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From the Editor's Desk ...

The year 2021 appears to be the year of transition - a bridge from the disruptions of 2020 to the brave, new post-pandemic world.

The 22nd Issue of PJMTR welcomes you; the current volume brings to our readers a versatile mix of articles drawn from various aspects of managerial thought and practice. We have endeavoured to showcase research that reflects the world we live in and, therefore, will be relatable and valuable to our academic and industry audiences.

The first article in this volume offers the lucrative title “An Empirical Study on App-based Cab Services and Consumers of West Bengal amidst Covid-19: An Attitudinal and Perceptual Revelation”. The study is a novel endeavour talking in the light of the current ongoing pandemic of Coronavirus, where the essence lies in unfurling the perception of consumers of West Bengal towards app-based cab services.

Continuing this theme, we have second article titled “The Smartness of Cities through Green Marketing: An Empirical Study”. The concept of a smart city is the need of the hour due to too much raise in population and pollution. Likewise, the natural resources are limited as compared to the requirement for the ever increased population. The present paper is an effort to learn the factors disturbing the satisfaction level of consumers just before green products to make the cities smart to make a sustainable environment.

Like never before, since the outbreak of Covid 19, uncertainty still prevails bringing about changes in market performances, the value of market capitalization, and the companies which wanted to go for initial public offers. The third paper of this issue titled “Indian Stock Market during Pandemic Times” tries to examine the fluctuations of the Indian stock markets during pandemic times and is one of the papers included.

Another study offers a view on “Factors Affecting Investment Decisions - A Study Based on Salaried Employees”. This fourth paper's research has been conducted to identify and understand the investment choices and patterns among individuals, who may be broadly classified as the 'salaried class', i.e. earning individuals who receive remuneration for their work from their employer. Authors have conducted the study with the view of providing more suitable investment avenues for individuals with limited resources.

I thank you for your continued patronage and I am confident that you will find this PJMTR issue an enriching one to read.

Wishing all our readers a truly informative and educative experience.

Happy reading and good luck!

Chief Editor

Dr. Chandan A. Chavadi

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An Empirical Study on App-based Cab Services and Consumers of West Bengal amidst Covid-19: An Attitudinal and Perceptual Revelation

Samuel S Mitra*, Peter Arockiam. A.**, Joseph K.***, Milton Costa****,
Ruby Mary Notts*****

Abstract

The Covid-19 lockdowns imposed as a precautionary measure to blunt the blood-thirsty pandemic have changed the modus vivendi of the common man. After the lockdowns were lifted and the Covid-19 norms experienced certain relaxations, consumers have been wary of using public transport like bus, metro, train, tram, etc., and has shown more proclivity towards the use of app-based cab services as a comfier and hassle-free source of riding. One of the striking revelations in these times has been an astounding upsurge in the use of cab service apps like Uber, Ola, Taxi for Sure, and others. The present research paper intends to examine and analyze the perception of Indian customers by probing into their motivations, attitudes, and behavioral intentions towards the adoption and usage of app-based cab services in the era of Covid-19. To this end, 334 respondents of different districts in the state of West Bengal have been surveyed through a questionnaire and their responses have been analyzed by the use of IBMs SPSS. The results of the study reveal that such customers have a strong penchant towards the adoption and usage of app-based cab services as there exists a positive and significant relationship amongst different dimensions of TAM constructs with the attitude and behavior of consumers of West Bengal amidst the Covid-19 pandemic. The study is a novel endeavor talking in the light of the current ongoing pandemic of Coronavirus, where the essence lies in unfurling the perception of consumers of West Bengal towards app-based cab services.

Background

In the backdrop of this fast-paced world, where rapid technological advancements are exhibiting myriad uncanny pyrotechnics it has

been witnessed that there has been a bewildering intensification in the use of app-based cab services, largely triggered by the dramatic rise in the usage of the internet, smartphones and

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relentless percolation of technologies in the ambit of E-commerce. Truth to be told, the head-turning amelioration of technologies coupled with the consumers' proclivity towards a more luxurious modus operandi has been a nifty driving force for the emergence of such eye-twitting transitions in the Indian bourgeoisie. In the past few years in a developing country like India, the spontaneous proliferation in the domain of e-commerce and mobile commerce has facilitated a plethora of hassle-free online services which has been embraced by a huge proportion of Indian customers especially those belonging to the segment of the middle class and upper-middle-class of the Indian society bringing prodigious metamorphosis in the consumption pattern among such people. The Indian consumers are fast relinquishing offline activities for innovative comfy online services. In this context, the emergence and growth of mobile wallets in India and their acceptance by Indian consumers have been the striking revelations of the 21st-century world. The gradual increase in the disposable income of Indian consumers, the juggernaut of technological innovations, the splendid

metamorphosis in the features of the latest smartphones, the havoc-free online services blended with a penchant of Indian consumers for more convenient modus vivendi has propelled the demand in the usage of app-based cab services like Uber, Ola, TaxiForSure, Rapido and many others. The usage of these applications has made life easy for the Indian consumers who were otherwise subjected to travails in catching a ride source like the traditional yellow taxis where the malaise lay in waiting for an indefinite time, more often than not experiencing harassments like profound refusal, faulty meter reading and subjected to cavalier behavior. With the advent of such innovative mobile applications, a major clod of Indian consumers have been instantaneously willing to use such expedient services. The present research study purports to investigate the intrinsic motivations, perceptions, and adoption mechanisms of users of app-based cab services in these testing times of the Covid-19 pandemic. The current research study has been undertaken in the state of West Bengal by surveying as many as 334 respondents who are all users of cab applications.

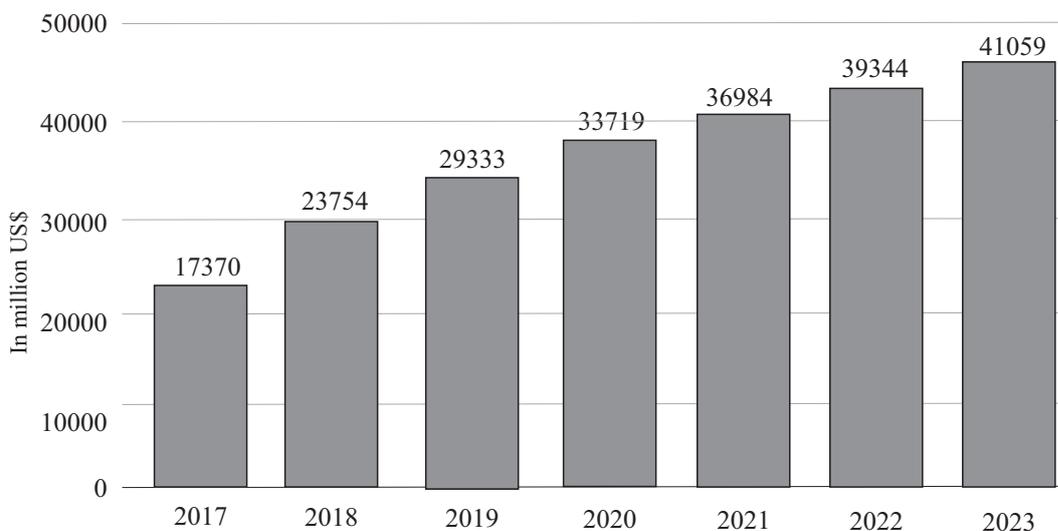


Figure 1: Growth of App-based cab users (Image Source: Synarion Solutions)

2. Introduction

The emergence of Covid-19 has been a death-knell to the nations worldwide. The potential outbreak of the pandemic and increase in the number of death tolls forced the government of all countries to enforce lockdowns as a precautionary measure to curtail the deadly disease. The Prime Minister of India, Shri Narendra Modi, announced a nationwide lockdown from the middle of March 2020 and since then the economy of India has been reeling. The lockdown dismantled all major sectors of the economy like manufacturing, retailing, transportation, tourism, hospitality, etc. and with business operations completely closed, managing transactions like cash payments became a major conundrum. After the lockdowns were lifted and Covid-19 protocols gradually curtailed, consumers have shown profound proclivity in resorting to cab services by adopting and using these joy ride services via mobile applications. In this context, the Indian consumers had shown a strong penchant towards the adoption of taxi-hailing apps with the sole intention of avoiding any kind of risk and further adhering to the norms of social distancing. The restrictions in the movement of people fuelled massive adoptions and usage of mobile wallets across the whole of India which was also witnessed among many people belonging to the lower-middle-class segment of the Indian society. The Indian consumers by capitalizing on these agile digital mobile applications were able to avail cabs by just a mere click on their smartphones, which fulfilled their motives of traveling during a difficult time simultaneously adhering to the norms of social distancing, thus, fostering a win-win situation. The concept of app-based cab services is also a part of the “Digital India Initiative” endeavor introduced by the Government of India. Since the inception of these cab applications, a major

chunk of the Indian population has shown a spectacular interest in the usage of these mobile services which has led to a gargantuan growth of registered cab users. According to Das (2015), the collective market share of Ola and TaxiForSure is believed to be pegged at a mammoth 80 percent, while Meru and Uber have claimed merely 12% and 4% of the organized cab-aggregation market in India.

One of the arduous challenges for any academic researcher lies in augmenting the current level of consciousness of multiple factors which trigger the mobile wallets to be accepted and adopted especially in times of Covid-19 when talking in the context of the Technology Acceptance Model (TAM), where the crux objective is to probe into the underlying perceptions, motivations, attitudes and behavioral intentions of Indian consumers towards these agile mobile applications. TAM is an information system model describing several decisions which influence how consumers would accept and use new technology when presented with it. In the current research study, we have rejigged the model of TAM to include concepts of 'Subjective Norm' and 'Exigencies (Covid-19).' Albeit, few researchers in the past have blended the various components of 'Attitude-Intention-Behaviour', in this particular research study we intend to emphasize conventional TAM with certain minor modifications.



Figure 2: Share of Cab Apps in India (Image Source: App Annie)

Research Objectives

1. To find out the perception of Indian customers towards App-Based Cab Services.
2. To examine and analyze the motivations, attitudes, and behavioral intentions of the Indian customers towards App-Based Cab Services.

Review of Literature

Studies conducted by Shankar, A & Kumari, P. (2016) and Singh, S & Rana, R (2017) revealed that Indian consumers are highly allured by the characteristics of money transfer provided by the system of cashless payment services in India. Over the years, there have been massive pioneering and development of myriad theories and models to explain and prognosticate

consumer behavior towards technological innovation. TAM is considered to be amongst the most influential models of technological acceptance, an extension of the Theory of Reasoned Action (TRA). TAM is an amelioration over TRA as it was built on certain independent variables like Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) as well as dependent variables like Attitude towards Usage (ATU). Fred Davis had coined the term PU as the degree or extent to which a person believes that using a particular system would lead to enhancement of his or her job performance. Davis (1989) defined PEOU as the degree or extent to which a person believes using a particular system would be free from effort. Further adding to the theory, Davis (1993) said that the usage of the actual

information system was determined by a concept called Behavioural Intention (BI), which was determined jointly by the users' attitude towards the use of the system and perceived usefulness. He defined it as "the subjective probability that an individual will perform a specified behavior." Attitude towards Usage (ATU) is a crux dependent variable in the TAM and the words of Ajzen & Fishbein (2000), "it is the evaluative effect of the positive or negative feeling of individuals in the usage of a particular system." With time, the concept of TAM began bolstering from the dynamics of retrospective information technology to integrate novel concepts like e-commerce and m-commerce. Lin et al. (2008), in their study, focused on the application of TAM, in that they endeavored to corroborate the influence of crux elements like mobile trust, perceived usefulness, perceived ease of use, and service fee on wireless mobile data service categorizing them as independent variables having an inexorable impact on the customer adoption of SMS technology. It is noteworthy that the traditional model of TAM has also proven to be quite flexible to include independent constructs most notably 'Subjective Norm', as first introduced by Taylor & Todd (1995), who defined it as "the influence gained from the social circle on whether or not to use a particular." TAM is still being relentlessly studied and expanded. "The two major upgrades under the umbrella of TAM are TAM 2 (Venkatesh & Davis 2000 and Venkatesh 2000) and Unified Theory of Acceptance and Use of Technology (UTUAT, Venkatesh, et al. 2003)." As per Venkatesh & Bala, 2008, "TAM 3 has also been proposed in the context of e-commerce which would include the effects of trust and perceived risk on system use." Though very little researches have been conducted in the

past taking into consideration the concept of Subjective Norm in the context of TAM, we find it extremely grueling to come across the domain of Exigencies used as a construct in TAM. This is the essence of our present research study.

Theoretical Framework

The Technology Acceptance Model (TAM) is a theory of information system (IS) explaining the way users embrace and use new technology. The suggestion of the model lies in the users' decision about the usage of a new technology which is influenced by various factors when the users interact with new technology. The most predominant factors in the TAM are Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Attitude towards Usage and Behavioural Intention are also crux variables that make up for TAM. The TAM is a brainchild of Fred Davis which was introduced in the year 1986. TAM is being relentlessly expanded with two new innovative models, TAM2 and UTUAT which were introduced in the year 2000 and 2003 respectively. 6. Research Model and Hypothesis Formulation.

Development of Research Model and Hypothetical Statements

The below model is a re-modified TAM. The constructs namely 'Subjective Norm' and 'Exigencies (Covid-19)' have been incorporated to cater to the influence of peer groups and urgent unforeseen needs respectively. Therefore, our research model comprises 6 constructs, which have been developed and presented below.

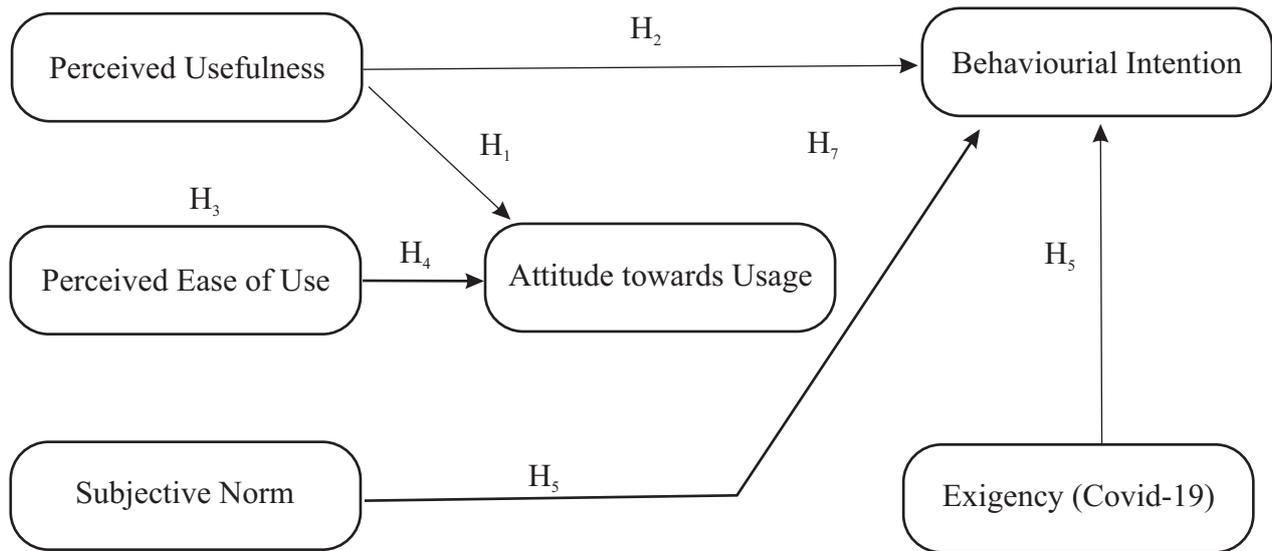


Figure 3: Research Model

The current research study purports to develop a research framework for the user acceptance and intention of mobile wallets, pillared on a re-modified Technology Acceptance Model (TAM). For this purpose, the following hypotheses have been developed and substantiated through the above research model represented above.

- H1: Perceived Usefulness has a positive influence on Attitude towards Usage of App-Based Cab Services among consumers
- H2: Perceived Usefulness has a positive influence on the Behavioural Intention of consumers towards App-Based Cab Services
- H3: Perceived Ease of Use has a positive influence on Perceived Usefulness towards App-Based Cab Services among consumers
- H4: Perceived Ease of Use has a positive influence on Attitude towards App-Based Cab Services among consumers
- H5: Subjective Norm has a positive influence on Behavioural Intention of consumers

towards App-Based Cab Services

- H6: Exigencies (Covid-19) has a positive influence on the Behavioural Intention of consumers towards App-Based Cab Services
- H7: Attitude towards Usage of App-Based Cab Services has a positive influence on the Behavioural Intention of consumers.

Research Methodology

Rigorous research was conducted including both primary and secondary data. Secondary data was used to create a robust foundation of the conceptual framework of the present research study. For this purpose, several research papers have been acquired from various authentic and reliable e-resource sites like Sage, JStor, BASE, Google Scholar, etc. For primary data collection, a survey has been conducted on a total sample size of 350 respondents, in the age group of below 18 to 55 years, engaged in education and various occupations, all of them either used or using cab-hailing services. For data collection, a close-ended questionnaire was developed. Most

of the questionnaires were mailed while others were randomly doled out to the respondents. The respondents in the present study form the residents of West Bengal living in various districts like Kolkata, Howrah, Hooghly, Burdwan, and Birbhum. The questions in the questionnaire were mostly self-developed albeit few questions have been adopted from previous researches. The questionnaire contained 22 questions under 6 segments, namely, Perceived

Usefulness (PU), Perceived Ease of Use (PEOU), Subjective Norm (SN), Exigencies (Covid-19), Attitude towards Usage (ATU), and Behavioural Intention (BI). A five-point Likert scale (5=Completely Agree and 1=Completely Disagree) has been used to measure the concepts. Few responses were erroneous and some were not returned, hence, those responses had to be rejected. After the rejection of such responses, the final valid responses stood at 334.

Data Analysis and Presentation of Data

The data obtained has been processed by using SPSS version 23.0. Demographic Profiling

Table 1: Representation of Demographic Statistics

Demographic Construct	Classification	Population Statistics	Percentage
Gender	Male	178	0.53
	Female	156	0.47
	TOTAL	334	1.00
Age	Below 18	6	0.02
	18-24	119	0.35
	25-34	113	0.34
	35-44	56	0.17
	45-55	40	0.12
	TOTAL	334	1.00
Current Occupation	Student	109	0.33
	Service	126	0.38
	Others	44	0.13
	TOTAL	334	1.00
Monthly Income	Less than 10000	21	0.06
	10001-25000	110	0.33
	25001-50000	123	0.37
	50001-100000	53	0.16
	Above 100000	27	0.08
	TOTAL	334	1.00

Thus, we can see that the ratio of male and female is moderately balanced in the proportion 178:156 where the total respondents are 334. The age group of 18-24 years and 25-34 years constitute major chunks of the population, 35%, and 34% respectively. A major proportion of the respondents are engaged in service, while the other respondents are students belonging to a

young age group as evidenced in the above table. Respondents with an income level between 25001 INR-50000 INR and 10001 INR-25000 INR are massive users of cab apps. One of the stunning results of the above demographics is the number of respondents having income levels below 10000, using cab apps which is very close when compared to the

other respondents who have more income than them. We see that respondents falling below the income level of 10000 INR comprise 6% of the total population juxtaposed to the respondents with income levels above 100000 INR, perched at 8% of the total population according to our survey. This is evidence of the spectacular turnaround in the behavior of people of such income level, predominantly falling under the category of the lower class segment of the Indian society who have adopted and used app-based cab services in times of exigencies (Covid-19).

Correlation Analysis

After conducting the reliability analysis, it is vital to find out the relationship between the 6 factors as well as to examine the hypotheses of our proposed research model. To serve this purpose, we have conducted a correlation test by using SPSS version 23. The below table shows that the correlation between PEOU, PU, ATU, SN, EX (Covid-19), and BI are positive and significant, thereby, confirming, our original hypotheses made in the literature related to TAM. The correlation statistics have been presented below.

Table 2: Representation of Correlation Matrix

Factor	PEOU	PEOU	PU	ATU	SN	EX (Covid)	BI
PEOU	Pearson Correlation Sig.(2-tailed) N	1	0.738** .000 334	0.763** .000 334	0.586** .000 334	0.751** .000 334	0.680** .000 334
PU	Pearson Correlation Sig.(2-tailed) N	0.738** .000 334	1	0.768** .000 334	0.645** .000 334	0.705** .000 334	0.728** .000 334
ATU	Pearson Correlation Sig.(2-tailed) N	0.763** .000 334	0.768** .000 334	1	0.606** .000 334	0.610** .000 334	0.712** .000 334
SN	Pearson Correlation Sig.(2-tailed) N	0.586** .000 334	0.645** .000 334	0.606** .000 334	1	0.542** .000 334	0.587** .000 334
EX (Covid)	Pearson Correlation Sig.(2-tailed) N	0.751** .000 334	0.705** .000 334	0.610** .000 334	0.542** .000 334	1	0.786** .000 334
BI	Pearson Correlation Sig.(2-tailed) N	0.680** .000 334	0.728** .000 334	0.712** .000 334	0.587** .000 334	0.786** .000 334	1

Regression Analysis

To further bolster our research findings, we have also conducted regression statistics to test the different proposed hypotheses. First, we examine the relationship between H1 and H4.

Table 3: Regression Statistics

Table : Predictors: PU & PEOU → Dependent Variable : ATU

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.876 ^a	.717	.713	.60436

a. Predictors: (Constant), PEOU, PU

Coefficients^a

Model	Unstandardized Coefficients		Standard Coefficients	T	Sig.
	B	Std. Error	Beta		
1(Constant)	.378	.193		1.534	.143
PEOU	.363	.050	.381	6.826	.000
PU	.587	.057	.553	10.342	.000

a. Dependent Variable : ATU

As we can see from the above table, the value of R square indicates that the two predictors (PU, PEOU) explain 71.7% variations in ATU. It explains the rationality of this model, albeit there might be other oblivious factors having an impact on the respondents' ATU. The

standardized coefficients (β) show that PU ($\beta=0.553$) has a larger impact than PEOU ($\beta=0.381$). Also, the Sig. indicates that both of the predictors have a significant and positive impact on ATU scores being less than 0.001 level.

Table 4: Regression Statistics

Table : Predictors: PU, SN, EX (Covid-19) & ATU → Dependent Variable : BI

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.895 ^a	.724	.707	.57964

a. Predictors: (Constant), PU, SN, EX(Covid-19), ATU

Coefficients^a

Model	Unstandardized Coefficients		Standard Coefficients	T	Sig.
	B	Std. Error	Beta		
1(Constant)	.319	.186		1.770	.093
PU	.599	.072	.558	8.768	.000
SN	.285	.061	.287	4.376	.000
EX(Covid-19)	.306	.062	.315	5.545	.000
ATU	.383	.067	.394	6.425	.000

a. Dependent Variable : BI

From the above table it is confirmed that all the four predictors namely PU, SN, EX (Covid-19), and ATU had a significant and positive influence on BI, with ($\beta=0.558$), ($\beta=0.287$), ($\beta=0.315$),

and ($\beta=0.394$) respectively for each predictor. Each of the four predictors has Sig=0.

Finally, we conduct a regression analysis to examine H3.

Table 5: Regression Statistics

Table: Predictors: PEOU → Dependent Variable: PU

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.809 ^a	.687	.690	.56438

a. Predictors: (Constant), PEOU

Coefficients^a

Model	Unstandardized Coefficients		Standard Coefficients	T	Sig.
	B	Std. Error	Beta		
1(Constant)	.378	.193		1.534	.143
PEOU	.363	.050	.381	6.826	.000

a. Dependent Variable: PU

Finally, one more determination of a regression model was done to test our fourth hypothesis, i.e. influence of PEOU on PU. As evidenced from the above table, the value of R Square is 0.687 which represents that PEOU explains 68.7% variations in PU. We also notice that the Standard Coefficient value is ($\beta=0.381$), PEOU had a significant and positive impact on PU. Hence, our proposed research model along with the hypotheses is rightly proven correct as evidenced by the robust examination and analysis.

Reliability Analysis

Reliability analysis has been conducted to check the internal validity and consistency of the items

used for each factor. For conducting, reliability statistics, IBM SPSS version 23 has been used. As per Nunnally (1978), "questionnaire for various factors are judged to well reliable measurement instrument, with Cronbach's Alpha scores being all above 0.6." Thus, we can conclude from the above statement that the Cronbach's Alpha score falling below 0.6 will not fit perfectly in the questionnaire. By running the reliability statistics, we have found that the Cronbach's Alpha score was above the standard value of 0.6 for every item of which is robust enough thus, validating that all the 22 items fit perfectly in our questionnaire and support our proposed research model.

Table 6: Reliability Statistics for all variables (n=22)

Cronbach's Alpha	Cronbach's Alpha based on Standardised Items	N of items
0.812	0.812	22

Findings

This study was a pioneering effort in the application of App-Based Cab Services into a TAM model which was re-modified especially by including the novel constructs of 'Subjective Norm' and 'Exigencies (Covid-19).' Based on our proposed research model and hypotheses development, we have probed into the liaisons among the traditional components of TAM like PU, PEOU, ATU and BI, and Subjective Norm and Exigencies (Covid-19). Utopian as it might appear, the study is imperative when talking in the light of the recent proliferation of smartphone features and multi-functionality when dealing with various mobile applications. According to our research findings, Perceived Usefulness (PU) had a significant impact on the Attitude towards Usage (ATU) of cab apps. It was also observed that PU was significantly related to Behavioural Intention (BI). The reason behind this could be that consumers are willing to adopt a beneficial mobile application that could make their life more convenient. Perceived Ease of Use (PEOU) was significantly related to ATU of cab apps. Furthermore, the domain of 'Subjective Norm' which deals with the influence of social circle had a significant impact on the Behavioural Intention (BI) of the consumers towards cab apps. Social interactions in today's world play a pivotal role in shaping the perception and attitude of people, in this case, the perception and attitude of respondents towards cab apps. We also notice that Exigencies (Covid-19 in our present research study) also influence the attitude of people as evidenced by our research findings. The spectacular adoption and usage of app-based cab services in the era of Covid-19 is a fact well-documented. This shows that customer's perceptions will be quite different in case of urgent need or emergency or any other

kind of exigencies. The findings of the present research study also proved that PEOU had a strong influence on PU, suggesting that providing adequate user training is vital for fine-tuning the consumers' perception about the usefulness of a technology that is quite new. Ultimately, we comprehend that consumers' Attitude towards Usage of cab-hailing apps has been prodigious in shaping up the Behavioural Intention of consumers as both psychological and physiological faculties are a nifty driving force in the development of perceived likelihood of customers.

Conclusion

The astounding amelioration of technology is relentlessly fostering a head-turning growth in the landscape of e-commerce and m-commerce. The face of technology has witnessed a seismic shift, particularly in recent years because of a plethora of instauration thereby boosting a bewildering proliferation in mobile internet and smartphone features. Smartphones possess uncanny qualities supporting myriad technological applications which have proven to be extremely useful for the customers. Amidst this pandemic, where the survival of mankind has been challenged, let alone commercial transactions and other activities, many agile mobile applications like cab applications have served the purpose of consumers by absorbing their despondency in these times of exigencies. We have been able to bring out the effectiveness of app-based cab services when talking in the context of customers' perception towards it, especially in the Covid era. The present research study has highlighted certain crux components under the TAM constructs, which will be quite useful to guide future researches. People in West Bengal highly value cab apps like Ola, Uber, and others.

A reason for this lies in the confidence and the eagerness among the erudite consumers of the culturally rich state who are always ready to embrace new-fangled technology. Granted the fact that the framework of TAM has garnered widespread criticisms due to its arguable heuristic value, restricted explanatory and predictive power, and triviality. Nevertheless, it is still the most popular theoretical model used in academia. The present research study is robust enough to provide valuable conclusions related to the display of consumer behavior towards app-based cab services during Covid-19.

Managerial Implications

Taxi-hailing apps are a subset of O2O (online to offline) services. To increase users' acceptance level, the company together with its product managers should explore a broad range of user preferences, intentions, and purposes towards cab-hailing systems and should subsequently try to infuse those factors into the development process. Ride sourcing may also have adverse impacts, a fact documented in the gradual wane of yellow taxis in West Bengal. There is a neck break competition between Ola and Uber, both of which are trying to gain a competitive edge over others, gain market share and mindset of the customers of West Bengal. Some of their eye-twitching marketing strategies include coupon codes, promotional codes, cashback and referral, and outright discounts have been the nifty driving force behind its sustenance and indirect competition to the yellow taxis of the state of West Bengal.

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The Smartness of Cities through Green Marketing: An Empirical Study

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Abstract

The concept of a smart city is the need of the hour due to too much raise in population and pollution. Likewise, the natural resources are limited as compared to the requirement for the ever increased population. The present paper is an effort to learn the factors disturbing the satisfaction level of consumers just before green products to make the cities smart to make a sustainable environment. The paper is based on the response composed during a sample with respondents of 410 sample from the Jind city of Haryana state through a well-structured questionnaire using, data collection was done with Likert-5 point scale and for the intention of testing of data, a set of simple statistics were used. To test the validation of data, ANOVA (Analysis of Variance) and Chi-Square analysis be used. Lastly for computation of statistics, SPSS (Statistical Package for Social Sciences) version 18 is used. Hence it is found that all the suggested factors of green products such as enhance the quality of life, protection of the environment, ability to recycle, need satisfaction, suitable price, easy availability, packaging, attractive advertisements, recognition by Government, healthy and hygienic for us, improve the status, support sustainability of the environment, passion to consume, eco-label, eco-brand and environment friendly of green products were considered from the review of related literature, were equally important for boosting green marketing to make a sustainable environment.

INTRODUCTION:

In the last two decades, the model of 'smart city' has to turn out to be additional and more broadly held in orderly novel and global policies. To know this concept, it is important to identify that why cities are considered basic elements for the future. Cities performed a key position in economic and social parts worldwide and contain an enormous crash on the environment (Dangelio et al. 2015). A study by Sangala (2018) described that to some level,

urbanization and urban development are responsible for creating environmental challenges, containing greenhouse gas (GHG) emissions. Most percentages of air pollution were produced by different activities in urban areas and cities. At a similar time, the present size of parks, urban forests, and other vegetative sectors for environmental protection has slowly declined. Thus, a great expectation has been held from environmentalists, policymakers, urban planners, and private sector players to

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explore innovative solutions that help in decreasing carbon emissions. Technological developments now allow cities to be instrumented, enable the meeting of more data evidence than yet before, which allow cities to evaluate and motivate more aspect of their operations. Cities are further and more “interconnected,” permit the free flow of information from one separate system to another, which increases the efficiency of the large infrastructure. To meet up these tasks and provide sustainable wealth for businesses and people, cities have to convert smarter and use new technologies to modernize their systems to optimize the use of inadequate resources.

SMART CITIES AT A GLANCE:

The idea of Smart Cities taking place by US information Technology Company IBM (Information Business Machines) corporation. The CEO Sam Palmisano put onward this initiative of smart earth on the roundtable in January 2009. The proposal is that smarter building would lead to a new generation of economic investment. This idea was known as the information superhighway plan which has received different and positive statements. The formation of smart cities is the delivery policy center of attention in countries all over the world. One reason is that all over the world, the pace of movement from rural to urban areas is speeding up mathematically. Nearly 70 percent of the population will be living in cities by the year 2050 and India is no exemption. It will be about 500 new cities to put up the entry. Smart Cities offer a theoretical and practical toolbox to deal with unparalleled urbanization. The Smart Cities Mission" of hundred smart cities in India was launched by Prime Minister Narendra Modi on 25 June 2015.

The concept of smart city mission is based on the utilization of information and technology to reduce the wastage of energy and resource consumption and to reach a superior quality of life by good-looking more efficiently and enthusiastically with residents.

GREEN MARKETING AT A GLANCE:

Now-a-day, the main dispute in the world for every Government, Industries as fine as for every individual on the planet is to keep and conserve the natural resources of the environment, which are vastly going exhausted and polluted. For that cause, Smart Business Houses had acknowledged “Green Marketing” as a part of their strategies. As a result, green marketing plays the main role to protect the natural resources of the environment and also to encourage the idea of sustainable development and environmental protection in the minds of each individual. Green Marketing includes a huge collection of activities, together with product modify, packaging changes, modifying advertising, and changes to production procedures. Until at present essential green marketing is not an easy profession. The words used in this element has diverse, it includes Green advertising, Environmental promotion, and Ecological Marketing. Green marketing arrives view into acknowledgment in the following 1980s' and close to the commencement 1990s'. The initial manuscript, name environmental Marketing was the winding up of the first concentrated path on “environmental Marketing” thought by the American Marketing Association in 1975. AMA (American Marketing Association) clear Green Marketing is the encouragement of products that are actually to be environmentally secure. Consequently, green marketing is holistic promotion thought, that contains

diverse performance i.e., production, marketing, utilization, and deduction of products and services obtain a position in a way to had a fewer harmful impact on the atmosphere. The scheme of Green Marketing is in accumulation clear by the United Nations Environment Program (UNEP) as “A promotion which covers all statement operations undertaken to maintain a product on the origin of its ecological properties or of its societal qualities”. It is concerning exchange products on a fair suggestion. The only kind features of green marketing are its business dimension attached regarding the values of consumers who want to perform in an environmentally aware and collectively responsible manner with the purchases they make. The now-a-day business wishes to frequently consider the latest and mainly smart promotion trend. Marketing trends can be recognized out by commonly researching regarding the changes in the conduct of customers in the marketplace. Through identifying the change in the consumer routine, the business can correct their contribution to the consumers. Consumers this time are to a huge extent worried about the harmful impact of their use of products and services on their surroundings, before and after purchasing. The source for this afraid could be increasing air and water pollution, visible weather changes, and global warming. Thus, the organization by way of Green Marketing not simply provides an occasion to meet customer expectations and deal with their green concern, but also to get well-built consumer support.

ROLE OF GREEN MARKETING:

The main essential role of “Green Marketing” is to create awareness in the middle of the people of society about the environmental issues, like global warming, greenhouse effect, and

environmental degradation, and how they can work out such types of environmental issues through maintaining the natural resources efficiently and effectively. Through green marketing people also starts adopting green products and services in their day-to-day life. It also helps in creating wealth from waste. Thus, green marketing helps in the support of bottle green expertise and green products for the protection of natural resources and sustainable development.

Green marketing facilitates selling underside top incentive and top procession development potential. While transform of production or business process may employ initiate cost, but after starting time to time it will set aside money in a long period. For instance, the price of install solar power is an asset in future energy cost money. Companies that assemble up improved and innovative products and services with ecological contact in mind give themselves just right entry to new markets, sustainability increase profits and advantage from competitive incentive above that promotion non-environmentally accountable alternatives.

GREEN PRODUCTS AND MARKETING PRACTICES:

Green products are such commodities that have a lesser amount of bad impact on the life cycle of the environment and human being health across their life phase. Therefore, changing from standard products to greener alternatives will consequently result in the preservation of resources and enhanced quality of life on the planet. In reality, there is no uniformity on what accurately is green. There is no well-known meaning of green product.

Review of Literature:

Polonsky (1994) studied the concept of green marketing. The author recommended that green promotion look more than a determined promotion state. As firms have to accept a great deal of the answerability for green deprivation, at final it is customers who request commodities and thus generate environmental disaster. Green marketing requires that customers expectation for cleaner surroundings and are ready to pay for it, perhaps from conclusion to end superior-priced commodities, personalized individual lifestyle, or even governmental involvement. In expectation of this occur it will be not easy for firms only to express the green marketing insurgency. As an outcome, a green dedicated association may not only produce goods that have condensed their unsafe impact on the surroundings, they may also be proficient to pressure their supplier to do somewhat in an additional environmentally accountable approach.

Simintiras & Martin (1995) explore the association among green manufactured goods lines –precise green information and attitude. A sample of 61 adults (aged between 18 years or above) was certain from the whole students of a major British University. For the gather of data, authors use a 5-point bipolar semantic differential scale using response sequence from “know a large deal about” to “know very small about” and for the learning of data, correlation technique was used. They invent that there was no relationship between awareness of and attitudes just before the contact of green product appearance on the environment above the pattern few duration.

Forleo et al. (2001) revised customers who are prepared to pay extra for environmentally responsive commodities. A test of 907 respondents from a total of 22 survey tracts in

seventeen municipalities of North-American cities was selected. Information was collected using a nine-point Likert scale (very insignificant to very significant). Authors use Chi-square and T-tests for the test of statistics. They report that today's environmental struggles are strict, to facilitate corporation do not act ahead constantly on the way to the environment and that perform in a cost-effectively favorable manner is essential and not complex.

Kaur & Jain (2004) studied the level to which Indian customers are environmentally aware, think upset with the environmental struggle, and engaged in environmental dependable activities. A test of 209 respondents on or after Delhi was selected. Authors use five diverse sizes namely perceived relationships among financial growth and environment, a common fear for the environment, the validity of environmental fear, and real responsibility of a range of contributors to environmental struggle and imaginary achievement of ecological performance. The authors used factor analysis, reliability analysis: mean, and dispersion for statistics investigation. They originate a low intensity of environmental responsiveness calls for extra strong-minded as well as broad hard work on a collection of Government and Non-Government Organizations (NGOs) occupied in promotion of green ideas for construction individuals wholly conscious and knowledgeable about ecological difficulty and issue.

Khandelwal & Saxena (2008) deliberate the attitude of the consumer towards green marketing. The authors used primary data of a sample of 321 consumers by conducting the individual inspection method in the cities of Jaipur, Chennai, Ghaziabad, Bangalore and Delhi. Composed information was analyzed by

way of One-way ANOVA, Two-Way ANOVA (Analysis of Variance), T-test and Z-test. They establish that these days' customers are further concerned about the environmental issue; in future advances and more customers will desire green products and customers also resolute that companies which can set up themselves throughout green reproduction will have diverse compensation in the marketplace.

Khandelwal & Saxena (2010) considered the accepting of three types of Indian Industries-durable, services, and non-durable in the direction of green promotion. A combination of convenience sampling and judgment sampling was used to decide a test of 112 company durable, 36- non-durable and 32 services companies. The authors do an in-depth creative writing survey, succeeding to gather the major information from the industry and based on this, they set four hypotheses, which were experienced by way of parametric tests-one-way ANOVA (Analysis of variance). They found that industries have tall anxiety for ecological safety and have sturdy fear for environmental protection and have strong confidence that green promotion can be used as an instrument for the realization of sustainable and cost-effective growth.

Kinoti (2011) studied the model of green marketing involvement strategies and sustainable growth with anxiety on green marketing involvement strategies to environmental problems in front of the world today. The authors highlighted the hypothetical framework of green marketing involvement strategies and sustainable development and ingredients of definite components of green marketing and sustainable growth conceptual structure. Ultimately, they suggested that marketing from end to end the green promotion and mostly green marketing strategy to attend to

the dispute with the constructive outcome of improved managerial arrangement and superior physical atmosphere which will express to sustainable improvement.

Wahid & Rahbar (2011) emphasized the outcome of consumers' purchase behavior regarding the examination of green marketing tools. A sample of 250 individuals involving the age of 18 years was selected as of Penang, Malaysia. The questionnaire was collected from five different sections-i) Green marketing tools, ii) Environmental advertisements, iii) Eco-label, iv) Eco-brand and v) Actual purchase behavior. The authors used a Likert 5-point scale for the gather of data and analyzed using mean and standard deviation. They establish that each size of green marketing tools shows eco-brand and belief in eco-label has significant variable associated with definite purchase behavior.

Sharma (2013) conducted a study of instructive contact on customer awareness and thoughts regarding green marketing with particular suggestions to Ujjain and Indore cities of Madhya Pradesh. A sample of 200 respondents from the age group of above 20 years having the qualification-up to 12th and graduation were selected from Ujjain and Indore cities. The author used a 5-point Likert scale for 80 percent of questions and the remaining 20 percent of the questions were based on dichotomous enquiry, form the basis of data collection. The author also uses Principle module means for factor examination and chi-square test for analyzing the data. The author establishes that education is the most considerable influencing factor for the level of understanding. More knowledgeable were more conscious about green products and vice-versa.

Mansouri et al. (2013) studied the impact of smart cities on city ecological groups and cost-effective sustainability from a holistic judgment. Secondary sources of information are used for the learning. The authors consider the hypothetical system form, jointly with sustainable manners and sustainable development to create urban sustainability for promoting the smart city effort. The authors concluded that to accomplish multi-dimensional city sustainability, citizens' activities and Government resolution creation must each build up into more successful, well-organized and sustainable. In accumulation, the smart city will require improvement when it comes to planning, management and procedure of their infrastructures and prosperity if they are to administer with the opportunity demands of their citizens.

Banerji & Dubey (2014) conducted learning on essential as well as prospects for the industry in the modern era concerning the idea of green promotion. The authors highlighted the nearby trends of green marketing in India and effort in front of the task of Go-Green and further discuss different green marketing initiatives. The author also cites several well-known examples of winning green marketing initiatives in the community world. Authors suggested that green marketing is slowly spreading its wings and recognized increasingly. In the future, only those companies will get the supreme encouragement that innovates with new products, materials, technologies that are eco-centric and talk to the disagreement by walking their talk.

Singh & Parishward (2014) focused upon the infrastructural development for the smart urban development in India and to discover the capacity of progress, confidence from various Government policies for doing well

implementation of smart city development. On behalf of the gathering and examination of suitable information source, a collection of secondary information were collected from ten diverse foreign as well as Indian studies, diverse parameters for smart city such as- smart surroundings, smart financial system, Smart Citizens, Smart Governance, smart mobility, and smart livelihood be measured. The authors finally concluded that smart cities may use the parameters and mark as a tool to standard with other cities and illustrate modules from improved performing cities, perhaps follow-on in policy transfer.

Nadaf & Nadaf (2014) emphasized the approach and challenges for Indian companies in the 21st century regarding the model of green promotion. The authors concluded that marketers have the accountability to make the customers know about the necessity for and turnover of green products to continue a cleaner and greener environment. There is no single approach that will effort for all companies, it every depends on the hold human being objectives, objective promote prosperity, etc. Therefore, in command to be optimizing the cost-effective arrival on their investments, companies have to construct up their strategy that modifies ecological savings into a source of inexpensive benefit. They recommended that even as the modifications to the green might give you an idea about to be expensive in the short run, it will demonstrate to be important valuable, price sensible as well in the extended run.

Zee et al. (2015) examined the effectiveness of corporate social responsibility initiative –authoritarian contract, green cause-related promotion, green product and a combination of green cause-related promotion and green product on acquisition purpose and approach of

the consumer. They certain 5 out of 50 districts in Bangkok using systematic random sample and a sample of 300 customers were certain. The respondents were asked regarding their probability of purchasing the company's product utilizing 5-point Likert scales. They establish that an accurate environment corporate social strategy elicits added positive reply than a universal approach of compliance through strategy.

Selvakanmani (2015) discussed the cost of implementation, challenges and economic benefits towards a smart city. Derived information was used for gathering and examination of data. The diverse composition blocks such as smart mobility, smart surroundings, smart financial system, smart livelihood, smart citizens and smart authority based on the Information and Communication Technology (ICT) were considered. The author finally recommended that smart cities are not an enquiry of 'if', but a belief of how and when. With so many live cities around the world and many more new ones in the creation, every major IT company is preparing for this future and operational on ruling their niche in the smart cities market.

Khan & Uddin (2016) studied the green purchase performance of youthful urban customers in India. A test of 161 young Indian customers among the period set of 15 to 18 years old be certain, reside in Northern district of the state and amongst which 55.3 percent be males and 44.7 percent by females. The investigate instrument used in the study comprised of two sections: the first section had a question on demographics profiles such as, gender, educational qualification, family monthly income, and age set of respondents, while the second section had 25 objects, in which a Likert 5-point Scale was occupied to examine factor

distressing green purchase performance of young customers. The authors establish that to build green purchases in the middle of youthful urban customers, the use of touching appeal in promotion communication and gender-based marketplace segmentation could be the means to engaging green promotion. They also institute that female customers are further environmentally energetic as compare to male customers; therefore products that target males throughout a range of mediums have to spotlight more on interesting males to dynamically add in the direction of the environment.

Rejikumar (2016) examined the consequence of customers' hypothetical greenwash panics on specific considerable background that build up green procure intention in the middle of customers. A test of 188 retail customers from the Cochin region in Kerala State was composed with the assist of a prepared questionnaire. The author used a Likert 5-point Scale for the compilation of information and a difference-based structural equation model was used to examine the relationship among variables of consequence. The author finished that to raise the sales of environmentally rational products, companies cover to build up a strategy to take absent barrier, such as not have of awareness concerning the green products among the customers, injurious perception and uncertainty with the green claim. Hence greenwash panic was a key delegate that limits green purchase intentions.

Hall & Gupta (2017) studied the smart city mission of India by analyzing three diverse data sources- a smart city vision statement, a citizen survey and a catalog of designed smart city projects. Samples of ten cities were selected to carry out the reliability test. They found that there are ten most common characteristics

integrated with the dream announcement, were eco-responsive, sustainable, comprehensive, lively, financial system, tourism, liveable, tradition, excellence of life and protection. The authors establish city officials' vision for presently commencement their smart cities make public the goals which are to be achieved in the next five to ten duration. The examination also reveals how the city dimension influences the priority of people and city officials, signifying that the thought of a smart city in India possibly will be diverse depending on the people and communications linked challenge in face of a city.

Sharma & Singh (2017) focused upon the challenges as well as the key areas for expansion of smart cities in India along with the case study of Chandigarh. For the collection and analysis of data, various secondary sources of data, such as websites, journals, books and reports were used. They measured various mechanisms of smart city task, challenges and SWOT (Strength, weakness, opportunities and threats) analysis of Chandigarh city. The authors concluded that there is a need of the hour to plan and construct the smart cities in the vision of resolving the trouble of unexpected development, be short of infrastructure, insufficient transport services and poor Governance arrangement.

Phil Jones (2018) highlighted that the model of 'smart' should not be lawless with 'clever. Intellectual can be a reflection of as technology and IT connected. Smart is regarding the assurance with people, by introducing the end client at the middle of management. A smart bottom-up move can use a more helpful 'spin' to support the low-carbon program. To a certain extent than the 'less bad' universal program of climate change, it focuses further on the 'better' local agendas associated with cleaner

environments, cost-effective and social benefits, collectively with healthy, secure, and creative energy-efficient buildings. The author finally concluded that the model of 'smart' should not be puzzled by 'clever.

Michael R. Glass (2018) examined that Singapore's City Gallery is outstanding in this situation, as it provides a codified viewpoint on the URA's idea for the state. This is a truthful 'Singapore Model' that provides a determining space anywhere processes of inter-referencing amidst claims of independent authority are enacted by people, tourists, visiting delegations, and neighboring planners.

Marc Wolfram (2019) illustrates how synergies in the middle of imperfect administration, empower a community of use and faithful intermediation go up out as input drivers for information transformative Governance, in demanding if associated to open test, whereas also shaping the role of global exchange in this. A test of 79 cities was considered for their sustainability orientations in a description local approach structure in a circle, the nationwide strategy tends to limit transformative skill growth and help incremental modification. Across all cities measured, the main gap continues interims of preliminary social awareness process that live in systems beliefs, sustainability nearby, as well as a suitable approach for embedding extra necessary innovation.

Research Objectives:

The current study is an attempt to calculate the awareness of consumers regarding green products and to identify the factors responsible for boosting green marketing for making a sustainable environment.

Hypotheses:

To validate the results of the current study, the subsequent two hypotheses were developed:

H01: There is no major dissimilarity between the respondents towards awareness of greens products.

H02: All the factors are equally important for boosting green marketing for making a sustainable environment.

Methodology:

In the current paper, non-probability convenience samplings have been uses. A test of 450 respondents has been selected to get the response regarding the awareness of green products through a well-structured questionnaire, out of which only 410 respondents were relevant and which includes 205 male and 205 female respondents of different occupation and age groups. The sample selected for this study includes Government employees, professionals, businessmen and private firm employees of Jind

city [HARYANA]. After collecting the data from 410 respondents, the responses were checked for completeness. Respective respondents were contacted for the collection of unanswered questions and responses. The responses so gathered were considered for further analysis. To bring out the research work, similar statistical tools be used in the command to obtain certain important information and results. Descriptive statistics have been used for the investigation of gathered responses. Testing of hypotheses is completed by using ANOVA (Analysis of Variance) and Chi-square test. Finally, for the proper investigation of data, an automated package SPSS 18.0 was used.

Analysis:

In the current decades, the concept of green products and green promotion is a recent idea which follows and adopt by the universal of the companies all over the world to defend the environment from getting infected. This learning helps analyze the fulfillment and understanding level of customers in the direction of green products.

Table 1: Awareness about green products or eco-friendly products

Nature of response	Male	Female	Total number of respondents(N)	Percentage (%)
Yes	186	181	367	89.5
No	19	24	43	10.5
Total	367	43	410	100
$\chi^2=256.039, df=1, sig. Value=.000$				

Source: Survey (data were processed through SPSS18.0)

Note: Level of significance at 5 percent

Are you aware about “Green Products” or “Eco-friendly products?”

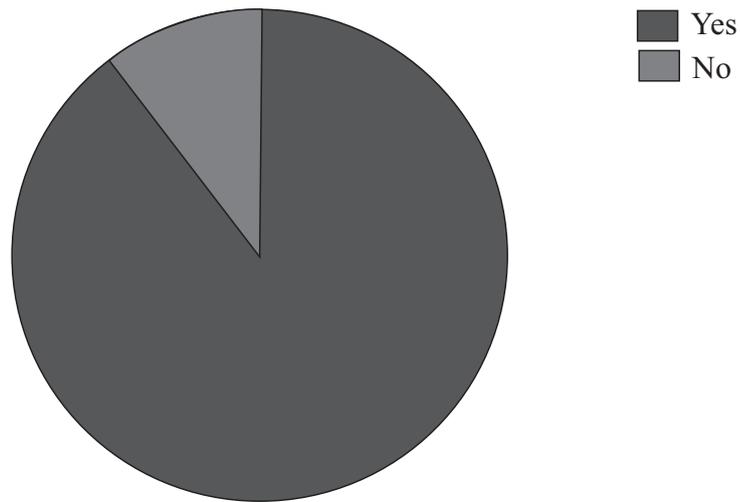


Fig.1: Awareness regarding green commodities or eco-friendly products

Table 1 and fig.1, show that 367 respondents were aware of green products and 43 respondents were unaware of green products out of a total of 410 respondents. Thus, a total of 89.5 percent of respondents were aware of green products, and 10.5 percent of respondents were unaware of the term green products.

By applying a non-parametric test (Chi-squares test), the result shows that ($\chi^2 = 256.039$, $df=1$, $p=.000 < .05$) there is a significant dissimilarity between the respondents regarding the awareness of green products. Therefore, the

hypothesis (H01) is rejected. Further, the above table and figure show that 186 male and 181 female respondents were aware of green products out of the total number of 410 respondents, which shows that both males and females are equally aware of green products.

Table 2: Factors affecting the satisfaction level of customers towards green products

Factors		S.A	A	N	D	S.D	F value	df	Sig.
Enhances quality of life:	N	171	202	31	6	0	.493	4	.741
	%	41.7	49.3	7.6	1.5	0			
Protect environment:	N	246	143	19	1	1	.339	4	.852
	%	60.0	34.9	4.6	.2	.2			
Able to recycle:	N	156	192	51	10	1	1.087	4	.362
	%	38.0	46.8	12.4	2.4	.2			
High level of satisfaction:	N	129	190	76	13	2	.581	4	.677
	%	31.5	46.3	18.5	3.2	.5			
Suitable price:	N	62	186	107	50	5	.652	4	.626
	%	15.1	45.4	26.1	12.2	1.2			
Easily available:	N	88	183	75	55	9	.437	4	.782
	%	15.1	44.6	18.3	13.4	2.2			
Packaging:	N	58	193	118	30	10	1.493	4	.204
	%	14.2	47.2	28.9	7.3	2.4			
Attractive advertisements:	N	53	165	114	59	19	.702	4	.591
	%	12.9	40.2	27.8	14.4	4.6			
Recognized by Government:	N	128	184	71	21	6	.868	4	.483
	%	31.2	44.9	17.3	5.3	1.5			
Healthy for me & my family:	N	232	148	25	5	0	.315	4	.868
	%	56.6	36.1	6.1	1.2	0			
Improve status:	N	109	173	85	36	5	1.841	4	.120
	%	26.7	42.4	20.8	8.8	1.2			
Support sustainability of environment:	N	171	172	55	11	1	1.652	4	.160
	%	41.7	42.0	13.4	2.7	.2			
Passion to consume:	N	57	167	135	41	10	1.365	4	.245
	%	13.9	40.7	32.9	10.0	2.4			
Eco-label:	N	101	221	74	13	1	.797	4	.528
	%	24.6	53.9	18.0	3.2	.2			
Eco-brand:	N	95	213	77	18	7	1.281	4	.277
	%	23.2	52.0	18.8	4.4	1.7			
Environment friendly:	N	256	131	19	2	2	.817	4	.515
	%	62.4	32.0	4.6	.5	.5			

Source: Survey (data were processed through SPSS 18.0)

Note: N= Number of Respondents, *Significant at 5 percent level of significance.

Table 2, shows that 49.3 percent of respondents were agreed to declare that they were happy with the use of green products because these products enhance the quality of life, whereas 41.7 percent of respondents state that they were strongly agreed with the above statements. However, 9.1 percent of respondents stated that they were not agreed with the above statement. Thus, in total 91.0 percent of respondents were agreed that we're satisfied with the use of green products because they enhance the quality of life. Statistically, it is found that there is no significant dissimilarity between the

respondents towards enhancing the quality of life by green products ($f=.493, df=4, p=.741 > .05$). Therefore the null hypothesis (H_0) is accepted. Additionally, Table 2, shows that 60.0 percent of respondents were stated that they strongly agreed to state that they satisfied with the use of green products because these products can protect the environment, whereas, 34.9 percent of respondents were stated that they agreed about the above statement. Yet, 5.0 percent of respondents stated that they were not agreed with the above statement. Thus, in total 95 percent of respondents were agreed that they

were satisfied with the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the ability to protect the environment of green products ($f=.339$, $df=4$, $p=.852>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2, shows that 46.8 percent of respondents agreed to state that they were satisfied with the use of green products because these products can recycle and 38 percent of respondents stated that they strongly agreed about the above statement. Though, 15percent of respondents was stated that they were not agreed about the above statement. Thus, in total 85 percent of respondents were satisfied with the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the ability to recycle green products ($f=1.087$, $df=4$, $p=.362>.05$). Thus the null hypothesis (H01) is accepted. Additionally, Table 2, shows that 46.3 percent of respondents were stated that they agreed with the use of green products because these products satisfied their needs and 31.5 percent of respondents were stated that they strongly agreed about the above statement. Though, 22.2 percent of respondents were stated that they are not agreed about the above statement. Thus, in total 77.8 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the high level of satisfaction of green products ($f=.581$, $df=4$, $p=.677>.05$). Therefore the null hypothesis (H01) is accepted. Further, Table 2, shows that 45.4 percent of respondents were stated that they agreed with the use of green products because these products have a suitable price and 15.1 percent of respondents were stated that they strongly agreed about the above statement. Yet, 39.5 percent of respondents were stated that

they were not agreed about the above statement. Thus, in total 60.5 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the suitable price of green products ($f=.652$, $df=4$, $p=.626>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2 shows that 44.6 percent of respondents were assured that they were agreeing about the use of green products because these products are easily available in the market and 21.5 percent of respondents were stated that they were strongly agreed about the above statement. Though, 33.9 percent of respondents were not agreed about the above statement. Thus, in total 66.1 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the easy availability of green products ($f=.437$, $df=4$, $p=.782>.05$). Therefore null hypothesis (H01) is accepted. Additionally, Table 2, shows that 47.2 percent of respondents were assured that they agreed about the use of green products because these products are well-known with their packaging and 14.2 percent of respondents were strongly agree about the above statement. Yet, 38.6 percent of respondents were not agreed about the above statement. Thus, in total 61.4 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the satisfaction level of green products due to their packaging ($f=1.493$, $df=4$, $p=.204>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2, shows that 40.2 percent of respondents were stated that they agreed that they were satisfied with the use of green products because these products have smart advertising and 12.9

percent of respondents were strongly agree about the above statement. Still, 46.9 percent of respondents were not agreed about the above statement. Thus, in total 53.9 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the satisfaction level about green products due to their attractive advertisements ($f=.702$, $df=4$, $p=.591>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2, shows that 44.9 percent of respondents were stated that they were satisfied with the use of green products because these products are accepted by Government and 31.2 percent of respondents were stated that they strongly agreed about the above statement. However, 13.9 percent of respondents were not agreed about the above statement. Thus, in total 76.1 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the reorganization of green products by the Government ($f=.868$, $df=4$, $p=.483>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2, shows that 56.6 percent of respondents were stated that they strongly agree with the use of green products because these products are healthy and hygienic for me and my family and on the other hand, 36.1 percent of respondents were agreed about the above statement. Though, 7.3 percent of respondents were not agreed about the above statement. Thus, in total, 92.7 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the use of green products because these products are healthy for me and my family ($f=.315$, $df=4$, $p=.868>.05$). Therefore the null hypothesis (H01) is accepted.

Additionally, Table 2, shows that 42.4 percent of respondents were stated that they agreed with the satisfaction level of the green product after using it because these products improve their status and 26.7 percent of respondents were stated that they strongly agreed about the above statement. Yet, 30.9 percent of respondents were not agreed about the above the statement. Thus, in total 69.1 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the satisfaction level of green products because these products improve their status ($f=1.841$, $df=4$, $p=.120>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2, Shows that 42.0 percent of respondents were stated that they agreed with the green products because they support the sustainability of the environment and 41.7 percent of respondents were stated that they were strongly agreed about the above statement. Yet, 16.3 percent of respondents were stated that they were not agreed with the above statement. Thus, in sum, 83.7 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the satisfaction level of green products because these products support the sustainability of the environment ($f= 1.652$, $df= 4$, $p=.160>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2 shows that 40.7 percent of respondents were stated that they were agreed about the use of green products because these products are in passion to consume and 13.9 percent of respondents were stated that they were strongly agreed about the above statement. Yet, 63.3 percent of respondents were not agreed about the above statement. Thus, in total 54.6 percent of respondents were agreed about the above-

said statement. Statistically, it is found that there is no significant dissimilarity between respondents towards the satisfaction level about the green products because these products are in passion to consume ($f = 1.365$, $df=4$, $p=.245>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2 shows that 53.9 percent of respondents were stated that they were agreed about the use of green products because these products have eco-level and 24.6 percent of respondents were stated that they were strongly agreed about the above statement. Yet, 21.4 percent of respondents were not agreed about the above statement. Thus, in total 78.6 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents regarding the satisfaction level of eco-level of green products ($f=.797$, $df=4$, $p=.528>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2 shows that 52 percent of respondents were stated that they were agreed about the satisfaction of green products because these products are of eco-brand and 23.2 percent of respondents were stated that they were strongly agreed about the above statement. Yet, 24.9 percent of respondents were not agreed about the above statement. Thus, in total 75.1 percent of respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents regarding the eco brand of green products ($f=1.281$, $df=4$, $p=.277>.05$). Therefore the null hypothesis (H01) is accepted. Additionally, Table 2 shows that 62.4 percent of respondents were stated that they were strongly agreed about the use of green products because these products are environmentally friendly and 32 percent of respondents were agreed about the above statement. Yet, 5.6 percent of respondents were not agreed about the above statement.

Thus, in total 94.4 respondents were agreed about the above-said statement. Statistically, it is found that there is no significant dissimilarity between the respondents towards the satisfaction level of green products due to their environment-friendly nature ($f=.817$, $df=4$, $p=.515>.05$). Therefore the null hypothesis (H01) is accepted.

Additionally, Table 2 shows that alternate hypotheses (H02) are also accepted for all given factors of green products because all the given factors of green products are equally important for boosting green marketing to make a sustainable environment.

Conclusions:

To sustain the environment, the following things should be necessary to keep in mind and should be implemented strictly by every people and for Government, such as-Government should implement the subject of Green marketing in all schools, colleges and Universities, Government should be aware the farmers regarding the proper implementation and adoption of the process of organic fertilizer for their agriculture land, Government should make a proper award and punishment system for the farmers regarding the process of organic fertilizer, Government should completely ban the polythene, Schools, Colleges and Universities should be prepared organic fertilizer in their campus to give a message to the students about how to prepare organic and healthy food, like vegetables. Every individual should try to learn online transactions in their day-to-day lifestyle and should implement them properly. Those who have learned and know properly about online payments should also try to educate others also. Hence the result shows that 367 respondents were aware of green products and 43 respondents were unaware about green

products out of 410 respondents. Further table 2, shows that all the considered factors of green products were equally important and relevant for boosting green marketing to make the environment a sustainable environment and there is also no significant dissimilarity between the respondents regarding the awareness of green products.

Recommendations:

Every individual should use LED (Light Emitting Diode), do more and more tree plantation in your campus and in outside also, use solar energy, used unused visiting cards, pamphlets, envelopes, etc., for writing and last but not least, the success of smart cities concept will depend completely on the green products and marketing practices.

To build a smart city, Government must take proper initiatives to build smart infrastructure and to improve the level and quality of education along with providing smart Governance. Hence need is therefore felt for a smart city that is both sustainable, efficient and can generate social well-being and economic prosperity. Last but not least a smart city effectively delivers public services to businesses and citizens wherever they may be located for improving environmental sustainability, economic prosperity and quality of life.

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Indian Stock Market during Pandemic Times

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Abstract

The year 2020 has been an unusual year with the outbreak of the coronavirus globally. Individuals, business firms, organizations, industries, educational institutions, hospitals, investments, tourism, and hospitality had to face this crisis. The Government of India announced 60 days lockdown due to the spread of the virus globally. Globally, the outbreak of the coronavirus has resulted in very low economic activities including in India. In this context, financial markets, particularly the stock market had to undergo this crisis facing risk and uncertainty together. Even in normal circumstances, the Indian stock markets are volatile so during the pandemic with the downturn of economic activities, resulted in fluctuations as companies that were performing well suddenly closed. Since the outbreak of Covid 19, uncertainty still prevails bringing about changes in market performances, the value of market capitalization, and the companies which wanted to go for initial public offers. The paper tries to examine the fluctuations of the Indian stock markets during pandemic times.

INTRODUCTION:

The year 2020 has been very unusual due to the outbreak of the coronavirus and the epicenter being China. The outbreak of the coronavirus or covid-19 has affected the entire globe. The pandemic resulted in a loss of lives, slow economic growth, loss of jobs, and uncertainty. China, Italy, Spain, Brazil, the USA, Russia, UK were the worst affected due to the corona crisis. Initially, India was not even in the top ten list of worst-affected countries but after May 2020 the number of people affected by corona started increasing rapidly. India had to witness incidents like loss of lives, problems of migrant laborers, a downturn in the economic activities, fluctuations in the Indian stock markets, loss of

jobs, etc. India's stock market, even before pandemic times had witnessed many changes like the American recession in 2008, the Euro crisis in 2013, and now the coronavirus.

There were huge volatilities in the stock market owing to the low performance of the companies listed, lockdown, restrictions on commercial activities by the Government, fall in production, etc. India's economy was in the recession phase. The present study is undertaken to analyze the trends of India's stock markets in pre-covid and post covid pandemic times.

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The impact of the outbreak of the coronavirus on the Indian economy

In the global environment, the objective of every country is to accelerate the growth of trade and economic development. In the global economy where the countries are economically interdependent, it is bound to be impacted by the global changes. The global changes are related to technological change, demographical change, changes in international policies, socio-political changes, and environmental changes. The current global crisis is due to the environmental change caused by the outbreak of the coronavirus in China where millions of people across the globe have lost lives, jobs, etc. This pandemic crisis has adversely affected the Indian economy. The economy was under recession, fall in the growth rate of all economic sectors. According to Unemployment Crisis, an article published in India Today Business News (2020), mentions that there has been a loss of sixty lakhs of jobs. When the lockdown was announced across the country, thousands of migrant workers lost their jobs, there was no proper shelter, found it difficult to reach their hometowns as there was no transport arrangement of any kind. According to the Centre for Monitoring India's economy (CMIE) reported that the unemployment rate was 6.51% in November 2020. The Government restricted all kinds of mobilization. The labor sector under the MGNREGA, 2005 are worst impacted as they are not provided jobs due to lockdown, most of the labor sectors are associated with the construction companies and daily wage earners. Travel restrictions and quarantines affected hundreds of millions of people. The food and agriculture sector contribute the highest in GDP i.e. 16.5% and 43% to the employment sector. The major portion of the food processing sector deals with dairy (29%), edible oil (32%), and cereals (10%). India also stands number one in

dairy and spices products in a global scenario (export).

Measures to revive the economy

The finance minister to revive the economy announced stimulus packages to the economic sectors which are listed below

- To create jobs and specialize in the production of network products
- To integrate 'Assemble in India for the world' into Make in India whereby India can increase its export share to 6% in 2030.
- To increase the exports
- To encourage the MSME sector and setting up of start-ups.

Fluctuations in Indian stock markets in pandemic times.

The financial markets consist of capital and money markets. The central bank is the leader of the money markets whereas the capital market is divided into primary and secondary financial markets, a place where stocks and shares of different companies listed on the stock exchange are bought and sold. In today's stock markets there are plenty of investment options like stocks, shares, mutual funds, and currency trade. The stock exchange markets are determined, rather influenced by global changes which may be due to political, environmental, technological, economical changes, etc. The Indian stock market always faces fluctuations due to the mentioned changes. India's stock market has two stock exchanges namely the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The two prominent Indian market indices are Sensex and Nifty. Sensex is the oldest market index for equities; it includes shares of 30 firms listed on

the BSE, which represent about 47% of the index's free-float market capitalization. Another index is the Standard and Poor's CNX Nifty; it includes 50 shares listed on the NSE, which represent about 46.9% of its free-float market capitalization. The present study is to analyze the fluctuations during pre-covid and post-covid times.

REVIEW OF LITERATURE

- Scott R. Baker, Nicholas Bloom, Steven J. Davis, Kyle Kost, Marco Sammon, and Tasaneeya Viratyosin (2020), analyze the fluctuations in the stock markets due to the outbreak of epidemic disease. Their study is based on the US stock markets and explained the stock market reaction to the Covid-19, the volatilities were due to the restrictions imposed by the Government on commercial activities, lockdown. In their study, they made a comparative analysis considering the outbreak of Spanish flu in the nineties and the coronavirus in 2020.
- Debakshi Bora (2020), examines the disruptions in the global financial markets due to the outbreak of the coronavirus which impacted the Indian stock market that resulted in huge volatilities. The author makes a comparative analysis of the Indian stock market in pre-covid and post-covid times. GARCH model is used to analyze the stock market trends.
- Zaky Machmuddah, St. Dwiarto Utomo, Entot Suhartono, Shujahat Ali, and Wajahat Ali Ghulam (2020), have analyzed the stock market trends three months before and after the outbreak of the coronavirus in 2020. A total of 2670 observations were made out of 5340 observations. The research findings indicate a significant difference between the daily closing stock

price and volume of stock trade before and after the COVID-19 pandemic.

- Naren Anne (2020), analyses the trends in the stock markets from December 2019 till March 2020. The author evaluates the performance of 500 large companies listed in the negative growth rate and E-commerce and technology companies like Amazon and Apple had to face low performance.
- M. Praveen Kumar and N.V. Manoj Kumara (2020), their study focuses on the impact of Covid-19 on the performance of the Indian stock market and shares. They tried to analyze the market capitalization correlation and volatilities by comparing the data between January and June 2020. According to their study, the changes in the market performance and the value of its market capitalization showed positive results.

OBJECTIVES OF THE STUDY

- a) To understand the impact of the outbreak of the coronavirus on the Indian economy
- b) To analyze the fluctuations in Indian stock markets in pandemic times.

RESEARCH METHODOLOGY

The study is based on secondary data. The data has been used from 5th March 2019 to 30th January 2020 as before the pandemic period and from 31st January 2020 to 31st December 2020 as post-pandemic period. The study is carried out using the constituents of SENSEX and SENSEX.

The study is carried using Paired T-test.

HYPOTHESIS OF THE STUDY

HO: There is no significant relationship between pre-covid and post –covid movements in the Indian stock market.

TESTING THE HYPOTHESIS

Ho : There is no significant relationship between pre-Covid and post –Covid movements in the Indian stock market.

Table No. 1: Pre Pandemic and Post Pandemic Correlation

Name of the company	Correlation	p Value
Asian Paints	0	0.835
Axis Bank	-0.099	0.709
Bajaj Auto	-0.023	0.877
Bajaj Finance	-0.019	0.621
Bajaj Finserv	-0.042	0.449
Bharti Airtel	0.148	0.362
Dr Reddy's	-0.039	0.464
HCL Technologies	0.027	0.267
HDFC Bank	-0.003	0.909
Hindustan Unilever	-0.011	0.880
HDFC	0.045	0.618
ICICI Bank	-0.072	0.434
IndusInd Bank	-0.001	0.856
Infosys	0.06	0.438
ITC	0.033	0.943
Kotak Mahindra Bank	-0.042	0.817
L&T	-0.013	0.753
M&M	0.037	0.554
Maruti	-0.051	0.950
Nestle	-0.068	0.549
NTPC	-0.026	0.870
ONGC	0.009	0.996
Power Grid	-0.025	0.793
Reliance	-0.02	0.801
SBI	-0.08	0.586
Sun Pharma	-0.134	0.637
TCS	-0.048	0.622
Tech M	-0.001	0.687
Titan	-0.043	0.877
Ultratech	0.021	0.944
Sensex	-0.058	0.960

According to the paired t-test results, as shown in Table No. 1 the p-value of all the companies is >0.05, this shows that all the companies are statistically significant and leads to not rejecting

H0 and conclude that there is no significant relationship between pre-pandemic and post-pandemic stock movements.

Table No. 2: Pre Pandemic and Post Pandemic Standard Deviation

Company	Pre Pandemic SD	Post-Pandemic SD	Status
Asian Paints	1.42	2.33	Increased
Axis Bank	1.66	4.25	Increased
Bajaj Auto	1.36	2.49	Increased
Bajaj Finance	2.04	4.18	Increased
Bajaj Finserv	1.85	3.74	Increased
Bharti Airtel	2.36	2.82	Increased
Dr. Reddy's	1.35	2.26	Increased
HCL Technologies	4.85	2.60	Decreased
HDFC Bank	1.28	2.71	Increased
Hindustan Unilever	1.15	2.22	Increased
HDFC	1.51	3.19	Increased
ICICI Bank	1.77	3.56	Increased
IndusInd Bank	2.66	5.68	Increased
Infosys	1.85	2.60	Increased
ITC	1.29	2.56	Increased
Kotak Mahindra Bank	1.40	3.02	Increased
L&T	1.62	2.71	Increased
M&M	1.85	3.23	Increased
Maruti	1.92	3.10	Increased
Nestle	1.36	2.16	Increased
NTPC	1.89	2.48	Increased
ONGC	1.85	3.57	Increased
Power Grid	1.38	2.25	Increased
Reliance	1.68	3.05	Increased
SBI	2.23	3.15	Increased
Sun Pharma	1.88	2.52	Increased
TCS	1.40	2.31	Increased
Tech M	1.32	2.77	Increased
Titan	1.89	2.70	Increased
Ultratech	1.76	2.56	Increased
Sensex	0.89	2.12	Increased

Table No. 2 shows the comparison of pre-pandemic and post-pandemic volatility of SENSEX Constituents and SENSEX, the volatility is tested using Standard Deviation. Out of 30 companies, 29 companies and

SENSEX volatility is increased post-pandemic when it is compared to pre-pandemic. Only HCL Technologies volatility has come down during post-pandemic when it compared to pre-pandemic.

LIMITATIONS OF THE STUDY

The study does not consider the impact of covid on the trade sector and the changes announced by the Government in the foreign direct investment (FDI) policy as changes in the FDI affect the Indian stock markets.

SCOPE FOR FURTHER RESEARCH

As the pandemic is still not over & now that the second wave of the deadly corona virus is affecting not only the people but also paralyzing the economy, therefore the scope for further research can be made on the measures by the Government to sustain the economy & how these measures impact the Indian stock markets.

FINDINGS OF THE STUDY

According to a report by the Indian Brand Equity Foundation (2021), India being a major market for E-commerce / online businesses has resulted in a market share of 950 billion US dollars which is 10% of India's GDP (Gross Domestic Product). The GDP growth is currently 4.8%. To revive the economy the Government is encouraging the setting up of start-ups and reforms have been introduced to boost investment and exports. Due to the outbreak of a pandemic, the Indian economic growth has declined but the Indian stock markets have not resulted in a slowdown, this is also proved in our hypothesis that there is no significant relationship between pre-pandemic and post-pandemic stock movements. Through the above analysis, it is observed that out of 30 companies, SENSEX volatility was high in post-pandemic than before pandemic. Through the study, it was also found that 30 companies were expected to file their Initial Public Offer (IPOs) in the beginning of 2020 towards market capitalization.

CONCLUSIONS OF THE STUDY

No doubt, the Indian stocks markets are always subject to fluctuations for various causes. The market analysts predict that with the finding of vaccines to combat the corona virus, the shares of pharmaceutical companies are expected to increase. The desire to improve the economic conditions, stock markets will also depend on the perceptions of people to invest not just in stocks but also in mutual funds. The pandemic effect has made investors rethink stocks keeping in mind the time horizon as stock markets are subject to volatility.

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Factors Affecting Investment Decisions - A Study Based on Salaried Employees

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Abstract

Purpose: This research has been conducted to identify and understand the investment choices and patterns among individuals, who may be broadly classified as the 'salaried class', i.e. earning individuals who receive remuneration for their work from their employer. Methodology: To conduct the study, a questionnaire containing questions relating to demographics and investment was circulated among a small sample of 160 individuals, and their responses were used as the data for calculating the various factors, such as the relationship between their age or educational qualification and their investment behavior and their primary choice of investment, etc. Frequency distributions for responses were also calculated. All calculations were performed using the SPSS software developed by IBM. Findings: Analysis revealed that there were significant relations between demographics and certain investment behavior and also that people belonging to the said category preferred to pick low-risk investments over high-risk ones. The most preferred investment avenue was also identified through analysis. The paper also provides suggestions regarding the formulation of investment policies to attract salaried individuals. Practical Implications: This research is conducted with the view of providing more suitable investment avenues for individuals with limited resources.

INTRODUCTION:

In ancient times, people usually invested in gold and land because there was no other option available for investment, as the financial system was not developed at that time. But gradually with the passage of time and need, a financial system was developed. Now, there are multiple options available for investment. Investment is very important for every person in today's scenario to live better lives in the future. Every person wants to invest with the hope of good returns and if savers do not invest their money, they will not only lose possible returns but will

also lose the value of their money due to inflation. A different variety of investment avenues are available such as shares, banks, companies, gold and silver, real estate, life insurance, postal savings. All the investors who wish to invest, invest their surplus money in the above-mentioned avenues that are available based on their risk-taking attitude and capacity bearing. This study is conducted to identify and determine the driving factors that prompt an individual to pick one avenue of investment over the other. Investment is a tendency that persists in most individuals who do not belong

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to the salaried class. However, Salaried employees have limited earning capacity, and hence their investment pattern is different from that of business owners and self-employed individuals. The variables involved are different. This study aims to identify and differentiate these variables.

Background of the study

There are different investment avenues available like shares, bonds, debentures, mutual funds, real estate, Fixed Deposits, Gold and bank deposits, etc. In India, people usually have a habit to save money, but they are not able to make appropriate decisions regarding investment. Many people are not aware of the various alternative investment options as they only make investments in bank deposits or gold. Those who are aware of the various investment options do not want to invest in the stock market, equities, and mutual funds as they are subject to market risks. Investment can be done in more than one product at the same time and this kind of investment is called Portfolio Investment. This kind of investment is done to minimize the risk as loss of one product will offset with the profit of another.

Several factors affect the investment decisions of an individual like; age, gender, income, occupation, etc. Risk tolerance is one of the most important ones because investment avenues carry risks. Some carry high risks, some carry moderate risks and some carry low risks. That is why risk-bearing capacity is a crucial factor that influences decisions. The objective of every individual who invests is to get good returns, but it is observed that there is a gap between individuals' perceived return and actual return".The mistake is done by people in making decisions regarding investment which is influenced by the risk-bearing capacity of an

individual. Research indicates that sometimes people overestimate their risk tolerance level for a desire for high return and a potential show-off factor in society. The statement "High risk, high return and low-risk Low return" are very true in the case of finance and therefore proper awareness and analysis is required regarding risk and returns before making investments in any product.

Literature review

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10. Zankhana Atodaria a, Ronikadevi Sharma b (2019) "Investment pattern of a salaried class of Somnath (Daman) – A Study of various investment options available" the research aims to analyze awareness, perception, and behavior regarding different investment avenues available for salaried people and pattern of investment.

Objectives of the Study

1. To identify the factors considered by an individual for a suitable investment
2. To find a relation between demographics and investment factors
3. To identify the most preferred avenue of investment

Research methodology

For the intended empirical study, a questionnaire is prepared with questions that are aimed at answering the research objectives.

Data Collection:

The questionnaire is prepared on the online platform, Google Forms.

The links for the same were sent through social media, particularly through the Instant messaging app (WhatsApp).

Sample:

The questionnaire was distributed to 160 salaried individuals out of which 149 responses were received and were selected for the study.

Source of Data:

The data to be processed is primary data.

Analysis:

The data collected is then accumulated in the SPSS software and is used in various methods to produce the output.

- The data is represented in graphical form through -Frequency Distribution Tables
- The analysis is done using -Chi-Square Tests.
- To perform the test, additional procedures are followed.

Data Requirements for Chi-Square Test:

1. Two categorical variables.
2. Two or more categories (groups) for each variable.
3. Independence of observations.
 - I. There is no relationship between the subjects in each group.
 - II. The categorical variables are not "paired" in any way (e.g. pre-test/post-test observations).
4. Relatively large sample size.
 - I. The expected frequencies for each cell are at least 1.
 - II. Expected frequencies should be at

least 5 for the majority (80%) of the cell

It is ensured that the data collected fulfill the above-mentioned criteria.

Hypotheses for Chi-Square Tests:

The null hypothesis (H0) and alternative hypothesis (H1) of the Chi-Square Test of Independence are expressed in the following way:

H0: "[Variable 1] has no significant relation with [Variable 2]"

H1: "[Variable 1] has a significant relation with [Variable 2]"

Data and Analysis

Frequency Distribution table:

Frequency distribution table showing the frequencies of the individual variables including both demographics and investment-related questions have been presented in the annexure. Here we see the findings from the table:-

Gender:

As displayed in Table 1, the number of male participants to female participants, is 76 to 73 respectively, that is 51% of the participants is male and 49% is female.

Age Group:

From Table 2, the number of participants who belong to the age group of 18 years-25 years is 47 (31.5% of the total number of participants). 26 years-35 years is 45 (30.2% of the total number of participants). 36 years-45 years is 16 (10.7% of the total number of participants). 46 years-55 years is 33 (22.1% of the total number of participants). 56 years and above is 8 (5.4% of the total number of participants).

Marital Status:

In Table 3, the number of participants who are unmarried to married stands at 76 (51% of the total number of participants) to 73 (49% of the total number of participants).

Educational Qualification:

From Table 4, the number of participants who have completed only Higher Secondary Education is 2 (1.3% of the total number of participants). Those who have completed their Bachelor's Degree stand at 65 (43.6% of the total number of participants). Those that have attained their Master's Degree number at 61 (40.9% of the total number of participants). Those that have completed a Professional Course number at 19 (12.8% of the total number of participants). Those that have acquired a Diploma number at 2 (1.3% of the total number of participants).

Nature of Employment:

In Table 5, the number of participants who are employed in the Private Sector is 130 (87.2% of the total number of participants). Those who are employed in Public Sector are 8 (5.4 % of the total number of participants). Those who are employed in the Government Sector is 11. (7.4% of the total number of participants).

Income Group:

In Table 6, the number of participants who are earning below 20000, is 22 (14.8% of the total number of participants). Those who are earning between 20001-40000 is 28 (18.8% of the total number of participants). Those who are earning between 40001-60000 are 28 (18.8% of the total number of participants). Those who are earning between 60001-80000 is 16 (10.7% of the total number of participants). Those who are earning between 80001-100000 is 20 (13.4% of the total number of participants). Those who are earning Above 100000 is 35 (23.5% of the total number of participants).

Most preferred duration of Investments

In Table 7, the number of participants who prefer to invest for Less than 1 Year is 3 (2.0% of the total number of participants). Those who prefer to invest for 1-3 years, is 54 (36.2% of the total number of participants). Those who prefer to invest for 3-5 years, is 35 (23.5% of the total number of participants). Those who prefer to invest for 5-10 years, is 24 (16.1% of the total number of participants). Those who prefer to invest for More than 10 years are 10 (6.7% of the total number of participants). 23 participants (15.4% of the total number of participants) opted for no preference.

The objective of Investment preferred:

From Table 8, we gather that the primary objective of investment appears to be 'Wealth Creation', selected by 43 participants (28.9% of the total number of participants); closely followed by 'Backup for Retirement', opted by 36 participants (24.2% of the total number of participants). 'Regular Income' was selected by 26 participants (17.4% of the total number of participants). 'Tax benefits' amounted to 16 participants (10.7% of the total number of participants). 'Familial reasons was selected by 13 participants (8.7% of the total number of participants). 'Children's Education' amounted to 7 participants (4.7% of the total number of participants). 'Meeting Contingencies' was chosen by 6 participants (4% of the total number of participants). 'Meeting Medical Expenses' was selected by 2 participants (1.3% of the total number of participants).

Sources of Information on Investment Options:

In Table 9, we see that majority of the participants, standing at 57 (38.3% of the total number of participants) are self-aware. 45 participants (30.2% of the total number of participants) consider family and friends as the

primary source of information. 27 participants (18.1% of the total number of participants) seek advice from a financial advisor. 18 participants (12.1% of the total number of participants) find the necessary information from the internet. Only 2 participants (1.3% of the total number of participants) gain their information from media.

Percentage of Income Invested:

In Table 10, we see that number of participants who invest 0-15 percent of their income is 77 (51.7% of the total number of participants). Those who invest 16-30 percent of their income stands at 52 (34.9% of the total number of participants). Those that invest 31-50 percent of their income are 18 (12.1% of the total number of participants). Those who invest above 50% of their income are 2 (1.3% of the total number of participants).

Maintenance of formal budget for family expenditure:

From Table 11, we see that 82 participants (55% of the total number of participants) admitted to the maintenance of a formal budget for family expenditure, whereas 67 participants (44 % of the total number of participants) denied the same.

Primary Criteria for Choosing an Investment Option:

In Table 12, it can be seen that 44 participants (29.5% of the total number of participants) selected 'Past Performance' as the primary criteria. 'Service' was selected by 17 participants (11.4% of the total number of participants). 'Investors Background' was chosen by 13 participants (8.7% of the total number of participants) as the primary criteria. 'Market sentiments' accounted for 20 participants (13.4% of the total number of participants). 'Products offering fixed returns' was selected by 33 participants (22.1% of the total number of

participants) as the primary criteria. 'Suggestions from Friends/Relatives/Advisors' amounted to 22 participants (14.8% of the total number of participants).

Mode of operating Investment Portfolio over next 5 years:

In Table 13, it can be seen that 'Regular Money Withdrawal' was chosen by 18 participants (12.1% of the total number of participants). 15 participants (10.1% of the total number of participants) intended to make 'Intermittent Withdrawals'. 94 participants (63.1% of the total number of participants) intended to make 'Regular Deposits'. 21 participants (14.1% of the total number of participants) intended to make 'Intermittent Deposits'. 1 participant (0.7% of the total number of participants) decided to remain inactive.

Willingness to risk Short-Term fall in investment value for the opportunity of better return over the Long-Term:

From Table 14, it was observed that 32 participants (21.5% of the total number of participants) were not willing to risk at all. 54 participants (36.2% of the total number of participants) were willing to take the risk but only if the drops were small. 34 participants (22.8% of the total number of participants) were compliant and understood the risks of investment). 29 participants (19.5% of the total number of participants) were willing to take the risk as they were only interested in the long-term returns.

Preferred Sector of Investment:

In Table 15, we can see that 54 participants (36.2% of the total number of participants) preferred to invest in the 'Private Sector. 20 participants (13.4% of the total number of participants) preferred to invest in the 'Public Sector. 48 participants (32.2% of the total

number of participants) preferred to invest in the Government Sector. 23 participants (15.4% of the total number of participants) preferred to invest in the 'Insurance Sector'. 3 participants (2.0% of the total number of participants) were willing to invest in the 'Foreign Sector'. 1 participant (0.7% of the total number of participants) was willing to invest in the 'Defence Sector'

Test Parameter for Chi-Square Tests:

All the Chi-Square Tests here are conducted at a 5% level of significance. If the level of significance is more than 5%, we accept the null hypothesis (H0), and if the level of significance is less than 5%, we reject the null hypothesis and accept the alternate hypothesis (H1). For this particular study, only those chi-square tests were selected to be represented where the level of significance was less than 5%, hence, the null hypotheses were rejected and the alternative hypotheses were accepted, i.e. where the two variables had a significant relation.

Table 16, displaying results of chi-square tests, is attached in the annexure

Observations from the Chi-Square Tests

1. The majority of the female population depends on friends and family as primary sources of information on investment options, whereas, the majority of the male population is self-aware.
2. The majority of the female participants, considered past performance, products offering fixed returns, and suggestions from friends/relatives/family almost at par with each other (past performance being the highest), as primary criteria for choosing an investment option whereas the male population is highly dependent on the analysis of past performance, for

the same.

3. A significantly high number of the female population is willing to accept temporary short-term fall risks in the expectation of better returns over time, but only if the drops are small. Whereas, most of the male population are willing to take the same risk, without considering the value of the drop.
4. A significant majority of the participants belonging to the age group of '18-25' focus their investments nearly equally on wealth creation and as a source of regular income.

An overwhelming majority of the participants belonging to the age group of '26-35' invested in wealth creation.

On the other hand, most of the participants belonging to multiple age groups of '36-45'; '46-55' and '56 and above', selected investment options based on their need to save as a backup for retirement.

5. Participants from the age group of '18-25' were willing to invest (0-15%) of their income. The participants from the second age group of '26-35' and the fourth age group '46-55' displayed similar investment behavior regarding the percentage of income invested, i.e. (0-15)%.

However, participants in the age group of 36-45 were more likely to invest a larger sum, i.e. (16-30)% of their income.

And the participants from the age group of '56 and above' were willing to invest, either (16-30)% or (31-50)% of their income, both garnering equal responses.

6. A significant majority belonging to the age groups of '18-25' and '26-35', do not

maintain a formal budget for family expenditure, whereas most of the participants, belonging to the age groups of '36-45', '46-55' and '56 and above' maintain a formal budget for family expenditure.

7. An overwhelming majority of the participants belonging to the age group of '18-25' are only willing to take the risk of the short-term falls for longer investments if the drops are small, indicating the unwillingness to take large risks. This is similar to the responses received from the participants, belonging to the '36-45' group, although a significant number of responses displayed the willingness to invest, even if the drops are not small.

Most of the participants belonging to the '26-35' and the '56 and above' group understand that temporary drops are a risk, and are willing to invest, despite that.

It is also observed that the participant investors, belonging to the age group of '46-55' display extreme behavior. While a significant number of participants are unwilling to invest if there is even a risk of a small drop involved, an equal number of respondents, display a willingness to invest, irrespective of any falls, as they are interested in long-term returns only.

8. A large majority of the participants who are married prefer to choose investment options, providing returns, as a backup for retirement. Whereas, the bulk of the unmarried participants, are more inclined towards investments for wealth creation.
9. An overwhelming majority of unmarried participants tend to assign around 0-15% of their income for investments. Whereas, a significant number of married participants, tend to invest 16-30% of

their income, closely followed by a small majority of them showing tendencies to invest 0-15% of their income.

10. All participants, whose educational qualification extends to Higher Secondary, prioritize investment with the objective of backup for retirement.

A large majority of the participants, who have acquired their Bachelor's degree, prioritize investment as a backup for retirement, closely followed by a smaller majority who prioritize investment as a means for regular income.

An overwhelming number of participants who have acquired their Master's degree prioritize wealth creation as an investment objective.

A large majority of participants who have undertaken professional course degrees, tend to invest for wealth creation whereas, a slightly smaller majority tend to make investments as a backup for retirement.

The entirety of the participants who have completed a diploma course, prioritize familial reasons as an objective for investment.

11. An overwhelming majority of the participants belonging to the income groups following income group:- 'Below 20000'. '20001-40000' and '40001-60000' all show similar tendencies of investing approximately, 0-15% of their income.

A large majority of participants earning between '60001-80000' typically invest 0-15% of their income whereas a smaller majority, set aside 16-30% of their income for investment.

In the case of the next income group, '80001-100000' a large majority of participants tend to invest 16-30% of their

income. On the other hand, a smaller majority invest 15-30% of their income.

Most of the participants earning 'Above 100000', invest 16-30% of their income.

12. The participants, who have achieved only a higher secondary degree, have given equal preference to investing in the government sector as well as the Defence sector.

A significant majority of participants having Bachelor's degrees prefer to invest in the government sector, whereas most of the remaining prefer the private sector.

In the case of participants holding a Master's degree, an overwhelming majority prefer to invest in the private sector.

Most of the participants who have completed a professional course, also tend to invest in the private sector, whereas, the participants having a diploma, give equal preference, to invest in the government sector and private sector.

Preference of investment avenues, as selected by the respondents:

The 'Frequency of preference given in Table 17 (in annexure) denotes the number of participants who opt to invest in the avenue. The 'percentage of preference' denotes the total percentage of people who prefer to invest in the option. The highest preference is given to Savings Accounts followed by Public Provident Fund.

Conclusion

This report is a reflection of the awareness and factors considering, risk-taking ability of the various categories of salaried individuals.

Selection of the perfect investment avenue is a difficult task for an individual. The paper concentrated on identifying the factors considered by the individuals before investment, the awareness level of salaried individuals towards various investment avenues, identifying investment behavior based on their demographics (including occupation and income group), and the level of risk investors are willing to take. The present study has important implications for investment managers as it has presented certain interesting facets of a salaried individual. The salaried investor (from among the participants) still prefers to invest in financial products, which give risk-free/low-risk returns. This confirms that individuals, regardless of their income, educational qualification, and independence are conservative regarding investments and prefer to play it safe. The only factor that perhaps does affect the risk tolerance is the age of the individual perhaps suggesting that with the stability of income and savings, people are more willing to take risks. The investments product designer can design products that can cater to the individuals, who are low risk-tolerant, tax saving, and use social media as a marketing platform as although everybody uses social media, very few individuals gain investment information from them.

Recommendations for Future Research

This research could have been made more intricate and detailed and could provide better insights into the topic if some things were done differently.

- Some more common investment options should be included, for example, Fixed Deposits.
- The research is carried out mostly locally. Future researches should broaden the

geographical area for better uniformity of results.

- This research mostly deals with the urban population. In the future, investment options for rural residents should also be considered.

Preferred Investment Avenues Among Salaried People Concerning Pune, India"
URL:<https://www.ijser.org/researchpaper/a-research-paper-on-investment-awareness-among-indian.pdf>

Limitations of the Research

Although the research was performed with the best of efforts, due to technical difficulties, certain limitations arose and could not be assuaged. They are listed below:-

- A sample size of 149 participants was taken. The sample size needs to be larger to apply this study on a universal scale.
- The research sample only includes Salaried Individuals and hence cannot be applied to people belonging to other sects of employment and thus the problem of generalization arises.
- For ease of study, the independent variables had to be grouped into clusters, hence providing a broad overview instead of a more specific one.

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ANNEXURE

Table 1: Gender of participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	76	51.0	51.0	51.0
	Male	73	49.0	49.0	100.0
	Total	149	100.0	100.0	

Table 2: Age group of participants.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	47	31.5	31.5	31.5
	26-35	45	30.2	30.2	61.7
	36-45	16	10.7	10.7	72.5
	46-55	33	22.1	22.1	94.6
	56 and above	8	5.4	5.4	100.0
	Total	149	100.0	100.0	

Table 3: Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unmarried	76	51.0	51.0	51.0
	Married	73	49.0	49.0	100.0
	Total	149	100.0	100.0	

Table 4: Educational qualifications

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Higher Secondary	2	1.3	1.3	1.3
	Bachelor's Degree	65	43.6	43.6	45.0
	Master's Degree	61	40.9	40.9	85.9
	Professional Course	19	12.8	12.8	98.7
	Diploma	2	1.3	1.3	100.0
	Total	149	100.0	100.0	

Table 5: Nature of employment of participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private Sector	130	87.2	87.2	87.2
	Public Sector	8	5.4	5.4	92.6
	Government Sector	11	7.4	7.4	100.0
	Total	149	100.0	100.0	

Table 6: Income (Per month)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20000	22	14.8	14.8	14.8
	20001 - 40000	28	18.8	18.8	33.6
	40001 - 60000	28	18.8	18.8	52.3
	60001 - 80000	16	10.7	10.7	63.1
	80001 - 100000	20	13.4	13.4	76.5
	Above 100000	35	23.5	23.5	100.0
Total		149	100.0	100.0	

Table 7: Most preferred duration of investment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	3	2.0	2.0	2.0
	1-3 years	54	36.2	36.2	38.3
	3-5 years	35	23.5	23.5	61.7
	5-10 years	24	16.1	16.1	77.9
	More than 10 years	10	6.7	6.7	84.6
	No preference	23	15.4	15.4	100.0
Total		149	100.0	100.0	

Table 8: Objective of investment preferred

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular Income	26	17.4	17.4	17.4
	Backup for retirement	36	24.2	24.2	41.6
	Children's Education	7	4.7	4.7	46.3
	Family reasons	13	8.7	8.7	55.0
	Wealth Creation	43	28.9	28.9	83.9
	Meeting medical expenses	2	1.3	1.3	85.2
	Tax Benefits	16	10.7	10.7	96.0
	Meeting Contingencies	6	4.0	4.0	100.0
	Total	149	100.0	100.0	

Table 9: Sources of information on investment options

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Self-Awareness	57	38.3	38.3	38.3
	Financial Advisor	27	18.1	18.1	56.4
	Internet	18	12.1	12.1	68.5
	Family and Friends	45	30.2	30.2	98.7
	Media (Advertisements, Marketing, etc)	2	1.3	1.3	100.0
	Total	149	100.0	100.0	

Table 10: Percentage of income invested

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-15	77	51.7	51.7	51.7
	16-30	52	34.9	34.9	86.6
	31-50	18	12.1	12.1	98.7
	51 and above	2	1.3	1.3	100.0
	Total	149	100.0	100.0	

Table 11: Maintenance of formal budget for family expenditure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	82	55.0	55.0	55.0
	No	67	45.0	45.0	100.0
	Total	149	100.0	100.0	

Table 12: Primary criteria to choose an investment option

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Past performance	44	29.5	29.5	29.5
	Service	17	11.4	11.4	40.9
	Investors' background	13	8.7	8.7	49.7
	Market sentiments	20	13.4	13.4	63.1
	Product offering fixed returns	33	22.1	22.1	85.2
	Suggestions from Friends/Relatives/Adv isors	22	14.8	14.8	100.0
	Total	149	100.0	100.0	

Table 13: Operation of an investment portfolio over next 5 years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular Money Withdrawal	18	12.1	12.1	12.1
	Intermittent Withdrawal	15	10.1	10.1	22.1
	Deposit Regularly	94	63.1	63.1	85.2
	Deposit Intermittently	21	14.1	14.1	99.3
	Remain Inactive	1	.7	.7	100.0
	Total	149	100.0	100.0	

Table 14: Willingness to risk short term falls for better long term returns

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	32	21.5	21.5	21.5
	Yes, but only if the drops are small	54	36.2	36.2	57.7
	Yes, I understand this is a risk	34	22.8	22.8	80.5
	Yes, because I'm interested in the long term returns only	29	19.5	19.5	100.0
	Total	149	100.0	100.0	

Table 15: Frequency percentage table for preference of sector to invest in

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private Sector	54	36.2	36.2	36.2
	Public Sector	20	13.4	13.4	49.7
	Government Sector	48	32.2	32.2	81.9
	Foreign Sector	3	2.0	2.0	83.9
	Defense Sector	1	.7	.7	84.6
	Insurance Sector	23	15.4	15.4	100.0
	Total	149	100.0	100.0	

Table 16: Table displaying results of the chi-square tests and degree of relevancy

(The relations between the variables is considered significant when p-value < 0.05)

SL. No.	VARIABLE 1	VARIABLE 2	P-Value	Significance Range
1.	Gender	Sources of information	0.001	Highly Significant
2.	Gender	Primary criteria for choosing an investment	0.040	Mildly Significant
3.	Gender	Willingness to risk short term falls in investment value for the opportunity of better return over the long term	0.020	Moderately Significant
4.	Age Group	The objective of the investment preferred	0.000	Highly Significant
5.	Age Group	Percentage of income invested	0.007	Highly Significant
6.	Age Group	Maintenance of a formal budget for family expenditure	0.019	Moderately Significant

7.	Age Group	Willingness to risk short-term fall in investment value for the opportunity of better return over the long term	0.045	Mildly Significant
8.	Marital Status	The objective of the investment is preferred.	0.000	Highly Significant
9.	Marital Status	Percentage of income invested	0.006	Highly Significant
10.	Education Qualification	The objective of investment preferred	0.004	Highly Significant
11.	Educational Qualification	A preferred sector of investment	0.000	Highly Significant
12.	Income Group	Percentage of income invested	0.000	Highly Significant

Table 17: Preference of Investment Avenues

S. No.	Investment Avenue	Frequency of Preference	Percentage of Preference
1	Public Provident Fund	107	71.8%
2	Savings Account	119	79.9%
3	Post Office Savings	53	35.6%
4	National Savings Certificate	47	31.5%
5	Government Securities	50	33.6%
6	Debentures	18	12.1%
7	Mutual Funds	96	64.4%
8	Bonds	40	26.8%
9	Equity Share Market	62	41.8%
10	Commodity Share Market	16	10.7%
11	Forex Market	16	10.7%
12	Bullion Market	30	20.1%
13	Chit Funds	8	5.4%

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