.*); wherein, all the variables were tested by an independent Chi Square test. H3 was tested using Regression (ANOVA) test (*H1: Culture & subculture significantly impact the purchase decision of urban households for edible oil in India.*) For H4 (*H1: Culture & subculture significantly impact the purchase decision of urban households for edible oil in India.*), Regression test (ANOVA) was used. The next section deals with results

5. Results

It is divided in to descriptive analysis and hypothesis testing. The first part is descriptive analysis

5.1 Descriptive Analysis

5.1.1 Descriptive Analysis of Edible Oil Usage

Table 4 gives the usage of oil among generation Y. 99%, that is, 286 respondents frequently used the edible oil; while on 1% did not use

Table-4: Usage of edible oil

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	286	99.0	99.0	99.0
Valid No	3	1.0	1.0	100.0
Total	289	100.0	100.0	

This depict from the demographic analysis that out of 289 respondents; 256 respondents, that is 88.58%, were falling in Generation-Y cohort, while 33 respondents, that is only 11.4% respondents were nearing the borderline of Generation-Y. As high as 192 respondents (66.44%) were having professional/work background; Thus, it may be assumed that 66.5% respondents having work-professional background, can be health conscious-brand conscious-price conscious; and hence they frequently used branded edible oils.

5.1.2. Type of Edible Oil Used

There are two types of edible oil in use. Their analysis is given in table-5 below:

Table- 5: Type of edible oil used

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Refined	192	66.4	66.4	66.4
Filtered	97	33.6	33.6	100.0
Total	289	100.0	100.0	

As high as 66.4%, that is, 192 respondents, were using refined oil while 97 respondents (33.6%) used filtered oil.

Since, as high as 192 respondents (66.44%) were having professional/work background; Thus, it may be assumed that 66.5% respondents having work-professional background, and 88.58% respondents were falling in Generation Y, they had higher disposal income and were health conscious. The next analysis is related to usage of the same regularly and is given in table 6

Table-6: Whether use same type regularly or change type edible oil :

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Same type	203	70.2	70.2	70.2
Change the type	86	29.8	29.8	100.0
Total	289	100.0	100.0	

203 respondents (70.2%) used the same oil type; while 86 respondents (29.8%) kept changing the oil types. This depicts that 70.2% respondents were either brand loyal or were loyal to the type of oil seeds they were using.

Another analysis is related to quality of purchase of edible oil

Table-7 Quantity of edible oil purchase:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 litre	44	15.2	15.2	15.2
2 litres	81	28.0	28.0	43.3
5 litres	125	43.2	43.2	86.5
10 litres	24	8.3	8.3	94.8
Above 10 litres	15	5.2	5.2	100.0
Total	289	100.0	100.0	

As high as 125 (43.2%) respondents used 5 litre edible oil while 81 (28%) respondents used 2 litre oil followed by 44 (15.2%) – 1 litre; 24 (8.3%) – 10 litres, and 15 (5.2%) – above 10 litres respectively. This infers that 43.2% households were nuclear or mid-sized families and hence using 5 litres oil cans which may have run for about 30 to 60 days. The next analysis is related to brand preference among generation-Y in table-8

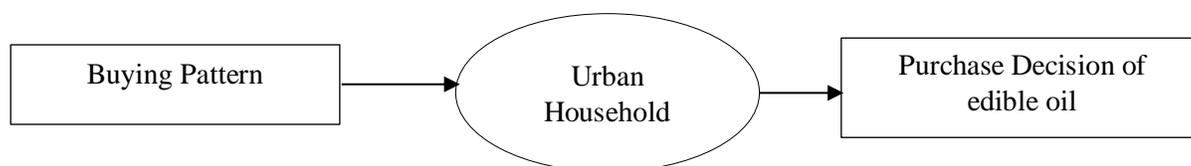
Table-8 Brand preference among Gen.Y :

	Frequency	Percent	Valid Percent	Cumulative Percent
Canola	19	6.6	6.6	6.6
Dhara	21	7.3	7.3	13.9
Dalda	2	.7	.7	14.6
Fortune	75	26.0	26.0	40.6
Godrej	4	1.4	1.4	42.0
Guinea	11	3.8	3.8	45.8
Nature fresh	72	24.9	25.0	70.8
Nutrela	3	1.0	1.0	71.9
Valid Gemini	12	4.2	4.2	76.0
Parachute	3	1.0	1.0	77.1
Patanjali	10	3.5	3.5	80.6
Riso	3	1.0	1.0	81.6
Saffola	31	10.7	10.8	92.4
Sundrop	15	4.8	4.9	97.2
Sunrise	6	2.1	2.1	99.3
Oleev	1	.3	.3	99.7
Figaro	1	.3	.3	100.0
Total	289	100	100.0	

75 respondents (26%) used Fortune oil while 72 (24.9%) preferred Nature Fresh brand of edible oil. Dhara was preferred by 21 respondents; while 19 respondents used Canola, that is, 7.3% and 6.6% respectively. Gemini, Guinea and Patanjali was used by 12, 11, and 10 respondents respectively, that is 4.2%, 3.8%, and 3.5% respectively. While Godrej was used by only 4 respondents (1.4%); and Sunrise by 6 (2.1%). Only 1% used Nutrela, Riso and Parachute; while Saffola was used by 31 (10.7%) respondents. Sundrop was used by only 15 respondents while only 2 respondents (0.7%) used Dalda; and only 0.3% used extra virgin olive oils. It can be thus inferred, that *Fortune*, being one of the reputed brands and most advertised brand, 26% respondents used *Fortune*, followed by 24.9%, that is almost 25% respondents using *Nature Fresh*; which were affected due to their demographic factors. The next analysis is related to hypothesis validation and theoretical construct

5.2 Testing of Hypothesis:

5.2.1. Theoretical Framework for H1:



H₁: Buying pattern significantly impacts the purchase decision of urban households for edible oil in India

Regression is used to test the above hypothesis to find the association between purchase decision and buying pattern and its analysis is given below:

ANOVA^a

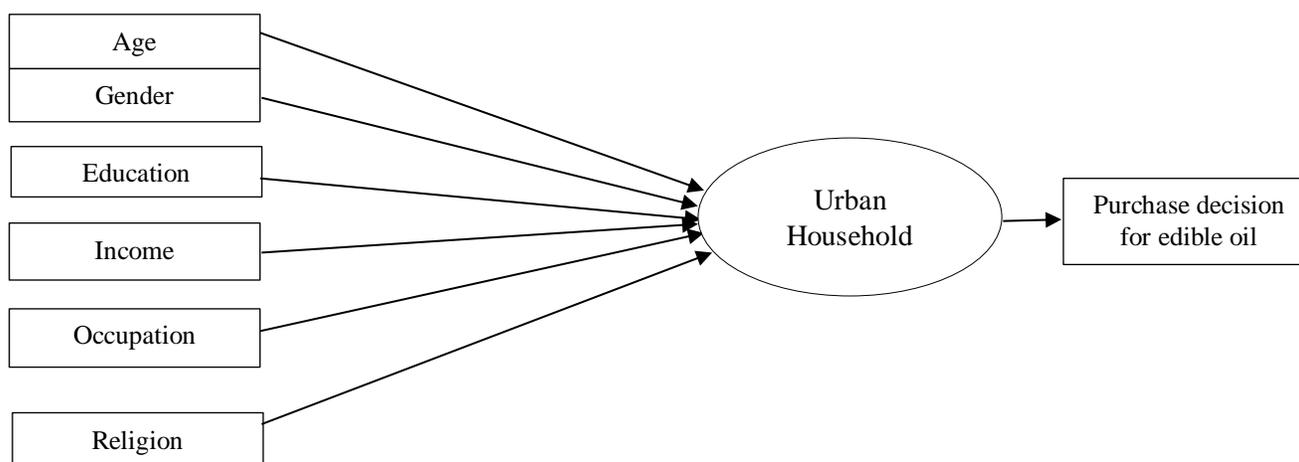
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	308.673	5	61.735	4.000	.002 ^b
	Residual	4351.796	282	15.432		
	Total	4660.469	287			

a. Dependent Variable: *Purchase Decision*

b. Predictors: (Constant), *Buying Pattern*.

Since the significance value is $0.002 < 0.05$, we reject H₀ and conclude that buying pattern significantly impacts the purchase decision of urban households for edible oil in India. The next analysis is related to hypothesis-2

5.2.2 Theoretical framework for H2:



H₁: Age, gender, education, income, occupation and religion has a significant relationship with purchase decision of urban households for edible oil in India.

Role of gender on purchase of edible oil

Pearson correlation test was used to test the above hypothesis and is given below:

Chi-Square Tests of gender vs. purchase decision for edible oils

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.542 ^a	16	.633
Likelihood Ratio	16.347	16	.429
Linear-by-Linear Association	.844	1	.358
N of Valid Cases	289		

a. 17 cells (50.0%) have expected count less than 5. The minimum expected count is 0.50.

Since the significance value is $0.633 > 0.05$, we reject H₁ and conclude that there is no significant relation between gender and purchase decision for edible oils.

Role of age and purchase of edible oil

Another test relates to purchase decision and edible oil below is the chi square test of age vs purchase decision for edible oils:

Chi-Square Tests of age vs. purchase decision for edible oils

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	74.650 ^a	48	.008
Likelihood Ratio	32.484	48	.958
Linear-by-Linear Association	.162	1	.687
N of Valid Cases	289		

a. 54 cells (79.4%) have expected count less than 5. The minimum expected count is 0.01.

Since the significance value is $0.008 < 0.05$, there is a significant relation between age and purchase decision for edible oils.

Role of education on purchase of edible oil

Pearson correlation reveals information regarding education and purchase decision, as given below:

Chi-Square Tests of education vs. purchase decision for edible oils

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	45.601 ^a	48	.572
Likelihood Ratio	45.575	48	.573
Linear-by-Linear Association	2.298	1	.130
N of Valid Cases	289		

a. 52 cells (76.5%) have expected count less than 5. The minimum expected count is .01.

Since the significance value is $0.572 > 0.05$, there is no significant relation between education and purchase decision for edible oils.

Role of occupation on purchase decision of edible oil

Pearson correlation test as done below reveals the association:

Chi-Square Tests of occupation vs purchase decision for edible oils

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	91.645 ^a	80	.176
Likelihood Ratio	94.769	80	.124

Linear-by-Linear Association	.792	1	.373
N of Valid Cases	288		

a. 88 cells (86.3%) have expected count less than 5. The minimum expected count is .04.

Since the significance value is $0.176 > 0.05$, there is no significant relation between occupation and purchase decision for edible oils.

Role of religion on purchase behavior using Pearson correlation

Analysis of the same is given below:

Chi-Square Tests of religion vs. purchase decision for edible oils

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	81.074 ^a	96	.862
Likelihood Ratio	60.505	96	.998
Linear-by-Linear Association	4.666	1	.031
N of Valid Cases	288		

a. 109 cells (91.6%) have expected count less than 5. The minimum expected count is .00.

Since the significance value is $0.862 > 0.05$, there is no significant relation between religion and purchase decision for edible oils.

Impact of Income on purchase decision

Similar analysis is given below:

Chi-Square Tests of income vs. purchase decision for edible oils

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	141.840 ^a	96	.002
Likelihood Ratio	138.977	96	.003
Linear-by-Linear Association	.292	1	.589

N of Valid Cases	288		
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a. 101 cells (84.9%) have expected count less than 5. The minimum expected count is .07.

Since the significance value is $0.002 < 0.05$ there is a significant relation between income and purchase decision of urban households for edible oil. The next analysis relates to H3

5.2.3 Theoretical framework for H3:

H₁: Culture & subculture significantly impact the purchase decision of urban households for edible oil in India.

Regression was used to test this hypothesis:

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	681.7068	9	75.74	4.7	.026 ^b
	Residual	4480.133	278	16.116		
	Total	4660.469	287			

a. Dependent Variable: Purchase Decision

b. Predictors: (Constant), Culture & subculture.

Since the significance value is $0.026 < 0.05$, Culture & subculture significantly impact the purchase decision of urban households for edible oil in India.

Summary of the hypothesis testing is given in table -9

Table-9: Summary of testing of hypothesis depicting the result:

Hypothesis	Test used	Significance value	Status of hypothesis	Comment
1. H ₁ : Buying pattern significantly impact the purchase decision of urban households for edible oil in India.	Regression	$0.002 < 0.05$	Accepted	Buying pattern significantly impact the purchase decision of urban households for edible oil in India.
2. H ₂ : Age, gender, education,	Chi square test	Age: $0.008 < 0.05$ Gender:		There is a significant relationship between

income, occupation and religion significantly impact the purchase decision of urban households for edible oil in India.		0.633>0.05 Edn.: 0.572>0.05 Income: 0.002>0.05 Occu: 0.176>0.05 Religion: 0.862>0.05		income and age with purchase decision; while there is no significant relation between gender, occupation, education, and religion.
3. H2: Culture & subculture significantly influence the purchase decision of urban households for edible oil in India.	Regression	0.026< 0.05	Accepted	Culture & subculture significantly influence the purchase decision of urban households for edible oil in India.

6. Discussion and conclusion

The theoretical construct model comprised of *demographic data of the respondents, buying pattern, culture, and subculture* as Independent Variables (IV) impacting the *purchase decision* as Dependent Variable (DV), on the Indian urban households.

Self-administered structured questionnaire was developed comprising of two sections viz.- section I for demographic data, and section II for edible oil usage data. The questionnaire was tested on Cronbach alpha test for assessing its validity and it had passed the validity test as all the variables were beyond 0.7.

For testing individual demographic variables (viz.- age, gender, education, occupation, income, religion), an individual hypothesis was created which was tested on Pearson Chi Square test; wherein, the results were varied as depicted below:

- *Age: Since the significance value is $0.008 < 0.05$, the null hypothesis was rejected and it was concluded that there was a significant relation between age and purchase decision for edible oils*

- *Gender: Since the significance value was $0.633 > 0.05$, the null hypothesis was accepted and it was concluded that there was no significant relation between gender and purchase decision for edible oils.*
- *Education: Since the significance value was $0.572 > 0.05$, the null hypothesis was accepted and it was concluded that there was no significant relation between education and purchase decision for edible oils.*
- *Occupation: Since the significance value was $0.176 > 0.05$, the null hypothesis was accepted and it was concluded that there was no significant relation between occupation and purchase decision for edible oils.*
- *Income: Since the significance value was $0.002 < 0.05$, H_0 was rejected and it was concluded that there was a significant relation between income and purchase decision of urban households for edible oil.*
- *Religion: Since the significance value was $0.862 > 0.05$, we accepted H_0 and concluded that there The independent variables buying pattern, culture, and subculture were tested using Regression (ANOVA) analysis and the results were as follows:*
- *Buying pattern: Since the significance value was $0.002 < 0.05$, we rejected H_0 and conclude that buying pattern significantly impacts the purchase decision of urban households for edible oil in India.*
- *Culture & subculture: Since the significance value was $0.026 < 0.05$, we rejected H_0 and concluded that Culture & subculture significantly impact the purchase decision of urban households for edible oil in India.*

In the study carried out, it was found that consumer buying pattern and culture & subculture have a significant influence on forming the purchase decision of edible oil of the urban household customers. It was also found from the data analysis that there was a significant relationship between income and age with purchase decision; while there was no significant relationship between gender, occupation, education, and religion.

It is worth noting here that the findings of earlier studies were different from this study as none of the studies had all the variables taken together in one single study.

7. Managerial Implications

This study will be highly useful to the industry experts, and decision makers in edible oil industry, marketing consultants from FMCG sector, etc. in devising suitable long term vis-à-vis short-term marketing strategies and tactics, sales promotional campaigns, viz. – trade campaigns and consumer campaigns, etc; based on the segmentation and targeting the audience region--/state-wise, which will help in creating strong brand awareness and strong brand image for their respective edible oil brand/s; which are not represented or have a very low market share in such regions/states. (Example - Mustard oil is highly used in West Bengal and Northern India; wherein, the marketers of other ‘types of oil’, e.g.- rice brand oil, canola oil, etc; can devise and deploy strategies and tactics via innovative promotional campaigns.

8. Limitation and scope for further study

The major limitation of the study was that this study was confined only to Mumbai, Pune, and Lonavala cities, which does not give a clear picture of usage patterns of the urban households across PAN India, due to variance in their cultures, sub-cultures, tastes, preferences, etc. Hence there is a larger scope for this study to be carried out by adding more metro cities of India with larger sample size so as to get more clear results.

9. Contribution of the study

This study is unique from previous studies on the subject of branded edible oil due to inclusion of key variables viz.- demographics, buying pattern, and culture & subculture together in one study. The major significance of this study is that over and above the demographics, consumer's buying pattern was correlated with culture & subculture, which are mutually exclusively interdependent variables; for, in southern India people primarily use coconut oil and sesame oil, as a part of their culture; while in northern and eastern India, mustard oil is primarily used as a part of their culture. Similarly, in groundnut oil is used primarily by Gujarati community; while Maharashtrians use sunflower oil and/or groundnut oil. The buying patterns of all the households differ due to the factors like family size, household income, standard of living, availability, country of origin, brand trust, brand loyalty, brand name, etc. Hence this study will contribute greatly for edible oil marketers in devising innovative schemes for consumers as well as trade, thereby enabling them enhancing their market shares in edible oil sector. On the other hand, this study will be useful for the consumers also, as they will have more choice of selection of branded edible oil, based on the type and brand of oil vis-à-vis the quality, for healthy living.

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Annexure - I

8th APRC Paper Questionnaire

Topic: “How consumption pattern, demographics, culture & subculture influences the buying decision of urban households for edible oil in India.”

Section I - Demographic variables:

1. Name, Address, Contact #, Email ID: _____

2. Gender (please tick the right one):

Male Female Other

3. Age group (please tick the right one):

22 – 29 30 – 39 40 – 49 50 – 59 60 – 69 70 and above

4. Religion (please tick the right one):

Hindu Muslim Sikh Christian Buddhist Jain Other _____

5. Educational qualifications (please tick the right one):

- Undergraduate Graduate Post graduate MPhil / PhD

6. Occupation (please tick the right one):

- Housewife Public sector employment Private sector employment
 Self-employed Professional (doctor, architect, CA, etc.) Other _____

7. Monthly household income in rupees (please tick the right one):

- ≤ 10,000 10001-20,000 20001-35,000 35001-50,000
 50001-75,000 75,000-100,000 100,001 & above

Section – II

8. Do you use edible oil for cooking at home?

- Yes No

9. Do you use refined or filtered oil for cooking at home? (Please tick)

- Refined Filtered

10. Do you use same type of oil regularly or you change over to other oil type (e.g.- from refined to filter or vice versa), and what quantity? (Please tick)

- Same type Change oil type
 1 litre 2 litre 5 litre 10 litre Other _____

12. What is the frequency of buying/purchasing edible oil? (Please tick)

- Monthly Bi-monthly Quarterly Half yearly As per need Festivals Special occasions/Ceremonies
 Other _____

13. Which brand of edible oil do you normally use? (Please tick)

- Canola (Adani Wilmar) Dhara (Mother Dairy) Dalda (Bunge Ltd)
 Fortune (Adani) Godrej Guinea Gemini Nature Fresh (Cargill)
 Nutrela (Ruchi Soya) Parachute (Marico) Patanjali Riso rice-bran Saffola
 Sundrop (Agro Tech) Sunrise Wagga Wagga
 Oleev Figaro Leonardo Bertolli Del Monte
 Other _____

14. Does any of the following factors influence you to make repeat purchase of above mentioned brands of edible oil? (Please tick the right options)

Strongly disagree Disagree Neutral Agree Strongly agree

- a. Age _____
b. Gender _____
c. Education _____
d. Occupation _____
e. Religion _____
f. Monthly household Income _____
g. Consumption pattern _____
h. Culture & subculture _____

=====XXXXXXXXXX=====

Role of Prudent Decisions on Corporate Success

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Abstract

Introduction: Corporate success quantitatively could be high profits, good growth rate and substantial market share. Qualitatively it could be happy employees, customers, and investors. Success is needed in both aspects, or it is incomplete and would be short term. Success to a large extent depends on prudent decision-making. Sophisticated technology aids in decision making but decision makers are people. Business in today's VUCA (volatility, uncertainty, complexity, ambiguity) environment faces many changes. AI, Blockchain, IoT, and the like have radically changed the complexion of business. COVID19 pandemic has highlighted the need to be agile and to be prepared for disruptions. Management includes decision making, coordination, control, and many functions. But decision making, is the vital function that decides to a great extent the success or failure of a company. The objective of this research is to explore what helps companies to take the apt decisions that result in actions conducive to company growth. To study the impact of prudent decisions on individuals, organizations, and the environment.

Methodology:

Articles, books, and published papers on decision making and corporate success were collected and studied as Secondary Data. Primary data was obtained through questionnaires and interviews.

Findings:

Management must take plethora of decisions. It is necessary to be in proper frame of mind while taking decisions. From the Secondary data collected, variables were identified. They were analysed and table of Variables created. Based on that, interview questions were designed. Responses were analysed using excel tools, and findings arrived at.

Key Words: *Success, Corporate, Management, Productivity, Decisions*

1. Introduction:

The wheels of business drive an economy. Business employs land, labour, capital, and enterprise. Income is generated, goods and services are produced, demand is met, foreign exchange is earned for the country and various benefits. Business success is thus imperative. Success of a Business largely can be attributed to Management discharging their functions aptly. Functions of management are manifold. Planning, decision making, implementation, coordination and control could be said to be the major functions. Decision Making is the aspect that can be the game changer. It can bring about growth and sustainability or push a business to failure. Business success is reflected in quantitative figures appearing in the financial statements. Other factors like attrition rate, level of employee satisfaction, loyalty of stakeholders whether they be customers or suppliers, or shareholders or employees and market reputation are also indicative of the business potential to be successful or going towards failure. Success is needed in both qualitative and quantitative issues. They must co-exist, existence of only one aspect is a fickle and temporary one. High profits and dissatisfied employees, High Sales but angry suppliers, Low cost of production but processes polluting the air are examples of quantitative success that would be short lived as qualitative aspects are ignored. Similarly, green policy of recycling and minimal pollution but having consistent losses; keeping employees happy but taking on more debt that that could be serviced; paying all suppliers on time but mishandling raw material leading to avoidable loss are examples of qualitative success not complemented by quantitative success that would make the success story very short. Business success depends on various forces working together creating a success story. Optimum Capital Structure, Apt Capital Assets, nimble Working Capital Management, good human resource management policies, strong internal controls, robust systems and processes and good corporate practises are some of the much-needed aspects. A business is like an orchestra with various people, departments, functions using different tools and techniques, but the melody must be common of survival, growth, and surplus. For this to happen, the decisions must be prudent. Impact may be immediate or felt much later. Wrong decisions cause lot of harm. Decision making is difficult as decision is taken as per current circumstances, but effect of the decision is in future. Looking into the future is done with the help of models, projections, and charts yet one can go wrong. The pace of change is very fast. Whether it is consumer preferences or technology or even climatic conditions, changes are happening faster and faster. Covid 19 pandemic has hit business, correct past decisions will have kept business alive and current good decisions will help them fight the crisis. Prudence in decision making is possible only if the decision maker is in the right frame of mind. The decision maker cannot be angry, emotional, or biased which could lead to a wrong decision. One must be balanced, stoic, be able to take a third-party view and a holistic look. It is possible to reach a frame of mind, to shut off internal negative thoughts and filter external wrong influences. One can make that happen by meditation, yoga, listening to music, dancing, painting, or whatever works for one to be in the right frame to take decisions. When a business fails, it causes mental and financial trauma to all stakeholders.

Creditors, Debtors, Customers, Employees, Shareholders, Lenders, Government and Society at large suffer. Mitigation of Business Failure Risk is an important issue, and this research paper explores this risk management. Proceeds from distress sale of assets or liquidation of business is not adequate to compensate the creditors. Loss of jobs of employees, orders lost of suppliers, investors their capital and the snow balling negative impact of those dependent on them is indeed painful. Business failure is not a loss to only the owner but to all concerned. To soften the impact, the Insolvency and Bankruptcy Code was enacted. Business failures also result in lesser tax revenues to the Government and a lower GDP. The objective of this Research is to study how business failure can be avoided. Secondary data was collected to understand how organizations function, variables were identified and based on that interview were taken of people at the helm of affairs in companies, their responses were analysed.

2. Literature Review:

2.1 Promoter Held Companies

Baron and Barbieri (2019) in their article have discussed how most companies across the world are mostly family-owned enterprises. 70% in US and 90% in India have promoters as major shareholders. They must with clarity lay down boundaries within which a company must operate and understand the perception of success they are adopting. Some owners measure it by growth figures, some with cash generated and some just do not want to lose control. One may start a business with passion, but one has a responsibility to carry it forward with wisdom. Lack of clarity of purpose and goals may make board meetings not effective and waste of talent of good employees. Owners must be clear as to what they mean by success and company strategy, policies and processes can work towards it. Issues arise due to ambiguity leading to conflict and eventually failure.

2.2 Functions of Management

Krishali (2021) in his article has summarized the functions of management as defined by renowned authors Henry Fayol, Gulick and Urwiik, R. C. Davis, G.R. Terry, and Koontz and O'Donenell. He has explained that the management experts differ in their definitions as each was looking at different types of organizations. Functions of management will differ as to type of business. He has concluded his article by summarizing the functions of management to be planning which involves decision making to make plans aligned to objectives; Organizing is bringing together various needed resources as per the objectives; Staffing is hiring, training and deciding compensation of staff, directing and motivating them to work as per objectives; Controlling that is ensuring that all happens as per plan and Coordinating to see that all aspects in the business operations are integrated and all smaller plans get merged with the master plan. The 3 Ms of Business are Machines, Money, and Materials. But the 4th M is Management which is an important resource.

2.3 Process of Decision Making

Zane (2016) analyses the process of decision-making in his 133-page book. He explains how apt business decisions can give a company a competitive advantage. Our own brain is not our friend and biases make us take wrong decisions. One needs to understand in an unprejudiced manner the nature of issue in the prevailing situation and find solution by choosing between alternatives. Creativity is often ignored in the decision-making process. While taking decisions, we are sub-consciencely under influence to think in a particular way. Group decision-making need to follow a framework and specific techniques.

Preuschoff, Mohr and Hsu (2015) in their book on decision-making have explained the challenges primarily due to inadequate information. Our nervous system must respond to a trade-off between expected outcome and uncertainty of the expected outcome. Our response to future probable situations and risks involved could be linked to extent of credible information available.

2.4 Management Control Systems

Cougero and Rosanas (2011) have described Management Control Systems. They have described the concepts of Fairness, Justice, Subjectivity, Objectivity and Goal Congruence. Systems may be rigid, but execution needs leadership and ethics. Organization rules, processes or systems must be just, and no one must feel exploited. Communication systems must be robust and there must be transparency at all levels.

2.5 Agency Issue

Jensen and Meckling (1976) have discussed the company format of doing business. It is an intriguing creation, investors put in money in a company but generally have no control over its functioning. Shareholders cannot dictate as to how their funds should be used. Management actions may not be aligned to investor's needs. Agency costs are incurred when management, the agent does not manage the affairs of the company as per the need of the shareholders to maximize share value. Contracts and statutes, controls and monitoring may reduce the agency costs, but they will always exist.

Boshkoska (2015) has discussed Agency issue problem and given ways to tackle it. There is no standard solution to it. A company can adopt good corporate practises, give importance to audit, and give fair compensation to reduce agency costs. Better laws and robust capital markets can also facilitate to decrease agency costs.

2.6 Work Environment

Subramaniam et al (2013) have analysed the work environment in banks. They have arrived at findings based on primary data collected from bank employees. Freedom to express views and to talk without fear in your workplace helps to improve productivity. Management must intervene to help employees achieve work life balance. They must adopt spiritual attitude to increase work satisfaction. Along with hard skill training, sessions on meditation, yoga and the like must be facilitated. Management must shift focus from evaluating contribution to understanding needs.

Lepner (2017) has analysed that bad performance cannot always be said to be due to the performer's attitude or talent. Fault maybe in the communication systems, processes or systems that cannot understand the employee. Instead of putting the blame on the bad performer, management must look deeper and see if the fault was due to bugs or snags in their processes. Often, bosses take repeated wrong information to be factual. Evaluation is done on results that may not be due to certain considered actions.

2.7 ESG-Environment, Social and Governance

Neil Borate (2019) has discussed the much-discussed ESG jargon. Today, environmental, social and governance (ESG) are important factors. Foreign Portfolio Investors increasingly looking at ESG compliant companies. Such investments in the long run prove to be worthy investments. There are today ESG mutual funds too who will consider companies that are mindful of climate change, ecology damage, water pollution issues, who give back to community and locality where they function and are compliant of the laws. This is becoming a global phenomenon as ultimately companies that are adopting ESG become growth oriented, sustainable, and profitable.

2.8 State of Mind

Fry and Nisiewicz in their book have designed a Spiritual Leadership Model. Organizations that are spiritually inclined, people caring for each other and working by finding a meaning and purpose for their efforts are more successful organizations. Motivation that addresses needs like remuneration is a base level motivation.

Leadership must be able to intrinsically motivate where work becomes the reward. Management must be able to make employees visualize their aspirations, goals and help them reach it by following a value-based road map.

Fernando et al (2006) in their paper have discussed the role of introspection on positive outcomes of decisions.

Response to a situation after due introspective is far from superior that being reactive or instantly responding.

Spiritualism helps but it must be applied for overall well-being of company and not to just increase profits.

Implementation of spirituality should not be done only to reap economic benefits but overall development of organization. Even religion helps, though the perception is not to mix religion with business, the authors findings are that in difficult times, some form of prayer or ritual helps, it does not divide but unites people in an organization.

Table 1: Literature Review summary

Author	Year	Published in	Area of Research	Gap
Krishali	2021	Website of economic articles	Management Functions as described by experts	Functions need to be in prioritized
Baron & al	2019	HBR	Success of promotor driven companies	Promoter Ethics
Borate	2019	Mint E-Paper	Importance of ESG	Convincing management

				to adopt ESG practises
Lepner	2017	E magazine-People matters	Wrong performance evaluation	How to mitigate that risk
Zane	2016	Book, Kindle Edition	Decision making process	Sensitizing the decision maker of the process
Preuschoff & all	2015	Book-published by Frontiers Media	Information available before taking a decision	Sources of Information
Boshkosko	2015	International Journal of Business and Management	Corporate Governance & Agency Costs	Incentive or Motivation to follow good practises
Subramaniam	2013	International Journal of advances in management and Economics.	Evaluate by understanding needs and not performance of employees	Yardsticks to evaluate
Cougero & all	2012	Management Accounting Research	Fundamentals of a good Management Control System	Implementation of such a system
Fry	2012	Stanford University Press	Spiritual leadership model	People at the helm of affairs, may not be spiritually evolved
Fernando	2006	Journal of Management and Organization.	Response to situations	Acceptability of good response systems
Jensen	1976	Journal of Financial Economics	Mitigation of Agency cost in Companies	Reason for the Costs
Author	Year	Published in	Area of Research	Gap

3. Discussion of Variables

Most companies in India and overseas are *promoter managed* or major chunk of shares are held by promoters. Management must align their decisions as per promoter's vision and goals. Management must have the leadership to see that the vision and goals are ethical.

Functions of Management are innumerable. The important functions like that of *decision making* must be given due importance as regards resources of time, money, and expertise.

Decision-making is a scientific process. Set *framework* must be followed but flexibility must be there for creativity. One must be mindful of biases and influences.

Decisions are always taken on basis of *information* made available. Must be wary of the source and authenticity

of the information. If it is estimated data, then the probability of its correctness.

A *system* that helps management to control the operations of an organization is necessary. The apt system must be opted for as per the scale and nature of the organization.

Management could take decisions not beneficial to shareholders and incur *agency costs*. There must be policies to mitigate this risk and reduce agency costs.

Management must be duly motivated to adopt Good Corporate Practises and adhere to *Corporate Governance*. Wrong decision of *blaming an employee* when fault was elsewhere is a risk one must avoid by looking deeper into issues with a holistic view.

Environment, Social and Governance are the 3 buzz words today of investors particularly Institutional investors. Companies which follow *ESG* guidelines normally have good growth and survive longer.

Spiritualism in organizations has a positive role to play. Particularly in times of stress, losses, or any upheaval, it helps.

The key to decision making is developing a good *response system*. One must learn to introspect rather than be reactive.

Performance evaluation needs a lot of understanding and maturity. Helping employees to achieve *work life balance*, helping them to develop technical skills and soft skills will help the organization.

Table-2: List of Variables:

Independent Variable	Dependent Variable	Moderating Variable
Ethical Decisions	Promoter's Goal	Management Leadership
Prudent Decisions	Importance to function of decision making	Due resources allocated
Prudent Decisions	Framework or Guidelines	In-built flexibility and room for creativity
Prudent Decisions	Availability of Information	Quality of Information
Goal Congruence	Management Control System	Robustness of System
Minimum Agency Costs	Policies that reduce agency costs	Management understands need to reduce the agency costs
Long Term Survival of Firm	Good Corporate Practices	Management understands the importance of good corporate practices
Correct performance Evaluation	Changing approach from results to needs	Ways to understand the needs
Follow of ESG guidelines	Good systems, policies, and processes	Sensitizing the management of need to adopt ESG framework

Reduction of stress	Balanced mind	Spiritualism
Prudent Decisions	Matured Response System	Introspection
Employee welfare	Work environment	Freedom of Speech and support for emotional and technical skills growth

4. Theoretical Construct:

Based on the variables following theoretical construct is given below:



Figure: I Theoretical Construct

Promoter's need to understand the importance of Good Corporate Practices or Ethics. Professional Top Management must have the leadership to influence promoters to have the apt vision and goals. There must be an in-built framework for decision-making but with flexibility and quality information must be available timely and easily. For long term growth and survival, company must aim to lower agency costs and follow ESG guidelines.

5. Research Methodology:

5.1 Research Design

It is an exploratory research and therefore the numbers are as per norms for focus interview.

5.2 Sample Design

Secondary data on issues relating to management functions, corporate governance, ethics, company systems and policies, spirituality, corporate growth, and sustainability were explored. Based on table of literature review and table of variables prepared, questions were designed for collecting primary data. Table-3 gives the sample profile

Table-3: Sample profile

Size	Males	Females	Age >60	Age 45 to 60	Age below 45
25	20	5	10	10	5

5.3 Questionnaire design

Interview method was followed. Interviews were taken via phone. Pilot interviews were taken of 3 persons, questions re designed for final interviews. In all, there were 25 respondents. This is an exploratory research and focused sample size is adequate as per norms.

Discussion with Respondents was as regards their organization's process, policy and method of decision making. Extent of decentralization, freedom to managers to take decisions, basis of decision making also about leadership and culture of organization. The responses were analysed by using graphics, excel sheets and tools.

6. Results:

Open End Questions were asked, and respondents who 25 CEOs/CFOs were encouraged to answer to the questions at length. Each interview was for about an hour. Responses were analysed with excel tools and commonality in responses filtered.

Table-4 Commitment to Ethics -Q 1. How do you think a company can be committed to be ethical?

Nos	Response
4	onus is on them as they have total freedom to take decisions
19	they are coerced to follow promoter's goals
2	they try to convince promoters to be committed to ethics

Corporate vision and thought process was undergoing a metamorphosis. COVID19 pandemic has speeded the process. The above table shows that the commitment to ethics and good corporate practises of a company depends on attitude of promoters and leadership of professional management to influence promoters.

Professional Management must be convinced of the benefits of good corporate practises and have the leadership to influence promoters. The other analysis are as under :

Q 2. Adoption of Technology and Digitization is very necessary today. Are your promoter's willing to spend resources of money, people, and time on it?

All 25 respondents said that *expenditure approval on technology was always given*. Resources are willingly spent for installation of systems and adopting technology. Data and information are saved, sorted, classified, and used meaningfully.

Q3. Are there rules, manuals, standard operating processes to help you take decisions. If yes, do you have the freedom to take a contrary view if needed.

All 25 respondents discussed how systems, policies, processes, check lists and the like are there within the framework of which decisions need to be taken. The summary of their responses is that promoters are sensitized to the perils of focusing on short term goals. Feudal system of boss and subordinate is slowly diminishing. Employees are being empowered to take initiative. Leadership style is more of participative management. Professional expertise is respected. Creativity is encouraged.

Q 4. Do all decisions taken consider the requirements of being ESG compliant?

The common thread in the response was that promoters are aware of ESG or triple P concepts. But it is very painful of them to compromise on profits to follow the said concepts. Professional management needs to be totally convinced of the merits and be persuasive and influential in adopting the ESG guidelines.

Q 5. What are the steps taken to improve the work environment?

Organizations are proactive in trying to be employee centric. Off sites and in office training sessions are arranged. Through fun and games, soft skills and hard skills training are delivered. POSH and Whistle Blower policies are in place. However, on deeper probing, it was apparent that only 10% of the respondents genuinely cared for employees. Contribution of employees to the bottom line and branding of the company took precedence over the well-being of the employees.

Q 6. What is Goal Congruence and is it tried to be followed?

All 25 respondents were aware of the importance of Goal Congruence. It is trying to through strategies or any intervention making employees meet their personal goals and in process meet organization goal. In an organization, each has different goals which may not match. Goals of employees, team leaders, department heads, top management and promoters may be all different. But good management systems try to see that in each in pursuit of their goal also meets organization goal. This is a difficult task that needs a lot of planning and strategizing. Surprisingly, all 25 respondents concluded that no specific framework or policy or steps taken to have goal congruence.

Q 7. Do you think that you could improve your decision-making ability?

The most significant commonality in all responses was those decisions taken with a relaxed mind were proved prudent in hindsight. Leadership has accepted the importance of being unbiased and pragmatic. Yoga, meditation and various de stress exercises are practised.

7. Conclusion:

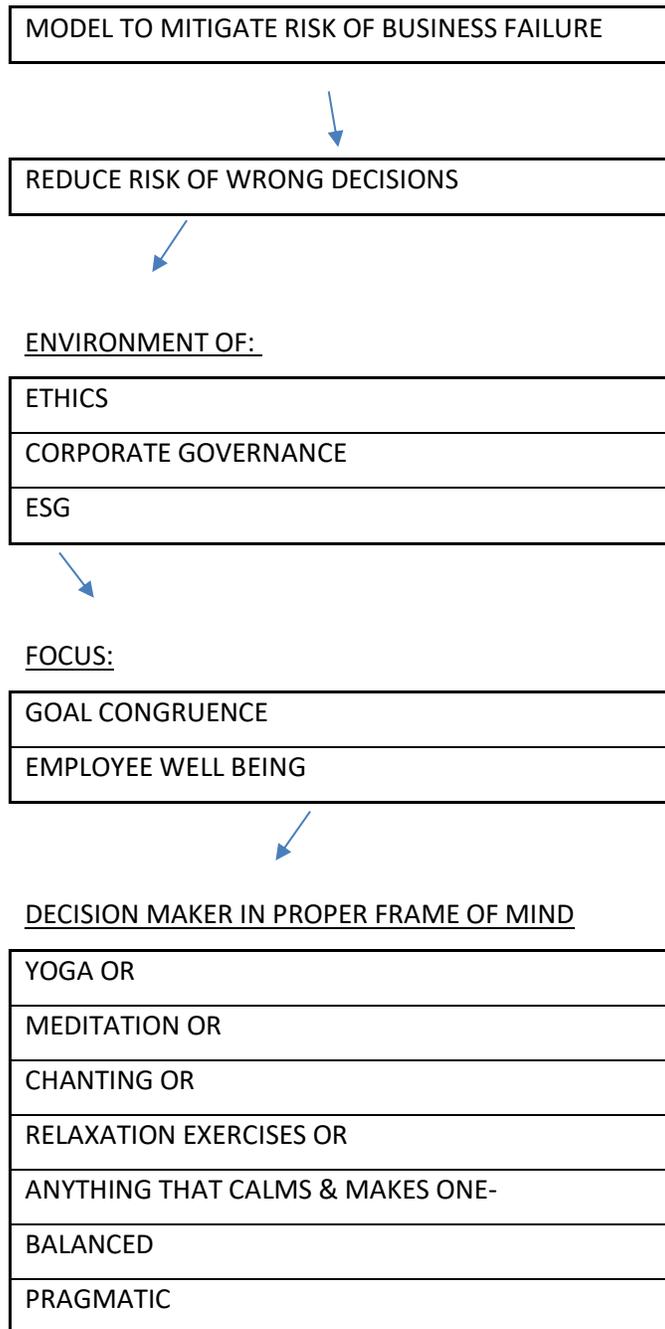
The theoretical concept model is validated by the responses. Management is constantly taking decisions. Many decisions are not easily irreversible. Examples are those relating to Capital Structure-components, ratio of debt and equity, cost of funds; Capital Budgeting-when, which and from whom to buy machinery and assets needed for business; staffing and promotion policy and the like. Impact of decisions is often understood after some years. Day to day working decisions affect the working environment and morale of workers.

Decision making is one of the most important function of Management. Decisions can be prudent only if promoters are committed to ethical practises, professional management needs to be committed to it and be able to influence promoters to be committed to it. Decisions can be promoted if decision makers are given a framework within which they can take decisions and have the flexibility to take innovative steps if circumstances ask for it. Quality information needs to be available on time to help decision making. For long term growth, sustainability and survival, companies must take corporate governance and ESG parameters seriously. Decision maker must be in right frame of mind while taking the decision.

8. Managerial Implications:

It is necessary that decisions are prudent. For that decision makers must be convinced of the merits of following good corporate practices, being mindful of ESG parameters, adopt exercises like meditation, yoga, networking, celebrations to improve his or her emotional and spiritual quotient.

Following is a generic model that can be followed to mitigate the risk of business failure.



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Factors affecting the buying behavior of consumers' towards waste management products

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Abstract

Introduction: In the Indian context, the 21st century is characterized by Liberalization, Privatization, Globalization, Industrialization, Urbanization and Digitization, Immunization, and self-reliant India. The cloud has become our new workspace while Bots and Robots have become our new co-workers. All the technological advancement that we have achieved has so far resulted in horrendous environmental degradation and scarce resources. So the entire world is shifting from a linear economy to a circular economy and actively looking for solutions to recycle, reuse and extend the product life cycle to the maximum extent possible. We have to find more sustainable ways to produce, consume and dispose of after use. We can make systemic choices that would embark on a trajectory towards positive, sustainable, regenerative, and value-creation development of the nation. The Green concept is slowly and steadily creeping into every facet of life. Proper waste management techniques and systems should be adopted to minimize the consequences of overconsumption, excess production, and irresponsible disposable behavior of society.

Purpose: The aim of the study is to develop an Extended Theory of planned behavior (ETPB) Model which will include environmental concern and perceived moral obligation to predict consumer behavior towards the purchase of waste management products/solutions for households.

Methodology: To test and quantify the hypothesis, the questionnaire-based approach was employed. Due to the Covid-19 situation, the questionnaire was circulated through Google Form, and a convenient sampling method was used. The data was analyzed using SPSS.

Results: Data of 272 respondents is captured through a structured questionnaire and analyzed to understand their waste management attitude and buying intention.

Keywords: Green behavior, disposable behavior, waste management product, attitude towards green products

1. Introduction

As posited by Csikszentmihalyi, (2000) ,a social philosopher, Hannah Arendt, almost half a century ago envisaged and warned about advances in technology and the increase in free time providing humankind with the opportunity to consume the whole world. That’s turning into a reality day by day. By 2030, India is predicted to be the foremost populous country in the world, the growing population, rapid urbanization, and industrialization, and current pandemic are putting lots of strains on our natural resources and generation of waste or hazardous materials. Although, uncontrolled growth of the population has resulted in technology progression, mass production, which eventually leads to continuous economic growth, over consumption, but all at the cost of degradation of natural resources. The world is facing serious environmental issues like climate change, biodiversity loss, and rapid non-renewable resource depletion, and a slew of other environmental issues such as waste management. Solid waste management (SWM) is a serious problem in India as well.

It is critical to segregate trash at the source, so that any valuable organic waste is not wasted. The 4Rs policy — refuse, reuse, reduce, and recycle – must be implemented immediately. Composting is an environmentally friendly alternative to landfills. It also cuts down on greenhouse gas emissions. Composting at home can significantly reduce the amount of trash entering the system (Lekammudiyanse, et al. 2009).

1.1.Waste Generation Scenario in India

As per the Ministry of Environment, 2016, India generates 62 million tonnes of waste (containing both recyclable and non-recyclable waste) per year and which is estimated to extend to 165 million tonnes by 2030. According to ASSOCHAM report 2017, only about 75-80% of the municipal waste gets collected and 22-28% of that waste is processed and treated. The majority of our environmental problems – excess garbage, pollution, waste of energy and material, etc. – are the result of consumers’ consumptive behavior (Gan, Christopher, Wee, Han Yen, Ozanne, Lucie, Kao, 2008). According to an article published in Mint (February 2021), Sanjiv Mehta, Chairman and Managing director, Hindustan Unilever, those years of unsustainable consumption have led to climate change and loss of biodiversity is at the root of this pandemic. From coastal erosion, erratic climate to declining natural resources, humankind will have to bear a huge environmental cost and new diseases are just the beginning. As per the 2020 Global Hunger Index, India ranks 94th out of the 107 countries. Therefore, an enormous disequilibrium exists within the society, and waste generation is the assured by-product of industrial development and consumerism.

1.2 Consumer Behavior towards Waste Management

Household waste production is a growing concern in both the developed and developing world (Stewart Barr, 2007). Studies have shown that improper waste management is one of the most common causes of environmental pollution. In line with the survey conducted by Ipsos in 2019, almost 90 percent of respondents in India stated that they made adjustments to their consumer behavior due to climate change concerns; however, around 6 percent admitted not to make any changes to their purchasing habits, but in reality, there is a huge gap between proclamation and actual purchase intention.

1.3 Waste Management Scenario in India

Sustainability, Zero Waste Policy, Net-Zero Emission, reducing carbon footprint are key strategies for propagating and maintaining circular economy. It's imperative for future survival as well as the tools to meet The Sustainable Development Goals (SDGs), also known as the Global Goals, adopted by all the United Nations in the year 2015.

The Ellen MacArthur Foundation, a UK registered charity that aims to propagate the concept of circular economics, has envisioned that enforcing circular economy possibilities in India may yield over \$624 billion per year in material savings by 2050, which is equivalent to 30% of India's current GDP.

Zero Waste Management is relatively a relatively new concept in the Indian scenario; however, it is a vital step in the direction of mobilization of the circular economy. Now a day's trash is treated as a commodity. The concept of waste to wealth is crucial in today's state of affairs and extracting wealth from waste has emerged as one of the most demanding activity of state and local governments in developing nations worldwide.

1.4 Household waste generation scenario

As per Food Waste Index Report 2021, it has been said that roughly 1/3rd of the food produced globally for human consumption either gets wasted or gets wasted, which can be quantified as about 1.3 billion tonnes per year. The same report, conducted by the United Nations Environment Programme (UNEP) and WRAP – around 931 million tonnes of food waste was generated in 2019, and it comprises 60% from households, 26 % from food service, and 13 % from retail. Indian households accounted for 7.4% of the entire 931 million tonnes of food wasted in the world in 2019. Food waste takes place at different stages in developing and developed countries; in developing countries, 40% of food waste occurs at the post-harvest and processing levels, while in a country like India according to a written statement given to the parliament in 2013 by former agriculture, minister Sharad Pawar that agriculture produces to the tune of Rs 50,000 crore-40% of the total produce-was wasted every year. One such initiative is adopted by the Chinese government to roll out mitigation policies and a nationwide “clear your plate” campaign to curb the issue of food waste. Food waste has been associated with the emission of

greenhouse gases, and it also has a substantial impact on all the three P's of sustainability i.e. People, Planet, and Profit. Therefore, apart from mindful consumption, household waste management products such as compost bins can be used to turn organic waste into manure and thereby contribute to sustainable development goals.

2. Need of the study

There is a lack of research specifically on examining the antecedents of consumer purchase intention with regards to waste management products in the Indian context, particularly in Jamshedpur, Jharkhand. A larger and/or wider concept like circular economy can't be successfully implemented and channelized until and unless all the stakeholders of the society actively participate and thoroughly understand its importance. Objectives are to predict the intention of a person towards the waste management products, we need to know.

Whether the person is aware of the present environmental condition, whether the person is in favor of adopting environmental friendly behavior, i.e., measuring their attitude towards waste management products; Impact of social pressure on adopting environmental friendly behavior ('subjective norm'); Whether the person feels in control of the action in question ('perceived behavioral control'); Role of Moral Obligation information of positive intention to buy waste management products. The next section is related to literature review

3. Literature Review

3.1 Need for Circular Economy

Since generations we were following a linear economy, i.e., take-make- use- throw-away approach, resulting in a lot of wastes in terms of plastic, textile, metals, lead, etc. This holds good only if resources are infinite. This overproduction and irresponsible disposable behavior is taking a toll on the environment and human health. According to Malthus (1978), population increases at a geometric rate, whereas means of life such as natural resources like food, water, oxygen, etc. increases at a constant rate. In the current situation, adopting a circular economy is the need of the hour. The circular economy advocates extending the life cycle of the product by incorporating the 6R's by reusing, repairing, recycling, and minimizing the waste to a minimum. The circular economy, which promotes the elimination of waste and the continual safe use of natural resources, offers an alternative that can yield up to \$4.5 trillion in economic benefits by 2030 (World Economic Forum).

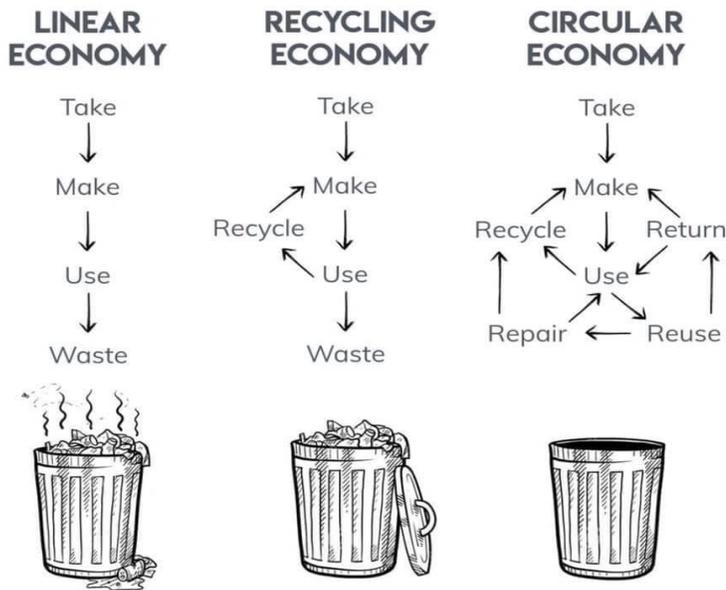


Figure I:Source: [\(25\) Pinterest](https://in.pinterest.com/pin/252201647870261645/) https://in.pinterest.com/pin/252201647870261645/

3.2 People, Planet and Profit- The 3P's of sustainability

According to John Rawls (1999), societies should confirm how much of the earth's resources they are willing to sacrifice or not use, so that future generations will be able to access and luxuriate in such natural resources, as we are the trustees of the natural resources for our future generation. The term, "sustainable development" was coined in the year 1970 during the Cocoyoc Declaration on the Environment and Development. In the year 1987, the World Commission on Environment and Development submitted its report, called "Our Common Future", which is additionally called the Brundtland Report, which outlined sustainability as, "Meeting our needs without compromising the ability of future generations to meet their own needs."

Against this backdrop, a sustainable organization is defined as any business concern that is economically viable, socially responsible, and environmentally friendly. As a result, sustainability helps to bridge the gap between business, society, and the environment. The key drivers of sustainability are climate change, the depletion of natural resources, regulation, consumer demand and economic globalization.

3.3. Evolving Relationship between Sustainability and Marketing

Sustainability is emerging as a megatrend (Lubin and Esty, 2010) for all the stakeholders of society. As stated by Peter Drucker (1958), marketing is the process through which the economy is integrated into society to serve human needs. So, marketing plays an important role in shaping the needs and wants of society and marketers must convert society's needs into an opportunity for profitable business. According to Philip Kotler, the best business strategy is to predict where clients will appear and stop right in front of them.

The ongoing pandemic and the rise of health-conscious consumers have resulted in new business dynamics such as the environment, sustainability, and going green. Philip Kotler coined the term "Marketing 3.0" in his book "Marketing 3.0: from Products to Customers to the Human Spirit. "Over the years, marketing has evolved through three stages;

Marketing 1.0 is a product-oriented concept that emphasizes the functional aspect of a product or service and believes in mass selling. Marketing 2.0 is a concept based on data. It was more customer-centric, with individual customers segmented and identified and followed via SEO, social media, and other ICT techniques. In today's hypercompetitive market, organizations are interested in tapping individual customers and hope to achieve profitable growth through a larger share of each customer's expenditure. Marketing 3.0 is a holistic approach and the shift is from customer-centric marketing to a humanistic approach and it benefits society at large and businesses are bound to understand and reflect human values in their marketing activities.

Over the years, the definition of marketing has undergone radical changes. The latest definition approved by the American Marketing Association: Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large.

3.4 Zero Waste Strategy- Need of The Hour

(BSR, 2010) has defined waste as "anything that does not create value is termed as waste. It is also described as something that is at the end of the product's life cycle and is disposed of in landfills. Household waste contains a lot of bio-degradable items such as kitchen waste, leftover food, etc. Adopting a composting method is one way to reduce household waste. Composting is a biological process of decomposition carried out under controlled conditions of ventilation, temperature, moisture and organisms in the waste themselves that convert waste into humus-like material by acting on the organic portion of the solid waste. In this process, the final product is odour-free and is the perfect soil conditioner. It is also considered as a nutrient-rich compost with enormous agricultural value and can be utilized as a fertilizer. Composting can be done in both the presence of air as well as in the absence of air. Degradable waste can be converted into useful compost by the process of aerobic composting, also known as Vermi Composting (Mir et al. 2016). Zero waste is a philosophy based on a set of practices aimed at avoiding as much waste as possible. In a manufacturing set-up, it is also known as the cradle to cradle approach, while in a household setting, it engages the consumer to act responsibly. However, there is a severe misconception among end users regarding the zero waste policy, that it involves a lot of recycling. However, recycling is the last resort before a landfill, because of the cost associated with the recycling process. For a house-holding setting, zero waste entails the following steps:

Refuse to obtain what you do not require. 2. Reduce what you do need. 3. Reuse: what you consume. 4. Recycle: what you cannot refuse, reduce or re-use. 5. Rot: (Compost) the rest. Household consumers can contribute significantly to the zero waste policy by composting their organic waste, such as kitchen waste and leftover food etc., and giving back to the environment. Therefore, sustainability is the future and waste management techniques are the tools to achieve sustainable goals. Many economists believe that when the free market is unable to maximize societal welfare, it should be regarded as a "failure," and that policy intervention may be required to correct it. Moreover, economists also believe that climate change is a result of multiple market failures. As most of the ill effects of emissions do not fall on those who are indulging in such activities, rather, they fall on future generations and developing countries. As a result, economists who support this as a market failure argue that policy intervention is required. Policymakers must raise the cost of activities that contribute to the emission of greenhouse gases, forcing businesses to innovate in low-carbon technologies.

3.5 Application of Theory of Planned Behavior

The Theory of planned behavior (TPB) has been extensively used as paraphernalia to back our understanding of a variety of behaviors such as health behaviors and intentions, including smoking, drinking, health services utilization, internet purchase behavior, and dishonesty, pro-environmental behavior, including waste management behavior by households and recycling behavior of individuals by researchers. The TPB was proposed by Ajzen (1985) as an extension of the theory of reasoned action (TRA; Fishbein and Ajzen 1975). The only difference between the two models is that TPB contains an additional variable called perceived behavioral control as the determinant of predicting the behavioral intention of an individual.

The theory of planned behavior assumes that human behavior is goal oriented. Buyers tend to exhibit socially acceptable behavior and they undertake logical and rational purchase decisions. TPB entails factors determining an individual's decision to comply with a specific behavior. It also assumes that the individual's behavior is adamant about intention, while intention in turn depends on various factors such as attitude; subjective norms set by society, perceived moral obligation and perceived control of behavior. Intentions are a person's motivation to act in a certain way. According to the theory of planned behavior, human intention is guided by the following factors:

- 1) Behavioral beliefs - beliefs on the likelihood of the outcomes of the behavior and the evaluations of these results with respect to a favourable or unfavorable attitude towards the behavior.
- (2) Normative beliefs are guided by normative expectations of others and motivation to comply with these expectations and this leads to perceived social pressure.
- (3) Control beliefs are the notion that the performance of a certain specific behavior is under an individual's control.

TPB is regarded as one of the most powerful frameworks for predicting human behavior, according to Stern (2005), and it has significant applicability in the field of environmental psychology). It has been extensively used in determining intention towards certain behavior by various researchers such as Chen, M. F. (2017), Kalafatis, S.P., Pollard, M., East, R. and Tsogas, M.H. (1999), George, J. F. (2004), Yadav, R., & Pathak, G. S. (2017), Setyawan, Andhy & Noermijati, Noermijati & Sunaryo, Sunaryo & Aisjah, Aulia (2018) in their studies to predict human intention towards a particular behavior. The present study takes the theory of planned behavior (TPB) as its base model. As posited by Paul et al. (2016), the extended theory of planned behavior presents a higher utility than the existing TPB. Hence, the researchers have extended the TPB model by adding Environmental Concern (EC) and a perceived moral obligation to predict the waste management behavior of Indian consumers.

4. Theoretical Framework and development of hypotheses

4.1 Theoretical Framework:

Research Gap

Indian consumers are considered as environmentally conscious by many scholars in their studies (Jain and Kaur 2006, Paul et al. 2016, Mostafa, 2007), while they also confirmed consumers are environmentally conscious but it does not affect their purchasing decisions, (Jain and Kaur 2006, Saxena et al., (2010). According to Stewart Barr (2007), there is a linkage between household attitudes and environmental behavior that is complex but interrelated and mostly governed by three factors, such as environmental values, situational variables, and psychological factors. (Yam-Tang and Chan, 1998) In their study, they stated that consumers do not purchase products based on environmental concern alone and they will not forgo other product features for a better environment.

Ajzen (1991) ascertained that perceived behavioral control influences the planned behavior of a person, but Lindqvist, J., & Andersson, M. (2015), proved that perceived behavioral control was non-significant in their study, though Chen and Tung, (2014), Paul et al. (2016) posited that purchase intentions were positively influenced by perceived behavioral control. Pertaining to subjective norms, Chen and Tung, (2014) and Han et al. (2010) observed a significant role of subjective norms in predicting purchase intention, unlike Paul et al. (2016).

Despite the fact that the model was created in accordance with Ajzen's (1991) theory of planned behavior, researchers have discovered that the model's strength can be further enhanced by including more relevant variables (Paul et al. 2016, Teo, T., Zhou, M., & Noyes, J. 2016) that may influence a positive purchase intention.

As a result, this model is an extension of the theory of planned behavior.

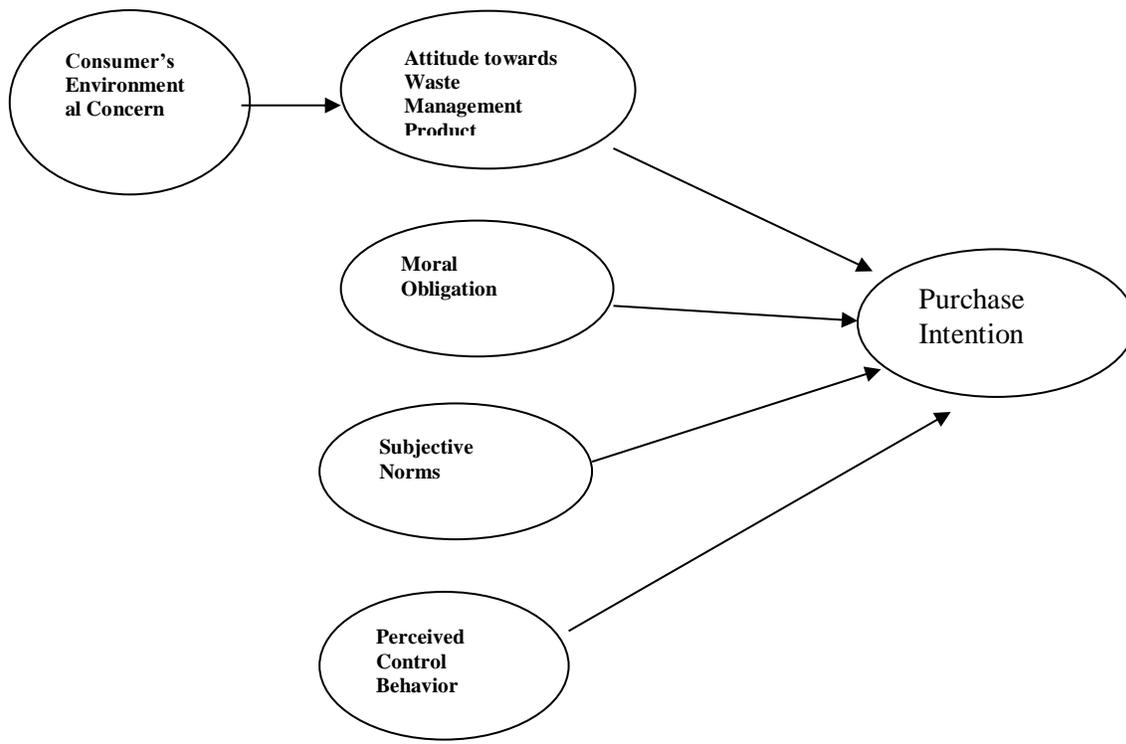


Figure:II Source: Author's own research

Consumer attitude towards Waste Management products is a dependent variable that is linked to their environmental concerns. Furthermore, attitudes toward Waste Management Products, Moral Obligation, Subjective Norms, and Perceived Control Behavior all have a role in deriving Purchase Intention. Therefore, Purchase Intention is considered as a dependent variable, whereas, attitudes toward Waste Management Products, Moral Obligation, Subjective Norms, and Perceived Control Behavior would be treated as independent variables. All the dependent and independent variables that were employed were thoroughly covered in the literature review section.

4.2 Development of hypotheses

As per Schultz and Zelezny (2000), environmentalism can be defined as "human activities intended to lessen the impact of human behavior on the ecosystem".

Environmental concern and purchase intentions of waste management products. Environmental concern (EC) has been treated as an evaluation of one's own behavior or others' behavior with consequences for the environment.

(Fransson & Gärling, 1999). Previous studies, such as Singh et. al (2020), Paul et al. (2016), Setyawan et al. (2018), have confirmed the role of environmental concern in purchase intentions. As cited by (Sharma et al., 2013), consumers' purchasing decisions are often based on their environmental attitudes. Therefore, the present study included EC as a variable.

H1: *Environmental concern has a positive and significant impact on attitude towards waste management Product.*

Attitude and purchase intention of waste management products

According to Gordon Allport (1935), "An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations to which it is related." As per Schultz and Zelezny (2000), "attitudes towards environmental concern are present in a person's concept of self and the degree to which they perceive themselves as an integral part of the natural environment". Previous studies have confirmed that attitude illustrates consumers' favourable and unfavorable response (Blackwell et al., 2006) and their purchasing decisions are based on their environmental attitudes (Irland, 1993; Schwepker and Cornwell, 1991). According to Cruzet al. (2015), attitude is a tendency to react while behavior a readiness to react towards certain objectives.

H2: *Attitude towards waste management product has a positive and significant impact on purchase intention towards waste management products.*

Subjective norms and purchase intention of waste management products

Subjective norms refers to, "the perceived social pressure to perform or not to perform the behavior". It affects people's decision-making process and intention towards a specific behavior (Ajzen, 1991; Chen & Tung, 2014). Subjective norm is the perceived social pressure to engage or not engage in a particular behavior.

H3: *Subjective norms have a positive and significant impact on purchase intention of waste management products.*

Perceived behavioral control and purchase intention of waste management products

As described by Ajzen (1991) the Perceived Behavioral Control as "a factor to envisage the perceived ease or difficulty in performing the behavior and it assume to reflect past experience as well as anticipates limitations and obstacles", which means that this factor reflects the perception. Behavior control specified in the form of self-efficacy and is a condition where people believe that a behavior is easy or difficult to follow. As following zero waste philosophy and sensible consideration of buying waste management products requires a disciplined approach, hence PBC included in the model to validate its impact on purchase intention.

H4: Perceived control behavior has a positive and significant impact on purchase intention of waste management products.

Perceived Moral Obligation and purchase intention of waste management products

Moral obligation is the personal internal state and concerned with the extent to which an individual feels a sense of responsibility to act morally or immorally when faced with an ethical dilemma. (Haines, et.al, 2008). Chen and Tung (2014) have examined perceived moral obligation and concluded that it is directly proportional to intention to perform certain behavior. They also posited that moral obligation is an important factor to understand the willingness to act in certain way. Verma and Chandra (2018) presented that morality act as an important factor observing a consumer's ecological behavior and intention. It has been observed that individuals who emphasize on morality tend to be more concerned for well being of the society and are more engaged in more pro-social behavior (Verma and Chandra, 2018). In the context of our present work, we Extended TPB model by adding Perceived moral obligation as add-on variable.

H5: Perceived moral obligation has a positive and significant impact on purchase intention of waste management products

Sustainability has become a prevailing factor across all walks of life but unfortunately the sales of sustainable products - especially waste management products are not picking up and there is huge gap in terms of consumer's attitude towards green products and their consumption and buying behavior. (Luchs et al. 2010)

5. Methodology

5.1 Sample Design

Regarding the sample size, it has been suggested that there should be a minimum of 10 cases per parameter/item required in the statistical estimate (Kline, 2011). The study has five constructs (5 items for environmental concern, 3 items for attitude, 4 items for subjective norms, 4 items for perceived behavior control, 4 items for perceived moral obligation, and 4 items for purchase intention, totaling 24 items), so the ideal sample size for the study is $(24 * 10=240)$. Therefore, a sample size of 272 is justified for the present research as the study contains 24 items and in view of the prevailing pandemic situation a convenient random sampling technique had to be used to collect data. The objective of the study was to understand the impact of environmental concern on attitude towards considering the purchase of waste management products such as compost bins and purchase intention of buying such products. The sample, therefore, is comprised of university students, professors, and home makers in the age group of 18–60 years. The general profile of the respondents is appended below.

Case Summaries

Gender		Age	Income	Qualification	Employment
Male	N	164	164	164	164
	Mean	1.10	3.41	3.60	3.21
	Median	1.00	4.00	3.00	3.00
	Std. Error of Mean	.024	.123	.063	.178
	Minimum	<30	Upto 2.5 Lakh	Higher Secondary	Full-time employment
	Maximum	30-40	No Income	Diploma	Student
	Range	1	4	4	5
Female	N	108	108	108	108
	Mean	1.20	4.15	3.53	4.35
	Median	1.00	5.00	4.00	6.00
	Std. Error of Mean	.047	.130	.064	.210
	Minimum	<30	Upto 2.5 Lakh	Higher Secondary	Full-time employment
	Maximum	40-50	No Income	PhD	Student
	Range	2	4	3	5
Total	N	272	272	272	272
	Mean	1.14	3.71	3.57	3.66
	Median	1.00	4.50	4.00	4.00
	Std. Error of Mean	.024	.093	.046	.140
	Minimum	<30	Upto 2.5 Lakh	Higher Secondary	Full-time employment
	Maximum	40-50	No Income	Diploma	Student
	Range	2	4	4	5

A total of 272 out of 300 respondents submitted their completely filled questionnaire. A total of 272 people responded, with 60.3% being male and 39.7% being female. The modal age of the respondents was 30, with 87.1% being in this age group, indicating that the data accurately captures the vibes of Indian millennials. Nearly 44.1% of respondents were graduates, 42.6% were postgraduates, 7.4% were PhDs, and the remaining 5.9% had a basic formal education. About 50% were employed whilst the remaining 50% were unemployed.

5.2 Questionnaire Design

The data was collected with the help of a structured questionnaire. The questionnaires were administered via an online survey using a Google form. The data collection was done from December 2020 to February 2021. The questions were designed by adopting items from Paul et al. (2016), while the scale for perceived moral obligation was adopted from Sabucedo, Dono, Alzate & Seoane, (2018). The questionnaire, which includes 25 items in total, was refined as per the needs of the research. All of the items were scored on a five-point Likert scale, with 1 representing 'strongly disagree' and 5 representing 'strongly agree.' The questionnaire items and their source of adoption are mentioned in the Annexure1. The collected data was tabulated in SPSS version-26 and all the analysis has been done using SPSS. The internal consistency of the questionnaire is tested using Cronbach's Alpha. Table 2 reveals the results of Cronbach's Alpha:

Reliability Statistics

Cronbach's	
Alpha	N of Items
.795	25

6. Results

6.1 Hypothesis Testing

H1: Environmental concern has a positive and significant impact on attitude towards waste management Product.

Table 1: I am very concerned about the environment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	12	4.4	4.4	4.4
	Agree	84	30.9	30.9	35.3
	Strongly Agree	176	64.7	64.7	100.0
	Agree				
	Total	272	100.0	100.0	

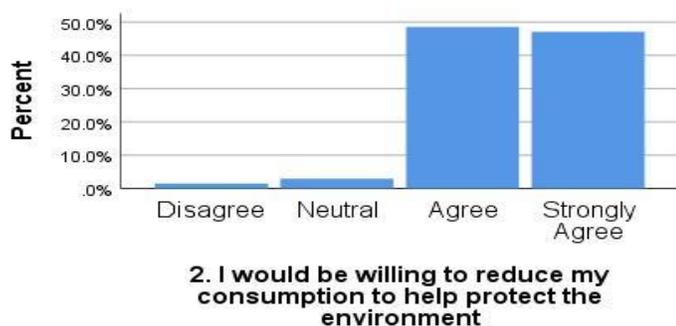
The above table reveals that 95.6% respondents claimed that they are very concern about the environment.

Table-2: The analysis of second question

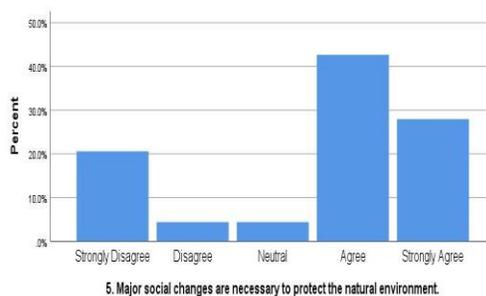
6. I am aware about the house hold waste management products such as Compost Bins,

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	24	8.8	8.8	8.8
	YES	248	91.2	91.2	100.0
	Total	272	100.0	100.0	

91.2% of the respondents were aware of the house hold waste management product (Compost Bin).



Majority of the respondents agreed to the point that they are willing to reduce their consumption to protect the environment.



While 70.5% of the respondents feel that major social changes are necessary to protect the natural environment. At the same time, 69.1% of people claimed that they follow zero policies.

To further confirm the relationship between environmental concern and attitude towards waste management products, Pearson Correlation method was applied.

Table-3: Correlations test

		ATWMP	Env_Concern
Pearson Correlation	ATWMP	1.000	.076
	Env_Concern	.076	1.000
Sig. (1-tailed)	ATWMP	.	.104
	Env_Concern	.104	.
N	ATWMP	272	272
	Env_Concern	272	272

While the Pearson Correlation reveals that the correlation between the two variables, namely environmental concerns and attitude towards waste management products is not at all significant (Pearson Correlation =0.076, p=0.104).

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change	Durbin-Watson
					R Square Change	F Change	df1	df2		
1	.076 ^a	.006	.002	1.68490	.006	1.586	1	270	.209	2.198

a. Predictors: (Constant), Env_Concern
b. Dependent Variable: ATWMP

We can see from the regression analysis that the adjusted R² value is.002, and thus we can conclude that the consumer's environmental concern has a negligible impact on their attitude toward waste management products. Although consumers claim to be concerned about environmental issues, attitudes do not always translate into actual purchasing behavior, and the study confirms that there is a significant gap between environmental concern and attitude toward waste management products.

H2: Attitude towards waste management product has a positive and significant impact on purchase intention.

H3: Subjective norms have a positive and significant impact on purchase intention.

H4: Perceived moral obligation has a positive and significant impact on purchase intention.

H5: Perceived control behavior has a positive and significant impact on purchase intention.

The multiple regression analysis was performed to test hypotheses 2 to 5 on the independent variables: Attitude towards waste management products, Subjective norms, Perceived control behavior, Moral obligation.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.511 ^a	.262	.250	1.64563

a. Predictors: (Constant), Moral_obligation, PBC, ATWMP, Subjective_Norm

The output of the same is appended below.

The overall result for the regression model was significant. It is clearly indicated that all the factors (ATWMP, Subjective Norms, PCB and Moral obligation) were simultaneously significant to the dependent variable (Purchase Intention). While the adjusted R square is (Adjusted R square =0.250), the three factors contributed to

25% of overall purchase intention.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.261	1.354		6.840	.000
	ATWMP	.273	.079	.242	3.436	.001
	Subjective_Norm	.232	.055	.343	4.253	.000
	PCB	-.107	.084	-.082	-1.277	.203
	Moral_obligation	.048	.053	.051	.916	.360

a. Dependent Variable: Purchase_Intention

Model Summary^c

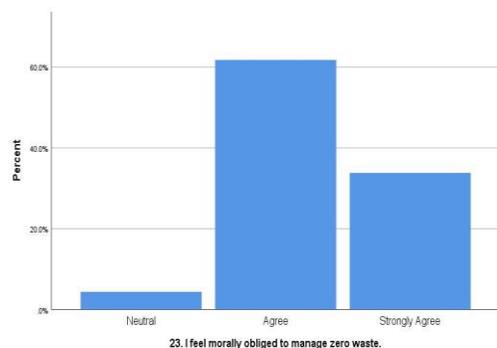
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change	Durbin-Watson
					R Square Change	F Change	df1	df2		
1	.473 ^a	.224	.221	1.67747	.224	77.345	1	268	.000	
2	.504 ^b	.254	.249	1.64750	.030	10.839	1	267	.001	1.774

a. Predictors: (Constant), Subjective_Norm

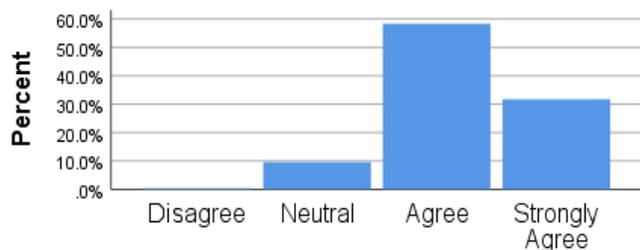
b. Predictors: (Constant), Subjective_Norm, ATWMP

c. Dependent Variable: Purchase_Intention

The attitude towards waste management products and subjective norms are positively significant in determining the purchase intention of consumer.



From the above Graphs it is clear that 95.6% respondents agreed to the fact that they feel morally obliged to manage zero waste.



25. Purchasing waste management products constitutes a moral obligation to oneself.

90% of the respondents revealed that purchasing waste management products constitutes a moral obligation to oneself.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.261	1.354		6.840	.000
	ATWMP	.273	.079	.242	3.436	.001
	Subjective_Norm	.232	.055	.343	4.253	.000
	PCB	-.107	.084	-.082	-1.277	.203
	Moral_obligation	.048	.053	.051	.916	.360

a. Dependent Variable: Purchase_Intention

From the above, it is clear that 95.6% respondents agreed to the fact that they feel morally obliged to manage zero waste and also 90% people revealed that purchasing waste management products constitutes a moral obligation to oneself but in the proposed model, perceived control behavior has no significant impact on purchase intention but moral obligation may be regarded as weakest factor in determining the purchase intention of people of Jamshedpur.

Table 4: Summary of Hypotheses Test

Hypothesis	Statement	p value	Result
H1	<i>Environmental concern has a positive and significant impact on attitude towards waste management Product.</i>	p=0.104	Not Supported

H2	<i>Attitude towards waste management product has a positive and significant impact on purchase intention towards waste management products.</i>	p=0.001	Supported
H3	<i>Subjective norms have a positive and significant impact on purchase intention.</i>	p=0.000	Supported
H4	<i>Perceived moral obligation has a positive and significant impact on purchase intention.</i>	p=.360	Not Supported
H5	<i>Perceived control behavior has a positive and significant impact on purchase intention.</i>	p=0.203	Not Supported

7. Conclusion

The current pandemic has had a great impact on the health and lives of people across the globe. Proper waste management tools and techniques are a must for sustainable growth and survival. Green marketing and green practices in India are still in the introductory phase. According to (Ramasamy & Yeung, 2009), 61% of millennials have revealed that it is their responsibility to make the world a better place to live, while 78% believe that companies have the responsibility to include them in their efforts. The same view has been supported by (Bertens et al., 2014) in their studies. India is a country governed by a plethora of religions, cultures, subcultures, values, tastes, and preferences. Consumer buying behavior is a complex process. It also varies by product; some products, such as FMCGs, are considered low-involved, whereas others, such as white goods, may require a higher level of involvement. This could be a complicated task for organizations and policy makers and they have to come up with an out of the box approach to involve all the stakeholders of society to succeed in their greening effort.

Household waste management primarily refers to separating household waste into different parts and then converting organic waste materials into useful resources, such as compost/fertilizers for plants through the use of

products such as compost bins. Even when consumers are aware of the negative environmental conditions, concern for the environment does not result in the formation of a positive attitude toward considering environmentally friendly behavior and a positive attitude toward management ($\beta = .242$; $t=3.436$, $p=0.001$). Products are also not purchased. Furthermore, the findings also indicate that the subjective norms ($\beta=.343$; $t=4.253$, $p=0.000$), which exhibit that the extent of social pressure people feel towards the purchase of waste management products such as compost bins was positive but not significantly influenced purchase intention, which is in line with studies conducted by Chen and Tung (2014), Paul et al. (2016), Han et al. (2010). Another important variable, i.e. perceived behavior control ($\beta = -0.082$; $t=-1.277$, $p=0.203$) is not significant for the purchase intention towards waste management products and the study negates the views of Chen and Tung, (2014) that perceived behavior control positively influences the purchase intention of individuals. Kim et al. (2014) linked moral reflectiveness with an individual's environmental behavior. As people who are morally inclined tend to think about the welfare of others and moral obligation can be interpreted as a motive to practice sustainable behavior and positive purchase intention to buy sustainability support products, the present study may not be in sync with previous research as the results of the study revealed that 95.6% of respondents agreed to the fact that they feel morally obliged to manage zero waste and also the same percentage of people revealed that purchasing waste management products constitutes a moral obligation to oneself, but in the proposed model, the role of moral obligation ($\beta=.051$; $t=.916$, $p=.360$) has negligible impact in determining the purchase intention of people of Jamshedpur.

8. Managerial Implication

The present study confirms the existence of an environmental concern-action gap. General consumers show off their concern for the environment, but they are not motivated enough to translate their concern into purchase intentions/actual buying motives. Proper waste management should be regarded as a responsibility of all the stakeholders of society. All the stakeholders of society, such as individuals, organizations and policy makers, will have to contribute significantly in reducing the environmental footprint, thereby contributing to sustainable development goals and the promotion of a circular economy. As a result, numerous media campaigns/drives must be launched to raise awareness and motivate the public to show concern for the environment, as environmental concern may lead to the formation of a green purchasing attitude.

9. Limitation

Firstly, the research paper focuses on the attitude and behavior of Jamshedpur, India. Due to the focus on only one place, the generalization across other districts/states is limited. Lack of previous studies in this particular area, as well as waste management products such as compost bins. The sample size depends on the nature of the

research problem. Therefore, having a sample size of only 272 may not reflect reality. The data was only collected online, and the responses may have come from tech-savvy people or people who are well-off and can afford an internet connection. As a result, the data may not reflect the views of all socioeconomic groups.

10. Contribution of Research

This study report will give valuable knowledge about the elements that influence Indian customers' buying intention for waste management products/solutions, such as compost bins. Perhaps this is the first attempt in this region to evaluate consumer purchasing intentions in relation to a disregarded product like the "Compost Bin."

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QUESTIONNAIRE:

Annexure1: Study constructs with following measurement items: Source: Paul, J., Modi, A., & Patel, J. (2016)

Environmental concern

1. I am very concerned about the environment.
2. I would be willing to reduce my consumption to help protect the environment.
3. I follow zero waste policy.
4. Major political change is necessary to protect the natural environment.
5. Major social changes are necessary to protect the natural environment.

Attitude towards purchasing green products

1. I like the idea of purchasing waste management products such as compost bin to manage zero waste.
2. Purchasing Waste management products such as compost bin is good idea to make quality manure for my garden.
3. I have a favourable attitude towards purchasing waste management products such as compost bin for my home.

Subjective norm

1. Most people who are important to me think I should purchase waste management products such as compost bin to minimize waste and contribute towards well being of the society,
2. Most people who are important to me would want me to purchase green products when going for purchasing.
3. People whose opinions I value would prefer that I purchase waste management products such as compost bin for zero waste.
4. My friend's positive opinion influences me to purchase waste management products.

Perceived behavioral control

1. If it were entirely up to me, I am confident that I will purchase compost bin for house hold waste management.
2. I feel that purchasing green purchasing green products is not totally within my control.
3. I have resources, time and willingness to purchase waste management products.
4. I feel that purchasing green products is not totally within my control.

Purchase intention for green products

1. I will consider buying waste management products because they are less polluting and help in zero waste policy.
2. I expect to purchase compost bins and other waste management products for my home in the future because of its positive environmental contribution.
3. I plan to spend more on environmental friendly products rather than conventional product.

4. I definitely want to purchase waste management products such as compost bins in near future.

Moral Obligation Scale (from: Sabucedo, Dono, Alzate & Seoane, 2018)

1. Managing zero waste, purchasing waste management product would make me feel proud of myself.
2. I feel morally obliged to manage zero waste.
3. Managing zero waste constitutes a moral obligation to oneself.
4. Purchasing waste management products constitutes a moral obligation to oneself.

Perception towards participation in Online Teaching Instruction among the Faculties of MBA during COVID-19

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Purpose: This study focuses on the perception of faculties teaching MBA in management institutes on their participation in online instruction during COVID-19 lock-down.

Design/methodology/approach: The study is based on data obtained from a survey of the management faculty who took the classes through online education during the lock-down vacation period during the COVID-19. It is a qualitative and exploratory research to find out the attitudes of faculty members teaching at post graduate level in institutions toward online instruction.

Findings: Faculties are convinced that online learning can make education accessible to everyone in these times when the physical presence of students in colleges has been made difficult because of the pandemic. Many faculties are willing to try teaching online, but feel that it could be difficult for mathematical subjects or credit subjects. Faculties welcomed online teaching during COVID -19. This research can help educational institutions to make strategies to make e-learning easier for the faculties and students. Kolb's (1984) experiential learning theory is applied to explain teaching behavior of MBA teachers during COVID -19 lock-down.

Research limitations/implications: The study was limited by participants' understanding and truthfulness when responding to the questionnaire. Respondents were assured confidentiality in an attempt to allow the freedom of response. Research focused only on business management programs and other streams like engineering, law, medicals are not considered. This study focused on teaching pedagogy in online and the impact of hardware and software are not considered.

Practical implications: Most of the teachers prepared and delivered the session through online for the first time during this COVID-19 pandemic lock-down period to consolidate their efforts to help meet the need for student and institute requirements. Work from home option has helped the faculties to work harder to deliver the session on schedule. Teachers require training in online instruction to help them feel comfortable in this teaching environment. This has also been supported by Cravener (1999), Wagner (2008) and Carthan (2007). They have explained that resistance to additional workload will continue if incentives are not provided to

encourage e-learning technology. Hence, institutes should modernize their infrastructure, need to train the faculties for imparting online training and should also give them incentives to use online learning. Unless the faculties have confidence in using online learning techniques, they will be hesitant to use them. Hence, the institutes should devise strategies to provide facilities and incentives to encourage the faculties use online learning. Further, results from this investigation could promote desire within faculty members to use the delivery methods of online instruction to help teachers in their profession.

Originality: The paper does provide new information regarding the transition from co-located to fully virtual online teaching. This research is useful because it is one of the few early researches done in India to understand the perception of faculties about the use of online learning in India, especially during a pandemic like COVID-19, which people have not experienced earlier. Also, in the Indian context, online learning is still not very common and hence, faculties should try to understand the opportunities and challenges posed by online learning in higher education institutes in India. Results from this investigation could help institute administrators to see the critical need for training for faculty in online instruction. This research can help educational institutions to make strategies to make e-learning easier for the faculties and students. Results from this investigation could help institute administrators to see the critical need for training for faculty in online instruction. Kolb's (1984) experiential learning theory is applied to explain the change behaviors among faculties toward on line teaching.

Keywords: E- learning; Perception; Behavior; Online Education; Management Training(MBA), COVID -19 lock-down

1. Introduction

COVID 19 pandemic has created the rapid expansion of e-learning and there is a need for greater understanding of the online learning dynamics from the perspective of faculties and students. Since its beginning, there have been concerns about the performance of e-learning among the teachers, and students (Carnaghan and Webb, 2007; Akdemir and Koszalka, 2008, Rogers, et. al, 2018). Modern technologies are contributing to the dissolution of traditional classroom boundaries (Shirky, 2008, Stickney, et. al, 2019). Students interact with each other and with their teachers using different ways of communication. Development of a time-based blended learning model, for instance, modifies the instructor's role (Liu and Hwang, 2010, Ferris-Costa, 2018) in learning environments based on students' learning preferences. Glance et al (2013), mentioned that most online courses are through video lectures, formative quizzes and automated assessment. Different ways of the assessment of students, and the limitation of traditional educational structures like duration of the study semester, also affect the expectations and satisfaction of the students. Faculties cultivate and encourage creativity among the students through online teaching (Ayob et al 2013, [Agustina and Rismantono, 2020](#)). Therefore, online instruction during COVID-19 is becoming a necessity. Under lock-down condition, students, and faculties are confined to indoors. This situation has created a problem of imparting teaching. *Is online instruction going to be a solution, and what will be the acceptance among faculties of post graduate (MBA) section during lock-down? (Rq1). How will be the perception and attitudes towards online education of post graduate programs (MBA) among faculties from different designation of post graduate faculties due to COVID-19? (Rq2). Teaching of non-theory courses like business statistics, research methodology, decision science requires explanation through white board. What will be the ease of teaching non theory courses (QT, RM, FM etc.) among post graduate (MBA) faculties during lock-down? (Rq3).* Therefore, Online teaching among Postgraduate faculties (MBA) needs to be investigated in emerging markets like India. There is a paucity of research on online teaching under COVID-19 condition. Hence, this study focuses on faculty perspectives of online instruction in the general and not in the specific design of courses for post graduate (MBA) faculties. Acceptance of teaching online by faculties is important specially during lock-down condition. There is reluctance to adopt the online teaching methods among the faculties as the approach is new. Behavior of post graduate faculties towards online teaching is explained through application of Kolb's (1984) experiential learning theory in our study.

There is a paucity of research on online teaching under COVID-19 condition. This study also focuses on faculty perspectives of online instruction in general and not in the specific design of courses for post graduate (MBA) faculties.

The structure of the paper is after the introduction, Literature Review with focus on gaps for variables, application of theories and developing theoretical construct followed by hypothesis development are written. This is followed by the methodology, results and discussion, conclusion, limitation and scope of the study, Managerial

Implication, and contribution of the study. The next chapter is relates to Literature Review.

2. Literature Review

The world is being challenged by one of the biggest crises in the last one hundred years. The COVID-19 pandemic, which began in December 2019, has since spread exponentially to 216 countries, areas, and territories around the world, resulting in more than ten million confirmed cases, and almost five hundred thousand deaths (<https://coronavirus.jhu.edu/us-map>). COVID-19 has created an opportunity for faculties to teach in a novel way. The COVID-19 pandemic also provides an unprecedented opportunity for our research community of studying technology-related behavior(Srivastava,2020). Chinese universities have launched online education reforms to form an open education network based on information , and network technologies(Shang & Cao, 2017). Over the past two decades, there has been a new understanding of how to teach online. Online teaching is no longer regarded as a way for students to review, but a more personalized learning scene(Gloria and Uttal,2020) Therefore, higher requirements are put forward for online teachers. Shift to higher education to online education at the same time, and teachers also need to turntable teaching way.

As per study of Lyons (2004), many professors use technology in the traditional classroom, but did not teach through online due to their likes for more personal interaction during teaching. Online technology has improved. E-learning increases access to education but quality of instruction has been found to suffer because faculties perceive an increase in workload due to online learning. They have problems in using technology because of inadequate training and support from the institute (Cravener, 1999; Carthan, 2007, Stickney, et. al., 2019). Business schools need to adapt to the impact of technology on learning. With advances in software tools, learning in higher education through online has overcome the limitation between faculties, students and administrators. (Oh, 2003; Ferris-Costa,2018; Stickney, et. al., 2019).

The success of the online teaching depends upon the factors like online presence, motivation and participation, length of the course, target audience, discipline area etc. The understanding of students is better in flipped classrooms in which the teacher just guides the students and the students are encouraged to work on their own (Asarta, Schmidt,2017). Online education has its set of challenges for active learning as per study of Biggs and Tang, (2011).

In the 21st century a paradigm shift emerged in the role of the professor to be extraordinary educators and technologically-savvy to stay competitive (Flaherty, 2015, Reeley 2016). Teachers need to be technologically savvy to stay competitive in online teaching. Present-day professors who stay cloistered at home, teaching from their electronic gadgets, and interacting with their students in virtual classroom may very well lose touch with reality. (Stan 2016).

The costs of education have increased and institute budgets have not increased. With increase in e-learning

adaptation by the students, institutes are trying to re-consider the mode of providing education through online (Wagner, Hassanein and Head, 2008, Ayob ,et. al.,2013). However, many faculties still believe that e-learning is inferior to face-to-face instruction. Since e-learning presents an entirely new learning environment, and requires technical skills from both instructors and students. Instructors take a lot of time to create, and manage e-learning contents. Unless incentives are provided to encourage instructors to use e-learning technology, resistance to additional workload is likely to continue (Wagner et al., 2008, Rogers et al ,2018).

The Allen and Seaman (2013) report has studied the growth of online learning and the use of massive open online courses (MOOCs) by institutes. Tunison and Noonan (2001) explained that online learning will have a huge influence on teachers, and students. It helps to make innovations in learning, and tries to reduce the limitations of traditional learning. Using online learning also has limitations like different levels of preparedness of students and content complexity. Also, there can be a problem in assessing learning outcomes and **faculty** may not have technical competence to use e-learning (Grandzol,2004). So today, teachers and students try to strike a balance between far and close, traditional, and novel, in higher education. (Kuntz, 2012).

Online education offers advantages that are not available to traditional education. Huang (1996,97) reported that online teaching leads to cost reduction, time saving, time flexibility, provides self- space for study, privacy, more choice, outsourcing between schools and better time management for teachers and students. With online courses, content can be covered more deeply and rapidly, and students are empowered to guide their own learning experiences. In today's world of globalization, being creative is the basis of any organization([Agustina and Rismantono,2020](#)). Creative educators can cultivate and encourage creativity among the students(Ayob et al 2013). The number of **faculty** who teach **online** courses is growing, but there continues to be some resistance to the effort (Ferris-Costa,2018), But **faculties** are more satisfied with support from technical help on usage of online **teaching** (Stickney et al. 2019)

Entire world is reaching a crisis stage; colleges were shut down due to the COVID- 19. The demand for on line teaching in business schools has increased. The need for this study arose from the increasing need for Web-based teaching. This method may prove to be a viable solution during the COVID-19 crisis period. The perception and attitudes towards online education training post graduate programs (MBA) among faculties from different designation of post graduate section are likely to be different. Teaching non theory courses (QT, RM, FM etc.) through online may require special efforts. The next chapter is relates to Application of theory ,developing theoretical construct and hypotheses

3. Application of Theory, Developing Theoretical Construct and Hypotheses

3.1 Application of Theory

Kolb's experiential learning theory is one of the best known educational theories in higher education (Mick Healey & Alan Jenkins, 2000). The term Experiential Learning Theory is used therefore to differentiate both from cognitive learning theories, which tend to emphasize cognition over affect, and behavioral learning theories that deny any role for subjective experience in the learning process. Therefore, this theory is adopted to understand the faculties behaviour of post graduate (MBA) business schools. "Learning is the process whereby knowledge is created through the transformation of experience." (Kolb, 1984; 38) The theory presents a way of structuring and sequencing the curriculum and indicates, in particular, how a session or entire course may be taught to improve student learning (Alan Jenkins, 2000). It suggests that learning is cyclical, involving four stages: experience, reflect, generalize, and test. An important feature of the theory is that the different stages are associated with distinct learning styles. Individuals differ in their preferred learning styles, and recognizing this is the first stage in raising awareness of alternative approaches about online usage to teach and helping them to be more flexible in meeting the varied demands of learning situations created under COVID-19 era. Experience in managing online with the help of IT administrator will reflect in usage of the on line medium of teaching and instill confidence and motivate the faculties to generalize the hesitation and test the online teaching through adaptation. Will this theory be useful in explaining the same under COVID-19 for adaptation of online teaching of MBA students by faculties? (Rq4). Based on these research questions theoretical construct is developed for the study.

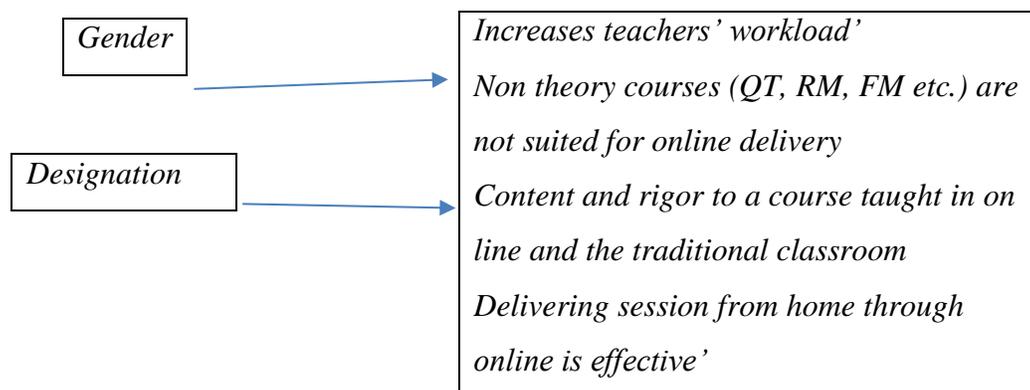
3.2 Developing theoretical construct

Based on the Literature Review, the following variables are identified. The independent variables are gender and designation of the faculty teaching MBA course. The dependent variables are: Perception of faculties experiencing increase in workload due to online teaching; Perception of suitability of online learning for non-theory courses (Quantitative technique, Finance, Research methodology, Business statistics etc) among faculties; Perception of equivalence of content and rigor of online courses with traditional teaching among faculties; Perception of effectiveness of online teaching from home among faculties of MBA.

Usage of online teaching among the faculties may differ due to gender and designation as professors may find it difficulties compared to assistant professor as confidence level of assistant professor may be higher due to motivation to accept challenges compared to professor at MBA schools. Therefore, willingness to experience will reflect in generalizing situation better and testing the online mode for teaching as per Kolb's experiential learning theory (1984). Keeping these variables following graphical framework is suggested for developing

hypotheses as in Fig.-I

Fig:I- Theoretical construct



:

Based on the theoretical construct developed on the basis of independent and dependent variables identified from Literature Review the following hypotheses are proposed :

Formulation of hypothesis

Cravener (1999) and Carthan (2007) have explained how faculties experience an increase in work load due to preparations to be made for online teaching. Wagner et al. (2008) explained that resistance to additional workload will continue if incentives are not provided to encourage e-learning technology. To understand whether faculties in India also experience an increased workload when they have to transition from traditional teaching to online teaching and whether this experience varies for faculties of different designations and gender, we can take the first hypothesis as follows. This hypothesis shows the linkage of the first dependent variable i.e. Perception of faculties about difficulty in using online learning i.e. experiencing increase in workload due to online teaching with the independent variables gender and designation.

H1: There will be no significant difference in the perception of faculties that 'teaching online courses increases teachers' workload' with respect to gender and designation as per Kolb's experiential learning theory (Rq1,Rq4)

Researchers like Oh (2003) and Lyons (2004) have said that there is a lack of personal interaction and linkage between instructors and learners because of online learning. This becomes even more pronounced in the case of non-theory subjects like mathematical subjects where concepts and formulae have to be explained to the students. Mathematical subjects like Statistics (Grandzol,2004, Stickney et al 2019), Financial accounting and financial management require explaining the formulae, how they are derived and then applying them to numerical problems. Many online platforms do not have very clear ways of showing step by step formulae or mathematical

terms. Theory subjects can be easily done online because you can send ppts, word files, or videos. But in mathematical subjects, the faculty has to go at the speed of the students which may not be possible online. Hence it is decided to find out whether faculties in higher education institutes in India also face the above problem and how this varies across designation and gender. This shows the linkage of the second dependent variable i.e. Perception of suitability of online learning for non-theory courses among faculties with the independent variables gender and designation. Hypothesis H2 is based on the above premises is given bellows:

H2: There will be no difference in the perception of faculties that 'non theory courses (QT, RM, FM etc.) are not suited for online delivery' with respect to gender and designation under COVID-19(Rq2).

Cravener (1997) and Carthan (2007) have explained that online learning increases the access to education. Similarly, Huang (1996, 1997) has also highlighted the advantages of online education, one of them being that it is equivalent in content and rigor to traditional education. Hence, it is important to understand whether Indian faculties also feel that online learning is equivalent in content and rigor to traditional education and whether this belief varies across designation and gender. Hence, we arrive at the third hypothesis. This hypothesis shows the linkage of the third dependent variable i.e. Perception of equivalence of content and rigor of online courses with traditional teaching among faculties with the independent variables gender and designation. H3 relates to same and is given below:

H3: There will be no significant difference in the perception of faculties that 'a course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom' with respect to gender and designation(Rq3).

Delivering lecture through online from home can be equally effective if the right media like ZOOM, Google Classroom, Microsoft Teams etc. is used (Srivastava et al 2020). As these tools are more user friendly, usage of the same whether from home or from college class room will not be different. It will be accepted by all across designation and gender. COVID-19 has given an opportunity to change the system of teaching. Also, researchers like Cravener (1997), Carthan (2007) and Huang (1996, 1997) have highlighted the advantages of online education and said that it can be very effective. Hence, there is need to understand the effectiveness of online education and whether it varies across designation and gender. This hypothesis-H4 shows the linkage of the fourth dependent variable i.e. Perception of effectiveness of online teaching from home among faculties with the independent variables gender and designation.

H4: There will be no significant difference in the perception of faculties that 'Delivering session from home through online is effective' with respect to gender and designation. The next chapter is relates to Research Methodology.

4. Research Methodology

Researchers used a Web-based survey created in Google form. It is a qualitative and exploratory research to find out the attitudes of faculty members teaching at post graduate (MBA) level in institutions toward online instruction. This design was chosen to provide a representation of the data that describes the results of the research (Shavelson, 1996).

4.1 Sample design:

Sample population consisted of 107 faculty members teaching post graduates (MBA) students from Mumbai, Delhi, Chennai and Kolkata (Four Metros), who are engaged in online education training methods during this lock-down period from 30th March to 15th April, 2020. The participants were randomly selected. Sample profile is given below:

Table-1: Sample Profile:

Post graduate(MBA) teaching Faculty	N	%
Male	63	58.9%
Female	47	41.1%
Sub Total	107	100%
Age profile		
Up to 35 years	35	32.7%
36-45 years	31	28.97%
46-55 years	21	19.63%
56-65 Years	20	18.69%
Sub total		
Assistant Prof	54	50.5%
Assoc. Prof	16	15%
Prof	15	14%
Guest faculty	22	20.5%

The percentage of male faculties who participated in the survey was more than that of female faculties. Majority of the faculties (50.5%) were assistant professors. Majority of the faculties (62%) were up to 45 years of age. Sample size for an exploratory descriptive study is justified as per Hair et al (2010). KMO value too is 0.820. Since the KMO value is greater than 0.7, it shows that the sample size is adequate. The next chapter is relates to Questionnaire design.

4.2 Questionnaire design:

Structured questionnaire was used to collect the relevant data from the management teachers. Using a Likert scale(5 points) , respondents were asked to rate 16 statements on a scale of 1-5, a few of them being influence on their behavior toward teaching online instruction, perception of faculties teaching ‘non theory courses like research methods, Business mathematics, Finance management etc., view on content and rigor toward online teaching compared to the traditional classroom teaching and ease of delivering session from home through online. These variables are measured on a scale of 1-5. These variables are identified based on gaps in the earlier studies like Huang (1996,1997), Cravener (1999), Unison and Noonan (2001), Oh (2003), Lyons (2004), Wagner et al. (2008), Kuntz (2012), Allen and Seaman (2013), Carthan (2017), Stickney et al (2019) on online study. Mean and standard deviation of different variables are given in table-2.

Table-2: Mean variables and standard deviation

Item Statistics

	Mean	Std. Deviation	N
Teaching online courses increases teachers' workload	2.81	1.214	107
Teaching by online instructions risks losing class autonomy	2.91	1.248	107
Non theory courses (QT, RM, FM etc.) are not suited for online delivery	2.89	1.276	107
Online delivery makes education accessible to everyone	2.95	1.568	107

Online delivery makes education affordable to everyone	2.97	1.321	107
Offering courses online can expand a class to an unmanageable size	3.00	1.414	107
Online delivery is better suited for non-credit education than for credit offerings.	2.88	1.147	107
I have a strong desire to teach online.	2.91	1.357	107
A course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom	2.99	1.170	107
Developing materials for students that support the course content is challenging	2.79	1.141	107
Teaching online is expensive than regular class room teaching	2.95	1.200	107
Interaction between Instructor and Student is more vigorous online	3.04	1.045	107
Delivering session from home through online is effective	2.93	1.264	107

The top five variables as per our surveys are Interaction between Instructor and Student is more vigorous online(M-3.04), Offering courses online can expand a class to an unmanageable size(M-3.00), A course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom(M-2.99), Online delivery makes education affordable to everyone(M-2.97), Teaching online is expensive than regular class room teaching(M-2.95) and Delivering session from home through online is effective(M-2.93). These five variables are further studied. It also indicates that online courses are appreciated by the post graduate (MBA) faculties irrespective of designation. Online teaching adoptability among post graduate((MBA) faculties are accepted and have shown positive attitude. Change normally is difficult to get acceptance, but, due to COVID-19 the acceptance of online courses is encouraging. The following gives the Cronbach alpha value for the overall construct for 'Online teaching'

Reliability Statistics

Cronbach's Alpha	N of Items
.863	16

Thus, the questionnaire is reliable as the value is more than 0.7. Since, the Cronbach alpha is greater than 0.7, it shows high reliability for the construct 'Online teaching' consisting of these variables. The component analysis led to identifying of the following factors for further analysis: Factor analysis is done. The KMO test is given below;

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
Bartlett's Test of Sphericity	Approx. Chi-Square	799.743
	Df	66
	Sig.	.000

The KMO value is greater than 0.7 which means that the sample size is adequate to conduct factor analysis. Since the significance value in Bartlett's test is 0.000, it means that the data is suitable for conducting factor analysis.

Table-3 has given the factor analysis

Table-3 Factor analysis

Rotated Component Matrix^a

	Component		
	1	2	3
Online delivery makes education accessible to everyone	.886	.071	-.070
It is appropriate to offer courses online during COVID-19 shutdown	.874	-.053	.204
Peers will support in online teaching methods	.837	.170	.117
My institution is committed to delivering education online	.814	.035	.207
I have a strong desire to teach online.	.813	.249	-.066
Delivering session from home through online is effective	.792	.328	-.166
Today's learners tend to learn differently than I did when I was in college	.783	.009	.302
Online delivery makes education affordable to everyone	.755	.168	-.201

Interaction between Instructor and Student is more vigorous online	.031	.880	.193
A course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom	.274	.867	-.002
Non theory courses (QT, RM, FM etc.) are not suited for online delivery	.087	.006	.854
Teaching online courses increases teachers' workload	.002	.163	.824

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

As seen from the above table, *four factors have been extracted*. Statements 1 to 5 will be clubbed together under factor 1 which can be named as '*Merits of traditional offline learning*'. Statements 7, 8, 9 and 10 can be clubbed together as factor 2 which can be named as '*Effectiveness of online learning*'. Statements 11, 12 and 13 can be clubbed together as factor 3 which can be named as '*Difficulties in using online learning*'. Statements 15 and 16 can be clubbed together as *factor 4* which can be named as '*Accessibility and affordability of online education*'.

The next chapter is relates to Data Design.

4.3 Data Design

Data from the completed surveys were transferred from Google form into SPSS. The processes followed during the content analysis included editing the data, assigning codes and grouping of data. SPSS 16 version was used to perform different types of descriptive statistics and independent samples t-tests were conducted from the qualitative data collected through the structured questionnaire. The next chapter is relates to Results.

5. Results

The data are analyzed and hypotheses testing is done. Details are given below:

Hypotheses testing

There are four hypotheses taken for testing. The first hypothesis is

H1: There will be no significant difference in the perception of faculties that 'teaching online courses increases teachers' workload' with respect to gender and designation

Work load as per AICTE norm for different designation is clearly defined in India. Professor, Associate professor and Assistant professor have 4hour,8hour and 16-hour norms for teaching (AICTE Mannual,2020). The work load is well accepted across the gender, age and position. Perception of faculties across the position on "Teaching online courses increases teachers' workload" is analysed using ANOVA. and is given in table-4.

Table.4. With respect to designation

ANOVA

Teaching online courses increases teachers' workload

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.467	3	.156	.103	.958
Within Groups	155.795	103	1.513		
Total	156.262	106			

Since the significance value is $0.958 > 0.05$, there is no significant difference in the perception of faculties that 'teaching online courses increases teachers' workload' with respect to designation. The next analysis relates to if there is any variation due to gender. Independent T test by doing Levene's Test for Equality of Variances and t-test for Equality of Means. Since the significance value is $0.114 > 0.05$, there is no significant difference in the perception of faculties that 'teaching online courses increases teachers' workload' with respect to gender. *Thus, it confirms H1.* This result has been supported by Cravener (1999) and Carthan(2007), Ferris-Costa,(2018) and Stickney et al (2019), who have said that teaching online increases the workload of faculties, irrespective of gender and designation. The second analysis is taken for the testing of second hypothesis.

H2: There will be no difference in the perception of faculties that 'non theory courses (QT, RM, FM etc.) are not suited for online delivery' with respect to gender and designation

ANOVA and independent sample test were used once again to (a) With respect the perception of faculties that 'non theory courses (QT, RM, FM etc.). Non theory courses require a lot of explanation. How online methods be

used to deliver subjects like Quantitative techniques (QT), Research Methods (RM) Finance management (FM)?
The analysis is given below in table-5

Table-5:Non theory courses (QT, RM, FM etc.) are not suited for online delivery

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11.299	3	3.766	2.404	.072
Within Groups	161.356	103	1.567		
Total	172.654	106			

Since the significance value is $0.072 > 0.05$, there is no significant difference in the perception of faculties that ‘non theory courses (QT, RM, FM etc.) are not suited for online delivery’ with respect to designation. Content complexity, difficulty in assessing learning outcomes and lack of technical competence among faculties can create problems as per study of Grandzol(2004) but, our study did not confirm the same. Innovation and adaptability under COVID-19 has improved the acceptance. The creativity of human resources in the current era of globalization has become the foundation of an organization([Agustina and Rismantono,2020](#)).

The next analysis relates to gender through Levene's Test for Equality of Variances and t-test for Equality of Means. Data reveal that there is no significant difference ($0.164 > 0.05$) in the perception of faculties that ‘non theory courses (QT, RM, FM etc.) are not suited for online delivery’ with respect to gender. *Thus, it confirms H2.* This can be explained on the basis that mathematical subjects require explaining the formulae, how they are derived and then applying them to numerical problems. Many online platforms do not have very clear ways of showing step by step formulae or mathematical terms. Theory subjects can be easily done online because you can send ppts, word files, or videos. But in mathematical subjects, the faculty has to go at the speed of the students which may not be possible online.

Teaching offered through traditional or online requires equal efforts irrespective of designation and gender. A course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom. Therefore, a comparative analysis on the perception of efforts to conduct classes through traditional and online courses was done using ANOVA and independent T test the next analysis is related to H3.

H3: There will be no significant difference in the perception of faculties that ‘a course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom’ with respect to gender and designation. This is given in table-6

Table-6: with respect to designation

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.930	3	2.977	2.253	.087
Within Groups	136.060	103	1.321		
Total	144.991	106			

Since the significance value is $0.087 > 0.05$, there is no significant difference in the perception of faculties that 'A course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom' with respect to designation. Once again gender analysis is done for the perception of the same. Since, the significance value is $0.549 > 0.05$, there is no significant difference in the perception of faculties that 'A course that is offered online is equivalent in content and rigor to a course taught in the traditional classroom' with respect to gender. *Thus, the study confirms H3.* This result has been supported by Huang (1996, 1997), Wen-Bin Chiou (2006), Rogers et al, (2018) who have explained the different benefits of online education, one of them being that it is equivalent in content and rigor to traditional education.

As these tools are more users friendly, usage of the same wither from home or from college class room will not be different. It will be accepted by all across designation and gender. COVID-19 has given an opportunity to change the education system of teaching. Therefore, the next hypothesis(H4) is tested

H4: There will be no significant difference in the perception of faculties that 'Delivering session from home through online is effective' with respect to gender and designation.

Table-7 is the analysis of the above hypothesis.

Table-7 : Delivering session from home through online is effective

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.588	3	3.196	2.060	.110
Within Groups	159.814	103	1.552		
Total	169.402	106			

There is no significant difference ($0.110 > 0.05$) in the perception of faculties that ‘Delivering session from home through online is effective’ with respect to designation -Professor, Associate Professor and Assistant Professor. Gender variation study using again independent T test reveals that there is *no significant difference* ($0.233 > 0.05$) in the perception of faculties that ‘Delivering session from home through online is effective’ *with respect to gender. Thus, confirming H4.* This result has been supported by Huang (1996, 1997), Wen-Bin Chiou(2006), Rogers et al,(2018) studies. Thus, summary of the four hypotheses in table-8.

Table-8: Summary of testing of hypothesis

Hypothesis	Test used	Significance value	Status of hypothesis
1. H1: There will be no significant difference in the perception of faculties that ‘teaching online courses increases teachers’ workload’ with respect to gender and designation	Independent samples t test for gender and ANOVA for designation	0.958 > 0.05 for designation 0.114 > 0.05 for gender	Accepted
2. H2: There will be no significant difference in the perception of faculties that ‘non theory courses (QT, RM, FM etc.) are not suited for online delivery’ with respect to gender and designation	Independent samples t test for gender and ANOVA for designation	0.072 > 0.05 for designation 0.164 > 0.05 for gender	Accepted
3. H3: There will be no significant difference in the perception of faculties that ‘a course that is offered online is equivalent in content and rigor to a course	Independent samples t test for gender and ANOVA for designation	0.087 > 0.05 for designation 0.549 > 0.05 for gender	Accepted

taught in the traditional classroom' with respect to gender and designation.			
4. H4: There will be no significant difference in the perception of faculties that 'Delivering session from home through online is effective' with respect to gender and designation.	Independent samples t test for gender and ANOVA for designation	0.110 > 0.05 for designation 0.233 > 0.05 for gender	Accepted

It also validates the theoretical construct as proposed in Fig.-I as all the hypotheses are also confirmed

6. Discussion

Though faculties have adopted the online teaching irrespective of designation or gender, but there are still minority of faculties who feel that teaching online courses increases teachers' workload and that teaching by online instructions risks losing class autonomy(34.5%), non-theory courses (QT, RM, FM etc.) are not suited for online delivery(33.7%), teaching online courses increases teachers' workload(28.1%), online delivery makes education affordable to everyone, but feel that online delivery is better suited for non-credit education than for credit offerings(29.9%).

Associate Professors and Guest faculty have given a higher weightage to the fact that 'Non theory courses (QT, RM, FM etc.) are not suited for online delivery' as compared to professors and assistant professors (35.5%-). This was also reported earlier by study of Grandzol (,2004). At the same time, Professors have given a higher weightage to the fact that 'Online delivery is better suited for non-credit education than for credit offerings' as compared to associate professors, assistant professors and guest faculty(14.02%). Associate Professors and Professors have given a higher weightage to the fact that 'Interaction between instructor and student is more vigorous online' as compared to assistant professors and guest faculty(28.97%) .This was also reported earlier by Stickney et al (2019).

This can be explained through Kolb's (1984) experiential learning theory as COVID -19 has given an opportunity to experience new methods of teaching. Adaptability to accept the new approach will ease the use of online

teaching. Acceptance by faculties of post graduate section (MBA) towards accepting online teaching is due to the eagerness of faculties to adapt process as per Kolb's (1984) model. The same model (1984) implies that both logical reasoning and intuitive creative thinking are improved as the student goes through the experiential learning cycle. This could be the reason for acceptance of on-line teaching across designation and gender. Training will be required for these class of faculties as innovation is the key to take care of COVID 19 effect. Adaptability will be crucial for survival for these faculties. There is need to retrain them during the lock-down condition.

7. Conclusion

Faculties are convinced that online learning can make education accessible to everyone during COVID-19 when physical presence of students in colleges has been made difficult as per the study. Many faculties, teaching MBA in management Schools, are willing to try teaching online, but feel that it could be difficult for mathematical subjects or credit subjects. They feel that internet connectivity is a challenge for online learning in emerging markets like India. But many institutes are supporting the faculties to go for online learning and gradually, they can train themselves to make online learning more effective and innovative for the students. Administrative support can instill confidence in faculties teaching post graduate (MBA) students as per our study. A training for faculties can help to reduce the anxiety and improve the acceptance level of online teaching. This will also motivate the faculties to adopt new methods as it increases the confidence level. Senior faculties are adapting the online teaching is an interesting finding of the present study. There is no gender and designation variation in adopting the online mode of teaching. Adaptation of online teaching is explained through Kolb's (1984) experiential learning theory.

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A Study of Brand image and Customer perception of Public and Private Sector Banks among Generation X and Generation Y

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Abstract

Introduction: Brand image is a composite of many thousands of impressions and facts. The significant components are 1) the reputation and performance of its brands 2) its reputation for innovation or technological ability, generally usually based on concrete events, 3) the center business and financial performance of the company, 4) its external relations with stockholders, community and customers, 5) its strategies towards salaried employees and workers, and 6) the perceived trends in the business sector in which it works as seen by the public as per article in "Analysis: Corporate Case Study by (Schering-Plough 2005). In some cases, a charismatic leader becomes so widely known that he or she adds a personal radiance to the company. This study focuses on perception of banking customers in India regarding physical resources, courteous services, committed services and assurance etc. Therefore, maintaining consistent image among few stakeholder group is also important.

Purpose: The purpose of the study is to look at Brand Image and Customer perception towards public and private sector banks among Generation X and Y, and how brand image affects banking transactions and reputation of banks among customers. Customer perceptions towards service offered by the banks and how generation X and Y are adopting new banking applications.

Methodology Type of research is primary and secondary. Data has been collected from 200 Respondents who are having Bank Accounts in Public and Private Sector Banks. Out of 200, there will be 100 from X Generation and 100 from Y Generation.

Contribution: Paper is focusing on measuring the customer perception and Customer satisfactions from Generation X and Y towards banks (public and private). There has been shift in usage of technology since past few decades in banking sector. As this shift has happened so there is the change in perception of these two generations.

Keywords: Customer Perception, Adoption of Mobile banking applications, Generation X, Generation Y, Public and Private Sector Banks.

1. Introduction

A favorable image tends to encourage shareholders to invest in a company, attract good staff, retain customers, increases profits and correlates with superior overall returns (Robert and Dowling, 2007). As mentioned by Villanova, Zinkhan and Hyman (2000), corporate image is an overall perception of the company held by different segments of the public. For example, the products and services consumer stakeholder buy are seen as having personal and social meanings in addition to functional utility. Again, they are interested in the long term stability of the company and ability of the company to maintain supplies, product/service, quality and price. The management are interested in all aspects of financial ratio analysis that all outside investors used in evaluating the firm to bargain effectively for more funds.

1.1 Introduction of Generation on X and Y (millennial)

The definition of a generation is first of all refers to classical meaning of the act of producing offspring. According to Scott and Marshall (2005), a generation is a form of age group consisting of those members of a society who were born at approximately the same time. Since World War II an idea of generation impact on social change has emerged. Based on Year of birth, classifications are given as follows: Matures or Traditionals – born between 1909 and 1945, Boomers or Baby Boomers are considered to be anyone born between the years 1946 and 1964. In general, the literature shows us that this generation has a more sensitive and smarter mindset regarding marketing then the other generations as per Rowson, 2016.

Generation X or Xers are born between 1965 and 1977. They have self satisfied sense of superiority .

Generation Y, Millennial, or Next Generation – born 1978 or later, As per Philip Kotler,(2005). As per Census, 65% percent of population is below 35 years of age. (Srivastava,2018).

1.2 Perception of Customers Towards Banks

The study of 'Banking services indicates Customer expectations and perceptions' to analyze the service quality of public and private sector banks in terms of customers' expectations and perceptions. People working in banks or employees of the bank act as a bridge between the bank and the customer. Study done by Bilamge, (2011) about customer perception is that in so many industries, banks are working hard to become increasingly customer-centric in order to grow and survive. Customer service quality is a important source of distinctive competence and often considered as a main success factor in sustaining competitive advantage in service industries (Palmer, 2001). Quality in service is unique from quality of goods. A highly satisfied and delighted customer is a very important non-financial asset for the banks.

Customer satisfaction and corporate image are the most powerful determinants of a marketer's success in the

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present era of stiff competition in the banking and financial services. Therefore, in today's banks interest has shifted from customer acquisition to their satisfaction and retention. In today's competitive environment, banking services plays a dominant role in customer satisfaction and service quality has emerged as one of the important aspect.

A distinguished and trusted brand personality makes individuals believe that a firm is reliable. This is the reason why profitable organizations work hard at building their brands and present them in an acceptable and reliable way. Previous studies suggest that a good brand image increases the consumer knowledge and builds long lasting commitment. Researchers have explored the effect of brand image on satisfaction and quality of consumer perceptions, although hypothetically it can be argued that perceived quality and consumer fulfillment will lead to consumer loyalty. This image is developed with brand attachment (Koubaa, 2008). It is generally sensed as a brand alliance kept in consumers' memory. The brand image is also considered to represent the feature of market contribution that enables organizations to build connection in the mind of consumers and include additional value in the form of exciting benefits, which enlarge past product attributes and efficient benefits. Brand image can be expressed as the consistent customer perceptions that connect them to particular brands. It also expresses essential characteristics of advertising actions, branding and market contribution with different descriptions and advances to its consideration. The study of brand image has long been accepted as one of the vital area of marketing. A good brand image is a great asset. Image of a brand plays a dynamic role in the achievement of large shares in the consumer market.

As in today's changing environment banking business has gone hay way and customers are bothered and tensed about their finance and savings as where to park them safely. Kalagarsamy and Wilson (2013) had studied on Decade-Focus on Customers which are as follows; In the Year 1950-1960 - Serving the customer, Year 1960-1980 - Satisfying the customer, Year 1980-1990 - Pleasing the Customer, Year 1990-2000 - Delighting the customer, Year 2000 and beyond - Retaining the customer. Generation Y have expectations of the minimum level of services often meet the highest quality standards and they do not forgive mistakes. The news of bad service spreads rapidly, filling thousands of sites. For any brand this could be the start of the end. In practice, the younger generation doesn't mind talking publicly about their user experience, therefore managing them is an issue that is why this study has been taken. Generation X perceive banking services as complicated. generation X expects to have more user-friendly functions specifically when it comes to online transactions. However, this process is liable to continuous change over time as the purchase characteristics of the customers change due to their psychological and physical needs. It is therefore important that the processes, physical, psychological and emotional that consumers utilize while selecting a distribution channel in the purchase of

financial services are taken into account in any consideration of consumer behavior. For the effective banking transaction the banks should have better communication and soft skill also needed. (Sukhaprada Devi, Ahmed and Ramakanth, 2016). Even though the customer is well educated some time high technology banking services hesitate the customer for the transaction. It may be due to reason such as security purpose.

There is more need for technological innovation in banking services, due to higher expectations of customers. The technological innovation includes ATM, Internet banking, Phone Banking, Mobile banking etc. Customers have their own demands, needs and preferences in a particular. And few public sector as well private sector banks are not that level techno-savvy. As there is lot of competition in this sector cutomers will swtich their account to other bank which is more tech savvy and this way bank may loose their customers as their expectations are not met in terms of technology.

The purpose of the study is to look at Brand Image and Customer perception towards public and private sector banks among Generation X and Y, and how brand image affects banking transactions and reputation of banks among customers. Customer perceptions towards service offered by the banks and how generation X and Y are adopting new banking applications. Therefore, in today's time bank's interest have shifted from customer acquisition to customer perception.

2. Literature Review

2.1 Consumer Perception of Generation X and Y (Millennial) Affects The Banking Transaction.

Regardless financial banking services, (Roig et al., 2013) have found that perceived value of functional and emotional benefits affect positively customer satisfaction, whereas perceived social value has a positive effect on loyalty. (Boksberger,2011) have found that Perceived Quality has a stronger effect on loyalty (both direct and indirect through satisfaction) compared to perceived value, which only exercises an indirect effect on loyalty. (Rouibah, 2015) had showed that high charges, poor security and lack of trust were the major constraints that affected e-payments. However, security features of banking facilities, internet, privacy and quality of services were also affecting adoption of e-payments. (Roy and Sinha, 2014) has indicated that e-payment systems had grown highly in India and there was more scope for increasing usage of digital payments. They have also found that incentives, innovativeness, convenience and legal provisions were contributing to improve the e-payment system. (Singh, 2017) concluded that there was significant difference between education of consumers and adoption of digital payment. The perception of consumers for digital payment had positive and significant effect on adoption of digital payment among consumers. Rao et.al (2012) have suggested that there is a strong need of bondage between employee and customer in the nationalised bank as customers are not satisfied with the

employee behavior and infrastructure, while private bank customers are not satisfied with high charges, accessibility. Now a day's all banks are providing similar product, so to different and to capture market share there is need of continuous unique change, As per Harshita,2015 all banks are providing almost similar products and services to satisfy their customers completely. Continuous metamorphosis of bank leads to more increase in customer base of private sector bank in comparison to public sector bank as well as positive impact on the profits of the bank. (Rao et. Al, 2012). Sun and Li, (2016) argued that brand personality represents the symbol of consumer personality trait association and is an indispensable auxiliary tool in product marketing. Perceived quality is considered an essential antecedent to “brand image, brand loyalty, and customer satisfaction” (Kim, Choe & Petrick, 2018). There is need to examine the online banking perception with respect to service quality dimensions fulfillment among public sector bank customers in India. Public sector banks are lacking smarter investments in technology as compared to other private and foreign sector bank customers . (Tamilselvi& Balaji 2019). Various developments have taken place in Indian Banking. Among the various developments, technology has influenced the way customer interacts with the banks. Electronic channels and products such as ATM's, cards, internet banking and mobile banking are offer along with traditional bank channel. Difference in the practice of channels exists between developed countries and emergent countries as mentioned by Sangeetha et.al 2020. As per Parveen et.al, 2021, Indian banks are working under intense competition from new generation banks and foreign banks. It is due to advancement of information and technology, which makes the dramatic changes in the banking segment. E-banking is an automated payment system, that helps customers of a bank or other financial institutions to conduct a financial transaction. Summary of Literature Review is given in table-1

Table : 1 Consumer perception of Generation X and Y (Millennial) affects the Banking transaction

Author	Area of research	Gaps
Parveen et.al (2021)	E-Banking, Customer perception	Customer satisfaction
Sangeetha et.al (2020)	Usage of technology, Customer Sastifaction	Customer perception
Tamilselvi& Balaji (2019)	Service quality, customer perception	Customer relationship management
Kim et.al (2018)	Brand image,	Corporate image

	Customer satisfaction, customer loyalty	
Singh (2017)	Consumer perception, Adoption of digital payment	Customer expectation
Rouibah, K. (2015)	Service Quality, Customer Satisfaction	Corporate image, Customer Relationship Management
Roy and Sinha (2014)	Corporate image, service quality, customer loyalty	Customer perception
Roig et al. (2013)	Customer loyalty, customer satisfaction, emotional benefit, functional benefit.	Customer Relationship Management, banking services
Sun and Li (2016)	Brand image	Customer Relationship Management
Harshita B (2015)	Customer satisfaction, Service quality	Corporate Image
Rao NS, Bhatnagar H (2012)	Customer satisfaction	Customer loyalty
Boksberger and Melsen, (2011)	Customer perceived value (CPV) of products and services	Customer satisfaction, customer perception, banking Services

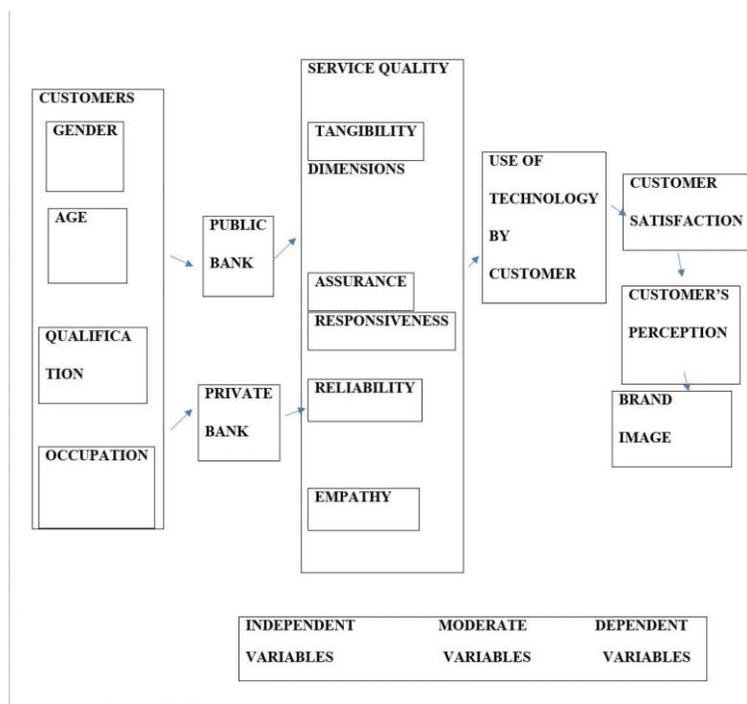
The research area is about finding the level of perception and usage of technology while taking services of the banks. Therefore, main focus is to find out that how the Indian banks are meeting the expectation of generation X and Y. As there is a paucity of similar research in this area the present research will add information to the existing knowledge. As Literature Review has been studies, and area of research and gap has been identified. Therefore, identification of variables have been identified on the basis of Literature Review.

3. Identification of Variables and Developing Hypotheses

3.1 Identification of Variables Classifying and Identifying Research Gaps

Characterizing research gaps deepens the understanding of how research gaps can be framed and may thus help to identify research gaps in Literature Reviews. The goal of this paper is to propose a framework to identify the research gaps when conducting research reviews. However, the explicit knowledge in the literature about how research gaps have been identified is limited. As research gap is limited, Literature Reviews might contain explicit or implicit knowledge on how researchers identified research gaps. Variables in area of my Research are Usage of Technology, Customer Satisfaction, Customer Perception, Brand Image, Service Quality. Table-2 gives the list of the same.

Table 2 Table of Variables



Customer Satisfaction

Customer satisfaction is defined as a measurement that determines how happy customers are with the products and services. Customer satisfaction information, including surveys and ratings, can help a company determine how to best improve or changes its products and services. An organization's main focus must be to satisfy its customers and this applies to industrial firms, retail and wholesale businesses, government bodies, service companies, non-profit organizations, and every subgroup within an organization.

Customer perception

Perceived customer value is a marketing and branding related concept that points out that success of a product or service is largely based on whether customers believe it can satisfy their wants and needs. Customer perception is typically affected by advertising, reviews, social media, public relations, personal experiences and other channels. . Companies are doing research in the market to get a sense of how customers think and feel. (Neil Kokemuller, 2018).

Brand Image

Brand image is the immediate mental picture that the audience have in their mind of an organization. It can be defined as mental picture that springs up at the mention of a firm's name. Unlike corporate identity, it can be changed overnight from positive to negative and also to neutral. As per Anderson and Sullivan (2003) claims that high customer satisfaction will develop positive corporate image because it will provide positive word of mouth. Therefore, corporate image is seen as microeconomic results of satisfaction (Weigelt & Camerer, 2008).

Service quality

Service quality construct and establish its linkages with other constructs like, customer value, customer satisfaction and behavioral intentions. Service quality has been reported to be affecting behavioral intentions directly as well as indirectly through mediation effect of other constructs such as customer value and customer satisfaction as per cronin et.al 2000. Accordingly, Izduierdo et al (2005) states that service quality is reached by establishing good relationships. Service is process consists of a set of activities more or less intangible naturally occurs in interactions between customers and staff, physical resources, goods and or service providers systems that will be solutions to customer problems. Service is an activity or benefit that offers one party to other party. (Monavarian & Amiri 2005).

As per Parasuraman et.al, the five Dimensions are as follows-

- A. **Reliability**- Reliability means organisation performs services on time and try to fulfil the promises and pay attention to the results.
- B. **Assurance**- Assurance has been defined as employee's knowledge and courtesy and capacity to transfer

trust and confidence to the customers.

- C. **Responsiveness** - Parasuraman et.al have focussed on responsiveness of willingness of employees in informing the customers exactly when service will be provided , giving them attention, promoting services.
- D. **Tangibles** – Since services are tangible, customers derive their perception of service quality by comparing the tangible associated with these services provided. Tangibles are physical facilities such as tools, machines, external appearances counters in the banks overdraft facility. Tangibility is also having a similar importance as Empathy.
- E. **Empathy**- In this competitive world, the customer’s requirements are rising day after day and it is the organisations’ duties to their maximum to meet the demands of customers, and make them feel important else customers who do not receive individual attention will search elsewhere. The next section is related to hypothesis development

a. Hypothesis development

The perception of the consumer depends on internal factors such as beliefs, experiences, needs, moods and expectations. Generation Y is expected to be one of the largest customer segments within a few years. Generation Y is significantly different from the previous generations that is Generation X. (Glass, 2007) have found that Generation Y is the first generation to grow up with constant supply of new technologies, and they are therefore willing to try and use new technologies to a larger extent than previous generations like Generation X. However, banks have offered customers digitalized services such as Internet banking. Millennials will not go all-electronic and the future will not mean the end of branches because electronic channels do not provide the same level of completion and confidence, as face-to-face interaction. And Generation X be brought into the electronic age. This can serve more customers and reduce staffing models as routine transactions will be done via ATM and mobile. Therefore, current hypothesis is discussed and accordingly research questions has been framed below. Customer satisfaction can be defined as the state of mind that customers have about a bank when their expectations have been met or exceeded over lifetime of the service. Customer satisfaction can help any bank to identify opportunities for services innovation

H1 - *There is a significant difference in the Customer satisfaction across the Types of Bank.*

H_{1a}: *There is a significant difference in the Customer satisfaction across the Age group of Generation X and Y.*

H2: *There is a significant difference in the Use of Technology across the Type of Bank..*

H_{2a} : *There is a significant difference in the Use of Technology across the Age group of Generation X and Y.*

4. Methodology

4.1 Research Design

Research study was done through two types of data i.e primary data and secondary data. Primary data consists of pilot study and was conducted by framing detailed questionnaire and it was collected through offline and online mode. It was conducted between December 2020 to March 2021. Total 148 customers of the banks have been selected to participate in the study. Banks consists of private and public sector banks. Customers consists of Generation X and Y (Millennial). Among them 69 were generation X and 79 belong to generation Y having their accounts in Public or Private sector bank. Information related to the study is collected through a detailed structured Questionnaire. Total 148 respondents are considered for this study. Cronbach's alpha test was conducted to test the reliability of the data and Descriptive and Anova F test was conducted to test the Hypotheses, by using SPSS software. As this is my ongoing research study with huge sample size. Therefore, out of that, around 148 customers' response was taken into consideration for pilot study.

4.2 Sample Design

Information was collected through a structured Questionnaire and total 148 respondents are considered for this study. Variables considered were services quality and customer perception from the questionnaire. Out of 148 customers, 79 had their accounts in public sector banks and 69 had their accounts in private sector banks. Data related to the Demographics is rated, classified and presented in the following table-3 :

Table 3 : Demographic data

Demographic factors	Components	Frequency	Percent
Generation	Generation X	69	46.6
	Generation Y	79	53.4
Type of Bank	Public	79	53.4
	Private	69	46.6
Gender	Male	77	52.0
	Female	71	48.0

The above table indicates that out of 148 respondents 69 belonged to Generation X, while 79 respondents belonged to Generation Y. Of these 148 respondents 79 had account in Public Banks, while 69 respondents had account in Private Banks. Also, out of these 148 respondents 77 were Male respondents, while 71 were Female

respondents.

4.3 Questionnaire Design

Cronbach Alpha test is used for validation of likert scale used in the questionnaire. Questionnaire were framed as per the variables. Likert scale was ranging from 1 to 7. 1 Being lowest to 7 being highest. Test is applied for all 148 respondents and parameters were measured of perception of service quality towards the banks as given in table-4.

Table 4: Following table indicates the result of Cronbach's Alpha Test

Variable Name	No. of subgroups	Cronbach's Alpha	Result
Perception of Service Quality	10	0.952	Scale is reliable and accepted

Above results indicate that Cronbach Alpha value is 0.952 for the Perception of Service Quality variables. It is more than the required value of 0.700. Hence the test is accepted. Conclusion is **scale is reliable and accepted.**

4.4 Data Design

There are two types of statistics used in data analysis. Descriptive statistics consists of Arithmetic mean and standard deviations are calculated. Inferential statistics is used for testing of hypothesis. Statistical tools such as F-Test and Cronbach Alpha test has been conducted.

5. Results

Results are obtained by using Anova F test . The first hypothesis focus on customer satisfaction towards public and private sector banks and sub hypothesis focus on Generation X and Y. Secondly other hypothesis focus on usage of technology by public and private sector banks and sub hypothesis focus on usage of technology among Generation X and Y. Not listed variables were customer relationship management, customer retention.

5.1 Perception of Service Quality:

Responses related to Perception of Service Quality statements is rated suitably. Mean Scores for the same are calculated using appropriate formula and presented in the table-5 as follows:

Table 5: Descriptive Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Perception	148	14.29	95.71	62.1236	18.85777
Valid N (listwise)	148				

The above table indicates that the Mean score for Perception of Service Quality is 62.12 percent. Corresponding standard deviation is 18.85, suggesting that there is a high variation in the responses of Generation X and Y. As Customer perception towards services was not measured in my previous research so that's why my current research focuses on generations' responses towards perception of service quality.

5.2 Hypotheses Testing

Hypothesis H_{11A}: There is a significant difference in the Customer satisfaction across the Type of Bank.

To test the above Hypothesis , ANOVA is obtained and F-test is applied. Results are as shown in the table-6 below:

Table 6: ANOVA table for Customer Satisfaction among banks

ANOVA					
Customer Satisfaction					
	Sum of Squares	df	Mean Square	F	p-value
Between Groups	1383.012	1	1383.012	5.354	.023
Within Groups	20146.605	78	258.290		
Total	21529.617	79			

Interpretation: The above test results indicate that the calculated p-value is 0.023. It is less than 0.05. Therefore F-test is rejected. Null hypothesis is rejected and Alternate hypothesis is accepted. There is a significant difference in the Customer satisfaction across the type of Bank. **Finding** is that there is a significant difference in the mean score of Customer satisfaction across the type of Bank. Customer satisfaction is higher in the Private sector Banks as compared to the Public sector banks. It indicates that customers are well satisfied and inclined

towards private sector as compare to public sector banks. Between the generations there is variation in satisfaction as well towards these banks as mentioned in table-7.

Table 7: Report of Customer Satisfaction among banks

Report			
Customer Satisfaction			
Type of Bank	Mean	N	Std. Deviation
Public	74.0024	46	17.16413
Private	82.4132	34	14.44874
Total	77.5770	80	16.50839

The above table indicates that the mean score for Customer satisfaction is highest at 82.41 percent for Private sector banks, while it is lowest at 74.00 percent for the Public sector banks. This verifies our findings. As previously there no was research conducted about customer satisfaction among generation X and Y.

Hypothesis H_{11B}: There is a significant difference in the Customer satisfaction across the Age group of Generation X and Y.

To test the above Hypothesis, ANOVA is obtained and F-test is applied. Results are as shown in the table-8 below:

Table 8: ANOVA table for Customer Satisfaction across Generation X and Y

ANOVA					
Customer Satisfaction					
	Sum of Squares	Df	Mean Square	F	p-value
Between Groups	859.595	3	286.532	1.054	.374
Within Groups	20670.022	76	271.974		
Total	21529.617	79			

Interpretation: The above test results indicate that the calculated p-value is 0.374. It is greater than 0.05. Therefore F-test is accepted. Alternate hypothesis is rejected and Null hypothesis is accepted. There is no significant difference in the Customer satisfaction across the Age group of respondents. **Finding** is that the

difference in the mean score of Customer satisfaction is highly insignificant across the age group of respondents. There is hardly any difference in the satisfaction level across the generation X and Y. Customer satisfaction is similar irrespective of the age group of respondents. This can be observed in the following table -9:

Table 9: Report of Customer Satisfaction across Generation X and Y

Report			
Customer Satisfaction			
Age	Mean	N	Std. Deviation
Up to 25 years	69.5736	11	19.28502
26 to 35 years	77.5508	13	18.04395
36 to 45 years	79.6631	29	17.21007
More than 45 years	78.6096	27	13.51732
Total	77.5770	80	16.50839

The above table indicates that the mean score for Customer satisfaction is 79.66 percent for respondents aged between 36 to 45 years, while it is lowest at 69.57 percent for the respondents aged below 25 years. This difference is not significant according to the F-test results. This verifies our findings. There is a paucity of similar research conducted previously about customer satisfaction across the age group of generation X and Y.

Hypothesis H_{12A}: There is a significant difference in the Use of Technology across the Type of Bank.

To test the above Hypothesis, ANOVA is obtained and F-test is applied. Results are as shown in the table-10 below:

Table 10: ANOVA table for Usage of Technology across Banks

ANOVA					
Technology					
	Sum of Squares	Df	Mean Square	F	p-value
Between Groups	.524	1	.524	.003	.958
Within Groups	14468.276	78	185.491		
Total	14468.800	79			

Interpretation: The above test results indicate that the calculated p-value is 0.958. It is greater than 0.05. Therefore F-test is accepted. Alternate hypothesis is rejected and Null hypothesis is accepted. There is no significant difference in the Use of Technology across the Type of Bank. **Finding** is that the difference in the

mean score of Use of Technology is highly insignificant across the Type of Bank. Customers of Private and public are using the technology at almost same level as reported in table-11.

Table 11: Report of usage of technology in private and public sector banks

Report			
Technology			
Q2 Type of Bank	Mean	N	Std. Deviation
Public	70.13	46	13.189
Private	70.29	34	14.186
Total	70.20	80	13.533

The above table indicates that the mean score for Use of Technology is highest at 70.29 percent for Private sector banks, while it is lowest at 70.13 percent for the Public sector banks. This verifies our findings. As per mean score of Use of Technology is highly similar irrespective of the type of Banks. As there was no research conducted previously about usage of technology across public and private sector bank.

Hypothesis H_{12B}: There is a significant difference in the Use of Technology across the Age group of respondents.

To test the above Hypothesis, ANOVA is obtained and F-test is applied. Results are as shown in the table-12 below:

Table 12: ANOVA Table for usage of technology across the Generation X and Y

ANOVA					
Technology					
	Sum of Squares	Df	Mean Square	F	p-value
Between Groups	310.934	3	103.645	.556	.645
Within Groups	14157.866	76	186.288		
Total	14468.800	79			

Interpretation: The above test results indicate that the calculated p-value is 0.645. It is greater than 0.05. Therefore F-test is accepted. Alternate hypothesis is rejected and Null hypothesis is accepted. There is no significant difference in the Use of Technology across the age group of respondents. Finding is that the difference in the mean score of Use of Technology is highly insignificant across the Age group of respondents. Use of Technology is similar irrespective of the age group of respondents. This can be observed in the following table-

13 :

Table 13: Report of Usage of Technology across the Generation X and Y

Report			
Technology			
Q4 Age	Mean	N	Std. Deviation
Up to 25 years	74.36	11	12.094
26 to 35 years	71.54	13	15.941
36 to 45 years	69.72	29	15.021
More than 45 years	68.37	27	11.314
Total	70.20	80	13.533

The above table indicates that the mean score for Use of Technology is highest at 74.36 percent for respondents aged up to 25 years, while it is lowest at 68.37 percent for the respondents aged more than 45 years. This difference is not significant according to the F-test results. This verifies our findings.

6. Discussion

The aim is to get various problems or satisfaction of banking customers in India regarding physical resources, courteous services, committed services and assurance etc. There is a difference in the attitude of Generation X and Y regarding assessment and perception of service offered by multinational banks. It is seen that Generation Y are open to the multinational banks and may prefer their flexible and modern facilities. The generation X accustomed to the traditional mode of transactions would still prefer the long waiting time and inefficient services offered by the Indian banks. The generation Y is more conscious about the Foreign bank's image and its effect on service delivery. Therefore, Foreign banks with their global operations are considered to be more efficient and responsive by generation Y as compared to Generation X.

In this study the variables considered were service quality and customer perception from questionnaire.

Demographic factors were generations, types of banks and gender. Further Cronbach test was conducted and result was 0.952 and scale was reliable and accepted. For the perception of service quality variables. H1 indicating that significant difference in customer satisfaction across the type of bank but there is no significant difference in customer satisfaction across the age groups of respondents i.e generation X and Y. In next hypothesis, there is no significant difference in usage of technology across the type of banks i.e private sector and public sector banks and across the generation X and Y.

7. Conclusion

It is an Exploratory study, as there are many radiant questions based on data which are not relevant data because of millennials thinking is different. As, Population is below 35 years, proper attention represented to Y and Z generation. These two different categories differ in terms of banks. There is significant difference in Customer Satisfaction of public and private sector banks, but there is no significant difference in Customer Satisfaction among Generation X and Y. As per second hypotheses, there is no significant no difference in terms of usage of technology across private and public banks as well among generation X and Y

8. Managerial Implication

Millennial are currently becoming a very attractive target segment for banks. Inside this segment we can find many difference of opinion regarding the technologies using, perceptions of banking services, using banking applications and so on. These habits are mostly in relation with the identifying factors as gender, educational attainment, age, status. That is why I have focused in this survey to find out the relations between Generations and two different sector banks. These factors can be considered as elements, which create the image of the banks.

9. Limitation

It is exploratory research. It is restricted to certain area and people of different age groups are of different opinion as per perception of public and private sector banks. Results totally depend on opinion of respondents. More data will be required to extend the research.

The researchers recommend that further studies should expand the sample size. This could be done by involving customers from other Asian countries for comparison purposes among different cultures. A study on the impacts of each electronic banking type such as ATM, mobile, and internet banking on customer satisfaction may be done to gain perspective about the effectiveness of electronic banking services.

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10. Contribution of Research

This research extends the service by exploring the relationship between customer satisfaction and usage of technology. In other words, this study demonstrate the satisfaction level of the customers i.e. Generation X and Y towards the level of technology provided by banks and the level of usage is done by these generations. This research has also some Managerial Implications. For the future, this research should encourage the researcher to explore the link between customer satisfaction and brand relationship in different service industry such hospitality, airlines etc.

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A study on Adoption of Digital Banking Services in Indian Public Sector Banks

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Abstract

Purpose: This study aims to discuss different Digital Banking Products & Services (along with specialized facilities) provided by the Indian Banks. The study also aims to compare the digital transaction ratios for Public Sector Banks in the country. Also, it aims to give some recommendations in order to improve the share of Digital Transactions in the Banking Industry in the country.

Methodology: We have used Secondary data available on different public platforms for the research purpose. The Annual Reports, Investor Presentations (based on Financial Results for the Banks) available on Public Domain have been used. Primary research was done through questionnaire involving 858 respondents. Descriptive Analysis has been done on the data/ information collected from various sources.

Findings: Although efficient, Core Banking was still dependent on offering products & services to the customers manually. Apart from a few selective ATMs provided by limited Banks, the customers had to visit the branches in order to conduct their financial & non-financial transactions. The Public Sector Banks also followed suit the Private Sector Banks in digitally transforming their products & services. State Bank of India (SBI), the country's largest commercial Bank launched many digital products like BHIM-SBI, 20 SBIPay, SBI Quick in the wake of Digital India initiative. In the year 2016-17, it set a target that it would generate 50% to 60% of its total revenue through its digital banking products. They have also developed different unique products which directly affect their business share through digital modes. They have devise strategies to improve their asset side by sourcing loans through digital platforms which limits footfall at the branches.

Contribution: The research adds value to existing knowledge on banking sector. The research helps to find out the influence of moderating factors like COVID-19 and demonetisation on the usage of digital banking services by the consumers of Public Sector Banks

Keywords: Public Sector Bank, Private Sector Bank, Digital Banking, Digital India, Demonetisation, COVID-19

1. Introduction:

Banking Industry in India is one of the premiere industries of the country which provides substantial strength to the economy. Presently, the Banking System constitutes of 12 Public Sector Banks, 22 Private Sector Banks, 44 Foreign Banks, 56 Regional Rural Banks, 1485 Urban Cooperative Banks and 96000 Rural Cooperative Banks, as reported by IBEF Report, (Nov'20). Public sector banks are owned by the government of India.

In last couple of years, the Indian Banking system has also been a pioneer in implementing the Government schemes towards inclusive and exclusive development of the society. The Banks have been playing a major role towards the growth of the nation by bringing most of the people into the financial system. However, the Banks have a major task in retaining their existing Customers and acquisition of new customers, in addition to providing quality Customer Service (www.financialservices.gov.in/banking-divisions/Important-Schemes).

Digitization of Banking products & services is one of the many paths, which the Banks could adopt in an optimum way to overcome the hurdles faced during providing face to face service to their customers (Economic Times, 2019). The Banks could develop a proper IT Support system to transform their existing services into digital platforms accessible to their customers, helping in reduction in footfalls at the branch and providing service in a comparatively quick and hassle free manner. This is also in line with the vision of the Government of India's 'Digital India' initiative, which has been formulated to reach to the citizens of the country electronically by means of enhanced online infrastructure and to provide all the services through increased internet connectivity. The campaign, which was launched in the year 2015, includes proposal for connecting rural areas with high speed internet networks. Also, it aims to increase the ICT ranking of the nation in ICT Development Index in the coming years, as reported by Deloitte Report (2016).

'Digital India' initiative has three major pillars of vision to be accomplished. These are 'Infrastructure as a utility to every citizen', 'Governance and services on demand', and 'Digital empowerment of citizens'. These vision pillars would be accomplished through nine focus areas, which would empower the overall objective of connecting every citizen of the country through internet. The focus areas for improvement identified are e-Governance (reforming government through technology), universal access to mobile connectivity, broadband highways, public internet access program, information technology for jobs, manufacturing of electronics, e-Kranti (electronic delivery of services), early harvest programs, and information for all. These areas have been supplemented by various initiatives (e-Hospital, Skill India, Bharat Net, Aadhar enabled payment system, Bharat Broadband Network, Bharat Interface for Money (BHIM), etc) launched by the government which are being operated at different levels, as reported by Deloitte Report (2016).

In line with the vision of the Government to implement the 'Digital India' initiative, the Banks in India have taken steps towards upgrading their existing systems, technology set-ups, soft-ware and other back-end structural support. As the banking industry forms the backbone of Indian Economy, implementation of this initiative in addition to already implemented Government schemes/programs like Pradhanmantri Jan Dhan Yojana, Atal Pension Yojana, Pradhanmantri Awas Yojana etc, would strengthen the focus of the Government towards a futuristic financial network across the nation (<https://financialservices.gov.in/new-initiatives/schemes>).

The Public Sector Banks in the country play major role in driving all Government schemes & initiatives. Their customer base is large and reaching to their customers for acceptance of 'Digital India' initiative will help in utmost manner. Public Sector Banks have slowed down in branch expansion since last three years, and are focussed on digital banking services for providing adequate support to their customers. Digitization along with NPA Reduction has been one major agenda for achievement in Public Sector Banks (Economic Times,2019) The leading Private Sector Banks have already moved way ahead in implementing digital, Artificial Intelligence based Customer Interaction platforms and also in process of robotic automation for providing financial service. Public Sector Banks need to catch up in this regard and could improve efficiency by implementing various digitized systems in place of their traditional setup.

The digital banking transactions performed by consumers of SBI, a leading Public Sector Bank, is observed to be almost 38% less than digital transactions performed by consumers of HDFC Bank, a leading Private Sector Bank, as on 31.03.2020 (Annual Report, 2019-20). This implies that there is still lot of scope for the Public Sector Banks to increase the share of non-ATM digital transactions. However, as the consumers of Public Sector Banks come from various sections of the society and also include citizens of the remotest regions of the country, the adoption of these technological changes has been slow. There has been resistance in the transition process from traditional to digital banking services in Indian Public Sector Banks (Bagla and Sancheti, 2018).

The resistance in adoption of digital banking services in Public Sector Banks is a result of various factors like customer awareness, delivery challenges, data integration, security risk and legal risk. The Public Sector Banks have a task in hand towards educating their customers towards the advantages of the digital banking products to build up consumer trust in this regard. Also, the Banks must build up on the scalability and adaptability of technology framework for increasing the consumer foothold in digital banking services. However, the security and legal angle should not be compromised in order to provide a formidable IT infrastructure. The consumers' adoption of digital banking services also depends on individual perception towards overall value provided by the product. The individual also takes the risk factor, convenience factor and cost related implication while selecting any new product or service for usage (Srilatha and Sudhakar, 2018). An individual's intention to use is the driving factor towards actual usage of the product. The relationship between different factors related to consumer

perception like Ease of Use, Value, Risk, Convenience, Cost etc with the behavioral intention of consumer towards adoption of certain product is required to be analysed under different perspective.

Existing research on adoption of digital banking services offered by Indian public sector banks have been limited. However, the studies have shed light on certain resistance shown by the consumers towards adoption of these services. Hence, a need for analysis of various factors influencing adoption of digital banking services among consumers of Indian Public Sector Banks is required for obtaining a real picture.

A consumer's decision towards adoption of any service or purchase of any product is initiated from the step of 'Need Recognition'. The need or problem faced by the consumer may be classified as either 'functional need' or 'social need' or 'need for change'. The recognition of the need may be a natural process or may be induced by the service renderer/ product manufacturer, who induce the need by means of promotion practice. After the need is recognised, the consumer searches for information related to various available alternatives which may satisfy the specific need. Information may be collected from the social circle or other sources. The next step involves with evaluation of various alternatives searched by the consumer. Consumer evaluates the alternatives depending on various factors which will affect his final purchase decision (Lautiainen, 2015).

The present study aims to identify the factors influencing adoption of digital banking services offered by Indian public sector banks. The study tries to extend the usage of Technology Acceptance Model (Davis *et al*, 1989), Unified Theory of Acceptance & Use of Technology (Venkatesh *et al*, 2003) and Diffusion of Innovations Theory (Rogers, 1962) to explain the factors influencing behavioral intention towards adoption of digital banking services in context of Indian Public Sector Banks. Also, a study on effect of COVID-19 pandemic on the consumer behavior towards digital banking services has been done.

Consumer's adoption of digital banking services plays a major role in improving customer satisfaction (Izogo and Jayawardhena, 2018). Various factors influence the belief and attitude of the user towards adoption of a new service.

In wake of spreading of Novel Corona Virus in the year 2020, the Government of India announced nationwide lockdown and restricted movement of public leading to closure of many services and transportation systems. The Banks urged their customers not to visit branches for their financial activities and requested them to use various Digital Banking services for their financial needs.

However, it was imperative to find that whether the instructions or guidelines issued by the Bank would affect the attitude of consumers who normally tend to visit respective Banks for their day-to-day financial needs (Bhasin and Rajesh, 2021). *Therefore, how Indian consumers will adapt to digital banking offered by Public sector banks in Corona time ?(Rq1)* Also, a necessity was felt that if there is a change in behavior among the consumers towards adopting digital banking services as against physically visiting branches. The risk averse consumers who tend to avoid using digital banking products due to fear of security or privacy breach might still prefer visiting

branches (Kaur *et al*, 2021). Will perceived risk and perceived cost affect adoption of digital banking?(Rq2) Hence, a need was felt to observe the influence of Perceived Risk & Perceived Cost on adoption of digital banking services.

The present study has an objective to analyse the factors which affect behavioral intention towards adoption of digital banking services provided by Public Sector Banks of the country. Also, it aims to give some recommendations in order to improve the share of digital transactions in the banking industry in the country. A Literature Review was conducted by studying and analysing existing research articles published in different journals for identification of variables during the course of the present study. The linkage of independent variables and dependent variables was studied by developing a Theoretical Construct as per various relevant theories and models like UTAUT, Technology Adoption Model, etc and Hypotheses Formulation was completed. Further, Research Methodology which includes Research Design, Sample Design and Questionnaire Design for survey purpose was done. After collection of data from sample, the Results were analysed for testing of Hypotheses of the study and discussion of the same was provided. The concluding section of the study attempts to provide Managerial Implication of the study. It also mentions the Limitations & Contribution of the study. The next section is related to Literature Review

2. Literature Review

This section focuses on the literature and gaps regarding factors influencing ‘Adoption of Digital Banking Services’. Various international journals like Journal of Advances in Management Research, International Journal of Bank Marketing, International Journal of Commerce & Management, Journal of Management Development etc were referred for the study purpose.

2.1 Adoption of Digital Banking services

The process involving a person’s awareness towards technology (i.e. tool, product, service) till his embracing the said technology and gainfully utilising it can be termed as ‘Technology Adoption’. Information Technology plays a vital role in enhancement of organisation’s performance, efficiency, and consumer reach. It can be termed as tool to increase the competitive advantage of any organisation in today’s market (Choudhury, 2018).

Consumers using digital mediums for their banking transactions are on a rise which has resulted in increase in penetration of retail digital banking transactions across Asian countries. The rise in penetration of smart-phone purchase has also supported this rise in digital banking transactions. The non-banking payment solutions penetration is at 39% in India (Mckinsey Survey, 2018).

The banking payment solutions through digital platforms are also on a rise but there is still scope for lot of progress in this area. Private Sector Banks and Foreign Banks have managed to perform considerably better than

Public Sector Banks in offering wide range of digital products & services to their customers in the country. In order to explore the obstacles/ hindrances faced by the Public Sector Banks, there is a need to study various factors influencing the behavioral intention & use behavior towards digital banking services with respect to this specific sector. The client preference from traditional banking to digital banking is gradually changing. However, there are several factors which tend to affect the consumers' mindset towards adoption of digital banking services (Bagla & Sancheti, 2018).

The below mentioned Table 1 comprises of a summary of recent literature on Adoption of Digital Banking Services along with the variables of study and gap areas identified by the researcher.

Table-1

Table 1: Adoption of Digital Banking Services (Variables of Study & Gap Areas)

Author & Year	Main Area of Research	Gaps Identified
Kaur <i>et al</i> (2021)	<ol style="list-style-type: none"> 1. Digital Banking 2. Communication 3. Branch transformation 4. In-branch efforts 	The study can be validated in context of Indian Public Sector Banks also.
Cheolho Yoon & Dongsup Lim (2020)	<ol style="list-style-type: none"> 1. Management of IT 2. Customer Relationship Management 3. Technology Behavior 4. Fintech 	The study can be reflected for Digital Banking Services also.
Almugari <i>et al</i> (2020)	<ol style="list-style-type: none"> 1. Economics 2. Business Management 3. Internet of Things 4. Safety; adoption 	<ol style="list-style-type: none"> 1. The study can be replicated in Indian public sector banks context also. 2. In future study, moderating variables like Consumer Trust, Social Influence may also be included.

Kiri (2020)	<ol style="list-style-type: none"> 1. Mobile Banking 2. Ease of doing 3. TAM 	<ol style="list-style-type: none"> 1. Sample size in the present study is limited. 2. Actual usage behavior may be added for future study.
Sudarsono et al (2020)	<ol style="list-style-type: none"> 1. Internet Banking 2. Islamic Bank 3. Conventional Banking 	Variables like Transaction Process & Complaint Redressal may also be included for future study
Anysiadou et al (2020)	<ol style="list-style-type: none"> 1. Mobile Banking 2. Extended TAM 3. Structural Equation Model 	Limited sample size and study focussed in a very limited region only.
Anna Sophie Oertzen and Gaby O Dekerken-Schroder (2019)	<ol style="list-style-type: none"> 1. Post adoption Usage 2. Perceived Usefulness 3. Commitment towards Bank 	Other organisation related drivers like Consumer Trust, Customer experience may be added for future study.
Mbama (2018)	<ol style="list-style-type: none"> 1. Bank's perception 2. Employees Perception 3. Customer Experience 4. Financial Performance 	The study can be replicated in Indian context also.
Choudhury (2018)	<ol style="list-style-type: none"> 1. Demographic Factors 2. Privacy & Security 3. Adoption of technology 	Limited sample size and study focussed in a very limited region only.
Manser <i>et al</i> (2018)	<ol style="list-style-type: none"> 1. Mobile Marketing 2. Financial Services 3. Services Marketing 4. Human-computer 	Socio demographic factors like education, income etc can also be taken into consideration in future study.
Hoffman Sampaio <i>et al</i> (2017)	<ol style="list-style-type: none"> 1. Service Failure 2. Perceived Justice 	Variables like behavioral intention, customer loyalty & post adoption behavior are missing.

Deb and Agrawal (2017)	<ol style="list-style-type: none"> 1. E-commerce 2. M-banking 3. Technology Acceptance 4. Trust 	<ol style="list-style-type: none"> 1. Sample size in the present study is limited. 2. Actual usage behavior may be added for future study.
Tam and Oliveira (2017)	<ol style="list-style-type: none"> 1. Culture 2. Individual performance 3. M-banking 4. De-Lone and McLean model 5. Post-adoption 	<ol style="list-style-type: none"> 1. The study can be replicated in Indian public sector banks context also. 2. In future study, moderating variables like Consumer Trust, Social Influence may also be included.
Bhatiasevi (2016)	<ol style="list-style-type: none"> 1. Mobile Banking 2. Consumer Behavior 3. UTAUT 	<ol style="list-style-type: none"> 1. Only UTAUT Model is explained. No reference to other theories. 2. The study can be replicated in India also.
Koksal (2016)	<ol style="list-style-type: none"> 1. Self-Efficacy 2. Perceived Cost 3. Trust 	Effect on customer satisfaction is missing.
Mortimer <i>et al</i> (2015)	<ol style="list-style-type: none"> 1. M-banking 2. Mobile Banking Adoption 3. Self-service Technology 	<ol style="list-style-type: none"> 1. Variables like Nature of Transaction process & Complaint Redressal can also be included as independent variables. 2. The study can be validated in context of Indian Public Sector Banks also.
Saxena, Sharma and Kumar (2012)	<ol style="list-style-type: none"> 1. Customer Service 2. Customer Grievances 3. Grievance Redressal 	Independent variables like Perceived Ease-of-use, Perceived Cost, Perceived Benefits may also be added for study.
Singh and Srivastava (2010)	<ol style="list-style-type: none"> 1. Adoption of digital banking 2. Behavioral Intention 3. Computer self-efficacy 	Other independent variables like Nature of Transaction process & Complaint Redressal System may also be included for future study.

2.2. Usage Behavior towards Digital Banking Services

Mathur (2014p23), “Customer’s Trends towards Public and Private Sector Banks”, in his article describes the growing importance of Digital products in the Banking Industry. He has described about the ‘Anytime’ & ‘Anywhere’ Banking preferences of the modern customer. He has also suggested that advertisements are not the major tool for success for any Bank, rather improvement in Service Quality and technology is the prime driving force for growing business. Consumers using digital mediums for their banking transactions are on a rise which has resulted in increase in penetration of retail digital banking transactions across Asian countries. The rise in penetration of smart-phone purchase has also supported this rise in digital banking transactions. The non-banking payment solutions penetration is at 39% in India (Mckinsey Survey, 2018).

However, (Agarwal and Kukreti, 2017) have described that the Private Sector Banks’ customers have a comparatively better Intention to use/ Usage Behavior (towards Digital Banking Services) as compared to the customers of Indian Public Sector Banks. They have also specified that the Customer Satisfaction is higher in Private Sector Banks as the complaint redressal process is smooth and fast. But, there are still apprehensions and fear among the customers for completely adopting the digital banking services in wake of increasing digital frauds and risk towards security & privacy breach (Chandra and Bais, 2015), Bhasin and Rajesh (2021) reported usage of Mobile communication systems for digital transaction. Digitalisation adapted by banks through Customer value co-creation will increase e. banking as per study of

Carranza *et al* (2021).Tabe-2 gives the summary of Usage Behavior towards Digital Banking Services

Table-2

Table 2: Usage Behavior towards Digital Banking Services (Variables of Studies & Gap Areas)

Author & Year	Main Area of Research	Gaps Identified
Bhasin and Rajesh (2021)	1. Mobile communication systems 2. Banking	Influence of Socio demographic factors like Age, Sex, Education, Occupation etc may also be included for future study.
Carranza <i>et al</i> (2021)	1. Customer value co-creation 2. E-banking 3. E-services 4. Technology Acceptance Model	Other moderating variables like Technology self-efficacy& socio-demographic factors can also be included for future study.

Hada (2020)	<ol style="list-style-type: none"> 1. Internet Banking 2. Customer Satisfaction 3. Information technology 	The study can be reflected for other factors affecting Digital Banking Services also.
Sobti (2019)	<ol style="list-style-type: none"> 1. Behavioral Intention 2. Adoption(Usage) 3. Perceived Cost 	Service Quality & Customer Experience can be studied as dependent variables.
Joshi <i>et al</i> (2019)	<ol style="list-style-type: none"> 1. Customers' perception 2. Digital banking 3. Adaptability of Indian banks 	Effect on Customer Satisfaction may also be studied.
Sivathanu (2018)	<ol style="list-style-type: none"> 1. Behavioral Intention 2. Innovation Resistance 3. Adoption of Technology 4. Performance Expectancy 	Other variables like Trust, Structural Assurances are missing.
Umans <i>et al</i> (2018)	<ol style="list-style-type: none"> 1. Organizational Culture 2. Subjective well-being 3. Digitalization 	<ol style="list-style-type: none"> 1. The sample size is limited. 2. Customer perspective can also be studied.
Asraar Ahmed & Sathish (2017)	<ol style="list-style-type: none"> 1. Social Media 2. Social Networks 3. Gaming 	The study can be reflected for Digital Banking Services also.
Rind <i>et al</i> (2017)	<ol style="list-style-type: none"> 1. Technology Acceptance Model 2. Perceived Risk 	Variables like Transaction Process & Complaint Redressal may also be included for future study.
Amin (2016)	<ol style="list-style-type: none"> 1. Internet Banking 2. E-Customer Loyalty 3. E-Customer Satisfaction 4. E-Service Quality 	Peer Influence, Technology self-efficacy may be included as moderating variables in future study.
Tan and Lau (2016)	<ol style="list-style-type: none"> 1. UTAUT Model 2. Adoption of services 3. Social influence 	Other moderating variables like Technology self-efficacy& socio-demographic factors can also be included for future study.

Thus, the above Literature Review helped to identify the gaps and variables for the study. The next section is related to application of theories in this study

3. Application of Theories in the Study

Consumer's probability to adopt a digital banking product/ service depends on his attitude, behavior and previous experience towards technology. This may be termed as consumer's 'Behavioral Intention' to adopt technology. Also, a consumer's transition from Behavioral Intention to 'Actual Usage' with respect to technology is crucial for exploring future decision making (OnurBodur *et al*, 2000). As per Theory of Planned Behavior, Behavioral Intention is a product of intention & perceived control, i. e. capability of any individual to perform action. Consumer's Behavioral Intention/ Actual Usage and Customer Satisfaction are interrelated with each other. A consumer's Actual Usage of any service may directly result to Customer Satisfaction and also 'Customer Satisfaction' may directly result into 'Behavioral Intention/ Actual Usage' for any service in future. Customer Satisfaction is dependent on product/ service's quality and also the Customer Experience towards any service (Sánchez Prieto *et al*, 2015). Based on these assumption, Theory of Planned Behavior- TPB (Ajzen,1988) is taken for this study, wherein it is explained that an individual's attitude, subjective norms and perceived behavioral control have direct relationship with individual's behavioral intention to use any product or service. The individual's intent to perform a particular behavior acts a deciding element for the actual performance of the action/ behavior. This would help in finding out relationship between consumer's 'Intention to Use' Digital Banking Services and consumer's 'Actual Usage' of such services.

Similarly, Technology Acceptance Model (TAM) (Davis *et al*, 1989) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh *et al*, 2003) are two models which provide the relationship structure of various factors on any individual's acceptance/ adoption of new technology. The Technology Acceptance Model (TAM), proposed by Fred D. Davis, Richard P. Bagozzi and Paul R. Warshaw in 1989, describes users' acceptance and usage of any technological change. The model implies that behavioral intention is formed through factors like 'Perceived Ease-of-Use' and 'Perceived Usefulness' and ultimately leads to actual usage of any technology. 'Social Influence' also forms a vital antecedent to determine the attitude towards adoption of technology.

Further, Technology Acceptance Model was upgraded by Viswanath Venkatesh, Michael G. Morris, Gordon B. Davis and Fred D. Davis in 2003, with inclusion of various other factors which may affect adoption of technology. This upgraded theory, known as the [Unified Theory of Acceptance and Use of Technology](#) (UTAUT), aims to explain user intentions to use technology and subsequent usage behavior. The model includes 'Effort Expectancy' & 'Performance Expectancy' among other variables, which influence a user's 'Behavioral Intention' towards usage of any technology.

Both TAM & UTAUT contribute to the study of adoption of technology by describing factors under which any user will accept any technological change/ new system and would continue to use the same. These theories provide a perspective of how the factors help in transitioning the decision-making process for individuals towards any product or service. These also provide framework for purchasing behavior of consumers.

The present research would build upon the existing theories, i.e. Theory of Planned Behavior, Technology Acceptance Model and [Unified Theory of Acceptance and Use of Technology](#) by linking other aspects of Adoption of technology to the theories.

4. Identification of Variables and Theoretical Construct & Hypothesis Formulation

4.1. Identification of Variables

Many researchers have studied factors related to ‘Adoption of technology/ digital banking services’ as independent & moderating variables and ‘Behavioral Intention/ Usage Behavior’ as dependent and moderating variables. Most of the research articles focus on the relation between these factors with the intention to use towards any specific service/ innovation/ technology. Kaur *et al* (2021), Bhasin and Rajesh (2021), Sobti (2019), Oertzen and Dekerken-Schroder (2019) and Mbama (2018) have studied factors affecting adoption of technology as an independent variable and behavioral intention as dependent variable. Behavioral intention has also been studied as a moderating variable by Choudhury (2018), Sivathanu (2018), Payne *et al* (2018) and Umans *et al* (2018).

Several researchers have explored technology adoption in banking related services by incorporating theories & models like Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), Diffusion of Innovation Theory etc. and have derived different variables which affect the process of adoption of digital banking services. The independent variables for the present study are as under:

- i. ***Perceived Ease-of-use:*** An individual’s perception that accepting any particular system would be effortless and would be easier can be termed as ‘Perceived ease-of-use’. This implies that an easier system/ application/ software will be accepted by any user in comparison to any complex system (Davis, 1989).
- ii. ***Perceived Value/ Benefit:*** An individual’s perception that any product or service would be able to meet or exceed expectations in comparison to other available products in the market. This acceptance of service could result in positive consequence for any user (Hyun-Sun Ryu, 2018).

- iii. **Perceived Risk:** An individual's perception towards uncertainty regarding a decision for usage of any product or service related to technology may be termed as Perceived Risk. Perceived Risk constitutes of financial, legal, operational & security risks (Joshi *et al*, 2019).
- iv. **Perceived Cost:** The cost incurred or to-be-incurred while performing a digital transaction which includes transaction cost, internet cost, access cost & equipment cost. All these dimensions have a strong influence in determining the overall perceived cost for any digital banking transaction performed by a user (Rind *et al*, 2017).
- v. **Perceived Convenience:** An individual's ability to perform any transaction without any influence of time & location can be termed as convenience. This is the overall flexibility a user experiences while performing digital banking transaction. This also includes reduction in process related time and also improvement in quality of life (Clark, 2008).

The **dependent variables for the study** are **Behavioral Intention** (Intention to Use Digital Banking services) & **Actual Usage** of Digital Banking services. A user's probability to adopt/ accept any new service or perform any specific task may be termed as 'Intention to use (Behavioral Intention)'. This intention being transformed into 'Actual usage' also is significant for the study (Sobti, 2019).

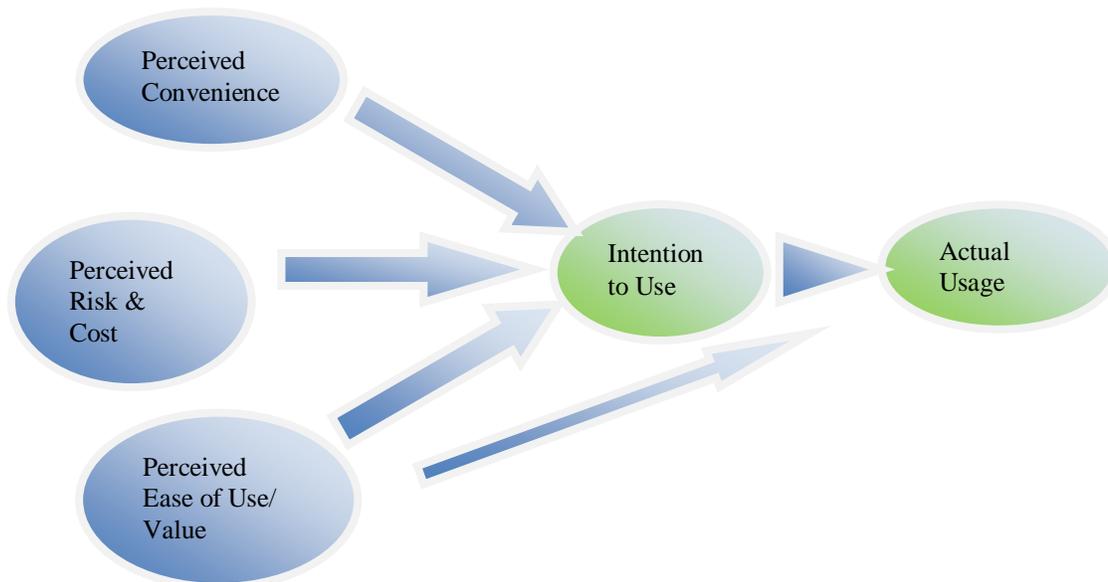
4.2 Theoretical Construct & Hypothesis Formulation

Based upon independent and dependent variables, a theoretical construct is graphically made to explain their importance and linkages.

This has been represented by figure 1.

Fig-1

Figure 1: Proposed Theoretical Framework



Various factors related to technology may affect consumer's intention to use digital banking services positively resulting actual usage. Adoption of digital banking services is dependent on various factors related to consumer's attitude, beliefs and perception towards aspects of technology and quality of service provided by the service renderer (Souranta and Muttala, 2004). A consumer's basic perception towards Ease-of-use, Value, Risk, Cost, and Convenience affect the resultant behavioral intention towards adoption of any new technology or change in any existing technology.

In case of banking sector, apart from these perceptions, the actual nature of financial transaction and the Complaint redressal system of the Bank have additional effect on the behavioral intention or usage behavior (actual usage) of digital banking services provided by the Banks (Laukkanen *et al*, 2008). A consumer's final decision towards adoption of digital banking services and his/ her continued usage of these services will ultimately affect overall satisfaction level towards the Bank's products and services. Based on the above conceptual framework we propose to further our study. The hypotheses are proposed in alignment with the conceptual framework detailed above.

A consumer's 'Intention to Use' any technology could explain 'Actual Usage' behavior of the consumer, as stated in the context of Theory of Planned Behavior (which analysed individual's attitude towards a behavior and actual behavior). Therefore, Hypothesis -1 is given below:

H1: Intention to Use digital banking services has a significant relationship with consumer's actual usage of digital banking services with respect to Indian Public Sector Banks.

Adoption of digital banking services is dependent on various factors related to consumer's attitude, beliefs, and perception towards aspects of technology and quality of service provided by the service renderer (Souranta and Muttala, 2004). A consumer's basic perception towards Ease-of-use, Benefits, Risk, Cost, and Convenience affect the resultant behavioral intention towards adoption of any new technology or change in any existing technology, as per Theory of Planned Behavior, Technology Acceptance Model & Unified Theory of Acceptance and Use of Technology. Based on these assumptions, the following hypothesis -2,3,4,5, are proposed :

H2: Perceived Convenience has a significant relationship with consumer's behavioral intention to use digital banking services with respect to Indian Public Sector Banks.

H3: Perceived Ease of Use & Perceived Value have a significant relationship with consumer's actual usage of digital banking services with respect to Indian Public Sector Banks.

H4: Perceived Ease of Use & Perceived Value have a significant relationship with consumer's behavioral intention to use digital banking services with respect to Indian Public Sector Banks.

H5: Perceived Risk & Perceived Cost have a significant relationship with consumer's behavioral intention to use digital banking services with respect to Indian Public Sector Banks.

The next chapter is related to methodology

5. Methodology

5.1 Research Design

In the research, primary and secondary data have been collected and studied through random controlled experimental study.

Primary Data was collected by random sampling survey method through structured questionnaire from consumers of different Indian Public Sector Banks. Secondary Data was collected from published literature in national and international journals, international financial forum reports, government published survey reports, Banks' Annual Reports etc.

The collected data was analyzed by using software like Software Package for Social Sciences (SPSS), Analysis Moment of Structure (AMOS) and Partial Least Square-SMART (pls-SMART). Partial Least Square Equation Model was used for data analysis, considering the type of relationships, data characteristics and its convenience.

5.2 Sample Design

Survey was conducted on more than 900 consumers of different Indian public sector banks, selected using random sampling techniques of the study area, out of which 858 usable responses were collected. The consumers were interviewed with means of structured questionnaire. The consumers belonging to the four metropolitan cities, i.e.

New Delhi, Mumbai, Kolkata, Chennai and their adjoining areas were focussed. The sample size is reasonably adequate, as suggested by (Hair *et.al* 2007, Umasekharan 2006) that sample size above 500 would be ideal for larger studies.

The data was collected electronically from the respondents by means of survey forms and was updated in a master data sheet. Individual responses were scrutinized for finding any outlier/ vague response for exclusion from the final data sheet. The contact details of the respondents were cross verified for better control on authenticity and non-duplication of responses.

Out of 858 respondents, 593 were male and 265 were female respondents living in rural, semi-urban, urban & metropolitan localities adjoining to the above named cities. The age group of 31 years to 45 years constituted of around 48.00% (largest part) of total respondents. The largest group of the respondents were graduates (58.50%).

Table-3 gives the sample profile .

Table-3

Table 3: Respondents' Demographic Characteristics

Demographic Characteristics	Item	Frequency	Percent
Gender	Male	593	69.10%
	Female	265	30.90%
Age	15 Years to 30 Years	270	31.50%
	31 Years to 45 Years	412	48.00%
	46 Years to 60 Years	170	19.80%
	Above 60 Years	6	0.70%
Education	Under Graduate	13	1.50%
	Graduate	502	58.50%
	Post Graduate	264	30.80%
	Professional Qualification / Doctorate	79	9.20%
Locality	Rural	127	14.80%
	Semi Urban	313	36.50%
	Urban	269	31.40%
	Metro City	149	17.30%

5.3 Questionnaire Design

Structured questionnaire which incorporates independent variables like *Perceived Ease-of-Use and Value*, *Perceived Cost and Risk*, dependent variables like *Behavioral Intention & Actual Usage Behavior* was used for the purpose of the study. Likert scale (1-5) will be used to measure the variables of the study. The above-mentioned variables were studied as per earlier studies conducted by Singh and Srivastava (2010), Igbaria & Iivari (1995), Moon and Kim (2000), Singh (2019), Laver *et al* (2011) and Brudvig (2015).

5.4 Reliability of Construct

In order to verify the reliability of the variables, the Average Extraction Variance (AVE), Compound Reliability (CR) was calculated. Also, the Cronbach's Alpha for each one of the variables was calculated. The results are displayed in Table 4 below:

Table-4

Table 4: Construct Reliability

Constructs	Items*	Factor Loadings	AVE	Composite Reliability	Cronbach's Alpha
Perceived Ease of Use (PEOU)	PEOU1	0.737	0.551	0.830	0.797
	PEOU2	0.758			
	PEOU3	0.711			
	PEOU4	0.761			
Perceived Value (PV)	PV1	0.800	0.557	0.790	0.834
	PV2	0.730			
	PV3	0.706			
Perceived Risk (PR)	PR1	0.879	0.766	0.929	0.916
	PR2	0.895			
	PR3	0.892			
	PR4	0.833			
Perceived Cost (PCOST)	PCOST1	0.876	0.735	0.847	0.879
	PCOST2	0.838			
Perceived	PCON1	0.736	0.531	0.693	0.868

Convenience (PCON)	PCON2	0.721			
Behavioral Intention (BI)	Intention to Use	0.770	0.627	0.771	0.735
	Actual Usage	0.813			

*Items display the multiple questions for each of the variables

It is observed that the Cronbach's Alpha for each of the variables are above the threshold value of 0.70 (Changchit *et al*, 2017), which indicates that the questionnaire has significant internal consistency. The values of AVE for the variables are also above the suggested threshold limit of 0.50 (Changchit *et al*, 2017), ranging from 0.531 for Perceived Convenience to 0.766 for Perceived Risk. The Composite Reliability for all the factors is above 0.70 (Hair *et al*, 2013) except for Perceived Convenience which lies just below 0.70 at 0.693. In view of this and as the Factor Loadings for the factors are above 0.70, it can be inferred that the results demonstrate adequate convergence (Hair *et al*, 2014).

5.5. Construct Validity

The next step was to validate the construct for which discriminant validity test was used. The AVE should be greater than squared correlations for all the constructs (Fornell and Larcker, 1981) for establishing discriminant validity. The Table 3 displays the diagonal values, which represent square root of each variable and also the inter-correlations between the variables.

Table-5

Table 5: Construct Validity

	PEOU	PV	PR	PCOST	PCON	BI
PEOU	0.742					
PV	0.708	0.746				
PR	-0.114	-0.098	0.875			
PCOST	0.051	-0.001	0.457	0.857		
PCON	0.427	0.504	-0.115	-0.179	0.729	
BI	0.351	0.416	-0.134	-0.117	0.541	0.792

As per the table-5, it is observed that the squared root of AVE for all the variables are greater than the inter-correlations between the constructs, which displays discriminant validity of the construct (Shahbaz *et al*, 2018). Additionally, as displayed in Table No 5, all item loadings and AVE are above the required threshold limit. Hence, the variables in construct can be accepted for hypothesis testing.

6. Results

In order to examine the different variables in the proposed construct, various previous studies like Ringle *et al* (2015), Yoon *et al* (2015), Li *et al* (2005), Henselar *et al* (2009) etc were referred for establishing reliability and validity.

First step of analysis consists of Descriptive Analysis which provides a picture of different products/ services provided by the Public Sector Banks and the frequency of usage of these services. The next step of the study includes testing of the hypotheses by means of Path Analysis under Partial Least Square (PLS) Method to establish relationship among the different variables. The first analysis is descriptive analysis.

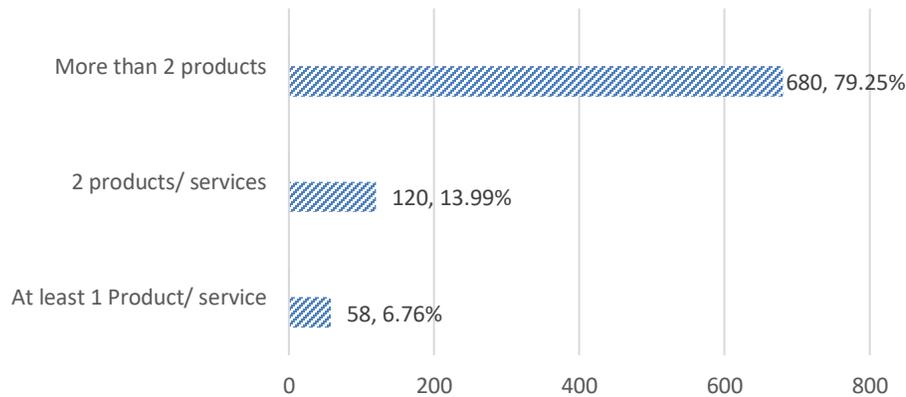
6.1. Descriptive Analysis

There are different types of digital products and services offered by the Banks in India. It includes services available by means of physical products like ATM Card, Debit Card, POS Point etc provided by the Bank and also through non-physical digital platforms like Internet Banking portal, Mobile Banking Portal/ App, UPI Services etc. The digital services like Internet banking, Mobile Banking, SMS Banking etc requires availability of Smartphone/ Laptop/ Computer along with Internet/ Mobile Data with the user. However, ATM/ Debit Card is majorly used for cash withdrawal/ cash deposit/ money transfer/ merchant banking services at branches/ ATM machines/ POS outlets.

In the present study, the customers were enquired about the type of digital banking product/ service used by them for their financial needs and also the frequency of usage was examined for individual respondent. Out of 858 respondents, only 54 respondents do not use ATM Card/ Debit Card which shows that almost 94% (804 out of 858) respondents depend on ATM/ Debit Card for their day-to-day financial needs. However, almost 96% (821 out of 858) respondents use either Internet Banking/ Mobile Banking/ UPI Services for day-to-day transactions. The higher usage frequency of these services is a result of rise in Smartphone penetration and dependency on Internet services in the country.

The Figure II below provides a graphical representation of usage of digital banking products/ services by the respondents.

Fig.II

Figure II: Usage of Types of Digital Products/ Services

It is observed that 79.25% of respondents use more than 2 products including ATM/ Debit Card, Mobile Banking/UPI Services, Internet Banking. 58 out of 858 respondents, i.e. 6.76% use at least one of the mentioned digital products/ services. The Next analysis is hypothesis testing

6.2 Hypothesis Testing

As per our theoretical construct, the testing of five hypotheses for establishing relationship between independent variables and dependent variables was done. There are three independent variables namely ‘Perceived Convenience’, ‘Perceived Ease of Use and Value’ and ‘Perceived Risk and Cost’ analysed in the present study. There are two dependent variables, i.e. ‘Behavioral Intention (Intention to Use)’ and ‘Actual Usage’ of digital banking products/ services, which are influenced by the said independent variables. However, the relationship between both the dependent variables is also separately analysed, as ‘Actual Usage’ of services is related with the ‘Intention to Use’ the services (Shaikh and Rehman, 2020).

The below mentioned hypotheses were tested in the course of research:

H1: Intention to Use digital banking services has a significant relationship with consumer’s actual usage of digital banking services with respect to Indian Public Sector Banks.

H2: Perceived Convenience has a significant relationship with consumer’s behavioral intention to use digital banking services with respect to Indian Public Sector Banks.

H3: Perceived Ease of Use & Perceived Value have a significant relationship with consumer’s actual usage of digital banking services with respect to Indian Public Sector Banks.

H4: Perceived Ease of Use & Perceived Value have a significant relationship with consumer's behavioral intention to use digital banking services with respect to Indian Public Sector Banks.

H5: Perceived Risk & Perceived Cost have a significant relationship with consumer's behavioral intention to use digital banking services with respect to Indian Public Sector Banks.

The following tests were used for the analysis: - Multicollinearity test and Path Analysis under Partial Least Square Method.

a. Testing for Multicollinearity

The assumptions under multicollinearity are used for analysing the linear relationship between one independent variable and other independent variables. As multiple independent variables might have significant relationship with one or multiple dependent variables, existence of linear relationship among independent variables result in difficulty in correctly defining the significance of relationship as per the theoretical construct (Krishanto, 2017).

To detect multicollinearity among the independent variables, 'VIF' is calculated for the independent variables. In case multicollinearity is detected, further steps like 'removing highly correlated independent variables', 'linearly combining independent variables', 'Principal Component Ananalysis' etc are required to be performed for validating the test results.

In order to verify the presence of multicollinearity among the independent variables, the Variance Inflation Factor has been calculated and presented as below in table-6:

Table-6

Table 6: Multicollinearity Testing

	Actual Usage Behavior	Intention to Use
Actual Usage Behavior		
Intention to Use	1.156	
Perceived Convenience		1.386
Perceived Ease of Use & Value	1.156	1.37
Perceived Risk & Cost		1.022

The variables have a VIF below the maximum level of '5' which is acceptable (Ringle et al, 2015), which infers that there is no presence of multicollinearity among the variables. The next step is to conduct path analysis for establishing causal relationships among the variables as per the proposed hypotheses.

b. Path Analysis

As per the theoretical construct, there are five paths for validating relationship among the variables. 'Path Analysis' is an appropriate tool to establish relationships between individual variables and validation of the overall construct (Ringle *et al.*, 2015). It provides appropriate means for conducting tests on multiple relationships in complex and multivariate constructs. Also, as the data under observation is non-parametric and ordinal in nature, Partial Least Square Approach for Structural Equation Modeling (PLS-SEM) was chosen for testing proposed causal relationship among the variables was conducted by Partial Least Square regression method (Faisal and Ahassany, 2018). Table-7 is given below:

Table-7

Table7: Path Analysis

Hypothesis	Relationship	Std Beta	Std Error	t-Value	P Values	Decision
H1	Intention to Use -> Actual Usage Behavior	0.537	0.05	10.647	0	Supported
H2	Perceived Convenience -> Intention to Use	0.335	0.045	7.394	0	Supported
H3	Perceived Ease of Use & Value -> Actual Usage Behavior	0.208	0.042	4.915	0	Supported

H4	Perceived Ease of Use & Value -> Intention to Use	0.188	0.048	3.907	0	Supported
H5	Perceived Risk & Cost -> Intention to Use	-0.084	0.025	3.207	0.001	Supported

The results reveal that all the path coefficients have significant relationships (p values are below 0.05). The highest significant positive relationship holds between ‘Intention to Use’ and ‘Actual Usage’ of digital banking services (Beta: 0.537, t-value: 10.647), while the highest negative significant relationship holds between ‘Perceived Risk & Cost’ and ‘Intention to Use’ (Beta: -0.084, t-value: 3.207). Among the significant positive relationship, the least correlation was found between ‘Perceived Use & Value’ and ‘Intention to Use’. The effect size (f^2) which assesses how strongly one exogenous variable contributes to explaining the endogenous variable is observed to be above 0.35 for the relationships established by Hypotheses 1, 2 & 3. It is evident that dropping any of the exogenous variables (Perceived Ease of Use & Value, Perceived Convenience, Intention to Use) has a medium effect on the R^2 of ‘Actual Usage’ (Garson, 2016). It implies that the dependent variables are strongly explained by the independent variables for the said Hypotheses (Cohen, 1988). Similarly, predictive relevance (q^2) is strongly significant for the relationships defined under Hypotheses 1, 2 & 3, as the q^2 values are above 0.35 (Henseler et al, 2009). The relationships defined under Hypotheses 4 & 5 are moderately significant as inferred by the effect size and predictive relevance values (which are below 0.35). Hence, all positive and negative paths show significant relationships.

It is observed that ‘Intention to Use’ digital banking services has the strongest effect on ‘Actual Usage’ behavior of the consumer and partially mediates the indirect effect of ‘Perceived Ease of Use & Value’, ‘Perceived Convenience’ & ‘Perceived Risk & Cost’ on ‘Actual Usage’ behavior of the consumer in line with previous studies Srilatha & Sudhakar (2018); Anysiadou et al (2020); Bashir and Madhavaiah (2015). The results show that the path coefficients in PLS-SEM are standardized regression coefficients, enabling comparison between the significance of effect of the exogenous variables on endogenous variables (Jakobowicz (2006)).

Earlier studies show that participants tend to use simple websites/ portal/ app interface in comparison to lengthy & descriptive interfaces. The consumers are also influence by their surrounding people’s views and observations (Kumar & Madhumohan, 2014). The reluctant effect of the ‘Perceived Risk & Cost’ is observed to be lower than the positive effects of the ‘Perceived Ease of Use & Value’ and ‘Perceived Convenience’, which means participants tend to weigh more on the perceived expected advantages, the convenience of this services, and the surrounding people’s opinions. – The personal innovativeness (INO) factor seems to have the least exerts among the proposed factors.

The Table 8 below shows the R^2 value for the dependent variables as per the Path Analysis.

Table-8

Table 8: R² Data

	R Square
Actual Usage Behavior	0.413
Intention to Use	0.228

It is observed that the combined influence of ‘Perceived Ease of Use & Value’, ‘Perceived Convenience’ & ‘Perceived Risk & Cost’ explain about 22.8% of the variance related to ‘Intention to Use’. The combined influence of ‘Perceived Ease of Use’ & ‘Intention to Use’ explain around 41.3% variance related to ‘Actual Usage’ behavior. The next analysis is related to SEM.

c. Structural Equation Modelling

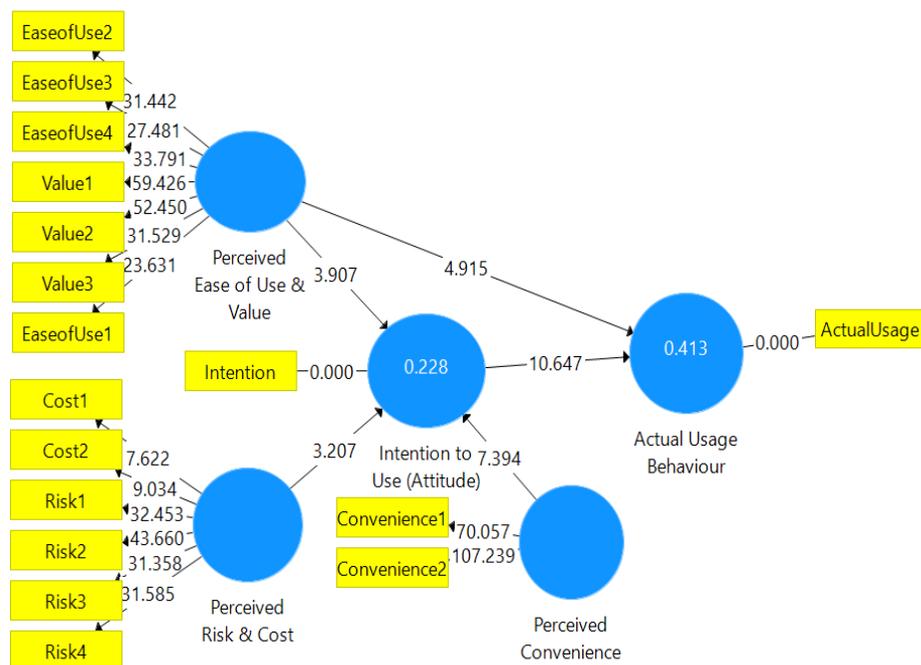
The Partial Least Square approach of Structural Equation Modeling is a multivariate analytical method, which deals with non-normal data distributions like social science data, data on consumer behavior etc. It has high flexibility in dealing with formative indicators and also helpful in dealing with data inadequacy issues (Hair et al, 2014). The PLS Approach has been used in different research studies related to management information, market research, strategic management and accounting (Faisal & Ahassany, 2018).

In the present study, software tools like Statistical Package for Social Science software (SPSS) v.20 and SmartPLS (version.3.2.4) have been used for partial least square Structural Equation modeling (PLS-SEM). The structural model showing significant paths as per the results is illustrated below in Fig-III

Fig-III

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Figure III: Structural Model



It is observed that the construct reliability & validity are properly met and the proposed model has been able to put an acceptable level of predictive power of all variables. Further, the values of R^2 reflect that the combined influence of 'Perceived Ease of Use & Value', 'Perceived Convenience' & 'Perceived Risk & Cost' explain about 22.8% of the variance related to 'Intention to Use'. As per the path coefficient analysis, 'Perceived Convenience' is an important factor in predicting 'Behavioral Intention' towards usage of digital banking services. The results also show significant relation between 'Behavioral Intention' and 'Actual Usage' behavior of the consumer.

7. Discussion and Theoretical Implications

The theoretical construct proposed significant relation between different independent variables such as 'Perceived Ease of Use and and Value', 'Perceived Convenience', 'Perceived Risk 7 Cost' and dependent variables like 'Intention to Use' and 'Actual Usage'. It was observed that the proposed model has an acceptable level of predictive power for all the factors, as all the criteria for reliability & validity of constructs was met. The combined effect of independent variables explains around 23% of variance of dependent variable. It implies 'Perceived Ease of Use & Value', 'Perceived Convenience' & 'Perceived Cost and Risk' predict the consumer's intention to use digital banking services with respect to public sector banks.

It can be inferred that Indian consumer tend to find using digital banking services fruitful for easing their efforts and reduce their cost towards transactions. They also decide on economic benefits associated with the service before deciding to use the same. This is in line with results from earlier studies like Madhaviah & Bashir (2015),

Srilatha & Rehman (2020), Shaikh & Rehman (2020) and others. Further, the study shows that the consumer behavior has been also influenced by the rising penetration of Smartphone and also affected by the changing landscape of internet availability/ mobile data (changing from 2G to 3G, then from 3G to 4G).

As per Theory of Planned Behavior, the factors 'Attitude', 'Subjective Norm' and 'Perceived Behavior Control' are influencers for an individual's intention to adopt new technology and also for conversion of such intention into Actual Usage. Also, it indicates that behavior is not directly influenced by attitudes, but the relation is mediated by behavioral intention (Ajzen, 1991). In the present study, the relationship between Perceived Ease of Use, Perceived Value & Perceived Convenience with 'Intention to Use' is observed to be positive asserting findings in previous study (Tan and Teo, 2000). This shows that a positive relationship between factors under Perceived Behavior Control and Behavioral Intention will enhance the usage intention.

Additionally, the results under present study indicate that Behavioral Intention has a direct effect on Actual Usage asserting the model of Theory of Planned Behavior. The combined influence of 'Perceived Ease of Use' and 'Intention to Use' explain around 41.3% variance related to 'Actual Usage' behavior.

Furthermore, in accordance with Technology Adoption Model, wherein it is explained that 'Perceived Usefulness' & 'Perceived Ease of Use' along with 'Demographic Variables/ External Influences' are predictors for an individual's inclination towards 'Adoption of Technology', the present study asserts that factors such as 'Perceived Convenience', 'Perceived Ease of Use' & 'Perceived Value' have direct influence on Intention to Use. Also, 'Perceived Ease of Use' & 'Perceived Value' can be termed as predictors for 'Actual Usage'. Previous studies have also taken Social influence, Website Designing, Traits etc as predictors of 'Adoption of Digital Banking Services' (Safeena et al., 2014; Kesharwani and Bisht, 2012). However, present study focused on testing the Technology Acceptance Model through major elements like 'Perceived Ease of Use', 'Perceived Value', 'Perceived Convenience' as well as demographic variables.

The present study also confirmed that the extension of UTAUT model regarding adoption of digital banking services is theoretically valid. The values of R^2 reflect that the combined influence of 'Perceived Ease of Use & Value', 'Perceived Convenience' & 'Perceived Risk & Cost' explain about 22.8% of the variance related to 'Intention to Use' which show that explanatory power of these variables is substantial in determining user intention. As per UTAUT, the results of this study suggest that 'Perceived Ease of Use' has a strong positive effect on 'Intention to Use', suggesting that 'Intention to Use' mediates the influence of Perceived Ease of Use on Actual Usage. The findings of the study are also supported by earlier findings in research conducted by Bhasin et al (2021) on the digital landscape and fintech adoption in the country.

8. Conclusion

Adoption of digital banking products/ services in Indian Public Sector Banks could be explored in light of the advantages & challenges of the same. As per the present study, the percentage of non-ATM digital transactions in Private Sector Banks stands in the range of 90%-95% as compared to 50%-70% share in case of Public Sector Banks. The study identifies the requirement of upscaling of IT Infrastructure in Public Sector Banks and also revamping/ remodeling different services to make these simpler and efficient in order to gain acceptability. It is observed that the predictive validity of the suggested conceptual model, representing approximately the 41.3% of its deviation.

The Public Sector Banks should try to develop the factors which influence consumer behavior towards adoption of digital banking services by taking some steps, like development and implementation of strategies to strengthen the IT Systems/ Processes at the Bank. Also, they should work towards improvement in Design Quality of the digital platforms, i.e. Apps, Websites, development of One stop solution providing platform for the customers, employing quick and efficient customer support service to the customers of the digital banking services. New technologies like Artificial Intelligence and Machine Learning could be implemented for providing futuristic banking experience to the consumers.

Steps towards creating Customer Awareness towards digital banking by implementing different programs should be done along with providing hand holding support to the new customers for better conversion from 'Intention to Use' to 'Actual Usage'.

9. Managerial Implication

It is observed that proper systems to be set for improvement in Digital Banking services in case of Public Sector Banks. It is also important to impart knowledge of Digital Products and Services among customers. The technical hiccups/ glitches should be reduced/ removed as much as possible for hassle free service. In the wake of merger of various Public Sector Banks, extra care should be given to transition in technological infrastructure. Also, focus to be shifted towards improvement in non-ATM digital transactions to promote a paper-less economy.

Continuous efforts are required from the bank managers to impart knowledge of usability of banking portals/ apps/websites. They should ensure providing user-friendly support to the customers as well as input efforts in developing an effective advertising campaign. The actions might push the customers to adopt digital banking products/ services and reduce footfall at branches.

10. Limitations of the Study

The study attempted to explore influence of various factors on consumers' intention to use digital banking services. The data was collected from a convenient sample of consumers of public sector banks from selected areas across the country. However, the results could not be generalized for consumers residing in other parts of the country. Also, an in-depth study is required by examining the degree to which the influencing factors could improve with time.

11. Contribution of Research

The research adds value to existing knowledge on banking sector. It expands the knowledge & literature on technological adoption in context of Indian banks. It has expanded the Technology Acceptance Model & UTAUT Model for validating the relationships between variables. The banks should have a robust and strong approach towards improvement in technology-based infrastructure, after considering different factors used in the study.

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Understand the maturity level regarding corporate social responsibility (CSR) activities by the Indian Hospitality sector vendors during Pandemic disasters (Covid19 situation).

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Abstract

Introduction: The concept of CSR is associated with various understanding, definitions and practices. It is a broad concept that addresses various topics such as human rights, corporate governance, health & safety, environmental effects, employee working conditions and contribution to economic development. Travel and tourism have been one of the largest industries, were creating one in every four of all global new jobs during 2014-2019. Every employment out of tenth was from the travel and tourism industry which was 334 million in 2019. Contributing almost 10.4% of global GDP (*Messina, 2021*). Presently the world is fighting with the Covid19 Pandemic as there is no respite on the site. Being a disaster, which resulted in a loss of 62 million jobs, there is a paucity of study on the subject.

Purpose: The study compares CSR activities and their impact on Indian Hospitality Sector Vendors during the pandemic.

Methodology: It is a primary research/interview mainly conducted in metro cities involving 64 respondents working in the hospitality industry. It is pilot exploratory research to understand CSR's impact on dependent variables vendor awareness, maturity level, and enterprise risk management. The study was conducted from October to December 2020.

Findings: The study confirms strong correlations between CSR activities and Vendor Management. The vendor is a significant stakeholder of the community and capable of linking CSR activities to form an association with socially responsible organisations; however, maturity is at the nascent level. Companies from the Indian Hospitality sector need to crystallise their CSR policies and activities to communicate effectively with their stakeholders for long-lasting and meaningful relationships.

Contribution: The study helps to understand the hospitality vendors' maturity level and association with the cause of CSR activities carried out by the company. It also helps to reinforce the need for the Indian hospitality industry to improve CSR initiatives and social communication.

Keywords: CSR, vendor management, Vendor CSR maturity level, Enterprise Risk Management, Indian Hospitality Industry

Type of Research: Primary Research

1. Introduction

The concept of CSR is associated with various understanding, definitions and practices. CSR is a broad concept that addresses various business and macroeconomic topics such as human rights, corporate governance, health & safety environmental effects, employee working conditions and contribution to economic development. Travel and tourism have been one of the largest industries, were creating one in every four of all global new jobs during 2014-2019. Every employment out of tenth was from the travel and tourism industry which was 334 million in 2019. Contributing almost 10.4% of global GDP (Messina, 2021). Presently the world is fighting with the Covid19 Pandemic as there is no respite on the site. Such a disaster, which resulted in a loss of 62 million jobs. GDP from tourism sector for India was down at USD 121.9 billion in 2020 as against USD 191.3 billion of the 2019 (Messina, 2021). Vendors to the hospitality sector are from various sectors supplying capital goods to meat, fish, poultry, vegetables & grocery. These vendors are ranging from individuals to the listed companies. Any change in the business scenarios has a profound impact on these vendors and ultimately on society.

1.1. Understanding Corporate Social Responsibility (CSR)

Definitions of Corporate Social Responsibility: The first formal definition came from Bowen in his 1953 book ‘Social responsibilities of the Businessman’: ‘It refers the obligations of businessmen to peruse those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society.’ (Kaushik, 2017 p.4). The most frequently cited definition of corporate social responsibility by (Holme et.al 2000, p.10), ‘corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the work force and their families as well as that of the local community and society at large’. (Brookes et.al 2014, p 4, Soundrya S p.40). Kotler and Lee (2005) defined corporate social responsibility as “a commitment to improve community wellbeing through discretionary business practices and contributions of corporate resources” whereas Baker (2004) refers to corporate social responsibility as a way companies manage the business processes to produce an overall positive impact on society. United Nations Industrial Development Organization (UNIDO) defines corporate social responsibility as management concept making it part of the corporate governance. “Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders.” (Kaushik 2017 p.12). Corporate Social Responsibility is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives (“Triple-Bottom-Line- Approach”), while at the same time addressing the expectations of shareholders and stakeholders. To comprehend the impact of corporate social responsibility on various stakeholders in the Indian Hospitality sector, we need to understand the genesis and growth of corporate social responsibility in India. The Government of India's clear focus is to get maximum

benefits out of corporate social responsibility activities and spend by corporates. To achieve the desired objective, various government departments have played an active role. The requirement of a specific class of profitable entities to spend a certain amount on CSR work comes into effect from April 1, 2014, as part of the Companies Act 2013. With effect from April 1, 2014, every company, private limited or public limited, which either has a net worth of INR 5billion or a turnover of INR 10billion or net profit of INR 50million, needs to spend at least 2% of its average net profit for the immediately preceding three financial years on corporate social responsibility activities (*Vijay et al., 2015*). While spending is not mandatory, filing a report on corporate social responsibility activities or failing to explain in the Board report why spending was not carried out is mandatory. Failure to do so attracts a penalty too of INR 0.05million, which may extend to INR 2.5million and the person responsible for failure can be punished for a prison term of up to 3 years or with a fine between INR 0.05million and INR 5million (*Vijay et al., 2015*). The Companies Law was amended in the June 2019 budget session that provides imprisonment of up to three years for executives of companies that violate rule apart from a fine of INR 0.05million to INR 2.5million. However, following intense lobbying by panicked India Inc. and the high-level committee's recommendation, enactment has been amended that violation should be regarded as civil offences liable for monetary penalties and not punishable by jail term (*Sikarwar, 2019*). From April 2014 to April 2017, Rs 38,000 Crore has been spent by 14,000 companies. For the year 2017-18 out of 3117 companies, 582 (19%) companies reported zero spend 875 (28%) companies reported less than prescribed spend (*ET Bureau, 2019*). Corporate India spent a little over INR 7,800 crore in 2019 -20 against Rs.1 8,655 crore from 2018-19 (*idronline.org 2021*). Data available with the Ministry of Corporate Affairs showed that 248 entities, including technology, automobile, and food companies, spent less than the required amount, while 98 companies, including cement, insurance, and pharma, spent nothing. Meanwhile, the spending on health, disability, and livelihoods reduced drastically; it was more than halved in FY20 to INR 3,582 crore. The share of state-owned companies in overall CSR spending, which was at twenty per cent in FY19, came down to about six per cent in FY20. (*idronline.org 2021*). With the reduction in the funding by corporates, the Government introduced various severe amendments to the CSR Rules on January 22, 2021, to ensure compliance with unspent funds. Though there is a continuous requirement of funds for the development, especially during the current pandemic situation, some companies have shown apathy towards corporate social responsibility initiatives. Also observed an imbalance in spent by corporates, i.e. significant spend is in and around Western & Southern part of India where businesses are located. Whereas the absolute need for such activities is in the eastern part of India. (*Das, 2019*). With liberalisation/privatisation/globalisation of the Indian economy, Government's ability to pay the social bills will be reduced as there will be a reduction in dividend income from Public Sector Undertakings. There is a government ordinance to reduce corporate tax percentage from 33% to 25% (*Livemint, 2020*). In such a situation, Government social spent needs to be supported by corporate social responsibility by the corporates. One needs to

understand stakeholders' awareness and reaction in this regard. As a recent concept in India, corporate social responsibility, paucity of the study noted for the Indian hospitality industry. It is critical to understand the direct /indirect impact of corporate social responsibility on all the stakeholders, e.g., corporate image, investor confidence level, employee morale, motivation level, productivity, perception of community, and which vendor is an important stakeholder.

1.2 Role of corporate social responsibility on changing perception of stakeholders in the Indian hospitality industry Global Economic:

In consequence of the pandemic and efforts to contain it, the global economy contracted by 3.3% in 2020 compared to a growth of 2.8% in 2019. Advanced economies contracted by 4.7%, while emerging markets and developing economies contracted by 2.2% (*IMF,2021*). The US economy contracted by 3.5% and that of the UK by 9.9% during the year. Emerging and developing Asian economies contracted by 1.0 (*IMF,2021*). Within this group, the Indian economy contracted by 8.0%, while the economies of Sri Lanka, Maldives, Malaysia, Bhutan, and Nepal contracted by 3.6%, 32.2%, 5.6%, 0.8%, and 1.9% (*IMF,2021*). China was the only large economy to register a 2.3% growth in 2020 (*IMF,2021*).

General view of the world tourism sector: The impact of the Covid-19 outbreak has been particularly pronounced in the trade of services across the globe. The travel and tourism sectors have been significantly affected as flights have been grounded, hotels and other tourism-related services have been closed, and travel restrictions have been implemented worldwide. Data from the International Air Transport Association (IATA) shows a collapse in air passenger travel, with a fall of 94 per cent in April 2020 compared to the same month a year earlier, representing an unprecedented decline. This contraction comes atop the year-on-year decline of 55 per cent observed in March 2020. Likewise, according to data from the United Nations World Tourism Organization (UNWTO), international tourism arrivals across the globe fell 44 per cent during the first four months of 2020, for the same period in 2019. The most severe decline was observed in the Asia and Pacific region, where arrivals fell by just over 50 per cent, while other regions of the world all registered substantial drops. (*Kituyi, 2020*).

Indian Economy: The nationwide lockdown caused a sharp contraction of 23.9% in GDP during Q1 FY 2021, recovering to a 7.5% drop in Q2, together with improvement in all key economic indicators- (*IHCL Annual Report, 2021*). Commencing from July 2020, the recovery has been V-shaped, as demonstrated by Quarter-on-Quarter GDP growth, a sustained by high-frequency indicators such as power demand, E-way bills, GST collection and steel consumption. GST collections reached pre-pandemic monthly levels following unlocking of industrial and commercial activity. Imports reduced more against exports, and foreign exchange reserves were at levels covering 18 months of imports. Inflation, mainly driven by food prices, remained above 6% for much of the

year. India's GDP is estimated to contract by 7.7% in FY 2020-21, with a sharp 15.7% decline in the first half of the year and a minor 0.1% fall in the second half (*IHCL Annual Report, 2021*). Government spend, improving private consumption, and net exports have cushioned the economy in the second half. If taken sector-wise, agriculture can be said to have performed better than industries, with a growth of 3.4% during FY 2020-21. Industry and services are estimated to contract by 9.6% and 8.8%, respectively, during FY 2020-21 (*IHCL Annual Report 2021*). Mining is estimated to contract by 12.4% within the industry, manufacturing by 9.4% and construction by 12.6%. The utility sector has shown a sharp recovery and is set to register a growth of 2.7% in FY 2020-21. Within services, trade, hotels, transport and communication, which constitute one-third of overall services, are estimated to contract by 21.4%. (*IHCL Annual Report, 2021*). *There will be more stress on the hospitality and tourism sector for the next few years. Recovery may be much slower than expected. Those associated with the sector will be impacted heavily because of loss of employment and less spend on the community. Organisations need to be cautious about each step that will impact the stakeholders.*

Indian tourism sector: Indian tourism got restricted to repatriation under Vande Bharat flights by the Government of India. Minor tourism activities have taken place during the lifting of the lockdowns in the various parts of the country. Overall all situation was grim and subdued in the Indian subcontinent. Foreign tourist arrivals (FTAs) in India, as per statistics provided by the Ministry of Tourism, averages at more than 10 million a year. During 2020, FTAs numbered 2.68 million compared to 10.93 million in 2019 (*Kaushik, 2021*). In reply to question in the Loksabha session by the Ministry of Tourism, the information provided to the house that during April-December, 2020, FTAs were only 0.21 million tourist arrivals compared to 7.75 million arrivals during the same period of the previous year, registering a drop of 97% (*Kaushik, 2021*). This data explains the devastating effect of the pandemic on Indian tourism. Since there is no foreign tourist arrival entire tourism supply chain is adversely impacted. However, the domestic leisure sector showed a revival in Udaipur, Goa, Rajasthan, Agra, Mussoorie, Rishikesh, Coorg and Himachal, with city occupancies driven by staycations. Weddings celebrations though curtailed in size, while business travel and corporate events were insignificant. The 13 Indian destinations tracked by STR, a global hospitality data analytics firm, registered an occupancy of 49.6% in Q4 FY 2021 as against 56.1% in Q4 FY 2019-20, with a 39% decline in Revenue per Available Room (RevPAR) (*STR report, 2021*). As against the previous year of 2021, the occupancy levels were sustained due to the domestic tourist demand at lower average room rates. Goa registered an occupancy of 70.1%, higher than 63.8% during the same period in the previous year. Kolkata and Chandigarh area registered occupancies near to their previous year levels. Among the cities with large room inventories, Delhi registered an occupancy of 57.3%, while that for Mumbai was 52.3%. Occupancy for Gurugram, Chennai and Bengaluru was 46.3%, 48.8% and 39.2%, respectively. Except for Goa, RevPAR at most destinations remained subdued due to excessive supply and limited demand (*IHCL Annual Report 2021*) Based on STR report reproduced in the report the demand was for leisure destinations for higher as

against city hotels. Guests have opted for leisure gateways during the lockdown conditions. It was an outcome of the perception that open air and less congested places are safer than populated and polluted urban areas.

Before 2019-20 India clocked the most significant improvement among the top performers in global tourism, jumping from 40th in 2017 to 34th in 2019 the Travel & Tourism Competitiveness Report published by the World Economic Forum (Calderwood 2019,). According to World Bank, 1.5 crore International tourists visited Indian in 2017 and USD 2.7 billion received from such tourists. Travel and Tourism has a 3.6% share in India's GDP and offers jobs to 2.8 Crore Indians (Calderwood, 2019). During 2017 to 2019, Indian tourism sector was on the robust growth path and attracting investments. The tourism and hospitality sector was one of the top 10 sectors in India to attract the highest foreign direct investment (FDI). Web and mobile-based channel traffic increased exponentially during this period, resulting in significant investment in related areas. Apart from direct hotel websites and mobile apps, online travel agents have also seen a spike in traffic. However, during the year 2020, in the case of India, the baseline scenario is a sharp recession in 2020 as strict lockdown measures to stem the virus' spread brought many productive activities to a halt across the country. Although there is an expectation of a rebound in 2021 in line with the growth rates of the Indian economy in recent years, the contraction registered in 2020 is likely to translate into a permanent income loss (Kituyi, 2020). Fear exists of multiple pandemic waves hitting across various parts of the globe shortly.

Well-crafted and implemented corporate social responsibility policy will directly and proportionate impact the business stakeholders (Investors, consumers, employees and community). Key corporate social responsibility issues are environmental management, eco-efficiency, responsible local sourcing, stakeholder engagement, labour standards and working conditions, employee and community relations, social equity, gender balance, human rights, good governance, and anti-corruption measures. These emanate from the UNWTO declaration of 2017 as International Year of Sustainable Tourism for Development (IY2017) to contribute to the achievement of Sustainable Development Goals. As per this Agenda, tourism can be helpful to eradicate poverty, inequalities and combat climate change for a better future (Earth Change/rs 2017). Tourism can be an essential tool to attain Sustainable Development Goals. A correctly implemented corporate social responsibility concept can bring along a variety of competitive advantages over competitors; it creates an image of a socially responsible corporate house. Also, create a host of avenues for, e.g. enhanced access to capital markets due to enhanced investor confidence. In response to the appeal from the Government of India, many Indian firms have graciously contributed to the cause of the fight against pandemic crisis is the recent example of constructive use of the CSR funds. Indian corporations contributed to the cause by way of various modes, e.g. money contributed to the fund, building facilities for medical treatments, providing food & place of rest to front line workers in essential services, supplying medicine, oxygen supply and installation of oxygen plants in the hospital premises.

Socially responsible companies are well accepted by the community and other stakeholders, directly and proportionately linked to the shareholders' confidence (Vuta *et al.* 2019). Receptive, engaged customers will increase sales and profits as customers choose socially responsible firms over other available substitutes (Tingchi *et al.*, 2013). Operational cost savings improved productivity, and superior quality cannot be achieved without happy and engaged employees, efficient human resource base. Improved brand image and reputation in the community will attract the talent, and it will be easier to retain the talent. It is evident that most of the time, the brand image is preferred by the employee over money for a job. When two different firms offer similar compensation, one with the reputed brand and another local firm, the offer from the reputed brand will be accepted by the candidate in most cases (Atudo 2014). In today's world of information explosion, the community is watching the actions of the company and its commitment towards the community (Camelo 2014). Details of corporate social responsibility are available on the website of any listed company. Due to information explosion, the stakeholders are using such information and preferring brands/firms which are socially responsible and committed to sustainability. Tourism is an important sector in the world economy. Economists and social scientists are keenly following the tourism sector. Tourism is one of the crucial sectors for the growth of the world economy (Rifai 2017).

1.3 Major Hospitality player in India

Marriott International, the world's biggest hotel chain, has around 100 hotels with approximately 22,000 rooms in India. Its immediate Indian rival, The Indian Hotels Company Limited (IHCL), founded in 1899 by Mr Jamsetji Tata, has 221 Hotels in 12 countries, 100+ locations. Including its budget brand Ginger with about 19,425 operating rooms. (IHCL Annual Report 2021). As per Brand Finance annual report on the most valuable and strongest brands in June 2021, IHCL's Taj is India's second strongest brand next to Jio of Reliance Industries (Francis, 2021). During the challenging situation, it was quite an achievement by the hospitality company. Brand Taj was strongest amongst all Indian hospitality brands and second in position across all sectors. The resilient and socially responsible demonstrated by the Taj during challenging times is respected by the stakeholders. While braving with the lockdown with high hygiene standards offered, the top brands in the hospitality industry thought outside of the box to offer home deliveries, curated experiences, health worker relief, and a range of innovative customer engagement initiatives to ensure their brands remained top of mind. Taj (brand value US\$296 million), (Francis, 2021). In a landmark deal that changed the dynamics of the Indian hospitality industry, Marriot had bought Starwood Hotels and Resorts worldwide for about \$13 billion, a move that brought together its Marriott, Courtyards, and Ritz Carlton brands with Starwood's portfolio of brands like Sheraton, Westin, W and St Regis (Chaturvedi, 2018). The Oberoi Group is a [hotel](#) company with its head office in [Delhi](#), founded in 1934; the company owns and operates 33 [hotels and resorts](#) in seven countries covering 15+ locations and servicing 4935 rooms, primarily under its The Oberoi Hotels & Resorts and Trident Hotels brands (EIH Ltd Annual Report 2020).

As against previous year *Oberoi's brand value has increased by 14% to US\$99 million, as it capitalised on a healthy mix of urban and countryside luxury properties offering hygienic and IT savvy conditions for families that needed a break from their homes* (*Francis, 2021*). The Leela Palaces, Hotels and Resorts, commonly known as The Leela, is an [Indian](#) luxury [hotel chain](#) founded in 1986 by Captain [C. P. Krishnan Nair](#). The Leela is a group of nine luxury palaces and hotels ([theleela.com](#)). Other major international and national brands which operate out of India as either owner, operator or franchisor model are Hyatt Hotels Corporation, which has 19 brands, 852 hotels and 211000+ rooms worldwide. InterContinental Hotel Group, Radisson Blue Hotels, Shangri La Hotels & Resorts, The Lalit Hotels, The Park Hotels, ITC started its operations in 1975 and has more than 100 hotels in all segments. *ITC Hotels (brand value US\$103 million) restricted their brand value slide to single digits to 3% as against previous year* (*Francis, 2021*). Other prominent brands are Bharat Hotels, Pride Hotels, Park Hotels, Lemon Tree Hotels, Accor, and Berggruen Hotels etc. As per Mr Ritesh Agarwal, founder of the Oyo Hotels, expected to become the world largest hotel chain by 2023. It is an Indian start up that began with one hotel in Gurugram in 2013, which has grown over 3,30,000 rooms in 500 cities globally, which has more rooms in China than in India (*PTI, 2018*).

India has more than 2 Lakhs hotel rooms spread across various categories. Though the supply of rooms/ keys is growing at a decent pace, it is way below the demand and expected growth of the Tourism industry. For the sake of comparison, as per the report of the New York State Comptroller, it had more than 1,07,000 in the year 2015 & 26,500 rooms were in the pipeline, Hospitality industry offered more jobs 50,000 in New York City (*DiNapoli, et al., 2019*).

1.4 Significant challenges faced by the Hospitality Industry in India

India is expected to establish itself as the third-largest travel and tourism economy by 2028 in terms of direct and total GDP a 2018 economic impact report by World Travel & Tourism Council (WTTC) (Mathur, 2018).

Predications were based on the base case scenario; however, in the year 2020, in the case of India, the scenario is a sharp recession as strict lockdown measures to stem the virus' spread brought many productive activities to a halt across the country. There is an expectation of a rebound in 2021 in line with the growth rates of the Indian economy in recent years. The contraction registered in 2020 is likely to translate into a permanent income loss (Kituyi, 2020). The lockdown has impacted the tourism and hospitality sector very heavily, and for the revival of the economy and sector needs, intervention from the government may be in the form of cash benefits or policy matters. eg. The Finance Minister of India, Ms Nirmala Sitharaman, in the press conference on June 28, 2021, announced the issue of tourist visas free of charge to 5 lakh tourists. The scheme will be applicable till March 31 2022, or till 5 lakh visas are issued, whichever is earlier. The expected financial implication of Rs. 100 crore.

(Livemint,2021). Few specific challenges noticed concerning changes in traveller behavior. In times of COVID-19, travellers are opting for closer destinations within the radius of 200 kilometres. Domestic tourism has shown positive signs in many markets since people tend to travel closer. Travellers go for 'staycations' or vacations close to home. Nature, rural tourism and road trips have emerged as popular travel choices due to travel limitations and the quest for open-air experiences. New concerns faced with health and safety measures and cancellation policies are consumers' top concerns. Last-minute bookings have increased due to the volatility of pandemic-related events and travel restrictions. Noticed a change in demographics, the travel recovery has been more robust among younger segments. Moreover, mature travellers and retirees deferred travel plans. Preference is given to sustainability, authenticity and local food. Travellers have been giving more importance to creating a positive impact on local communities, increasingly looking for authenticity (Deodhar et al., 2020). Further, few challenges are beyond the pandemic and may hamper the estimated growth prospects. There is a scarcity of quality training institutes for the continuous supply of skilled workforce. Also, attracting, developing and retaining a quality workforce is a core challenge. Ever-increasing utility cost, e.g., energy, water, & other utilities; not so reliable supply of electricity beyond metro cities. Higher Good and Service Tax (GST) up to 18% for the luxury hotel segment- (Panasare 2020). Lack of sustainable business models for the travel and tourism industry by Government and corporations. Inadequate infrastructure for Airports, Roads, at Tourist places. Challenge of capacity building, i.e. lack of trained hospitality staff, taxi drivers, tour guides, and travel managers (IHCL Annual Report 2019). The ever-increasing cost of land. Requirement of various Licences for hotel operations. Though India is the seventh-largest travel and tourism economy globally, and India lacks tourist infrastructure such as airports, seaports, high-speed rail, and roads compared to its neighbours in the east. There is an opportunity for the Regional Connectivity Scheme to open up 350 unserved and underserved airports and airstrips. (Mathur,2018). Such developmental activities are stalled due to the prevailing pandemic situation and impacted heavily on the community. Before March 2019, India was on the way to become a reckoning force in world tourism. Most of the listed airline and hospitality companies have reported good results. With the change in the macro-environment, the stakeholders are impacted adversely. Community as stakeholders consist of suppliers specific to the hospitality sector heavily impacted due to continuous lockdowns. These suppliers have their ecosystem and another supply chain that responds to the environment. This chain was interrupted during pandemic period. In the current situation, any organisation to succeed in all fronts need to maintain long term and fruitful relationship with all stakeholders including community. It is inevitable to understand what the community is thinking about the organisation, and corrective measures must be taken to fill the expectation gaps.

2 Aim or Need for the Study

Vendors for hospitality sectors are capital goods suppliers and also small-item suppliers, e.g., vegetables, fish, and poultry meat. From building material, engineering items to software, car hire, and chemical. There is a wide range of material requirements by the industry, any change in the consumption pattern has a direct and proportionate impact on this vendor. During the current pandemic, the lockdown situation and drastic drop in hospitality business vendors from hospitality sectors are adversely impacted. Various hospitality companies and other corporates have engaged with the community and Government to battle with the novel coronavirus. Most business houses were considerate with the vendors by honouring the commitments and paying for goods and services on time. Hospitality sector vendors, either from the organised or unorganised sector, are listed or unlisted, local or international, engaged in CSR activities in their way. Such vendors have their ecosystem to provide goods & services with the help of a manufacturing unit or a team of people. It is a relatively complex and unique ecosystem. It is different from other sub-sectors in the service sectors, which may not have such a long supply chain. The study aims to understand the maturity level regarding corporate social responsibility (CSR) activities by the Indian hospitality sector vendors during the Pandemic situation. Various steps were followed to analyse and validate the hypothesis. The Literature Review was carried out with the help of journals, published papers and other literature. Theories related to Corporate Social Responsibility examined. To develop the theoretical framework, the identification of variables was critical. Without which developing a hypothesis will be difficult. Such a hypothesis need to be tested with the help of a questionnaire and subsequent data analysis. As a first step of the exercise of hypothesis testing, subject-related literature examined with books on the subject of CSR, related publications, various websites, journals, and reports. The study will try to determine how these vendors respond to the CSR activities by hospitality corporates whether such vendors differentiate between brands and give preference to the socially responsible brand while associating with a particular brand. Also, it will explore the self-assessment of the maturity level of these vendors and the reality. Since these vendors are various segment study will provide a dipstick for community response to the CSR activities by the hospitality sector. The CSR awareness level & risk assessment culture, demonstrated by such vendors, especially during the current pandemic situation, needs to be explored, which leadership style promotes the CSR activities and helps nurture the culture of business excellence.

3 Literature Review

3.1 Influence of corporate social responsibility on Brand and Strategic Identity

Various studies revealed that information about corporate social responsibility activities influences customer's decision-making process. Panasare (2020) has studied the impact of CSR activities on brand image and brand equity from the investor's point of view in the Indian hospitality sector. The direct relationship between corporate social responsibility and strategic financial and economic performance established for the Romanian Companies by Vuta et al. (2019). The online survey of Spanish sportswear has established that corporate social responsibility has a direct positive influence on loyalty and an indirect influence through its positive effect on brand awareness and consumer satisfaction (Rivera et al., 2019). The impact of corporate social responsibility on the perception of customers and employees of luxury chain hotels in Delhi, India, suggests that corporate social responsibility improves the corporate image, however, which cannot be measured directly (Sharma et al. 2018). Independent unbranded five-star hotels in Istanbul, Turkey, carry out a moderate corporate social responsibility activity and positively impact the corporate image and customer loyalty (Gurlek et al., 2017). Qualitative branding strategies explored by Shahani et al. (2017). Patil (2017) studied the link between responsible investment strategy and corporate social responsibility and noted that the link is complementary. Rishi (2015) focuses on the thematic analysis of preference amongst the Indian transition generation and explains that frequent communication/awareness about sustainability helps to attract customers in tier II cities towards luxury lodging. Results of the study were online with a study conducted in China. Brookes et al. (2014) presented a paper on the development and implementation of responsible business practice, notes greater emphasised for co-operation between various stakeholders in the hospitality and tourism industry. A study conducted by Tingchi et al. (2013) in China states that middle-class consumers consider corporate social responsibility as one factor in choosing a particular hotel brand over others. Martinez et al. (2013) studied how Melia Hotel International, a leading hotel company in Spain, used corporate social responsibility activities to change its organisational identity positively. It is noted that the impact of corporate social responsibility on the Indian hospitality sector vendor has not been studied in any of these studies. Please refer to Table 1 for an elaborate summary.

Table 1: Summary of Literature Review on the influence of corporate social responsibility on brand and strategic identity: -

Author/ Year	Country	Area of Study	Gaps
Panasare (2020)	India	Impact of CSR activities on brand equity, brand image and investor's view	Other than Investors, other stakeholders (employee/ customer/ vendor/ community) not considered

		on Indian Hospitality Sector	
Vuta et al. (2019)	Romania	CSR effects on financial performance	Not specific to the hospitality sector
Rivera et al., (2019)	Spain	Effects of Corporate Social Responsibility on Spanish sportswear consumer brand loyalty, brand awareness	Not specific to the hotel industry
Sharma et al. (2018)	India	Performance of luxury chain hotels	Ignores other stakeholders, Corporate image, loyalty, suppliers (Vendors)
Gurlek et al. (2017)	Turkey	Corporate social responsibility customer and employee focused loyalty The role of corporate image.	Ignores other stakeholders
Shahani et al. (2017)	India	CSR branding, Qualitative Branding strategies	CSR spent, return on investment, brand image, brand equity, application of Triple Bottom Line theory, Stakeholders theory, vision & objective, leadership role and approach, hospitality sector, Impact on suppliers is not covered specifically
Patil (2017)	India	Investment	The hospitality sector, brand

		strategy, corporate social responsibility	image, brand equity, application of CSR theories, vision & objective, customer retention, motivation, leadership approach, word of mouth
Rishi et al.; (2015)	India	Marketing Sustainability in luxury lodging Industry, Influence of parents, children and travel agents; Rewards for green behavior	Impact on Hospitality sector vendors.
Brookes et al.; (2014)	UK	Responsible business practices	CSR spent, return on investment
Tingchi Liu et.al; (2013) USA	China	Performance, brand equity, brand preference	CSR spent, return on investment, alignment with vision & objective, customer retention, employee motivation, word of mouth, impact on vendor not studied
Martinez et. al; (2013)	Spain	Organisational Identity	Amount spent, return on investment,

3.2 The role played by the statutory bodies/community to derive desired results from corporate social responsibility by the companies

The requirement to introduce legislative measures to stimulate corporate social responsibility is studied in Romania, specifically for hospitality companies (2019). The community engagement model of Tata Housing Development Company Limited by Mitra (2016) explains strategic partnership with the community. Sandeep Kumar (2016) studied the important prerequisites and positive government interventions to encourage corporate social responsibility initiative and spent. Ferus- Comelo (2014) had documented in the paper that vigilant community/ social groups can work as a pressure group to achieve desired results. Atudo (2014) has studied the impact of corporate social activities on various stakeholders with specific reference to employees. The relationship between business and society concerning corporate social responsibility studied by Chaudhri (2011), with the particular emphasis on enactment, consumer behavior and clashes of community with business over land and natural resources in the northeastern states of India. Das (2009) has considered the Centre and State Government's contribution to India to drive the solid corporate social responsibility model. Except for Ferus- Comelo, Vendors as a part of the community not studied in depth. Please refer, Table 2 for summarised details.

Table 2: Summary of Literature Review on the role played by the statutory bodies/community to derive desired results from the corporate social responsibility by the companies:

Author/ Year	Country	Area of Study	Gaps
Baicu et al, (2019)	Romania	Bio-economy, social responsibility, sustainable hotel Industry	Introduction of legislative measures to stimulate corporate social responsibility in Romania
Mitra (2016)	India	Partnership real estate company & community	Hospitality Sector
Kumar, Chandigarh,(2016)	India	Economic Reforms, Government interventions	Hospitality Sector, spent, return on investment, brand image. application of CSR theories, alignment with vision & objective, customer retention, motivation, leadership approach,

			word of mouth
Comelo, Panaji, Goa, India,(2014)	India	Self-reporting, Inadequate data reporting, Lack of transparency, communication, vigilant community,	Amount spent, return on investment, application of CSR theories, customer retention & motivation, leadership approach, word of mouth, perceived brand value, brand equity.
Atudo (2014)	Kenya	Employees perceptions of corporate social responsibility benefits	Telecom sector in Kenya; only employees as a stakeholder is considered
Chaudhri, Purdue University Graduate School, (2011), West Lafayette Indiana, USA	India	Relationship between business and society, communication, trusteeship, global reporting indicators,	Hospitality sector CSR spent, return on investment, brand image and equity
Das (2009)	India	Contribution of central and state government in the social sector, the socio-economic structure of the country,	The hospitality sector, amount spent, return on investment, brand image., brand equity, alignment with vision & objective, customer retention & motivation, leadership approach, word of mouth,

3.3 Corporate social responsibility activities by Indian companies for inclusive growth

An analysis of 42 non-finance companies understood corporate social responsibility initiatives and shortcomings (Arijita et al., 2016). The corporate social responsibility activities undertaken by FMCGs in India and their impact on the company's market capital are explored by Panigrahi et al. (2015). Gautam et al. (2014) has studied corporate social responsibility practices in India for 500 companies and listed the shortcoming and opportunities. Please refer, Table 3 for further details.

Table 3: Summary of Literature Review on corporate social responsibility activities by Indian companies for inclusive growth:

Author/ Year	Country	Area of Study	Gaps
Arijita et al., (2016)	India	Corporate social responsibility, analysis of 42 Non-finance companies.	Hospitality sector CSR spends, return on investment, brand image, brand equity, application of CSR theories, alignment with vision & objective, customer retention & motivation, Leadership approach, word of mouth, Government Policies.
Panigrahi et al. (2015)	India	Activities in Indian FMCGs, Consumer durable	Hospitality Sector, brand image & brand equity. customer retention & motivation, word of mouth, Government Policies
Gautam et al. (2010)	India	CSR practices in Indian top 500 companies, UN Global Compact, 1997 and ten	Specific hospitality sector analysis not carried out, alignment with vision & objective, customer

		principles, OECD, SA 8000, PRI, Equator principle, the role of ILO, ISO 26000, OHSAS 18001	retention & motivation. leadership approach, word of mouth
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3.4 Corporate social responsibility and global perspective

The effect of national culture on corporate social responsibility in the hospitality industry is studied in the Republic of Korea by Kang et al. (2015). Differences between Micro and Macro aspect for corporate social responsibility were evaluated by Sharma et al. (2010) as tabulated in Table 4

Table 4: Summary of Literature Review on corporate social responsibility and global perspective:

Author/ Year	Country	Area of Study	Gaps
Kang et al.; (2015)	Republic of Korea	The effect of national culture, Hofstede's four national culture dimensions (i.e. Power, distance, individualism, masculinity and uncertainty avoidance)	Correlation of corporate social responsibility strategy, financial performance, Return on Investment, Earnings Per Share
Sharma et al.; (2010)	India	Corporate Social Responsibility and Global Compact, Difference between Micro and Macro aspect	Hospitality sector brand image & equity, alignment with vision & objective, customer retention & motivation

To summarise, a paucity of the study was noted to understand the impact of corporate social responsibility activities on stakeholders for the Indian Hospitality sector. Further specific gaps were noted concerning understanding the maturity level regarding CSR activities by the Indian Hospitality sector vendors, especially during the current pandemic disaster (Covid19 situation).

3.5 Corporate social responsibility theories

Corporate Social Responsibility as a theory encourages that corporations are entities with economic, legal, ethical, and philanthropic obligations. Corporations responsible for a *Triple Bottom Line* seek sustainability in the economic, social, and environmental territories. Corporate ethics built on *Stakeholder Theory* which involves all those affected by the organisation in its decision-making process. These theories are analysed to understand the maturity level regarding corporate social responsibility (CSR) activities by the Indian Hospitality sector vendors during Pandemic disaster (Covid19 situation);

3.5.1 Corporate Social Responsibility (CSR), (Milton Friedman, 1962)

'The Business of Business is Business'. There is one and only social responsibility of Business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engage in open and free competition without deception or fraud'' (Friedman, 1962). The theory of corporate social responsibility emphasises both the responsibility to make money and interact ethically with the community. It also has a specific conception that responsibility to profit while playing a role in broader questions of community welfare. As per Milton Friedman's theory of Corporate social responsibility, every business holds four kinds of obligations, and business should respond to them in order: *first the economic, then the legal, next to the ethical, and finally the philanthropic*. The major criticism of this theory was that business obligations need to be followed in a particular order and not everything to be seen business as a whole. Freeman coined the concept of inclusive Stakeholder Theory against the sequential or ordered concept of responsibility.

3.5.2 The Stakeholder Theory, (R Edward Freeman, 1984)

Stakeholder Theory is a view of capitalism that interconnects relationships between a business and its customers, vendors, employees, investors, community and all others who have a stake in the organization. Stakeholder theory confirms that those whose lives are touched by a business hold a right and obligation to participate in directing it. The stakeholder theory obligates corporate directors and managers to consider all sides and balance everyone's interests and welfare in the name of maximizing benefits whose lives are touched by the business. The stakeholder theory considers all business stakeholders simultaneously and not in particular order as per Milton's CSR theory.

Stakeholder's theory is an important step forward to Milton's theory. However, it does not consider facets of economic, social & environmental sustainability while conducting the business. Apart from the concept of corporate social responsibility and inclusive stakeholder theory John Elkington has developed concept of Triple Bottom Line of sustainability.

3.5.3 The Triple Bottom Line, (John Elkington 1994)

A triple bottom line is a form of corporate social responsibility that helps corporate leaders tabulate bottom-line results in economic terms, i.e. profit and company effects on the people in the social realm and the planet's environment. Each needs to be reported independently, and the company should achieve sustainable results. The notion of sustainability is at the intersection of ethics and economics. *Sustainability* helps to maintain the long-term balance of the business. *Economic sustainability* is long-term financial strength over volatile, short-term gains, no matter how high. As per the triple-bottom-line model, any corporations have a responsibility to create business plans for stable and sustained action. *Sustainability is a virtue of valuing business plans that may not lead to quick gains and avoid disastrous losses.* *Social sustainability* is the elimination of imbalances between rich and poor. Restoring human respect. Workers need to be treated with dignity. *Social sustainability requires corporate citizens in a specific community must maintain a healthy relationship within society.* *Environmental sustainability* begins by confirming that natural resources are limited, especially oil, and clean air and water. *Environmental sustainability means actions must be taken to facilitate our natural world's renewal.* Together, these three notions of sustainability, economic, social, and environmental guide industries toward actions fitted to the conception of the corporation as a participating corporate citizen in the community than a money machine. These three aspects should drive the business and not the money. Enterprise should be ready to compromise profit for these essentials. However, it is practically difficult for any business to be at the forefront of all these aspects simultaneously. Balancing profits and maintaining economic, social and environmental sustainability is a task for any business house.

To conclude these three forms of corporate social responsibility theories, traditionally, the directors and managers of companies have had a challenging and very narrowly defined responsibility: guide the enterprise toward money. The ethical question was, they have been arranged around the fundamental obligation to represent the owners' only interest of profit on investment. Corporate social responsibility and the related ideas of the triple bottom line and stakeholder theory lead to a different kind of business ethics. Corporations have responsibilities that go beyond generating profits and include the larger society. Corporate social responsibility as a specific theory encourages corporations with economic, legal, ethical, and philanthropic obligations. Corporations are responsible for a triple bottom line search for sustainability in the economic, social, and environmental aspects.

Corporate ethics built on stakeholder theory involves all those affected by the organisation in its decision-making process. Table 5 narrates theories related to Corporate Social Responsibility.

Table 5: Corporate Social Responsibility Theories

Theory	Author, year	Area of Study	Gaps
Corporate Social Responsibility (CSR),	Friedman, 1962	Economically sustainable. Business obligations to be responded to: economic, then legal, next to ethical, and finally philanthropic.	Hierarchical approach towards its obligation. Stakeholders are not considered independently and interdependently.
The Stakeholder Theory	Freeman, 1984	Those whose lives are touched by a business to hold a right and obligation to participate in directing it. Any business decision to balance all stakeholders' interests and welfare to maximise benefits. Stakeholders are clearly defined.	Fails to consider the difficulty in method and formulae in balancing all the stakeholders to balance everyone's interest and welfare
The Triple Bottom Line	Elkington, 1994	The company should obtain sustainable results. It needs to be at the forefront of economic, social, environmental aspects. Independent results need to be reported on each aspect.	Economic, social, and environmental sustainability guides the businesses & not the money. Profits may have to be compromised for sustainability.

Milton Friedman's CSR theory considers a hierarchical approach, and economic obligation is considered a primary and other obligation next in order; however, stakeholders are not considered independently and interdependently. Freeman's Stakeholder theory advises balancing the interest of all stakeholders, which is a practically tricky task. As per Elkington's Triple Bottom Line theory, every enterprise should obtain sustainable results and be at the forefront of economic, social, and environmental aspects, which must be reported independently. These three aspects should drive the business and not the money. Enterprise should be ready to compromise profit for these essentials. Mentioned theories consider all the aspects of the business, including the community as a stakeholder and vendor is an essential element of community.

4 Identification of Independent, Dependent and Moderating Variables

A variable is any quantity or quality that varies. The dependent variable is what is being studied and measured in an experiment. A variable in which the researcher is interested. An independent variable is independent of everything else, a variable supposed to affect the dependent variable. Moderating variables - In general terms, a moderator is qualitative, e.g., sex, race, class or quantitative, e.g., level of reward, variable that affects the direction and/or strength of the relationship between independent and dependent variables. A moderator is a third variable in a correlational analysis framework that affects the zero-order correlation between two other variables. (Baron & Kenny (1986)). A moderator variable is a third variable that affects the strength of the relationship between a dependent and independent variable. In [correlation](#), a moderator is a third variable that affects the correlation of two variables. *Government Policies and corporate social responsibility funds are independent variables*. With effect from April 1, 2014, every company, either private or public limited, needs to spend at least 2% of its average net profit on corporate social responsibility activities based on the defined parameter (Vijay et al., 2015). These activities should not be undertaken in the ordinary course of business and must be to any of the activities mentioned in the Act's Schedule. Availability of funds and government policies goes hand in hand as both are complementary to drive corporate social responsibility activities. Ministry of Commerce issues regular guidelines on compliances of funds and their utilisation. A recent example is CSR funds allowed to be used to tackle the current pandemic challenge.

Government policies and the availability of corporate responsibility fund influences the *dependent variables*. Stakeholders (investors, hotel guests, employees, suppliers, community) are directly affected and benefited by the amount spent or not spent on corporate social responsibility. Such benefit may be actual, derived or even notional, e.g. when a certain amount kept aside for the corporate social responsibility activities, investors and shareholders receive less economic benefit, i.e. lower earnings per share. As per the corporate social responsibility theory, the very purpose of any business is to be profitable, which a short term approach. In contrast, a long-term approach is when a company spent on corporate social responsibility activities, which helps to improve the overall brand

image and brand equity reflected on the stock exchange and valuation. Improved brand value leads to an increase in return on investment and results in wealth creation for shareholders. Community benefits from social spending and will be at a loss if less amount is spent or fewer activities are undertaken. The vendor is an integral part of the community and hospitality value chain. The *CSR awareness* drive by hospitality corporates for its activities and awareness level of the vendor about this concept of CSR is an essential factor to achieve desired results. Vendors align to the mission-vision of the company only be mutually beneficial partners to each other. To understand the awareness level, continuous *assessment* of factors related to *CSR and Risk culture* is critical. *Leadership style* drives the organisational culture. Such a leadership style helps any business to achieve *business continuity* and *business excellence*. Such dependent variables are critical for the success of any organisation, especially in today's pandemic situations. Government by constitution obligates for social activities; however, with the liberalisation, privatisation and globalisation, Government is slowly shifting focus to the governance of social activities. The Government needs the support of funds to tackle the present challenge faced by the novel coronavirus. The governments in developed or underdeveloped economies have started focusing more on governance than on manufacturing & services. Employees are the company's brand ambassadors, and there is a visible, direct and proportionate impact on the motivation and morale of the employees due to corporate social responsibility activities undertaken by a hospitality corporate. Today customer is digitally and technologically savvy, prefers to have his research. Customer likes to be associated with the brand which is on the forefront of the corporate social responsibility.

Moderating variables is *corporate social responsibility activities* carried out by the corporates. Based on these variables, a theoretical framework is developed. Please refer below Table 6 for the identification of variables.

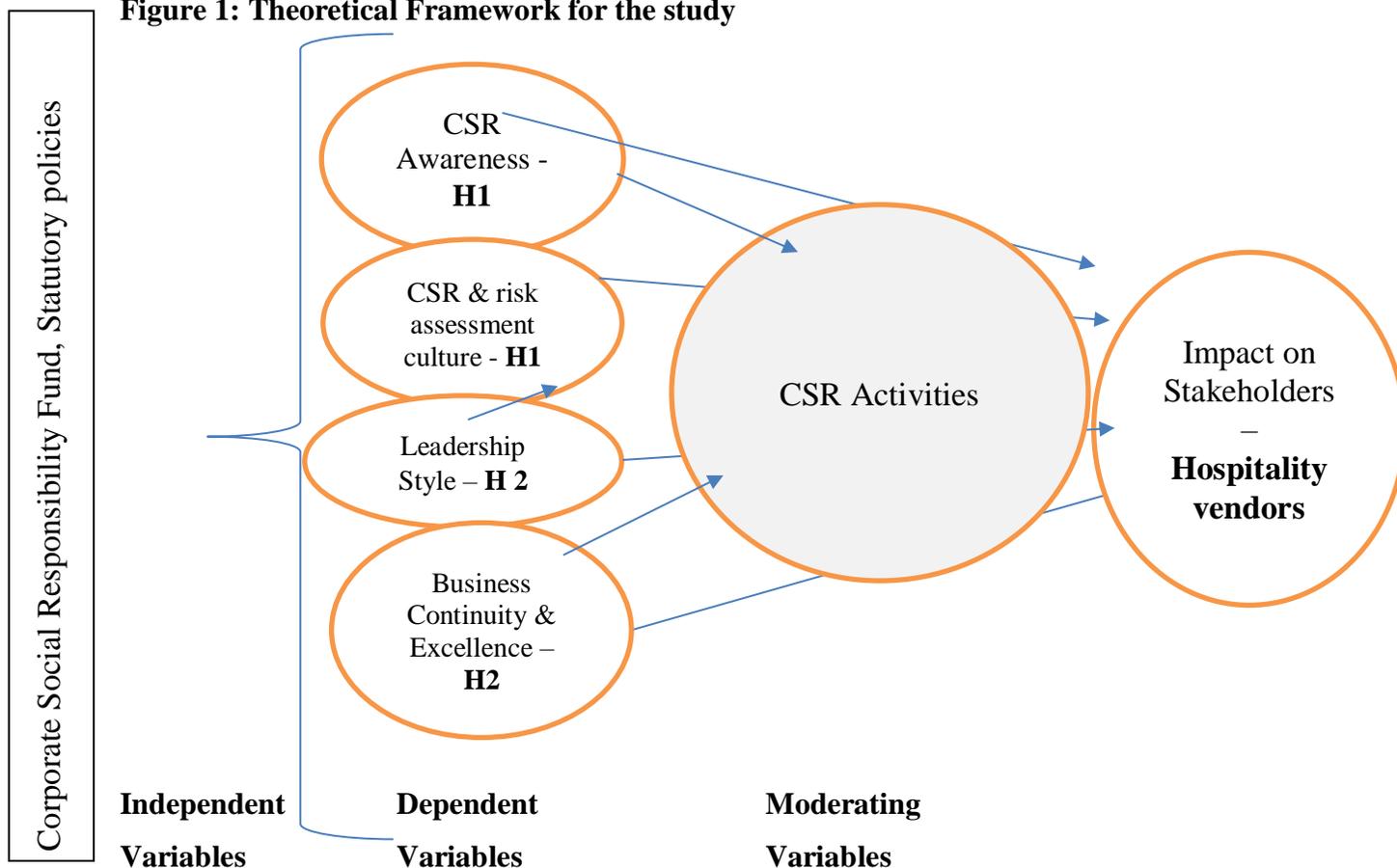
Table 6: Identification of Variables

Independent	Dependent	Moderating
Corporate Social Responsibility Fund (availability), Government Policies	CSR Awareness, CSR and risk-assessment culture, Leadership style, Business continuity and excellence	Corporate Social Responsibility activities carried out by the corporates

4.1 Developing Theoretical framework

To Understand the maturity level regarding corporate social responsibility (CSR) activities by the Indian Hospitality sector vendors during the Pandemic disaster (Covid19 situation), after undertaking a relevant Literature Review, understanding the theories, and identifying variables was essential while developing a theoretical framework. Theoretical framework explained with the help of a diagram. Figure 1 relates to the

Theoretical Framework for Study.

Figure 1: Theoretical Framework for the study

Inference

India is expected to be the third biggest tourism economy in the next ten years. Presently tourism industry generates 10 million jobs (Mathur,2018). *There is demand supply gap for hotel room in India. Eventually, there will be the formation of more hospitality companies to fill such a gap. As being growing and eventually, profitable sector, more funds will be available for corporate social responsibility activities. With the information explosion, Stakeholders and companies are exposed to each other more than before.* In India, various legislations acts and statutory authorities enforce and monitor corporate social responsibility funds and spending. Corporate social responsibility funds are presently being used for education, health care, rural development, environmental sustainability etc. (*Times of India, October 25, 2019*). During the current challenging time, corporate funds are essential to fill in the gap of the social budgets of the Government. The Government of India on April 22, 2021, vide circular No. 5/ 2021 from Ministry of Corporate Affairs allowed spending funds on setting up makeshift covid-19 hospitals and temporary care facilities can be considered as an eligible corporate social responsibility activity (*Srivastava, 2021*). Community and all its stakeholders are continuously watching the movements by corporate and Government bodies. It is imperative to understand the CSR Awareness, CSR and risk assessment

culture followed by the hospitality vendors, the Leadership style followed by such vendors, whether it has any influence on the decision making process. Finally, it has the link to business continuity and business excellence. The corporate social responsibility theory of Friedman (1962) focuses only on economic sustainability as the first and foremost obligation and other obligations to be responded to next in order. Business stakeholders are not identified in this theory, as against the said theory suggested study will look at all the stakeholders, including a significant part of a community that is a vendor and aspect of the business. The Triple bottom line theory of Elkington (1994) expects that company should achieve a sustainable result on economic, social and environmental aspects; the study explores beyond these three aspects and considers *the impact on stakeholders, especially on vendor community*. The stakeholder theory by Freeman (1984) confirms that whose lives are touched by a business holds a right and obligation to participate in and directing it. It also obligates corporate directors and managers to consider all sides and balance everyone's interest, and the business touches welfare in the name of maximising benefits and those lives. The theory has an overarching guideline, and the study will cover aspects specific to the vendors. The stakeholder theory does not show a roadmap to achieve this balanced approach. The present study would help achieve a *balanced approach* by understanding the impact of corporate social responsibility on the stakeholders, including vendors of Indian hospitality companies. Based on the discussed inference, the next step is to develop the hypothesis to understand the impact of CSR activities on vendors and the leadership style supporting CSR activities, leading to business continuity and excellence.

4.2 Developing Hypothesis

Since funds mandatorily to be spent on corporate social responsibility activities, it will impact the community, an important stakeholder. Change in the degree of spending on corporate social responsibility will have direct and proportionate impact on the community, and the supplier is an important part of the community. It is critical to understand the maturity level regarding corporate social responsibility (CSR) activities by the Indian Hospitality sector vendors during current challenging situations. During the Literature Review, Panasare (2020) has studied the impact of CSR activities on brand equity, brand image and investor's view on the Indian Hospitality Sector. It is essential to study the impact of CSR on the recipient. Rivera et al. (2019) has covered consumer brand loyalty, brand awareness in the Spanish market. The role of corporate image in the Turkish market is studied by Gurlek et al. (2017). CSR branding, Qualitative Branding strategies studied by Shahani et al. (2017). Performance, brand equity, brand preference studied in China by Tingchi Liu et al.; (2013). Various sectors are covered in India and internationally to understand the impact of and corporate social responsibility on stakeholders (Vuta et al., 2019, Panigrahi et al. 2015, Gautam et al. 2010); however, there is a paucity of study to understand the maturity level regarding corporate social responsibility (CSR) activities by the Indian Hospitality sector vendors. Also, as per Friedman (1962) theory, business needs to be ethically profitable. The Stakeholder Theory by R Edward Freeman,

1984, states that those whose lives are touched by a business to hold a right and obligation to participate in directing it. Any business decision to balance all stakeholders' interests and welfare to maximise benefits. As we have understood by now the suppliers or vendors are essential part of the community and major recipient of the CSR activities by any firm. The current pandemic situation is reoccurring after almost 100 years, and CSR is a recent concept; none of the above studies or theories has considered the impact of disaster situations. The impact of the pandemic on travel & tourism, and hospitality is disastrous. GDP contribution from the sector was at USD 121.9 billion for 2020 as against USD 191.3 billion for the previous year, a reduction of 36%. Impact on local communities has been devastating (*Messina, 2021*). Being a disaster of the century and comparison is not available, as the hotel industry was not mature a century ago. Considering the above facets understanding the sentiments of the vendors, a vital community stakeholder, is imperative. To understanding, this better CSR awareness and understanding of the risk environment by vendors is also essential. Ultimately leadership style of the vendor organisation has links to the concept of understanding CSR and business continuity and excellence. Thus the hypotheses for the effect of CSR on the vendor from the Hospitality Sector:

*H1) Vendors are **positive** towards CSR activities by Hospitality Company proportionate to its **CSR awareness level & risk assessment culture**, especially during the current pandemic.*

Studies are carried out across various countries and sectors to understand that the leadership style impacts CSR activities. Sharma et al. (2018) has studied hospitality suppliers; however, the impact of leadership style & its impact on business continuity and excellence is not explored. Though Shahani (2017), Patil (2017), Sandeep Kumar (2016), Arijita et al., (2016), Comelo, (2014), Gautam et al. (2010), Chandra Das, (2009) covered the subject however hospitality sector-specific to business continuity and excellent is not studied. Also, referred theories not explored the impact of leadership style on corporate social responsibility activities. It is imperative to understand the correlation between leadership style and CSR and its impact on business continuity, especially in current pandemic situations. Thus, the hypotheses to understand the effect of CSR on Leadership style & Business continuity during the pandemic situation is:

H2) Consultative style of leadership leads to CSR activities and leads to Business continuity & excellence.

5 Methodology

Research design: - Research is based on books, journal articles and surveys. This study aims to understand the maturity level regarding corporate social responsibility (CSR) activities by the Indian Hospitality sector vendors during the Pandemic disaster (Covid19 situation). It is pilot exploratory research. Survey sample respondents (suppliers/vendors) are from diverse sectors across India.

Sample Design: – Sample size of 64 respondents considered.

Table 7: Analysis of sample survey

Attribute	N	%
<i>Indirect taxpayer</i>		
Yes	59	92%
Not applicable	5	8%
		100%
<i>Direct taxpayer</i>		
Yes	60	94%
Not applicable	4	6%
		100%
<i>Organisation structure</i>		
Registered Company	41	64%
Other than company format	23	36%
		100%
<i>Medium and small enterprise</i>		
MSME vendor	26	41%
Others	38	59%
		100%
<i>Number of the year of operations</i>		
01-05	10	16%
06-15	34	27%
16-25	13	20%
>25	24	38%
		100%
<i>Supplier type</i>		
Vegetables/ Fish/Poultry/ Meat	3	5%
Groceries	1	2%
Food and Beverages	9	14%
Stationary/Engineering and other misc. items	21	33%
Services	30	47%
		100%

<i>Trade association membership</i>		
Yes	16	25%
No	48	75%
		100%
<i>Supplier to sectors</i>		
Hospitality as a primary sector	43	67%
Not specific only to hospitality	21	33%
		100%
<i>Employee Strength</i>		
Less than 10	8	13%
10-50	27	42%
51-100	10	16%
Above 100	19	30%
		100%
<i>Turnover of the Enterprise</i>		
Less than 10 lakh	2	3%
Between 10 to 50 lakhs	4	6%
Above 50 lakhs	58	91%
		100%
<i>Risk-aware organisation</i>		
Risk assessment not carried out at all	15	23%
Risk assessment carried out once a year	39	61%
Risk assessment carried out twice a year	10	16%
		100%

Above Table 7 provides an analysis of the sample survey, which is summarised as follows: Out of total respondents, 94% were indirect taxpayers also 92% were Direct taxpayers; 64% of vendors are with company structure; 41% represent MSME sector; 84% were in trade for more than six years, indicates established suppliers; Vendor providing hospitality-related services were 47%, stationary & other engineering item supplier 33%; Vegetable, fish, meat, poultry, food and beverages & groceries suppliers were 20%, which indicates appropriate sample mix; 25% vendors are members of trade associations; 67% are primarily supplying only to the hotel industry; 46 % suppliers have employed at 50 employees; 91% vendors are generating turnover of at least 50 lakhs; 76% vendors have carried out risk assessment at least once a year, balance are not the risk-aware organisation.

To summarise, respondents demonstrate representative of suppliers for the Indian hospitality sector. All respondents are established in the trade, members of trade associations, registered taxpayers—respondents representing large, medium and small and medium sectors based on turnover and employability. Most of the vendors are aware of business risks and risks related to the pandemic and acts of god.

Questionnaire design: - It is pilot exploratory research. Pilot testing carried out to validate the questions and to determine the validity and reliability of the questionnaire. The questionnaire covered CSR awareness status, CSR and risk assessment status, leadership style, Business Continuity and excellence etc. A structured questionnaire prepared by incorporating *independent variables* like corporate social responsibility fund and government policies, *dependent variables* like Risk estimation by the risk-aware organisation, CSR awareness and socially responsible behavior, risk evaluation, culture assessment, Leadership attributes, coaching and mentoring for business continuity and excellence, *Moderating variable* as corporate social activities carried out by corporates. The questionnaire also covered detailed demographics like registration with tax authorities, type of organisation, i.e. large, medium, MSME, type of suppliers, supplier-specific to industry, size of the company, No of years of operations, etc. Brand equity measured by the RKS model (Srivastava, 2005, 2006, 2009, 2010, 2014, and 2018). It is a financial model to calculate the brand value and is used in emerging markets. The consumer attitude measured based on the instrument used by Morton and Friedman (2002). To measure opinions, beliefs and attitudes (DeVellis, 1991), Likert-type scales used. Scales with the Likert type response format can generate higher reliability coefficients than those with other response formats (Churchill & Peter, 1984; Hayes, 1984). Elmore & Beggs (1975) have explained that a 5 point scale is as good as a higher point scale, and moving from a 5 point scale to a 7 point scale or 9 point scale does not improve the reliability response. Therefore for study 5 point Likert scale used to evaluate cultural aspects—motivation and Leadership style measured by adopting scales based on Srivastava (2015). Happiness level measured based on the study of the Subjective Happiness Scale (SHS) by Lyubomirsky & Lepper (1997) and Ambastha and Srivastava (2016). Innovative leadership capability will be measured with the help of Hurley and Hult (1998), Lawson and Samson (2001), Hult et al. (2004), Dibrell et al. (2014) and Vicente, Margarida et al. (2015). Reliability statistics for the questionnaire is provided in Table 8

Table 8: Reliability Statistics for the questionnaire:

Variable	No. of Items	Cronbach's Alpha
Risk assessment maturity status	3	0.959
CSR awareness by vendors	8	0.976
Understanding and appreciating CSR culture	9	0.967
Risk awareness status	7	0.931

Risk maturity level	5	0.753
Leadership attributes	11	0.988
Business continuity and excellence	4	0.968
Leadership style	3	0.854

The value of Cronbach's Alpha is between 0.753 to 0.988, which is an acceptable level of reliability and shows internal consistency or interrelatedness.

Data Design: - Data analysed by using SPSS and Excel tools. Descriptive, reliability and correlations tests used to test hypotheses.

6 Results

The study aimed at understanding the maturity level regarding corporate social responsibility (CSR) activities by the Indian Hospitality sector vendors during the Pandemic disaster (Covid19 situation). The first phase of analysis is descriptive nature.

Descriptive analysis: the first analysis descriptive a) relates to factors affecting the understanding levels of the vendor, related to being positive towards CSR activities by Hospitality Company based on their awareness of CSR and risk assessment culture. Another analysis b) relates to the identification of leadership attributes that leads to business continuity & excellence.

- a) Assessment capabilities of the hospitality sector vendors for CSR activities by hospitality companies and also the risk & CSR awareness and assessment culture-specific to due to disasters situations are as given in Table 9.

Table 9: Reason for vendors are being positive towards CSR activities by Hospitality Company based on their awareness of CSR and risk assessment culture

	N	Mean	Std. Deviation
<i>Self-risk assessment by the vendor</i>			
Risk mitigation plan in place	64	3.13	1.579
The register is reviewed periodically	64	2.88	1.599
Vendor organisation has defined risk register	64	2.84	1.606
<i>CSR awareness at vendor organisation</i>			
Avoids corruption in business	64	3.55	1.718

Provides equal opportunities irrespective of class/ creed/ religion /gender	64	3.58	1.716
Protects human rights/ freedom of union/ forbids the use of child labour	64	3.63	1.704
Takes care of applicable laws	64	3.50	1.700
Meets health and safety regulations	64	3.56	1.680
Strongly believes in going beyond law and regulations to help stakeholders	64	3.19	1.670
<i>CSR culture at vendor organisation</i>			
Quality of goods and services	64	3.66	1.720
Confirmation of ethical behavior in all its interactions with community	64	3.63	1.686
Defined good/ services delivery standards	64	3.67	1.681
Fairness concerning payment to employees	64	3.52	1.652
Defined image and vision mission of the organisation	64	3.56	1.622
Review of profitability/ EPS/ Market value	64	3.22	1.568
<i>Risk awareness level</i>			
The visible link between vision mission and risk- taking attitude of the enterprise	64	1.13	0.333
Enterprise Risk Management awareness within the enterprise	64	1.11	0.315
The continuous risk assessment process	64	1.11	0.315
<i>Risk maturity level</i>			
Evaluation of liquidity position and each credit proposal	64	4.19	1.271
Assessment of organisations actions impacting/ contributing society	64	3.47	1.221
Preparedness for calamities, acts of god etc.	64	3.94	1.180
Insurance coverage	64	3.94	1.180

As per the *self-risk assessment* by vendors to the hospitality sector, designing a risk mitigation plan is the first step, followed by risk identification and review. Though the mean is comparatively lower, which indicates nascent stages of maturity, the vendor could establish a link between the vision mission and the risk-taking attitude of the

enterprise. Enterprise Risk awareness and continuous Risk assessment are indicators of *Risk awareness level*. However, reasonably high-*risk maturity level* about business indicated by way of evaluating the liquidity position, ability to assess the impact of business on the stakeholders, preparedness for the adversities and seeking insurance cover. It indicates the reasonable maturity level about assessment & evaluation culture for any risks in the business. Such businesses lean towards *avoiding any corruption in business*, ready to provide equal *opportunity to all* irrespective of class, creed, culture, region, gender, firmly votes towards *human rights* and *against child labour*, and follows all applicable laws & health & safety standards. *CSR awareness* indicates when such vendors are *ready to go beyond* law and regulations to help the *needy stakeholders*. It indicates their understanding of CSR activities by Indian hospitality sectors and corroborated by similar trends followed at their respective firms. A similar inference was out of the studies carried out in Spain by Rivera et al. (2019), in Turkey by Gurlek et al. (2017), in China by Tingchi Liu et al. (2013) and in New Delhi, India, by Sharma et al. (2018) concerning the impact of CSR activities on the customer. The above findings are also linked to the culture followed by such vendors at their respective businesses. Few indicators maintain the *quality of goods or services, delivery standards, fairness* in all interactions, including employees. All these are part of the vision-mission of the enterprise. *Review of financial* status, which is determined by current profitability, past performance earnings per share and the present value of the share at the stock market. These are in line with the Corporate Social Responsibility Theory (Milton Friedman, 1962), The Stakeholder Theory (R Edward Freeman, 1984) & Triple bottom line (John Elkington, 1994). It is also in line with a study carried out for linkage of responsible investment strategy to corporate social responsibility by Patil (2017), Arijita et al. (2016), Brooks (2014), and Tingchi Liu et al. (2013) in India, UK and China. To summarise, the vendors can understand the magnitude of the CSR activities by Hospitality Company as they have adequate assessment skills and capabilities. Similar culture is appreciated by such vendors, especially during the current pandemic situation.

- b) Descriptive Analysis: Another analysis relates to the identification of leadership attributes that leads to business continuity & excellence is as given in Table 10

Table 10: Reasons for a particular style of leadership leads to CSR activities and leads to business excellence at vendor organisation

Descriptive Analysis

	N	Mean	Std. Deviation
<i>Leadership attributes</i>			
Leaders are capable of managing emerging risk Scenario	64	4.34	1.224

Leaders are open and flexible for risk assessment	64	4.33	1.209
Loyalty is considered an important factor	64	4.45	1.167
Definition of responsibility and accountability for each employee	64	4.31	1.153
Bright employees are groomed by coaching and mentoring	64	4.47	1.140
Fairness is easily measurable in the enterprise	64	4.30	1.136
Thankful to all stakeholders	64	4.52	1.084
<i>Business continuity and excellence</i>			
Mentoring increase the level of self-awareness	64	4.22	1.215
Coaching and mentoring is essential for an organisation	64	4.03	1.181
Coaching increase effectiveness/ commitment and carrier progression	64	4.23	1.151
<i>Leadership style for Business continuity and excellence</i>			
Autocratic	64	3.41	1.455
Democratic	64	3.95	1.161
Consultative	64	4.08	1.159

A leader needs to be capable of understanding *managing emerging risk* scenarios, open for *risk assessment*. Leaders consider loyalty an essential factor and *define responsibility and accountability* for each team member, *believing in coaching and mentoring*. Importantly *thankful to all* stakeholders for their respective contributions. *Mentoring increases self-awareness* which contributes to the effectiveness and demonstrates commitment towards carrier progression. For the preferred leadership style, the consultative style was with the highest mean and lowest standard deviation.

- c) Rank analysis to understand the linkages for awareness about CSR activities, the risk environment and risk assessment culture. It demonstrates that hospitality vendors have a clear understanding of risk evaluation, assessment and preparedness. CSR culture is followed with an adequate awareness level by these vendors. Refer to Table number 11,

Table 11: Rank analysis for awareness about CSR activities and risk and risk assessment culture

	N	Mean	Std. Deviation	Rank
Evaluation of liquidity position and each credit proposal	64	4.19	1.271	1
Preparedness for calamities, acts of god etc.	64	3.94	1.18	2
Insurance coverage	64	3.94	1.18	3
Defined good/ services delivery standards	64	3.67	1.681	4
Quality of goods and services	64	3.66	1.72	5
Protects human rights/ freedom of union/ forbids the use of child labour	64	3.63	1.704	6
Confirmation of ethical behavior in all its interactions with community	64	3.63	1.686	7
Provides equal opportunities irrespective of class/ creed/ religion /gender	64	3.58	1.716	8
Meets health and safety regulations	64	3.56	1.68	9
Defined image and vision mission of the organisation	64	3.56	1.622	10
Avoids corruption in business	64	3.55	1.718	11
Fairness for payment to employees	64	3.52	1.652	12
Takes care of applicable laws	64	3.5	1.7	13
Assessment of organisations actions impacting/ contributing society	64	3.47	1.221	14
Review of profitability/ EPS/ Market value	64	3.22	1.568	15
Strongly believes in going beyond law and regulations to help stakeholders	64	3.19	1.67	16
Risk mitigation plan in place	64	3.13	1.579	17
The register is reviewed periodically	64	2.88	1.599	18
Vendor organisation has defined risk register	64	2.84	1.606	19
The visible link between vision mission and risk-taking attitude of the enterprise	64	1.13	0.333	20

- d) The rank analysis also carried out to understand the link between leadership attributes & CSR activities, business continuity and business excellence. Refer to Table number 12 for detailed analysis.

Table 12: Rank analysis for leadership attributes leads to CSR activities, business continuity and excellence

	N	Mean	Std. Deviation	Rank
Thankful to all stakeholders	64	4.52	1.084	1
Bright employees are groomed by coaching and mentoring	64	4.47	1.14	2
Loyalty is considered an important factor	64	4.45	1.167	3
Leaders are capable of managing emerging risk Scenario	64	4.34	1.224	4
Leaders are open and flexible for risk assessment	64	4.33	1.209	5
Definition of responsibility and accountability for each employee	64	4.31	1.153	6
Fairness is easily measurable in the enterprise	64	4.3	1.136	7
Coaching increase effectiveness/ commitment and carrier progression	64	4.23	1.151	8
Mentoring increase the level of self-awareness	64	4.22	1.215	9
Consultative	64	4.08	1.159	10
Coaching and mentoring is essential for an organisation	64	4.03	1.181	11
Democratic	64	3.95	1.161	12
Autocratic	64	3.41	1.455	13

The vendors are thankful toward all the stakeholders in the business, understand the importance of mentoring and coaching for business continuity; loyalty is the essential factor for business relations. These vendors are capable of understanding the various risk scenarios. Respondents prefer the consultative leadership style over other leadership styles.

7 Hypotheses Testing

Hypotheses are taken up for analysis. The first hypothesis is as under

H1) Vendors are **positive** towards CSR activities by Hospitality Company proportionate to its CSR awareness level & risk assessment culture, especially during the current pandemic.

The analysis is done to test the hypotheses is given in table number 13

Table 13: Correlation between general awareness about CSR activities and risk assessment culture during a current pandemic situation

Pearson correlation

Coefficient:

Descriptive Statistics

	Mean	Std. Deviation	N
Mean	3.32	.313	9
Std. Deviation	1.66	.054	9

Correlations

		Mean	Std. Deviation
Mean	Pearson Correlation	1	.885**
	Sig. (2-tailed)		.001
	Sum of Squares and Cross-products	.784	.120
	Covariance	.098	.015
	N	9	9
Std. Deviation	Pearson Correlation	.885**	1
	Sig. (2-tailed)	.001	
	Sum of Squares and Cross-products	.120	.024
	Covariance	.015	.003
	N	9	9

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

The study aimed to understand the impact of CSR activities carried out by Hospitality Companies on their vendors and their maturity level about CSR and Risk. The study clearly showed that vendors are positive when CSR activities are enhanced by hospitality corporate. There is a significant and strong correlation between the vendors understanding level about present risk scenario, CSR awareness level, and CSR activities carried out by hospitality firms. The descriptive, correlation and rank analysis also supported this hypothesis. The hospitality corporates and their association with their vendors have a significant relationship concerning CSR activities. The vendor studies the company's financial performance and understands its liquidity position, vision, and mission, whether it aligns with his risk appetite. However, he gives importance to the assurance that the company is not involved in corruption and provide importance to statutory compliances and applicable laws. Mainly medium and small vendors closely observe the CSR activities carried out by the hospitality corporates and try to replicate them.

The second hypothesis is as under

H2) Consultative style of leadership leads to CSR activities and leads to Business continuity & excellence.

The analysis is done to test the hypotheses is given in table number 14

Table 14: Correlation between preferred leadership style its impact on CSR activities and business continuity and excellence

Pearson correlation

Coefficients

Descriptive Statistics

	<i>Mean</i>	<i>Std. Deviation</i>	<i>N</i>
Mean	4.14	.100	4
Std. Deviation	1.18	.029	4

Correlations

		<i>Mean</i>	<i>Std. Deviation</i>
Mean	Pearson Correlation	1	.155
	Sig. (2-tailed)		.845
	Sum of Squares and Cross-products	.030	.001
	Covariance	.010	.000

Std. Deviation	N	4	4
	Pearson Correlation	.155	1
	Sig. (2-tailed)	.845	
	Sum of Squares and Cross-products	.001	.002
	Covariance	.000	.001
	N	4	4

The study aimed at understanding the link between consultative leadership style on Corporate Social Responsibility (CSR) activities. Also, its impact on business continuity & excellence at vendor organization in Indian Hospitality Sector. During the study, it came out clearly that the consultative leadership style has a weak correlation with CSR activities, business continuity & business excellence. The descriptive analysis shows preference to the autocratic style leadership to achieve excellence business continuity and involvement in CSR activities; Rank analysis is favorable towards the CSR activities, business continuity and awareness. There is a weak correlation between consultative leadership styles to CSR activities, business continuity and excellence.

8 Discussion

The study summarizes that hospitality vendors are aware of the risk environment and concept of CSR. Vendors are capable of risk assessment and can define, evaluate and mitigate the risks. Though essential exercise has been carried out, identified risks are mitigated adequately. Vendors are observing the CSR activities of the hospitality sector. CSR awareness is at a decent level, and there is visible CSR culture exists. Also, there is a visible solid correlation between CSR activities and risk assessment culture. The vendor is following the CSR culture followed by the hospitality company in its way. A proven hypothesis is that vendors are positive towards CSR activities by hospitality companies proportionate to its CSR awareness level & risk assessment culture, especially during the current pandemic situation. The vendor prefers relationships with organizations that demonstrate socially responsible behavior. Vendors prefer the autocratic style of leadership for understanding, managing & mitigating any emerging risk.

Though hospitality vendors are thankful to the community and open to any changes, there is a weak correlation between the consultative leadership style to CSR activities, business continuity and excellence. Mainly due to other than company structure ownership. Being a supplier to an unorganized segment in India, it is also preference maybe towards an autocratic leadership style to drive toward the goal. Though there is a weak correlation between the consultative style of leadership and CSR activities, business continuity & excellence, it is a proven hypothesis.

The study further confirms the relevance of earlier similar studies carried out for sectors other than hospitality and also impact on stakeholders than vendors by Panasare (2020), Rivera et al. (2019), Gurlek et al. (2017), Shahani et al. (2017), Tingchi Liu et al.; (2013), Vuta et al (2019), Panigrahi et al. (2015), Gautam et al. (2010) within India and internationally. Such research specific to stakeholders as a vendor can be extended to sectors other than travel and tourism to understand the CSR maturity level of the vendors. Such a study will be beneficial to the community as a whole.

The theoretical framework created for a study has statutory policies and CSR fund availability as an independent variable. CSR activities by the Hospitality Companies a moderating variable that drives the dependent variable such as CSR awareness, CSR and risk-assessment culture, leadership style, business continuity, and excellence translate into an impact on stakeholders. In this case, it is a hospitality vendor. Such theoretical framework of the study is in order for use in further studies.

Theories considered for the research were Friedman's Theory of CSR, which follows a hierarchical approach towards its obligations to Stakeholders, Freeman's Stakeholder theory says that any business decision needs to balance the interest of all stakeholders and Elkington's Triple Bottom Line expect a business to be on the forefront of economic, social and environmental aspect. The vendor is a significant part of the stakeholder 'community' considered in the mentioned theories. The vendor, an important stakeholder, responds to the CSR commitment by the hospitality companies in a positive way. Vendors can understand the economic, social, and environmental obligations and their importance in any business. However, it is in proportion to the maturity level of awareness of the business atmosphere. The change in the degree of maturity establishes a link between the CSR theories & the stakeholders. Hospitality companies though spending on CSR activities, effective communication of such activities to the community is essential to derive benefits of the long-lasting relationship with the community in general and specifically with the vendor as a vital business stakeholder.

9 Conclusion

The main finding of this work is represented by the insight that the vendors of the Indian hospitality industry are matured to link the corporate social responsibility activities to form an association. It helps to understand the impact of such corporate social responsibility activities on the company's brand image and brand equity during the current pandemic situation. It has been observed that the concept of corporate social responsibility has been relatively understood by the vendor, one of the major stakeholders of the community in the Indian hospitality industry. Considering that the vendors are from all sections of society, the understanding may not be to the advanced world level. However, vendors give due weightage to socially responsible corporate behavior. The supplier is an essential element of the community, and it understands and appreciates a direct and proportionate linkage between corporate social responsibility activities and brand image and brand equity of a corporate.

Stakeholders prefer socially responsible Indian hospitality companies to be associated with either vendor, investor, or customer. Considering these factors, Indian hospitality firms need to crystalized their social policies and community interactions. Also, concentrate on CSR activities in the areas of its operations. The study will help such companies to engage with their stakeholders to create long-lasting impact and meaningful relationships.

Also, a conceptual model can be developed to ascertain the impact of a rupee spent on corporate social responsibility on the hospitality company's brand image/ brand equity.

10 Research Limitations

Since the data collection took place by focusing on a relatively small sample of 64 respondents, having further been carried out remotely in the current pandemic situation reach was restricted to the responses received, the main limitation of this study refers to the issue of generalizability, as the validity and applicability of the results for other industries and countries are not guaranteed.

11 Practical Implications

The Indian hospitality supplier is aware of and responsive to the surrounding atmosphere. He uses available relevant information for his decision making effectively. These vendors are of different classes and from different geographies. Corporations are not aggressively communicating the corporate social responsibility activities carried out by them. Effective communication by organizations will help in increasing stakeholder's awareness of a firm's efforts. Small vendors also need support from the corporates to improve maturity for CSR awareness and engage with them in such activities. Once corporates start engaging with vendors for CSR activities, it will help mitigate community skepticism and improve overall brand image. There is a direct correlation between corporate social responsibility activities and vendor association with any hospitality company.

12 Contribution of Research / new knowledge/ Originality

This work sheds light upon a field that has experienced limited research for the Indian hospitality industry. The study explored the hospitality sector vendor's maturity level to CSR activities by hospitality companies. It also explored the link for the association between hospitality companies and vendors based on CSR activities by hospitality companies. The study confirms revelations of previous research efforts that have equally identified the existence of effort in the sectors other than hospitality and vendor as an important stakeholder, but adds additional value by providing strategic guidelines concerning the Indian hospitality stakeholders' perception about corporate social responsibility activities also answers how to practically approach it, which is often missing in existing research. The study helps reinforce the need for the hospitality sector to improve CSR initiatives and their communication.

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Transient Impact of Covid-19 on Employment in India

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Abstract

Purpose: The purpose of this research paper is to assess the impact of the unforeseen Covid-19 lockdown on the Indian labour market. It highlights the short-term transitional effects on the skilled and unskilled labour force in the formal and informal sectors.

Methods: The study proposed uses categorical data which was analysed using dummy variable regression and likert scale to estimate the ramification of the lockdown on formal sector whereas primary survey method (qualitative method) was used to study the impact on informal sector. Further, the study investigates whether or not traditional government policies were effective during the pandemic. It is a secondary research.

Findings: The primary investigation reveals that workers in the informal sector were affected the most while the formal sector was in no better position either. According to the Centre for Monitoring Indian Economy (CMIE) report a month after the lockdown 121 million Indians were out of work. A new culture of online work from home regime emerged for the formal sector that was unfamiliar and unplanned. In conclusion, the paper advocates efficient steps to give a stimulus in the form of subsidies, fiscal policies accommodated by monetary policies favorable to both working class and the employers, and ways of public financing the continuous increase in government debts. The result of the study emphasizes the revival path of the economy.

Key words: Job Market, Intuitional Reforms, Pre and Post Covid-19 Lockdown

Type of research: It is both a primary and secondary research.

1. Introduction

On the evening of 24th march, 2020, the India had gone under a nationwide lockdown, as a response to the novel corona virus pandemic. A population as big as 1.38 billion were restricted inside their houses and millions on the roads had nowhere to go. Social distancing became the primary non- pharmacologic mitigation approach for the COVID-19 pandemic in a country where density of population is as problematic as the pandemic itself.

As the shops were closing down their shutters, offices closed their gates and schools and colleges started shutting down a new wave of problems marked their presence. The question then was what now? Initially the lockdown was announced for a period of 21 days but as time passed by the lockdown seemed indefinite. Initially only the basic necessities were kept in mind and people were allowed only to shop groceries, medicines and essential items. Some even took a break from regular lives and tended to rest in the comfort of their homes. But little did they know about the challenges awaiting them in the next phase. Although restrictions were imposed strictly, it did not stop the virus from spreading and more and more people fell prey to this virus thus leaving India in a problematic stage. The lack of government actions and poor health infrastructure were revealed eventually as time passed by and the situation worsened. While the others were busy counting the new cases arising every day the poor were the worst hit with nowhere to go and no means to earn their bread.

The immediate and most anticipated result of the new pandemic world was job loss, both in formal and informal sectors. There was a loss of 17.7 million jobs in April. As a result, in July 2020, salaried jobs were still 18.9 million less than they were in 2019–2020. Four months into the lockdown, salaried jobs are the worst hit. As of July 2020, the estimated employment in India was 392.7 million. [\(Vyas, 2020\)](#)

According to the Centre for Monitoring Indian Economy (CMIE), the unemployment rate reached 23.52% in May, 2020. As per Statista Research Department, 46% of households experienced a fall in income. Through this paper of ours we make a conscious attempt to understand the impact of lockdown on Indian job market, which includes both the formal and informal sector. The worst affected sectors during the pandemic are manufacturing, construction, trade, small businesses and hotels which employ over 80% of the Indian workforce and have been categorized as the most vulnerable [\(kapoor, 2020\)](#).

Unemployment is not a new dilemma and but this pandemic is. The government should ensure some safety nets for the most vulnerable sections of the society. The interim policy requirements is to protect the workers and their families and so the attention of the government should be more towards supporting Micro, Small and Medium Enterprises (MSMEs), expansion of MNREGA, direct cash transfers, ration subsidization and also to uphold the rights of the migrant workers. On the other hand appropriate incentives should be given to employers so that they ensure fair treatment towards their employees. On a brighter side the pandemic has given a new opportunity to participate in the global supply chains taking advantage of the growing consumer animosity towards China, therefore businesses should continue to be positive and start planning about the future accordingly as the correct

investments and development of human capital today will land us in a better tomorrow. While conducting the field study of different employees from the formal and informal sectors, we primarily focused on covering our aim of the impact of the lockdown on their jobs. The aim of the study is to study the short term effects of covid-19 lockdown on Indian job market. To further analyze the impact of lockdown on employees in the job market. And to analyze the role of Government and institutions and in turn suggest policy implications in dealing with the impact of lockdown on the job market.

2. Literature Review

2.1 Implications of Covid-19 for Labour and Employment in India

The Covid-19 pandemic has caused a financial and economic slowdown in developing nations like as India, affecting both the conventional and casual labour markets. This demonstrates that its impacts on the labour market are proportional to effective social security nets, government legislation, and other efforts taken by labour market institutions. For 2020, the IMF estimated the GDP growth of just 1.9% for the country, the lowest rate since the 1991 balance of payment crisis ([dhasmana, 2020](#)). This suggests that the economy is dominated by micro and small businesses, primarily in the informal sector ([EDUSAH, 2013](#)). According to the ILO's initial assessment, casual and self-employed employees would most probably lose their employment or see their income decrease. Sectors such as real estate, trade, manufacturing, and retail were the hardest hit owing to decreasing demand and limitations imposed in compliance with the lockdown; and these are the industries that employed the most people. ([Walter, 2020](#)). The total unemployment rate in August 2020 was 8.35 percent, then dipped to less than 7 percent the following month before rising to a somewhat higher level of 9.06 percent in December. ([dhawan, 2021](#)).

2.2 Informal Workers Need Greater Support

Volatility has an impact on the labour market and incomes. This confounds people's decisions about whether or not to enter the workforce. This might lead to a "discouragement effect," in which people drop out of the labour market much faster than they did previously. Because the denominator is not steady, the unemployment rate would be underestimated. Furthermore, they destabilize employees' wages, which would have resulted in two effects: dis-savings (exhaustion of cash reserves and maybe pawning of modest assets) and recourse to new borrowing that might be weaker and so results in their paying usurious interest rates. ([Dhawan, 2021](#)). For many employees, the impact of COVID-19 has been heavily influenced by one question: Can I work from home or am I bound to my workplace? Quarantines, lockdowns, ([Chandrasekhar and Ghosh, 2020](#)) self-imposed isolation have forced tens of millions of people throughout the world to work from home, hastening a workplace experiment that had struggled to gain pace prior to COVID-19. ([Anu, 2020](#)). In general, an economic downturn in the destination country lowers the number of migrants, limits remittances, and upsets migrant systems. According to the

Economic Survey 2016–2017, more than 9 million individuals relocate inside the nation each year, with the majority of such mobility being for work or education. While Delhi, followed by Mumbai, is the top destination for migrants, many people are migrating to the cities in southern states, like Bangalore, Chennai, etc. The largest number of these migrants sets off from the states of Bihar, UP, Bengal and Assam. ([Khanna, 2020](#)). India is now formulating a labour code that aims to give social security to its workers in the informal sector (Code on Social Security, 2019), and the necessity for such a code is growing in the midst of the present crisis. Countries with greater mobility over time are those with time-limited contracts or with a rise in part-time work. ([Macchiarelli, 2013](#)) About 400 million people working in the informal sector in India will lose their jobs and are at a risk of falling into the vicious circle of poverty (International Labour Organisation, 2020). ([times, 2020](#))

2.3 *A critique of the Indian Government's Response to the Pandemic*

Access to financing will be difficult and insufficient to restore the economy due to diminishing demand. Banks will have to provide more loans at lower interest rates in order to preserve their balance sheets, and if the economic situation worsens, there will be payback defaults, exacerbating the crisis. Allowing the government to borrow just at repo rate would be a better way for using funds. ([ghosh, 2020](#)). Most MSMEs that created about 90% of jobs in India are falling short of funds and they have monthly EMIs and loans to repay and with heavy fixed costs they will cease to exist in the market ([Pandey, 2020](#)).

Workers in the informal sector have little opportunities for advancement since they have minimal skills and have not invested heavily in human capital. Furthermore, geographical location is important since urban employees experience greater upward transition than rural labourers. ([Rajesh Raj Natarajan, 2020](#)). The government should implement a plan of action to improve the quality of employment in both the informal and formal sectors. This is only possible if policies are structured to improve human capacities, guarantee socioeconomic stability, encourage the expansion of small and micro firms, and create jobs through specific schemes. ([Ghosh, 2020](#)). The government should implement a variety of active and passive labour market policies aimed at enterprises and employees. Recessions are thought to be the optimum moment to implement large-scale labour market reforms, and it is critical to make substantial adjustments in the approach to confronting labour market challenges. ([Alessandro Turrini, 2015](#)). To boost aggregate demand, the government should raise expenditure, which may temporarily raise fiscal debt, but as soon as the economy recovers, tax income will rise, rebalancing the budget. ([Chandrasekhar and Ghosh, 2020](#)).

2.4 Gap Table

Table 1- Gap analysis

<u>Authors</u>	<u>Title</u>	<u>Year of Publication</u>	<u>Key Findings</u>
C P Chandrasekhar & Jayati Ghosh	Coronavirus: Informal workers need greater Support	2020	With the beginning of Covid 19 pandemic the informal workers faced the worst material impacts like loss of livelihood. Paper studies about the share of formal and informal workers of world, developed countries and emerging countries. 88 percent workforce of India belongs to informal sector of almost 90 percent is in non-agricultural activities.
S. Mahendra Dev and Rajeswari Sengupta	Covid-19: Impact on the Indian Economy	2020	The paper talks about the overall impact of Covid 19 pandemic on Indian economy and every job sector It compares the spread of virus in India and all over the world The paper also states the condition of Indian economy in pre Covid period
Jayati Ghosh	A critique of the Indian government's response to the COVID-19	2020	Mismanaged strategies of government such top down approach for nationwide lockdown inspite of having low number of cases and only in particular regions.

	pandemic		Government failed to make proper use of lockdown and improve medical infrastructure to certain required level. Low coordination between centre and state governments.
Dagmar Walter	Implications of Covid-19 for Labour and Employment in India	2020	Because of lockdown & lower demand, in 2020 the GDP of India saw its lowest value (1.9%) since 1994. Sectors such as real estate, trade, manufacturing & retail which hire the maximum number of employees were the most affected.

This table includes papers only from 2020 as the situations described in this paper (covid 19 pandemic and nationwide lockdown) never occurred before. In order to keep the objective clear only relevant papers have been included.

3. Identification of Variables

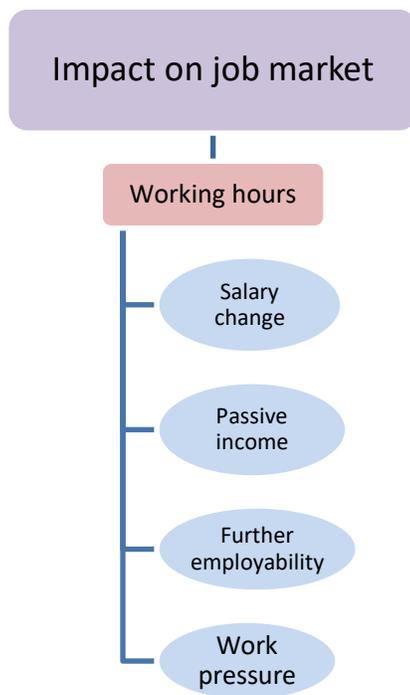
3.1. Variables for Formal Sector

- i) To study impact on the working conditions due to lockdown, daily working-hours was considered as our dependent variable.
- ii) Variables like salary change, further employability, work pressure and passive income were taken as explanatory variables to judge their impact on working hours. Let us now understand the variables.
 - a. Daily working-hours: According to the Department of Labor (DOL), “hours worked ordinarily include all the time during which an employee is required to be on the employer's premises, on duty, or at a prescribed workplace. This variable captures the time it takes for the employees on a daily basis to accomplish their tasks.
 - b. Salary change: Salary change means an increase or decrease in the salary or pay given to an employee. This variable captures the changes in salary of the employees due to the lockdown and the volatility associated with it.
 - c. Work- pressure: Work pressure is the pressure one faces at work. When we talk about pressure, we're

talking about having to complete a given bunch of tasks in a certain amount of time. This variable captures the psychological pressure that the employees faced during the lockdown.

- d. Further employability: This variable plans to capture the problems one faces in finding a new job especially in the lockdown environment when uncertainty prevails around everything.
- e. Passive income- this variable looks for an alternate source of income of the employee. It has been seen that multiple sources of income helps individuals at times of crisis hence the absence of other source of income leads to further vulnerability at times of risk and volatility.

Figure-I Relationship among the variables in formal sector



The above diagram explains how the different variables together have an impact on the job market. Every variable like salary change, passive income, further employability, work pressure etc. is connected to working hours which in turn is related to the impact on job market.

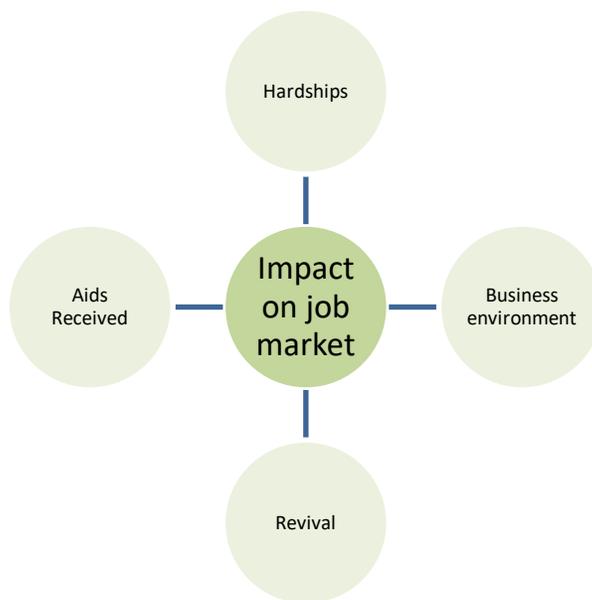
3.2. Variables for Informal Sector

i) The variables for informal sector varied according to the section which was studied.ii) Variables like hardships, aids received were considered for household servants and daily wage workers.

ii) To judge the impact on small and unorganised businesses variables like revival and business environment were studied.

- a. Hardships: Difficulty caused by having too little money or too few resources are included here.
- b. Aids received: this variable captures the benefits that were offered to the informal sector.
- c. Revival: This variable tries to capture the revival in the informal sector.
- d. Business environment: this variable tries to capture the environment of business after the lockdown for the informal sectors.

Fig-II: Relationship among the variables in informal sector



The above diagram explains factor that impact the labour market in informal sector. The factors like hardships faced, revival, aids received and ease of conducting business affected the labour market here. We know that due to the lockdown the entire job market especially the informal sector faced financial crunch and difficulties. Again the recovery of demand was slow in this sector which impacted their job market. Thirdly the ease of doing business was impacted as well because people were unable to manage the supply and demand requirements and also their markets were down mostly even after the lockdown ended, lastly, the relief packages received were a positive sign for them, to manage their savings and come out of debts and financial crunch which in turn reflected in their employment and labor markets.

3.3 Hypothesis

. Hypothesis testing implies that an informed assertion is compared to an alternative assertion. Hypothesis testing is a statistical approach that examines experiment results to determine the accuracy of our target variables. The null hypothesis is our claim about the experiment, and it is tested against any other claim. If a recommended test on the hypothesis verifies its accuracy through critical values, we fail to reject our null hypothesis. We do not accept the null if the calculated value is outside the acceptance zone.

To test the hypothesis whether the variables considered in our model have changed significantly themselves thus impacting the overall job market in general, we tested the hypothesis to verify if the change is significant enough. The variables on which the change was clearly visible were amount of working hours which have increased and the salary. Ideally both these variables should have a positive correlation, so in order to test for significance we tested the null hypothesis (no change) for rejection.

The reason this paper arrived at the hypothesis whether there has been a significant increase in working hours and change in salary because these two are the variables which on the whole imitate the working conditions at a place

4. Research Methodology

4.1 Research Design

This paper is a combination of statistical and descriptive research techniques. This paper is a pilot explanatory study. The study conducted is both based on primary and secondary research. For primary research we have conducted an online survey for formal sector in social media platforms like Linked-In, Whatsapp, Facebook etc. while for informal sector we have conducted personal interviews in four cities of Mumbai, Delhi, Guwahati and Ghaziabad. For formal sector the respondents were employees of various organizations working in different sectors and for informal sector the respondents belonged were mostly involved in odd jobs like daily wage labourers, maids, vendors, drivers etc.

In case of secondary research we have consulted various other papers mentioned above and websites to gather other relevant information. The study involves both statistical as well as categorical data in order to capture all dimensions of the impact of lockdown on the job market in India. Both financial as well as psychological aspects are kept in mind while choosing the variables and analyzing the data and results. The paper uses ANCOVA model which is operated through dummy variable regression model and likert scale analysis.

Dummy Regression Model: When explanatory variables (Xs) are qualitative in character, they are referred to as Dummy variables. Such qualitative variables are often used to signify the existence or absence of a "quality" or a characteristic. One way to quantify them is to assign a value of 0 when an attribute is lacking and a value of 1 when the attribute is present. The Regression models that contain both quantitative and dummy variables are called Analysis of Covariance (ANCOVA) model.

$$Y_i = B_0 + B_1 D_i + U_i$$

Y_i is the outcome for i th observation,

B_0 is the coefficient for the intercept,

B_1 is the coefficient for the slope,

D_i is:

1 if the i th observation is in the treatment group;

0 if the i th observation is in the control group;

U_i is residual for the i th observation.

The above model is used to estimate a linear regression equation. Analysis of co-variance (ANCOVA), T-statistics and P-values are used to confirm the hypothesis generated.

4.1.1 Formal Sector

Through this paper we attempt to study the short term changes in Indian labour market and at the same time analyse its macro-economic impact. Accordingly we have conducted both primary and secondary research in an attempt to understand the socio-economic as well as psychological impact of pandemic on the Indian job market. The socio-economic aspect has been covered through direct questions whereas for the psychological aspect we have used the likert scale analysis.

i. Dummy regression model:

The obtained categorical data was then analyzed by running a dummy variable regression

$$y_i = \beta_0 + \beta_1 D_i + e_i ; e_i \sim (0, \sigma^2)$$

Where,

y_i = outcome for i th observation (dependent variable)

β_0 = coefficient for the intercept

β_1 = coefficient for the slope,

D_i = Dummy variable which takes value

1 = observation is in the treatment group;

0 = observation is in the control group;

e_i = residual or error term for the i th observation.

The dependent variable under the study was working hours and the independent variables or the variables which impacted the number of working hours were multiple qualitative variables, some of which had binary answers which were assigned as dummy variables.

For further analysis, hypothesis testing was used to test whether the explanatory variable considered in the above

model had any significant impact on our model. The coefficients of the explanatory variables were tested for significance by using t-statistic and p values.

Where H_0 was rejected if the t value calculated lied in the rejection region

or

If $p > 0.05$.

ii. Likert scale analysis:

To adjudge the impact of psychometric variables such as work pressure and further employability, a 5point likert scale was used. Average likert score was used to comparatively study the situations that existed pre and post lockdown.

4.1.2 *Informal Sector*

The data for informal sector was collected through primary survey across four cities-Mumbai, Guwahati, Delhi and Ghaziabad where unstructured interviews were conducted and the questions differed per subject and further questions depended on answers given for previous questions. The data was collected in a manner such that the circumstances and problems faced by the workers from the informal sector during the lockdown could be assessed properly. Variables such as scheme access, financing, employment situation and some other variables which were subject specific such as recovery for small and unorganised industries and businesses were kept in mind while assessing the data.

4.2 *Sample Design*

4.2.1 *Sampling Unit*

For formal data was collected through online platforms like LinkedIn, Whatsapp, and Facebook etc. For informal data was collected through field surveys in four cities of Delhi, Mumbai, Guwahati and Ghaziabad. The sample was selected on the basis of the industry in which they work to give adequate representation.

4.2.2 *Sample Size*

The sample size varied in both the formal and informal sectors. While the formal sector had one hundred and fifty samples, the informal sector had a larger sample of three hundred respondents. The sample size for formal sector is small because all of them are educated and are expected to give rational data and results. But in the informal sector, mostly the samples were not educated so a larger set was taken for more precision.

Table-2: Sample design

Formal Sector	No. of respondents	Informal Sector	No. of respondents
Art and design	12	Domestic help	50
Banking and finance	15	Taxi drivers	25
Education	10	Hotel waiters	75
Government	10	Tiny roadside businesses	25
IT sector	15	Construction site laborers	75
Medical	20	Small shop employees	50
Hospitality and management	17		
Manufacturing	9		
Law	11		
Retail and commerce	5		
Telecom and sales	7		
Real estate	17		
Tour and travel	2		

4.3 Data Design

This paper uses stratified random sampling method in order to collect data across thirteen formal sectors and around six informal sectors. The respondents for formal sector were chosen randomly in every group and the same was done for the informal sector. While for formal sector the method for online questionnaires was used the informal sector was surveyed personally through field surveys in the cities of Delhi, Mumbai, Guwahati and Ghaziabad. There were around 150 respondents for formal sector and 300 respondents for informal sector.

5 Results

The results section shows the output obtained after the dummy variable regression, hypothesis testing and likert scale analysis on the sample data. The results section is broadly divided into two sections- hypothesis based and descriptive based. These two sections are further divided for formal and informal sector. The hypothesis section talks about the hypothesis testing done on the specified variables and interprets the results thereafter. The descriptive study tells us theoretically the results and the result for every variable has been explained in tabular

form for the formal sector. While for the informal sector has been explained in paragraphs.

5.1 Formal Sector Data Analysis Output

5.1.1 Hypothesis Testing

- i. Impact on salary: Formal sector

H0: Average pay cuts across the sectors is zero (no change in salary after pandemic)

H1: Average pay cuts across the sectors is not equal to zero

TABLE-3: Impact of salary on formal sector

	Salary change
Mean	-14.7860
Variance	306.9459347
Observations	150
Hypothesized mean difference	0
Df	149
t Stat	-11.5409
P(T<=t)one tail	6.91382E-24
t critical one tail	1.653087138
P(T<=t) two tail	1.38276E-23
t critical two tail	1.972800114

Impact of salary on working hours: So when the null hypothesis was tested for rejection at 5% we found that both our t-statistic (>1.96) and p value (<0.05) lie in the rejection region. So we reject the null hypothesis as we see that salaries have decreased by almost 14% among the surveyed employees or there is a minimal chance of pay rise for them in future.

The impact of salary on working hours is direct and affects the job market. The paper used hypothesis testing method to check whether the change in salary affects working hours which in turn impacts the job market. So, the null hypothesis stated that there was no salary change after the pandemic while the alternate hypothesis stated that there was change in salary after pandemic. So, tests like t test, p values etc. were applied using excel. The null hypothesis was tested for rejection at 5% we found that both our t-statistic (>1.96) and p value (<0.05) lie in the rejection region. So we reject the null hypothesis as we see that salaries have decreased by almost fourteen percent among the surveyed employees or there is a minimal chance of pay rise for them in future.

ii. Impact on working hours:

H0: Average working hours are same across all the sectors

H1: Average working hours are not same across all the sectors

TABLE-4: Impact on working hours

	<i>Values</i>
Mean	9.7
Variance	8.798658
Observations	150
Hypothesized Mean Difference	8
Df	149
t Stat	7.019179
P(T<=t) one-tail	3.67E-11
t Critical one-tail	1.655145
P(T<=t) two-tail	7.34E-11
t critical two-tail	1.976013

Impact on working hours: When we test the hypothesis that average working hours haven't changed across sectors, we find that both our t-statistic (>1.96) and p value (<0.05) lie in the rejection region. So we reject the null hypothesis as the actual average mean working hours among the surveyed employees has increased to 9.7 hours per day which is significantly more than the internationally accepted standards.

Working hours affects the job market on a huge basis. The paper used hypothesis testing method to check whether the average working hours are same across all sectors. So, the null hypothesis states that the average working hours are same across all the sectors while the alternate hypothesis states that working hours are not same across all the sectors. So, tests like t test, p values etc. were applied using excel. When we test the hypothesis that average working hours haven't changed across sectors, we find that both our t-statistic (>1.96) and p value (<0.05) lie in the rejection region. So we reject the null hypothesis as the actual average mean working hours among the surveyed employees has increased to almost ten hours per day which is significantly more than the internationally accepted standards.

iii. Impact study on working hours through dummy regression model

In order to study the impact of various variables on the working conditions a dummy regression was deployed to account for binary choices along with use of likert scale for psychometric values.

TABLE-5: Impact study on working hours through dummy regression model

<i>Regression Statistics</i>	<i>Column1</i>
Multiple R	0.852
R Square	0.727
Adjusted R Square	0.68
Standard Error	1.6715
Observations	150

iv. Impact study on working hours through dummy regression model:

So here we can see that as our multiple R^2 was found to be 0.727 our model explains significant amount of variance in the dependent variable (working hours) through the explanatory variables. The adjusted R^2 which imposes a penalty for over-fitting the model was found to be 0.68, which tells us that there weren't any unnecessary regressors included just for the sake of increasing the R^2 .

The paper not only focuses on statistical measures but also categorical data. Hence the dummy model regression is used. The dummy model regression is used to measure categorical data. The impact of working hours has again been studied using categorical data this time, along with the use of likert scale for psychometric values.

Microsoft excel was used in order to access the results and several values like r square, multiple r square has been computed. Our multiple R^2 was found to be 0.727 our model explains significant amount of variance in the dependent variable (working hours) through the explanatory variables. The adjusted R^2 which imposes a penalty for over-fitting the model was found to be 0.68, which tells us that there weren't any unnecessary regressors included just for the sake of increasing the R^2 .

v. Dummy regression output

Working hours = $\beta_0 + \Delta \text{layoff} + \Delta \text{other monetary source} + \Delta \text{unemployment} + \Delta \text{salary change} + r \text{Likert}_{\text{scale}} + \beta_1 * \text{difficulty in finding a new job} + \beta_2 * \text{work pressure} + e_i$

The above regression equation was formed to study the categorical data which was obtained through the primary

survey and later cleaned and analysed using excel.

TABLE-6: Dummy regression output

<i>variables</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	8.631752537	1.186429299	7.275404	2.144E-11
Layoffs	0.453702207	0.604500799	0.75054	0.4541712
-				
other source	1.541752398	0.709849776	2.171942	0.0315203
-				
Displacement	0.351896221	0.517878523	-0.6795	0.49793
-				
salary change	0.036290562	0.01300314	-2.79091	0.0059794
job search	0.050877044	0.20059293	9.2558	0.013257
work				
pressure	0.468667358	0.202012724	2.319989	0.0217667

Dummy regression output: Variables which significantly impact working hours (where t value and p value of the β coefficients was found to be significant) are other sources of monetary income, work pressure, salary change and further employability.

vi. Likert scale analysis

Likert scale was used for scoring or sentiments as means of understanding psychological bias of an individual towards a certain question. Psychometric variables like work pressure and difficulties encountered in finding a new job were studied through this scale.

TABLE-7: Likert scale analysis

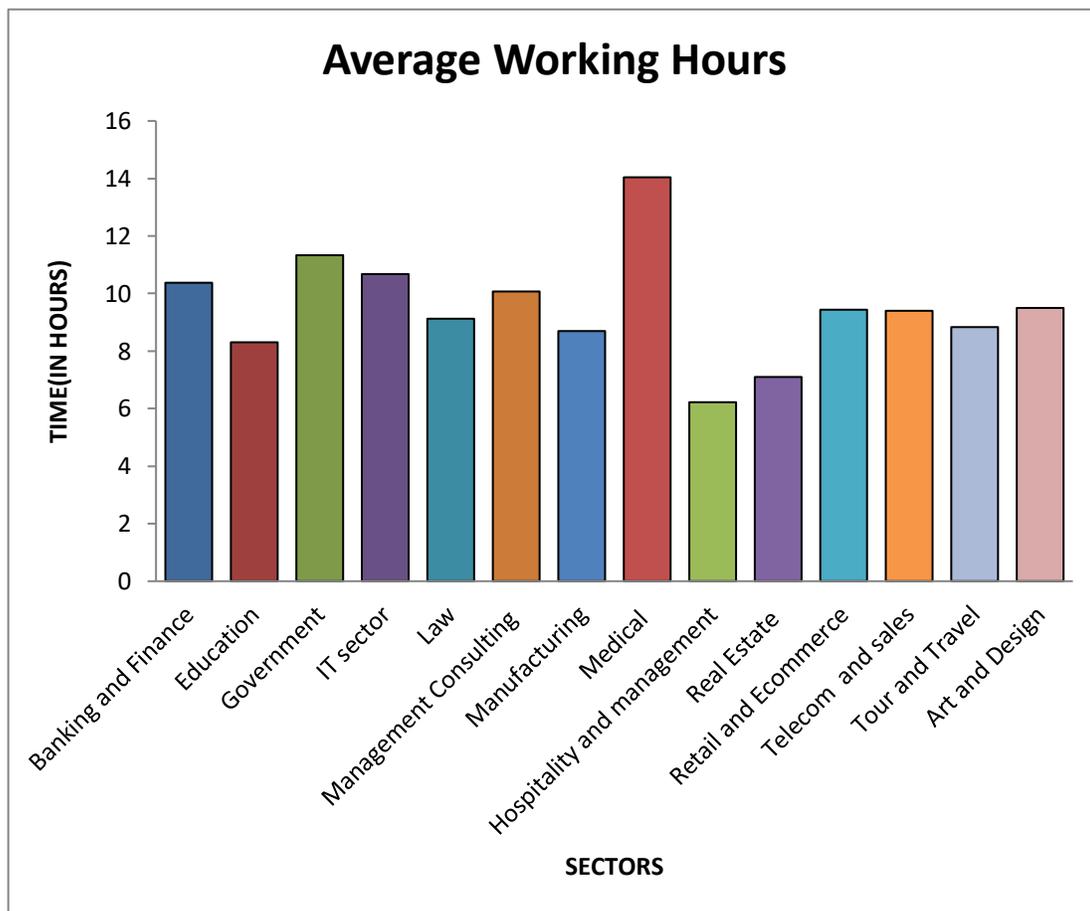
Variable	Average Likert score
job search	3.693333333
work pressure	3.753333333

Likert scale analysis: The average score was closer to 2 for both the variables as per the response generated through the primary survey. Both the variable showed a significant t-statistics and p value. The beta coefficient

was 0.050 for job search and 0.46 for work pressure which can be interpreted as an increase in Likert scale by one unit, the average working hours increase by beta hours. Thus, work pressure and online environment transitions were hard to adapt to as it led to an increase in working hours of individuals in our study.

The likert scale is used to capture the psychometric variables. Here two variables- job search and work pressure has been taken. Researchers often use this psychometric scale to understand the views and perspectives towards a brand, product, or target market. To determine the minimum and the maximum length of the 5-point Likert type scale, the range is calculated by $(5 - 1 = 4)$ then divided by five as it is the greatest value of the scale ($4 \div 5 = 0.80$). Afterwards, number one which is the least value in the scale was added in order to identify the maximum of this cell. According to the results for this paper the average score was closer to two for both the variables as per the response generated through the primary survey. Both the variable showed a significant t-statistics and p value. The beta coefficient was 0.050 for job search and 0.46 for work pressure which can be interpreted as an increase in Likert scale by one unit, the average working hours increase by beta hours. Thus, work pressure and online environment transitions were hard to adapt to as it led to an increase in working hours of individuals in our study.

GRAPH-1: Average working hours



Source- Based on sample data

5.2 Descriptive Based

5.2.1 Formal Sector

The formal sector in India is defined as a sector under which economic activities are taxed and governed by licensed institutions with specific working hours and regular wages are assured. This sector includes activities from “publicly traded companies incorporated or formally registered entities, corporations, factories, shopping malls, hotels, and large businesses”. Around ten million which is around 9.98% of the work force (2011-2018) are employed in the formal sector including the manufacturing sector in India. The sector contributes significantly to the GDP of an economy.

Below is a table listing the results of our study on formal sector which has all the parameters listed with their respective findings.

TABLE-8: Results of formal sector

PARAMETERS	FINDINGS
Employment Status	<p>a. It has been found that 85% of respondents have a secured job as of the current timing.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>128 out of 150 respondents surveyed have a job as of now (However this still doesn't tell us about the real situation as most of the surveyed members were from LinkedIn and other people from contact list (sampling wasn't random))</p> </div> <p>b. 65% of them reported a loss of jobs or on job-on-old situation (first two months of lockdown).</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>98 out of 150 respondents reported job loss or job being on hold during the 1st two months of the lockdown</p> </div> <p>c. 58% of respondents have close friends or family who still don't have a proper job or have experienced a job loss due to the pandemic.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>87 out of 150 respondents have close friends or family who still don't have a proper job or have</p> </div>

	experienced a job loss due to the pandemic
Unemployment rate	d. Unemployment was already high with an average of 8.75 since 2018, which increased drastically to 23.5 during April 2020
Average working hours	e. It has been found that the average working hours is 9.7 hours per week which is more than the international standard of eight hours. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Out of various people surveyed from various sectors, the average working hours came out to be 9.7 (also includes outliers as members from education sector hardly had any work)</p> </div> <p>This shows that they were underpaid and made to do more work.</p>
Pay cuts	f. Salaries have decreased by almost 14% among the surveyed employees. <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Among the surveyed people the average amount of pay-cuts across all sectors was found to have been 14%</p> </div> <p>g. This shows there has been significant pay cuts all around</p>
Alternate source of income	h. 78% of respondents have no alternate source of income <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>113/150 reported no alternate source of income</p> </div> <p>i. Salaries and savings were only source of survival for many of them, which is not a good sign</p>
Increments	j. 80% of employees in the formal sector did not have any increment in the financial year 2020-2021 <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>from those who were employed 104/128 people reported no increment</p> </div>

	<p>k. 20% received a mere increment of 3.5% which is lower than the prevailing inflation rate in the country thus making a little or no difference at all.</p> <p>24/128 who reported increments received a pay rise of just 3.5%</p>
Saving rate	<p>l. It has been found that average savings of all the respondents was 11.3%</p> <p>m. While 67% of them recorded no savings at all thus increasing the vulnerabilities all round.</p> <p>100/150 reported no savings at all. And from those who reported any savings, the average came out to just 11.3%</p>

The following analysis is based on informal sector. This analysis has been focused on qualitative data focusing on the categorical rather than statistical change. The variables taken here are categorical and hence the results are descriptive in nature

5.2.2 *Informal Sector*

Approximately eighty one percent of the population in India are engaged in the informal sector. The informal sector of an economy is defined as any economic force that is not taxed or supervised by any institutional authority.

The research is particularly focused with vegetable sellers, car drivers, construction workers, and domestic employees in order to provide a realistic picture of the informal sector in metropolitan India. The researchers conducted on-site interviews to further understand the effects of the pandemic on people working in these industries. As a consequence, the following outcomes have been achieved.

The primary results of this survey has been conveyed in the following points-

- i. Family size- India, being one of the world's most populous countries, has long had population issues. In the informal sector, the average family size was observed to be seven-eight, aggravating the severity of the disease. What is more concerning is the ratio of dependent to independent family members. It has been found that many individuals lost their jobs as a result of the lockdown, therefore the number of dependant

members expanded on an average.

- ii. Vegetable/Fruit vendors: During the pandemic, this group of people experienced a myriad of problems. Not only was demand for their products limited, but they were also subjected to harsh restrictions as a result of the lockdown. Because these people come into touch with a variety of people on a regular basis as part of their occupation, many of them had even got infected by the virus, raising their vulnerabilities. Even once the restrictions were relaxed, many of them found it difficult to return, and the revival was gradual. According to our findings, a significant proportion of people did not even get the relief supplies designated for them like the scheme for BPL cylinder package.
- iii. Drivers: Our research shows that drivers' earnings were hampered during the lockdown, since they could only earn one-fourth to one-fifth of their pre-lockdown earnings. Shorter travels came from traffic enforcement and travel limitations, as well as low demand. As a result, drivers could only go 20-30 km per day, compared to 100-130 km per day before to the lockdown. In many circumstances, drivers drove without passengers, accumulating idle miles without earning any money. During the present crisis, several drivers increased their charges nearly thrice in order to boost their revenue, generating hardship for the regular public. Many car drivers also found other ways to make a living, such as delivering groceries, medication, and other necessities, or starting their own companies, such as selling fruits and vegetables, or returning to their hometowns. There was no government mechanism in place to provide them adequate systemic assistance.
- iv. Construction workers: The threat of being infected, combined with the unexpected loss of a job, provided little to no incentive for construction workers to remain on the job. According to, more than half of construction employees fled for their home countries within the first month of the lockdown as most of them were migrants.
- v. Domestic worker: With the lockdown, dozens of domestic helpers who had worked for years as family members for several households became outsiders. They were barred from entering the buildings and were fired. Some of them were not paid for their previous labour while others saw salary drops.

The covid-19 pandemic apart from other problem witnessed an unprecedented crisis in India. The problem of migrants was a special problem, as thousands of people were left vulnerable. So, the following paragraph primarily focuses on this aspect.

5.3 Situation of Migrants

This pandemic had the greatest impact on migrant labourers. With no means of transportation or lodging, they and their children, as well as expectant mothers, had to walk thousands of kilometres. This exposes them not only to the risk of contracting the virus, but also to the fury of cops implementing COVID-19 restrictions.

As the results show that the job market has been drastically affected by the Covid-19 pandemic. The following section analyses the impact in systematic manner in order to get a better hold of the problems and their causes.

6 Discussion

6.1 Formal Sector

The model used in this paper is ANCOVA model explained through dummy variable regression. The reason for adopting this model is to do complete justice to this research both in statistical and psychological terms.

Sometimes the depth of the problems are not captured entirely by statistical variables as in case of this paper, then psychometric variables are considered in those cases. Dummy variable help us to analyze the categorical variables and brings out the qualitative aspect of the regression. ANCOVA model is the combination of statistical and qualitative variables. Analysis of covariance is used to test the main and interaction effects of categorical variables on a continuous dependent variable, controlling for the effects of selected other continuous variables, which co-vary with the dependent.. In addition with dummy variables we used likert scale analysis in order to assign values to some categorical data. The paper compared the likert scores pre and post covid in order to see the change in the variables. Thus every aspect of impact on job market has been covered.

After running dummy variable regression and doing hypothesis testing we have observed that variables which significantly impact working hours (where t value and p value of the β coefficients was found to be significant) are other monetary source of income, Salary change (past or future uncertainty, difficulty in finding a new job and work-pressure. These are again linked to the results which are mentioned in tabular form above. Let us look into the following points to get a better understanding-

- i. Passive income: Income which is not exempt and cannot be charged under the heads of salary, income from house property, profits and gains from business or profession, or capital gains, form income from other sources for taxation purpose is called other monetary source of income. Presence of secondary source of income proved to be an important determinant of working hours, as could be seen from its β coefficient of -1.5417 which conveys that with some other supportive income the need to work extra working hours would also be reduced. From our results it can be seen that around 78% people did not have any other source of income thus making them completely dependent on their salaries and savings.
- ii. Salary change (past or future uncertainty): Getting increments became a privilege during the pandemic. The pandemic not only impacted the formal job market in form of job loss and reduced employment generation but also with increased uncertainty regarding the rate of salary growth. With most of the companies themselves facing a strained balance sheet, the chances of future pay rise have also started to look uncertain thus increasing the number of working hours.

- iii. Further employability: Unemployment is not a new problem globally, especially in India. With the amount of labor force that is being added to the work force every year, there was already a huge demand supply mismatch in the job markets with many eligible people sitting idle due to lack of job opportunities. Now this situation has even worsened as could be seen from the regression results which show that due to lack of new job opportunities as well, people are forced to work extra hours at their existing workplace in order to sustain in the competition.
- iv. Work pressure: Work pressure is when you experience pressure, because you have to properly finish a certain amount of tasks by a specific time.. The following section discusses the hardships and the causes for the informal sector.

6.2 Informal Sector

This is a sector which needs most support from the government schemes, preferably in form of direct aid. The vocations which mostly depend on the mobility and contact based like vegetable vendors, taxi drivers need most amount of support as they hardly have any other source of income. Even after the reopening the demand for the services provided by these people haven't recovered. Let us have a closer look into the sector for a better understanding.

- i. Hardly few of the people mentioned in the results table (table 10) had a secondary source of income which is not a good sign and led to another level of crisis. This shows that the workers were entirely dependent on their salaries and savings making them vulnerable to the lockdown.
- ii. Even for people who have started back their businesses have a very low hope of revival of demand and hardly any sustainable level of earnings (this includes taxi drivers and roadside businesses). The pandemic is on-going and with multiple waves and partial restrictions around the nation, the survival of small businesses has become quite difficult.
- iii. For few of them their employers were considerate enough to pay something during lockdown but most of them did not get paid at all. According to our survey the domestic helpers were paid even during the lockdown. For rest of them like drivers, gardeners etc. the income was either less or zero for a considerable amount of time. Also many of the helpers even got their job back after the first wave but same is not true for the rest.
- iv. Farmers did receive the promised amount of Rs. 6000 subject to fulfillment of the requirements of the schemes (which most of them did). In light of schemes introduced, the farmers received aid. But in many cases the debts were higher than the aid received making them vulnerable. Also many of them did not have

proper documentation to qualify for the schemes, leading to loopholes in the distribution. Most of the above mentioned people who migrated weren't eligible for an aid (documentation issues) but their family members did receive it in the home state (pensons, SHGs).

7. Conclusion

With daily covid-19 cases crossing three lakh, which is at current the highest in the world there is going to be further adverse impact on employment and growth. The formal sector which has now managed to find a way to deal with the social distancing norms may not be impacted as badly as during the initial days, however the impact could still be same on consumer sentiments and contact based functioning sectors. However the one which government really needs to focus on is the informal sector as this new wave could prove to be another crushing blow to the already declining informal sector which was just showing the signs of some recovery. So efficient target based policies with a bottom up approach could be a good way to deal with this.

8. Managerial Implications

One of the most important objectives of this paper is to define the role of Government in revival from the loss caused due to the covid-19 lockdown and suggest policy implications in dealing with the impact of lockdown on the job market. After much research and analyzing the results of this paper the following recommendations seem necessary:

- i. Create a more structured way of identifying job requirements:
- ii. Policy for online format of working:
- iii. Export promotion:
- iv. Increasing the organized jobs:

9. Limitations of the study

The data collected for the informal sector was based on just four cities which might not be a correct representation of the entire scenario. In many cases the problems and the aids received varied across different states and cities which might not be captured by a survey in just four cities of the country. Many of the workers were actually migrants which show the displacement of people across different states and cities and thus bringing the possibility of biased results. The survey conducted for the formal sector was conducted through online platforms like LinkedIn, where the response might be biased. Also the pandemic is still going on and the situation of the country is not stable yet with on and off restrictions being imposed across various states, so it is out of the scope of the paper to show the complete image now. As the true picture might be even worse than shown. It will only be

possible to access the true picture after the pandemic is over. The data for revival of the employers might be biased as we have not taken the entire sector under observation but only the representative companies or rather say the top companies. While the same might not be true for the entire sector. Assessing the entire sector based on few companies is not liable enough.

10. Contribution of Research

This paper contributes in developing a firsthand picture of the impact of Covid-19 lockdown on the Indian job market (both formal and informal sector). The paper takes into consideration both theoretical and practical aspects which might influence the job market..The research conducted takes into accounts not only socio-economic factors but also pays hid to the psychological condition of the employees in both the sectors in an attempt to bring out the complete picture.

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Impact of Oil and Domestic Gold prices on GDP

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Abstract:

Introduction: Oil and gold prices have a great impact on the Indian economy. It affects all the sectors of the economy directly or indirectly. Oil and Gold constitute about 46% of the total imports of India. Thus, a rise or fall in oil and gold prices affects India's Current Account Deficit (CAD) and ultimately the GDP.

Purpose: This paper is an attempt to study the impact of Oil and domestic Gold prices on GDP for the period 2000-19.

Method: It is a secondary research. Existing published data is used for analysis.

Findings: Using multiple regression, the study tried to find the relationship among the variables and it is found that there is a significant effect of Gold prices and domestic Oil prices on GDP.

Keywords: Oil price, Gold price, GDP, multiple regression.

1. Introduction

Oil and gold prices have an extensive economic impact on financial activities. This impact is observable in consumption, investment, and industrial production, in all sectors of the economy. Oil and Gold constitute about 41% of its total imports Trading economics, Ministry of Commerce and Industry, India.). This brings several international factors into consideration. This matters to the health of the economy.

Crude Oil is one of the most important commodities. The growth of any country is linked to its oil imports. Domestic crude oil consumption is increasing progressively. On the other hand, its production is declining. Import is the only solution for bridging this gap. India is among the largest oil importers in the world. It imports around 82.8% of its oil needs (Wikipedia, 23-07-2021.). Thus, the rise and fall in oil prices affect India's Current Account Deficit-the amount India owes to the world in foreign currency. So, high Current Account Deficit (CAD) ultimately leads to Rupee Depreciation and vice versa. Crude oil is the second-highest source of India's energy consumption after coal. It is a key source of energy for transportation. It is also used for electricity generation. The lubricants derived from it are used in many types of machines and almost all industries. The rise in oil prices leads to an increase in the cost of production and transportation too. Consequently, it contributes to a higher inflation level. On the other hand, high oil prices may be beneficial for the exporters of petroleum products in the country. According to the Hindustan Petroleum Corporation report, "India has rapidly established itself as a major player in the global refining industry in the last decade. The country has been a net exporter of petroleum products since 2001-2, and since 2009 has been Asia's largest exporter of petroleum products."(Nishi Vasudeva, 2014,

p.p.76-78). Gold is a precious metal and a most liquid asset too. It is the best investment for the poor as well as the rich. It is often hailed as a hedge against inflation. Gold is used as a mode of transaction between all the countries. It is the king of all currencies as it never loses its purchasing power. And this makes the yellow metal more attractive. Gold has special importance in India. It symbolizes wealth and is considered highly auspicious. India is the second-largest consumer of the precious yellow metal. Although oil imports are primarily responsible for high CAD, India's huge gold imports are also partially responsible for it. Since the second largest part of the import bill is gold. India's gold market is driven primarily by consumption and fabrication of the yellow metal. Both have a significant impact in terms of economic value-added, employment, contribution to foreign exchange earnings, and the trade balance. A report commissioned by the World Gold Council estimated that gold made a direct contribution of more than 30 billion dollars to the Indian economy. The role and impact of gold are reflected by Gems and Jewelry industry in India contributes around 7% to country's GDP. (The Economic Times :Wealth; 15 October 2018)

GDP is the final value of goods and services produced within the geographic boundaries of a country during a specified period, usually a year. It is often used as a metric for international comparisons as well as a broad measure of economic progress. It is considered to be the world's most powerful statistical indicator of national development and progress. (Wikipedia, https://en.wikipedia.org/wiki/Gross_domestic_product)

It can be formulated as:

$$\text{GDP} = \text{C} + \text{I} + \text{G} + (\text{X} - \text{M})$$

Where, C: – Consumption

I: – Investment

G: – Government Expenditure

X: – Exports

M: – Imports

It is estimated that the import dependence of India associated with crude oil is expected to 94% by the end of 2030. Therefore, the trouble water in Indian crude oil demand and supply management is the rise in international crude oil prices followed with the extent of the increase in crude oil requirement with respect to feasible higher GDP growth 8% to 9%. The import dependence of India associated with crude oil is from 76% in 2011-12 to 80% by the end of twelfth plan (2012-17). As crude oil prices are rising globally and imports will be expensive, it is necessary to understand the consequences of crude oil price rise on the economy. (Bhattacharjee, 2013)

India's gold imports for 9 months to December 2012 stood at \$ 37.6bn. India's overall trade deficit (excess of import over exports) stood at \$147bn. Gold accounts for over a quarter of the trade deficit. This results in current account deficit surging to a new high of 5.4%. A high current account deficit exerts pressure on the rupee as the demand for foreign exchange rises. This means people sell the rupee and buy more of the foreign currency

(Khushmita Sandhu, 2013). This is not a good sign for the growth of the economy. There is a need to understand the burden of gold imports on economy. Thus, the desire of the study is to understand how the changes in crude oil prices and gold prices impact the economic indicator GDP.

There is some research based on the same domain. But the results of interrelationship among the various important variables are varied and mixed. Reasons of these results could be due to distinct time period and area of the study, different techniques of data analysis and modelling. Hence it is imperative to verify the results.

The present research explores the relationship between crude oil prices (Indian basket), domestic gold prices and GDP. Thus the objective of the study is to analyze the impact of oil and gold prices on GDP and to create a model with these factors to predict the GDP.

2. Literature Review

Sujit and kumar (2011) studied the dynamic relationship among Gold price, oil price, exchange rate and stock market returns. The study used daily data (2nd January 1998-5th June 2011) and using the techniques of vector autoregressive and cointegration showed that the exchange rate is highly affected by the change in other variables. On the other hand, the stock market has a fewer role in affecting the exchange rate. Also, there is a weak long-term relationship among the variables. The authors did not give a thought to macroeconomic variables like inflation or GDP.

Jain (2013) in his paper “Oil Price Volatility and its Impact on The Selected Economic Indicators in India” studied the relationship between crude oil price and selected macroeconomic variable i.e. stock market (NSE) and Inflation. The study also analyzed the relationship between selected economic indicators and crude oil price. He concluded that there is a significant positive relationship between crude oil price and Inflation in India on the other hand Stock market of India (NSE) is also affected by the changes in the crude oil price. The study has given pieces of evidences of other countries also to support the finding. This study did not analyzed the relation between crude oil prices and GDP. Only the inflation and stock market has been considered. Gold prices were also not taken into account.

Aprana (2014) in her paper “Impact of Oil Prices on the Indian Economy” attempted to study the impact of crude oil price on the Indian economy by considering Gross Domestic Product (GDP), Index of Industrial Production (IIP) and Wholesale Price Index (WPI) as the relevant variables. The tools such as Vector Auto Regression (VAR) has been used to analyze the objective since a direct causal relationship could not be established. The paper did not studied the effect of crude oil prices and gold prices on GDP, considering all the three variables at a time.

Siok Kun Sek, Xue Qi Teo, and Yen nee Wong (2015) in their paper revealed that oil price change has its direct

effect on domestic inflation in the low oil dependency group but its impact is indirect on affecting the domestic inflation in the high oil dependency group through changes on the exporter's production cost. This paper was highly focused on the oil price change and its effect on inflation. It does not paid much attention to other macroeconomic variables. Khan (2015) analyzed the Impact of Oil and Gold prices on the GDP growth of an emerging economy of Pakistan. The study used the stock market data with the average Gold and Oil prices from the period 1997 to 2014. The data analysis result shows that gold and oil prices have a significant impact on GDP. The study was in the framework of Pakistan economy.

Gokmenoglu (2015) examined the interactions among gold, oil and stock market of the US. They have obtained a presence of long-run equilibrium among the variables. This research did not observed the interaction of variables with GDP. It was in consideration of US economy.

The paper by Gupta, Garg and Singh (2016) analyzes the impact of Oil prices and Domestic Gold prices on GDP. The authors have found that there is a significant impact of Oil and domestic Gold price on GDP growth. They have also mentioned its contribution towards the contribution of country GDP. This paper used ten years data from 2004-05 to 2013-14.

Ganesh (2017) addresses the impact of crude oil price on the Indian economy by considering the relevant inputs like Gross Domestic Product (GDP) and Consumer Price Index (CPI). The Outcome of the paper indicates that there is an inter-correlation between CPI and crude oil price and vice versa. There is a clear indication that whenever the CPI increases there is a decrease in crude oil price and vice versa. It was also found that there was a significant difference between crude oil price and GDP and no significant difference between CPI and GDP. The authors did not included gold prices and its effect on oil prices and macroeconomic variables.

Sarkar and Jain (2018) explored the causes of Indian Basket Crude Oil price fluctuations and their impact on the Indian economy. They found that Indian Basket crude oil price granger causes Gross Domestic Product (GDP). The paper do not examine the gold price fluctuations and their impact on the economy, or the relationship between gold prices and oil prices.

Shabbir, kousar and Batool (2020) acknowledged the significant impact of gold prices and crude oil prices on stock market in Pakistan. Augmented Dickey-Fuller test, correlation, descriptive statistics and ARDL test has been used for data analysis. The authors have come up with some recommendations for investors and portfolio managers. However, they did not examined the impact on GDP of Pakistan.

These studies do not pay much attention to the impact of crude oil prices and gold prices on GDP. Furthermore, the researchers have either explored the factors influencing the crude oil price or the gold prices. They have studied the consequences of one of the two on a particular macroeconomic variable like inflation or stock market. Hence, an extensive scenario cannot be formed from these studies. Moreover, some research was based on foreign countries. Many of the studies were based on data from very past time period. There was not much research in

recent time period on Indian economy. In addition to this, many of the studies were based on

international crude oil prices or the gold prices. Thus the Indian basket benchmark was lacking. The present study is more focused about the Indian basket prices of crude oil and gold, and their impact on India's GDP. The review of literature discussed above can be summarized as follows:

Table 1: Summary of the Literature Review

Sr. No.	Authors	Year	Area of study	Gaps and variables not studied
1.	Sujit and Kumar	2011	Gold price, oil price, exchange rates, stock market returns	GDP
2.	Jain	2013	Oil price, stock market, inflation	Gold price, GDP
3.	Aprana	2014	Oil price, GDP, IIP, WPI	Gold price
4.	Siok Kun Sek, Xue Qi Teo, and Yen nee Wong	2015	Oil price, Inflation	Gold price, GDP
5.	Khan	2015	Oil price, Gold price, GDP (Pakistan)	India
6.	Gokmenoglu	2015	Oil price, Gold price, stock market (US)	GDP, India
7.	Gupta, Garg and Singh	2016	Oil price, Gold price, GDP	Recent data
8.	Ganesh	2017	Crude oil price, GDP, CPI	Gold price
9.	Sarkar and Jain	2018	Oil price, GDP	Gold price
10.	Shabbir, Kousar and Batool	2020	Oil price, Gold price, stock market (Pakistan)	GDP, India

3. Identification Of Variables, Developing Theoretical Construct and Developing Hypothesis

3.1 Identification of Variables

The paper aims at analyzing the impact of crude oil and domestic gold price on GDP; we define the variables for the study as:

Independent variables: Crude oil price, Gold price.

Dependent variable: Gross Domestic Product (GDP).

- i. Crude Oil Price- International Crude Oil Price of Indian basket is considered as an indicator of India's crude oil import price. It is the weighted average of Dubai and Oman (sour) and Brent crude (sweet) crude oil prices. Crude oil is classified as sour and sweet depending on the amount of impurity sulfur. Crude oil with high sulfur content is classified as "sour", while crude oil with low sulfur content is classified as "sweet". Sulfur content is considered an undesirable characteristic for both processing and end-product quality. Indian basket crude is a composition of both sour and sweet crude oil. It is one of the major element used by Government of India while examining the domestic price issues.
- ii. Gold Price- Domestic Gold price represents the Gold price in India. Gold prices in India are determined mainly through an informal process. However it is heavily depended on the International Gold Prices. The most common benchmark for the price of gold is London Gold Fix. It is determined twice each business day of London Bullion Market. Domestic Gold prices tend to swing with international gold prices. In addition to this exchange rates, rupee depreciation/appreciation, import duties and taxes are some of the major factors playing an important role in determining gold prices in India. (Sources: Mishra and Mohan, 2012). Multi Commodity Exchange (MCX), Mumbai is one of the major Gold exchange. MCX gold price depends upon MCX trading. The Indian Bullion Jewellers Association (IBJA) plays a key role in determining day to day gold prices in India.
- iii. GDP-Gross domestic product (GDP) is a [monetary measure](#) of the market value of all the [final goods](#) and services produced within country's boundary in a specific time period. As a broad measure of overall domestic production, it functions as a comprehensive scorecard of a given country's economic health. GDP can be calculated in three ways, using expenditures, production, or incomes. It can be adjusted for inflation and population to provide deeper insights. The calculation of a country's GDP encompasses all private and public consumption, government outlays, investments, additions to private inventories, paid-in construction costs, and the foreign [balance of trade](#). (Exports are added to the value and imports are subtracted). Of all the components that make up a country's GDP, the foreign balance of trade is especially important. The GDP of a country tends to increase when the total value of goods and services that domestic producers sell to foreign countries exceeds the total value of foreign goods and services that domestic consumers buy. When this situation occurs, a country is said to have a [trade surplus](#). If the

opposite situation occurs—if the amount that domestic consumers spend on foreign products is greater than the total sum of what domestic producers are able to sell to foreign consumers—it is called a [trade deficit](#). In this situation, the GDP of a country tends to decrease. GDP can be computed on a nominal basis or a real basis, the latter accounting for inflation. Overall, real GDP is a better method for expressing long-term national economic performance since it uses [constant dollars](#). (Source: Investopedia, 2021).

3.2 Theoretical Construct

Pricing Mechanism refers to the system where the forces of demand and supply determine the prices of commodity and the changes therein. Price fluctuations is one of the most observable phenomenon in the crude oil field. Price gives a signal to the oil-producing countries to inflate their production to meet higher demand. On the other hand, price fall due to the excess supply is a signal to enhance importer base. Oil exporting countries should keep should always keep an eye on economic growth of oil importing countries. It may help them to predict crude oil production strategies. Hence Pricing mechanism theory provides sufficient support to develop a model.

Keynesian's inflation theory may also provide a support to build a model. Higher oil prices leads to increased cost of transportation and production and hence the prices of final product also increases; causing inflation.

Deterioration of purchasing power is one of the major problem of inflation. Thus, the industrial production starts declining and along with that GDP and other macroeconomic factors also get affected. (Source: Sarkar and Jain, 2018)

Crude oil Prices and Gold prices share a positive correlation. (Sindhu, 2013). In the long term, gold prices move up and down along with crude oil prices. This is because, like oil, gold too is mined from the ground and energy is the dominant production cost for gold. (Sharma, 2018). Further, high crude oil prices leads to inflation; Gold being a reliable store of value, is used as a hedge against inflation. Thus, crude oil price and gold prices have a strong relationship.

In an attempt to determine the impact of crude oil price and gold price on GDP, the following regression equation was fitted:

Equation:

$$GDP = \beta_1 (\text{crude oil prices}) + \beta_2 (\text{gold prices}) + \varepsilon$$

Where, β_1 – coefficient of crude oil prices

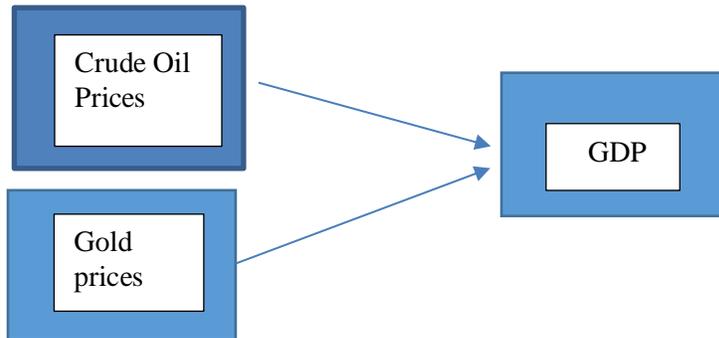
β_2 – coefficient of gold prices

ε – Residual term

Model: The following model diagram shows the research model of this study showing the independent and dependent variable.

Figure-I: Research Model

Note: Self constructed figure



3.3 Hypothesis

The paper aims at studying the impact of oil and domestic gold prices on GDP. Here, crude oil prices (Indian basket) and domestic gold prices are the two independent variables. GDP is the dependent variable. The hypothesis can be constructed in support of aim of the paper as:

Null hypothesis-

H_0 : There is no significant effect of oil and gold prices on GDP.

Alternative hypothesis-

H_1 : There is a significant effect of oil and gold prices on GDP.

4. Research Methodology

The research is a secondary research. A total of 13 research papers were studied from ELSEVIER, IOSR-JBM, IOSR-JEF, IJRAR, IJMSSR, international journal of applied business and economic research, international journal of management science and business administration, financial matters in global perspective and other listed journals. Also 1 doctoral dissertation of a PhD student from Dr. D. Y. Patil University was studied over the same domain. The present Literature Review based on 13 research papers falls into three main categories: the factors affecting crude oil prices and its impact on selected macroeconomic variables, the factors affecting gold prices and its impact on selected macroeconomic variables, the impact of crude oil and gold prices on selected macroeconomic variables.

The paper aims at investigating the impact of crude oil and gold prices on the Indian economy. For this, the

macroeconomic variable GDP has been taken as a dependent variable. The two variables, crude oil prices (Indian basket) and domestic gold prices are independent variables. As there are two independent variables (oil and gold prices), their impact on dependent variable (GDP) can be easily examined by multiple regression.

Data design: The study is primarily based on secondary data from reliable websites and journals. The data pertaining to oil prices (Indian basket) has been adopted from the Petroleum Planning and Analysis Cell (PPAC). Domestic gold prices have been collected from the RBI website and GDP data has been taken from the World Bank. 20 years (2000-19) long time frame has been used for this work. Data frequency for this study is annual data.

Various statistical tools has been used for data analysis. The cause and effect relationship between the variables is checked by using a multiple regression model. For this, first the assumptions of multiple regression have been tested. The Karl Pearson correlation coefficient has been used to find the linear relationship between the variables. Breusch-Pagan test has been used to test the homoscedasticity (homogeneity of the variables). The normality of residuals is checked by the Kolmogorov-Smirnov test and the Shapiro-Wilk test. After fulfilling all the assumptions, multiple regression has been performed by using data analysis tool in excel.

5. Data Analysis and results

Multiple Regression- Multiple regression generally explains the relationship between multiple independent variables and one dependent variable. It is also widely used for predicting the value of one dependent variable from the values of two or more independent variables. The equation of multiple regression is as follows:

$$Y = \beta_1 * X_1 + \beta_2 * X_2 + \epsilon$$

Where, Y = value of dependent variable, what is being explained or predicted

X_1 = first independent variable that is explaining the dependent variable

β_1 = coefficient (slope) of X_1

X_2 = second independent variable that is explaining the dependent variable

β_2 = coefficient (slope) of X_2

ϵ = error

To perform multiple regression, there are some assumptions which needs to be tested. These are as follows:

1. Correlation:

Correlation is a statistical measure that expresses the extent to which the two variables are linearly related.

Correlation coefficient is a way to put a value to the relationship. It lies between -1 and 1.

The computational formula for Karl Pearson's correlation coefficient is:

$$r = r_{xy} = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n \sum x_i^2 - (\sum x_i)^2} \sqrt{n \sum y_i^2 - (\sum y_i)^2}}$$

Where, r = Pearson correlation coefficient

X_i = x variable sample

Y_i = y variable sample

Table 2: Correlation between GDP, oil price and gold price

	<i>GDP\$</i>	<i>Oil Price \$</i>	<i>Gold price \$</i>
<i>GDP\$</i>	1		
<i>Oil Price \$</i>	0.493	1	
<i>Gold price \$</i>	0.954	0.471	1

The correlation table shows that there is a positive correlation between the Variables. The variables oil price, gold price and GDP are linearly related. That means there is a linear relationship between the given variables.

2. No or little multicollinearity:

Multicollinearity means high correlation between the independent variables. We have, the correlation coefficient between oil and gold prices is 0.471 which is low. Thus, we can say that there is no or little multicollinearity.

3. Homoscedasticity:

This means that the variance of residuals should be constant. Bruesch-Pagan test has been used to test homoscedasticity.

H_0 : The residuals are homoscedastic

Table 3: Auxiliary regression of the squared residuals on oil price and gold price

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	1.49E+46	7.45E+45	1.141115	0.342751
Residual	17	1.11E+47	6.53E+45		
Total	19	1.26E+47			

Since, $\text{sig } F > 0.01$, we accept the null hypothesis and conclude that the error terms are homoscedastic by the Bruesch-Pagan test.

4. Normality:

The residuals should be normally distributed. For this, Kolmogorov-Smirnov test and Shapiro-wilk test have been performed.

H_0 : The residuals are normally distributed.

- Kolmogorov-Smirnov Test:

Test statistics: - $D_n = \sup |F_n(x) - F(x)|$
 $= 0.156905$

Tabulated value = 0.29408 (5% level of significance)

Since $D_n < \text{Tab value}$, we accept the null hypothesis.

Thus, the residuals are normally distributed by K-S test.

- Shapiro-Wilk Test:

$$W = \frac{\left(\sum_{i=1}^n a_i x_{(i)}\right)^2}{\sum_{i=1}^n (x_i - \bar{x})^2}$$

$$W = 0.972583916$$

Since our p-value lies between 0.5 to 0.9 which is much higher than α . So we go with the null hypothesis i.e. the residuals are normally distributed.

Hence, all the assumptions of multiple regression have been satisfied.

Regression test: Impact of crude oil and domestic gold prices on GDP

Hypothesis:

H_0 : There is no significant impact of oil prices and domestic gold prices on GDP.

H_1 : There is a significant impact of oil prices and domestic gold prices on GDP.

Using the data analysis tool kit in excel we have come to the following results.

Table 4: Summary of Regression analysis

<i>Regression Statistics</i>	
Multiple R	0.94515453
R Square	0.89331708
Adjusted R Square	0.88076615
Standard Error	2.7174E+11
Observations	20

The coefficient of determination R^2 indicates how much the dependent variable “GDP” is explained by the independent variables oil and gold, is 89%, which is very large.

Table 5: ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	1.05E+25	5.26E+24	71.17535951	5.48E-09
Residual	17	1.26E+24	7.38E+22		
Total	19	1.18E+25			

Table 5 indicates that the regression model predicts that the outcome variable significantly well. Here $p < 0.05$, indicates that the model applied is statistically significantly predicting the outcome variable. The p-value (5.48E-09) < standard value 0.05, hence we can say that H_0 is rejected.

Table 6: Coefficients

	<i>Coefficient</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	4.3401E+1	1.57E+1	2.77023	0.0130998	1.03E+1	7.65E+1	1.03E+1	7.65E+1
t	1	1	7	49	1	1	1	1
Oil	-		-	0.0011712		-		-
Price \$	1.325E+10	3.4E+09	3.89222	97	-2E+10	6.1E+09	-2E+10	6.1E+09
Gold price \$	583711504	5.63E+0	10.3708	9.05545E-09	4.65E+0	7.02E+0	4.65E+0	7.02E+0

Based on the coefficients we obtain the regression equation:

$$\hat{Y} = (4.3401E+11) - (1.325E+10) X_1 + 5837115048X_2$$

Where, X_1 =Oil prices

X_2 =Gold prices

Based on the data analysis discussed, we reject the null hypothesis that there is no significant impact of oil and gold prices on GDP. Hence, we accept the alternative hypothesis stating a significant impact of oil and gold prices on GDP.

Thus, the analysis of data reveals that there is a significant impact of Oil prices and Gold prices on GDP. Due to lack of adequate petroleum reserves, India is mostly dependent on crude oil imports. So, it can be suggested that it should switch on to the renewable energy resources such as solar, wind, hydro and bio-mass to achieve [energy security](#). It will not only reduce the import bill but also there will be a stability in Indian crude oil market. It may give rise to new businesses which will help economy to grow in a faster rate. A similar approach can be made for gold. Government have started a scheme of sovereign gold bonds. People should invest more in such schemes as it has many advantages like zero risk, assurance of purity, tax benefits, ease of borrowing loan and many more. In addition to this, these schemes may help to reduce gold imports which will reduce burden of import bill on GDP.

6. Conclusion

The study analyses whether or not the two independent variables in the model were significantly predictive of GDP. For our purpose, the oil prices and domestic gold prices for the year 2000-19 were analyzed for the power of predicting GDP. Firstly, the assumptions necessary for the multiple linear regression analysis were examined in the research, and then the multiple regression was performed. The model's degree of predicting the dependent variable was found to be $R=0.94$. The model's degree of explaining the variance in the dependent variable was $R^2=0.89$. Looking at these coefficients we can conclude that the model predicts the dependent variable very well. Thus, the oil prices and domestic gold prices have a significant impact on GDP.

7. Implications

Oil and domestic Gold prices have a significant impact on GDP. With the help of this research, Government and policymakers can know the pattern of oil prices and domestic gold prices and their impact on GDP. The study observed that Oil and Gold prices are quite closely related in India. The study may be helpful to know the variation in India's Gold market.

This paper will provide the base to the researchers for further study in a related area.

8. Limitations

The study has used the annual data for only 20 years of average oil prices, gold prices and GDP. Also, it has considered only two factors domestic oil and gold prices. Several other factors can also be included. Further, only multiple regression has been used for data analysis. Other techniques may yield some other results. So, further study is needed.

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