MEASURING THE ATTITUDES AND BEHAVIOURAL DYNAMICS OF CONSUMERS TOWARDS ONLINE SHOPPING AMIDST COVID-19: INSIGHTS FROM KOLKATA

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ABSTRACT

The past few years has witnessed the phenomena of "internet shopping" grow in leaps and bounds. The term "online shopping" has become a buzzword and an ever growing trend among consumers even in a developing country like India. In fact, the market potential for e-commerce has a huge reservoir as explored through a sneak-peek into the exponential expansion of key players existing in the e-commerce industry. Moreover, online shopping has prodigiously influenced the lives of the modern day consumers, who have been observed to have a penchant towards it. The present research endeavour is aimed to probe into the perceptions of consumers towards e-shopping in the context of "Technology Acceptance Model" (TAM). For this purpose, a survey among 363 respondents in the metropolitan setting of Kolkata has been conducted and their responses were recorded. "Structural Equation Modeling" (SEM) has been used to examine and analyze the model fits and hypothesis testing. The findings reveal positive perception among the surveyed consumers towards online shopping.

Keywords: E-commerce, Online Shopping, Technology Acceptance Model, Attitudes Behaviour & Kolkata

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BACKGROUND OF THE STUDY

In the backdrop of this fast paced technologically empowered era, the modus vivendi of the consumers and their ways of consumption have spawned numerous luxuries in the budget of consumers as accentuated by a bewildering upsurge witnessed in the disposable income of such consumers. The skyrocketing rate of technological innovations and the astounding proliferation in technology has made the lives of people rather easy and convenient. The spontaneous intensification in the usage of online shopping by the Indian consumers bears a strong testimony to the fact that consumers of the modern society have a gargantuan penchant towards such luxurious ways of living. The present study is primarily based in the city of Kolkata, especially during a time of a menacing global pandemic, when people are least seen outdoors for shopping and relying more on online mode of shopping. With the head-turning growth and development in the landscape of technology, the advent of e-commerce has been seen a massive turning point paving way for facilities like online shopping via various shopping apps and websites. A major chunk of the consumers have been observed to use online method of shopping particularly for its expedient and havoc-free services. In fact, the essence of our research endeavour itself lies in this rudimentary idea.

Figure 1: Top 10 Indian e-commerce sites (Source of Image: Similar Web)
(Permission for reproduction of image not required)
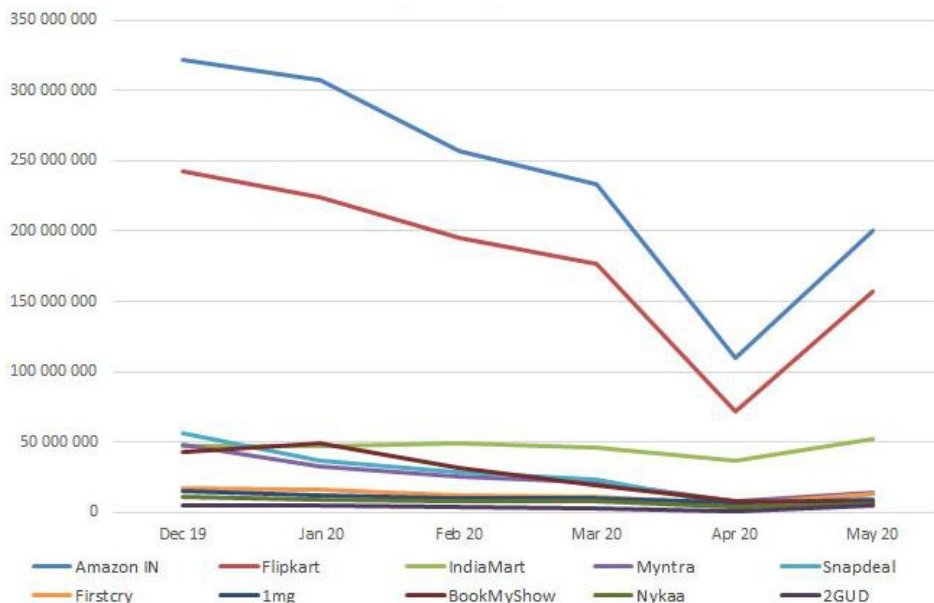
INTRODUCTION TO THE STUDY

The rapid globalization and the upsurge in technological innovations has fuelled the growth of electronic devices, especially, smartphones. The ambit of technology is witnessing mercurial changes due to a plethora of instauration boosting a spectacular proliferation in the milieu of mobile internet. This has triggered metamorphic consumption patterns among the Indian consumers. By capitalizing on the latest technological vantage points, online shopping or internet shopping enables customers to choose myriad products through the brand's own website or shopping apps. Not only this, the usage of shopping app also informs customers about the product specifications and the amount of time it shall take to be delivered at their doorstep. It also reduces unnecessary hassles like queue and occasion cavalier behaviour shown by the sellers. Thus, with such prolific amelioration in technology, customers are unshackled of the traditional stranglehold of shopping. The retail market of India has a division between the unorganized and organized sector, with the latter accounting for less than 10% share and the former making up for the predominant portion. India has an internet user base of about 696.77 million as of May' 2020. The Indian Market is further expected to grow in leaps and bounds from US$ 38.5 billion as of 2017 to US$ 200 billion by 2026. Such stunning amelioration in the e-commerce market of India has been evidenced by the latest upsurge in the internet connections of India to 776.45 million as of September'2020, while online retail sales in India would grow 31% to touch as per the data provided by IBEF. During the festive season of Durga Puja and Diwali in India in October'2020, e-commerce companies reported sales of US$4.1 billion across platforms, a manifestation of the increasing demand and usage of online shopping among consumers in India. Amazon – the e-commerce behemoth, announced that "the customers are relying on them like never before in their social distancing and self-quarantine efforts." This escalation in the usage of online shopping that of late has been largely because of the Covid-19 pandemic and norms of social distancing, quarantines and convenience in e-shopping procedures (Halan, 2020).

Figure 2: Expected online shopping in India in 2020 by categories (Image Source: Statista)
(Permission for reproduction of image not required)
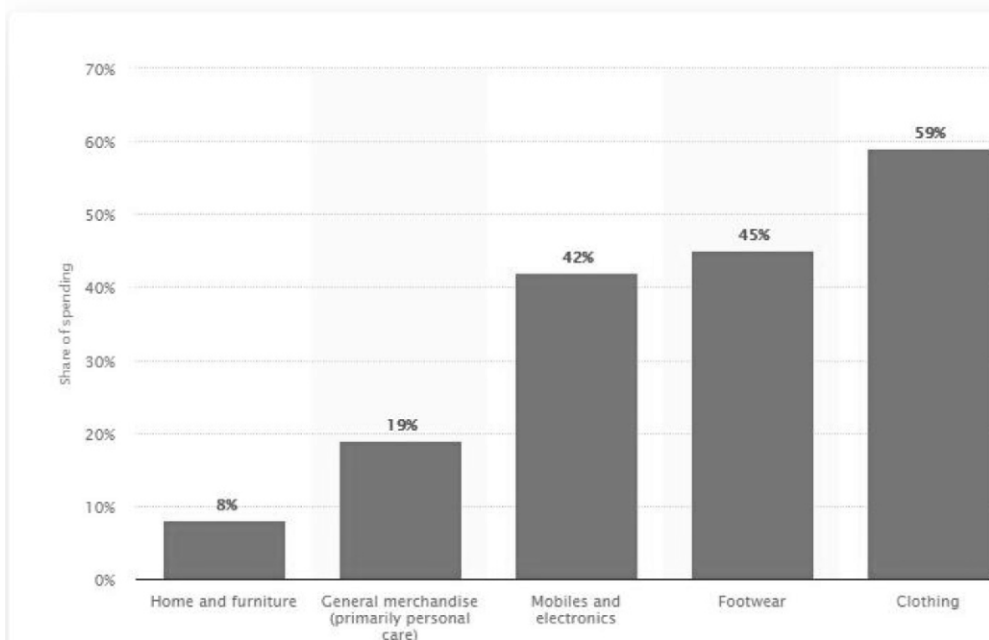
One of the arduous task for any academic researcher exists in augmenting the current cognizant level of multiple factors which influences the adoption and usage of online shopping or shopping apps, in light of "Technology Acceptance Model" (TAM), where the crux objective is to probe into the motivations, preferences, attitudes and behavioural intentions of consumers towards such technology or technological apps. In the current research study, the TAM has been modified to rejig the domains of "Subjective Norm" and "Covid-19 Exigency." Albeit, few researches which have shown the blending of key components like 'Attitude-Intention-Behaviour', here in the present research study, the emphasis should be on conventional TAM with minor modifications.

OBJECTIVES OF THE STUDY

1. To develop an integrated framework of user acceptance and intention towards online shopping pillared on traditional TAM constructs and contemporaneous components.

2. To examine and analyze the attitudes and behaviour of consumers towards online shopping amidst Covid-19 pandemic.

REVIEW OF LITERATURE

Research related to online shopping and consumer behaviour is not a novel endeavour, but mapping consumer perceptions towards e-shopping in the current era of 'new normal' is a novel attempt towards research. Also, whilst probing into the perceptions of consumers especially in the ambit of a technological use, it is almost imperative to discuss about TAM and apply it. Technology Acceptance Model (TAM) as we all know is nothing but an amelioration of the Theory of Reasoned Action (TRA), which was propounded by Ajzen & Fishbein (1975).

Davis (1989), was the first person to coin the term "Perceived Usefulness" which is actually an individual belief about enhancing his/her job performance which is triggered by using a particular system. Davis, again in the same year also defined "Perceived Ease of Use" as the degree to which a person believes that using the system will be effortless. Davis (1993), made an assertion about a concept called "Behavioural Intention" which he defined a combination of "perceived usefulness" and "attitude towards usage". Attitude towards Usage (ATU) is a very relevant dimension of TAM and Ajzen & Fishbein (2000), defines ATU as an evaluative impact of emotions, both negative as well as positive in people towards using a system.

With the passage of time, the concept of TAM began bolstering from the archetypal dynamics of retrospective information technology to integrate novel concepts like e-commerce and m-commerce. TAM is still being expanded. The conventional TAM model is quite flexible to include several independent dimensions. Also the existence of empirical evidences in studies that integrate keywords of Perceived Usefulness, Perceived Ease of Use, Attitude towards Usage and Behavioral Intention, Youssef et al. (2020) holds that this cannot be deemed sufficient due to a need for considering certain external variables which might have a profound influence on the perception of users towards the use of "internet-based services". In this aspect, "Subjective Norm", was first inducted by Taylor & Todd (1995). They defined it as the influence stemming from the society on whether or not to use a system. TAM 2. Ajzen (1991), has defined

subjective norm as a social pressure being perceived to decide whether to perform the behaviour or not. One of the recent researches on the influence of subjective norm over consumer attitude and behaviour was done by Cordente-Rodriguez et al. (2020).

It is quite obvious that any unforeseen emergencies would trigger abnormal behaviour among the individuals. The attitudinal response and behavioural dynamics of consumers during the current ongoing pandemic of COVID-19 has also changed. In this light it has been witnessed that consumers have become more cost conscious and alert towards health and safety. The outdoor activities of consumers have been cut off to a gargantuan extent and consumers are also trying to stay indoors, thus, adhering to the COVID-19 norms. This has triggered the need for the consumers to resort to online mode of shopping and hence consumers are seen adopting and using online shopping apps and visiting online shopping sites more than ever before to meet their requirements. This phenomenon is also having a prodigious impact on the attitudes and behaviour of the consumers.

Albeit, past researches that have been conducted taking into consideration the concept of Subjective Norm in the context of TAM, is very rare. In addition to this, we find it extremely arduous to come across the domain of Covid-19 Exigency used as a construct in TAM, by further introspection of existent literature. This in fact is the essence of our present research study.

THEORETICAL FRAMEWORK

The existent literature in the domain of consumer behaviour and TAM is vast. But a major innovation in contributing to the existing associated literature would be to blend the keywords of "Subjective Norm" and "Exigency (Covid-19)". The present research study is a novel effort, where the gruelling task involved has been blending such key constructs to unfurl the underlying motivations, attitudes, behavioural intentions and perception of consumers, which is the very essence of our purported endeavour.

The current research study is an endeavour attempted in developing a conceptual framework of the user adoption and usage of e-shopping, pillared on marginally modified Technology Acceptance Model (TAM). The below model is a re-modified

TAM. The constructs namely 'Subjective Norm' and 'Exigencies (Covid-19)' has been incorporated to cater to the influence of peer groups and urgent unforeseen needs respectively. Therefore, our research model comprises of 6 constructs, which has been developed and presented below. For this purpose, the following hypotheses have been developed and substantiated through the above research model represented above.

Figure 3: Research Model (Author's own conceptualization)
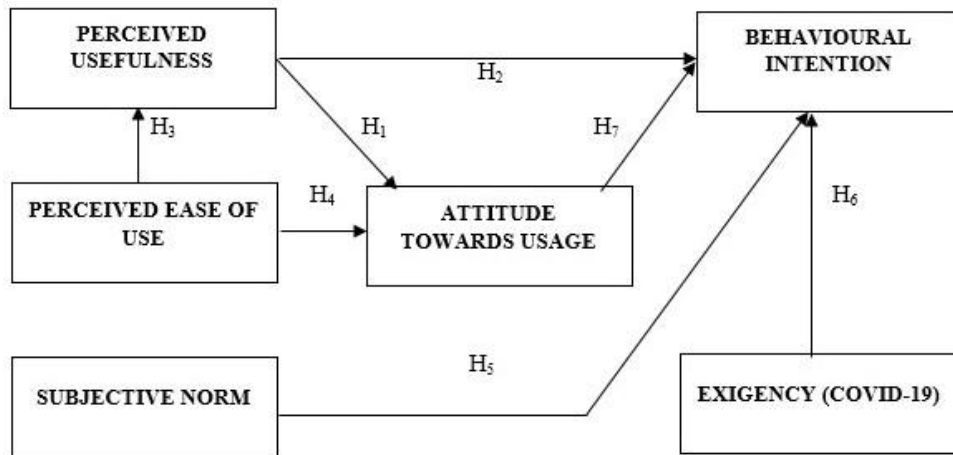
Perceived Usefulness which is actually an individual belief about enhancing his/her job performance which is triggered by using a particular system. Perceived Usefulness affect attitudes toward use that itself is said to shape up behavioural intention (Renny & Guritno, 2013).

H₁: "Perceived Usefulness is significantly associated with Attitude towards Usage"

Perceived Usefulness is also said to have an impact on behavioural intention via direct influence (Renny & Guritno, 2013).

H₂: "Perceived Usefulness is significantly associated with Behavioural Intention"

Perceived Ease of Use is defined as the degree to which a person believes that using the system will be effortless. Raza et al. (2021), explored positive relationship between perceived ease of use and perceived usefulness.

H₃: "Perceived Ease of Use is significantly associated with Perceived Usefulness"

A similar study by Mitra et al. (2021), asserts that perceived ease of use has a positive association with perceived usefulness, wherein, mobile wallets were taken into consideration in the region of West Bengal.

H₄: "Perceived Ease of Use is significantly associated with Attitude towards Usage"

Subjective Norm is the influence stemming from the society on whether or not to use a system. Roy (2017), in his study found a positive linkage between subjective norm and behavioural intention in the context of taxi hailing apps.

H₅: "Subjective Norm is significantly associated with Behavioural Intention"

Mitra et al. (2021), in their study concludes that any exigency would trigger abnormal behaviour among consumers. The pandemic of Covid-19, was also revealed to have a positive effect on behavioural intention directly.

H₆: "Exigency (Covid-19) is significantly associated with Behavioural Intention"

Attitude towards Usage is an evaluative impact of emotions, both negative as well as positive in people towards using a system. Raza et al. (2017), conducted a study in the context of mobile banking in Pakistan and opined that attitude towards usage plays a pivotal role in influencing behavioural intention.

H₇: "Attitude towards Usage is significantly associated with Behavioural Intention"

DATA AND METHODOLOGY

The current research employs the use of both primary as well as secondary data. Secondary data includes several research papers accessed from various authentic databases like EBSCO, BASE and Google Scholar. This has helped develop a strong conceptual base for the study. Primary data has been collected via a survey conducted on more than 400 respondents, all of them either resorting to online shopping or using shopping apps. To this end, a structured questionnaire has been developed and

administered to the respondents via Convenient Sampling. In fact, most of the questionnaires were mailed to the respondents while some were randomly doled out to the respondents who were in close proximity. The rationale behind this is has been to take effective precautionary measure due to COVID-19 pandemic. The survey has been conducted in selected regions of Kolkata like Tollygunge, Khidderpore, Beckbagan and Taltala, predominantly in urban municipal areas. Most of the questions have been adopted from previous research study (Roy, 2017) albeit few questions have also been self-developed, especially also keeping in mind the context of COVID-19. Self-developing questions is any day a herculean challenge for any researcher and calls for travails during the process of preparation of questionnaire. In order to cope up with the current challenge, the questions have been prepared cautiously keeping it short and simple, brief and lucid. Unambiguous and tough words has been completely eliminated while drafting a questionnaire and personal questions have completely been avoided. The process of face validity has been undertaken to measure validity of the questions which have been used for the first time. Especially, the three items used in the segment of Covid-19 are absolutely new. The process of face validity is a highly informal one but rules out quickly the sub-par research techniques. For face validity, two employees working for Myntra and Snapdeal were consulted and asked to rate the questions on the basis of "Five-Point Likert" scale. Due to high level of agreement between the raters, a high face validity was detected which led to the ultimate choice and selection of all such items. A total of 23 questions or items has been used in the questionnaire, thus keeping it short yet sound. Such 23 items has been segmented across five constructs, "Perceived Ease of Use", "Perceived Usefulness", "Attitude towards Usage", "Subjective Norm", "Behavioural Intentions" and "Exigency (Covid-19)". All the items finally used in the study have been subjected for further tests especially to prove its reliability. Albeit, more than 400 respondents were surveyed, only 363 responses were found valid and hence included for final analysis. The survey was initiated during the third week of January 2021 and concluded in late March 2021. A "Five-Point Likert" scale has been used to measure the concepts. A Likert scale is a "psychometric scale" typically used in all fields of research that employs questionnaires. It was developed by Rensis Likert. The "Five Point Likert" scale is not new but is an exquisite scale for measuring the level of agreement or disagreement amongst respondents. It is instrumental in analyzing if respondents are pleased or have

issues with a particular aspect. Over the years, researchers have also used "Seven-Point Likert" scale as well as "Ten-Point Likert" scale. These two Likert scales to some extent provides unambiguity in their measurement in that they consider too many scales which in itself are almost the same. However, researches have been conducted using both these scales. However, the present study applies the "Five-Point Likert" scale. The choices range from *"(1=Strongly Disagree"; 2=Disagree; 3=Neutral; 4=Agree and 5=Strongly Agree)"*.

DATA ANALYSIS AND PRESENTATION

- *Demographic Profiling*

Table 1: Representation of Descriptive Statistics

Demographic Construct	Classification	Population Statistics	Percentage
Gender	Male	206	0.57
	Female	157	0.43
	TOTAL	363	1.00
Age	Below 18	16	0.05
	18-24	89	0.25
	25-34	103	0.28
	35-44	92	0.25
	45-54	55	0.15
	55-60	8	0.02
	TOTAL	363	1.00
Occupation	Student	105	0.29
	Service	156	0.43
	Business	42	0.16
	Others	60	0.12
	TOTAL	363	1.00
Monthly Income	Less than 10000	4	0.01
	10001-25000	134	0.37
	25001-50000	162	0.45
	50001-100000	44	0.12
	Above 100000	19	0.05
	TOTAL	363	1.00

As observed in the above the number of male respondents (n=206) exceeds the female respondents (n=157). Most of the respondents belong to a young age group in the category of 25-34 years. Majority of the respondents are either students or servicemen. We also see that most of the respondents having a moderate level of income perched in the category between 10.1K-25K and 25.1K-50K.

- *Reliability Analysis*

For the purpose of testing whether the variables are consistent or not a Cronbach's Alpha has been run which would help to examine the scale reliability of the constructs. All the "Cronbach's Alpha" values as evidenced in the above table exceed the ideal value of 0.7, while "Correlations of Corrected Items" are all above the ideal value of 0.5.

Table 2: Reliability Statistics

Construct	Cronbach's Alpha	Items	Total Correlation Value of Corrected Item	Cronbach's Alpha When Item Removed
Total	0.994	23	—	—
Perceived Ease of Use	0.988	PEU1	0.987	0.982
		PEU2	0.985	0.980
		PEU3	0.985	0.978
Perceived Usefulness	0.989	PU1	0.975	0.986
		PU2	0.974	0.985
		PU3	0.978	0.985
		PU4	0.979	0.985
		PU5	0.977	0.985
		PU6	0.917	0.983
Attitude Towards Usage	0.990	ATU1	0.980	0.985
		ATU2	0.978	0.986
		ATU3	0.971	0.988
		ATU4	0.969	0.988
Subjective Norm	0.962	SN1	0.872	0.957
		SN2	0.935	0.943
		SN3	0.950	0.940
		SN4	0.938	0.945
Behavioural Intention	0.981	BI1	0.977	0.961
		BI2	0.941	0.984
		BI3	0.974	0.962
Exigency (Covid-19)	0.975	EXC1	0.972	0.989
		EXC2	0.930	0.912
		EXC3	0.974	0.962

- *Convergent and Divergent Validity Test*

A convergent validity test has been conducted to check for the convergence of items. According to Forner & Lacker (1981), "the convergent validity of scale items are determined by their respective factor loadings, composite reliability and average variance extracted." The loadings of Confirmatory Factor Analysis (CFA) and composite reliabilities of all factors report figures of above required level of 0.7, while AVE report figures above required level of 0.5.

Table 3: Convergent Validity Results

Construct	Items	Factor Loading	AVE	C.R.
Perceived Ease of Use	PEU1	0.972	0.977	0.968
	PEU2	0.972		
	PEU3	0.977		
Perceived Usefulness	PU1	0.978	0.947	0.992
	PU2	0.977		
	PU3	0.980		
	PU4	0.981		
	PU5	0.980		
	PU6	0.942		
Attitude Towards Usage	ATU1	0.978	0.961	0.991
	ATU2	0.977		
	ATU3	0.979		
	ATU4	0.977		
Subjective Norm	SN1	0.925	0.885	0.990
	SN2	0.846		
	SN3	0.889		
	SN4	0.857		
Behavioural Intention	BI1	0.979	0.960	0.986
	BI2	0.977		
	BI3	0.976		
Exigency (Covid-19)	EXC1	0.980	0.947	0.992
	EXC2	0.942		
	EXC3	0.978		

The usage of "square root of ACE" and the "correlation coefficient matrix" is important for testing the divergent validity of constructs. As per Fornell & Larcker (1981), "discriminant validity was obtained by comparing the shared variance between factors with the AVE from the individual factors." The below matrix shows that MSV and ASV between factors are less compared to AVE and also the square root of AVE is higher compared to the correlations of inter-constructs, hence, satisfying the discriminant validity test.

Table 4: Divergent Validity Results

Construct	Inter-construct Correlations					
	PEU	PU	ATU	SN	BI	EXC
PEU	0.989					
PU	0.985	0.973				
ATU	0.982	0.954	0.980			
SN	0.805	0.827	0.817	0.941		
BI	0.963	0.969	0.974	0.934	0.942	
EXC	0.975	0.982	0.989	0.958	0.966	0.980

- *Test for Structural Equation Modelling*

"Structural Equation Modelling" (SEM) has been performed to delve into the relationships existing between 6 variables, namely, PEU, PU, ATU, SN, BI and EXC. The analysis has been done by the use of AMOS v23. The rationality exist in testing the fit between the model and the obtained data. The first stage of making inference about the results of SEM encompasses a review of "fit indices." All the fit indices when juxtaposed with their corresponded values which has been suggested will give a good model fit "Ratio of Chi-square to its Degrees of Freedom" ($\chi 2/df$) = 1.977, "Goodness of fit index" (GFI) = 0.958, "Adjusted Goodness of fit index" (AGFI) = 0.936, "Relative Fit Index" (RFI) = 0.967, "Comparative Fit Index" (CFI) = 0.983 and "Root Mean Squared Error of Approximation" (RMSEA) = 0.042.

Table 5: Indices for measure of "Goodness-of-Fit"

| Goodness of Fit Measure	Recommended Value	Actual Value of Measures	Result of Model Fit
CMIN/DF	≤ 3.00	1.977	Good
GFI	≥ 0.90	0.958	Good
AGFI	≥ 0.90	0.936	Good
RFI	≥ 0.90	0.967	Good
CFI	≥ 0.90	0.983	Good
RMSEA	≤ 0.05	0.042	Good

To this end, the results of hypothesis testing have been obtained. The below table clearly represents the validation of all the hypotheses through the path analysis. It can be concluded that perceived usefulness and perceived ease of use favourably impact attitudes towards usage with each reporting figures of (β= 0.192, P<0.05) and (β= 0.402, P<0.05) respectively, thereby supporting H_1 and H_4. The same could be safely asserted for the relationship between perceived usefulness, subjective norm, attitude towards usage and exigency (Covid-19), which are all significantly associated with behaviour intention of consumers towards online shopping, with each reporting figures of (β= 0.198, P<0.05), (β= 0.405, P<0.05), (β= 0.443, P<0.05) and (β= 0.402, P<0.05) respectively substantiating H_2, H_5, H_6 and H_7. The relationship between perceived ease of use and perceived usefulness is also linked with figure reporting (β= 0.609, P<0.05), thus, substantiating H_2.

Table 6: Results of Path Validation (Hypothesis Testing)

Hypotheses	Path	Coefficient	Direction	Results
H1	PU→ATU	0.192	Positive	Supported
H2	PU→BI	0.198	Positive	Supported
H3	PEU→PU	0.609	Positive	Supported
H4	PEU→ATU	0.408	Positive	Supported
H5	SN→BI	0.405	Positive	Supported
H6	ATU→BI	0.443	Positive	Supported
H7	EXC→BI	0.402	Positive	Supported

Research Model based on Path Validation Results

Figure 4: Validated Research Model (Author's Own Conceptualization)
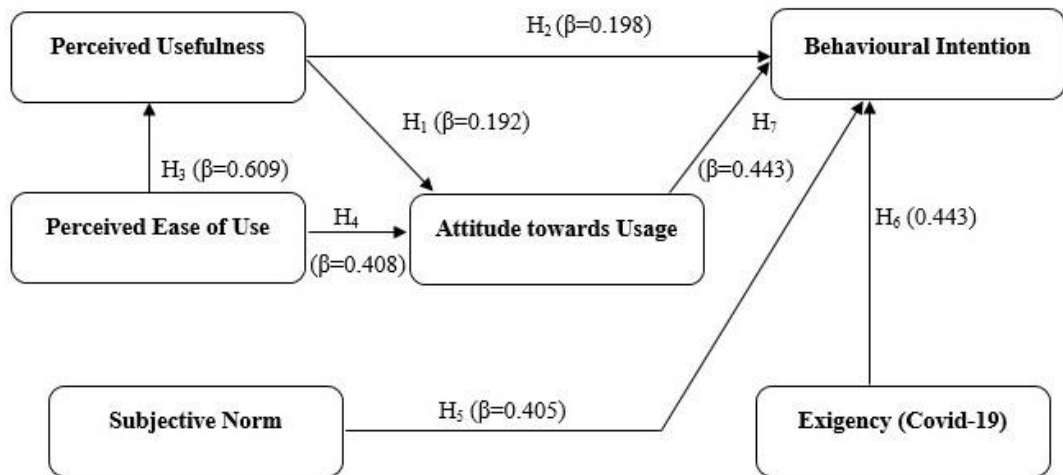
DELIBERATION OF RESEARCH FINDINGS

The present research study was a pioneering effort in delving into the consumer attitude and behaviour towards online shopping by applying "Technology Acceptance Model" (TAM). On the basis of our proposed research model, we explored the liaisons among the traditional TAM components and contemporaneous components like

Subjective Norm and Exigency (Covid-19). The findings of the data analysis of the survey has been examined and has proved to have positive and significant relationships with each other as per the hypothetical statements. The current research study is highly relevant in the context of recent proliferation in the milieu of technological innovations and advancements, resulting in the upsurge of e-commerce, m-commerce, smartphones, online shopping facilities and shopping apps. According to the first hypothesis, Perceived Usefulness had a positive relationship with Attitude towards Usage as the extent to which the importance of usefulness will be psychologically casted would have a bearing on the attitude of the consumers. As per the second hypothesis, it was also observed that Perceived Usefulness was related to Behavioural Intention. An explanation for this would be that the consumers are always in the quest for using a beneficial application which would make their lives more convenient. We evidence, in the third hypothesis testing that Perceived Usefulness was strongly influenced by Perceived Ease of Use. This hints that providing appropriate user training is essential for bolstering the consumers' perception of the usefulness of a technology. Besides, Perceived Ease of Use was also positively related to Attitude towards Usage, validating our fourth hypothesis. The fifth hypothesis was attempted at examining the relationship between Subjective Norm and Behavioural Intentions. The impact cast by social circle had a significant impact on the behavioural intention of consumers towards online shopping. This is a crucial finding as local clubs, colleagues or opinion leaders shape the perceptions and attitudes of people towards a technology. As observed by the sixth hypothesis, we have comprehended that the attitude of consumers towards online shopping has been instrumental in shaping the behavioural intention of such consumers, as both mental as well as physical faculties are a nifty driving force in developing the perceived likelihood of consumers. Finally, the seventh hypothesis analyzed the relationship between Exigency (Covid-19) and Behavioural Intentions. Any unforeseen exigencies would trigger an abnormal behaviour among people. An example would be any war which can bring a stunning change in the consumption trajectories of the consumers as they would hoard food grains, spend less on luxury items, cut costs, focus on health and safety, etc. The current situation of this ongoing Covid-19 pandemic is also similar, where people are prioritizing health and safety over other things. Almost all the consumers share a common though that relying on online shopping is the best way of wielding this

menacing disease by staying at home and adhering to norms of social distancing. In addition to this, online shopping is also easy and convenient and reduces a lot of hassles like physical travelling, shopping queue, etc. Such prolonged attitudes observed among the consumers during this "new normal" has brought a bewildering change in their behaviour as well.

CONCLUSION

The breathtaking metamorphosis in the landscape of technology has triggered a bewildering growth in e-commerce and m-commerce. The smartphones and tablets of today exhibit qualities like never before making the modus operandi of people rather luxurious. The modern technologies have pulled off a stunning heist by intriguing the customers' frame of mind. Taking into consideration the proclivity of consumers in the contemporaneous panorama, these amelioration in the circa of technology, particularly, e-commerce and m-commerce was a much needed tonic. The current research study highlighted certain crux elements under TAM constructs which shall be highly relevant in guiding future researches. People in Kolkata, are prodigiously valuing e-shopping especially during these times of pandemic, a manifestation in the sudden escalation in the adoption and usage of e-shopping sites, services and applications. Truth to be told, the framework of TAM has been criticized due to its debatable heuristic value, constrained explanatory and predictive power and triviality. Despite such shortcomings, it is by far, the most popular theoretical model used in academia.

LIMITATIONS

No research study exist without any shortcomings or limitations, and the same goes for the current research study too. The total sample size taken into consideration in the present research study is only 363, more number of respondents could be surveyed which could provide greater insights. Similarly, only selected regions of the city of Kolkata has been taken into consideration. A greater emphasis on all regions of West Bengal or an in-depth survey across different states could had provided us with better findings.

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