

Navigating Instability: The Changing Online Purchasing Behavior of IT Professionals in India During the COVID-19 Pandemic

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KEYWORDS

E-commerce, Covid-19, Online Purchase behavior, Online Purchase Intention, Pandemic Fear.

ABSTRACT

Unstable consumer behavior refers to unpredictable and fluctuating patterns in how individuals make purchasing decisions, often influenced by external factors such as economic downturns, crises, or societal changes. The COVID-19 pandemic has dramatically changed how consumers shop online. In particular, online shopping became more vital than ever, providing convenience, safety, and access to products when physical stores were restricted or closed. With shifting priorities focused on health, security, and value for money, consumers increasingly turned to e-commerce for their needs. Businesses were required to stay flexible and adjust their strategies to meet these evolving demands. In India, the pandemic led to financial and employment challenges, particularly in industries dependent on in-person interactions, while the IT sector remained strong and supported other sectors with innovative solutions. This shift also saw a significant rise in e-commerce, bridging the gap between supply and demand. This study examining online purchasing behaviors of 583 IT professionals working remotely used a multi-stage random sampling method and a descriptive research design to analyze how the pandemic influenced online purchase intentions and behaviors. The study employed structural equation modeling (SEM) to test the relationships between purchase intention and Purchase Behaviour with Pandemic fear as the moderator. The findings revealed that Sub dimensional construct (attitudes, ease of use, and perceived usefulness) and online purchase intention significantly influenced online buying decisions. Pandemic fear had a partial moderating effect on the online purchase behaviour.

INTRODUCTION

Unstable consumer behavior refers to sudden and unpredictable shifts in how people make purchasing decisions, influenced by a variety of internal and external factors. This has become an important area of study for both researchers and businesses, as it directly affects consumer choices. Factors such as economic changes, social media influence, emotional states, and evolving cultural trends all contribute to this unpredictability. Psychological drivers like fear, anxiety, and impulse buying, as well as technological developments like personalized ads and online reviews, also play a role in shaping consumer behavior. Additionally, shifts in consumer behavior are often linked to market uncertainty and fluctuating brand trust. For businesses, understanding these changing behaviors is crucial to staying competitive and adapting to shifting consumer preferences. Research on online shopping during the Covid-19 pandemic highlighted the influence of factors like attitudes and social norms on consumer choices (Moshref Javadi, 2012). Other studies found that millennials' online shopping habits are strongly influenced by their demographics, and fears related to the pandemic have also impacted their purchasing decisions (Laato et al., 2020). The rise of remote work during the pandemic shifted people's views on working from home, from excitement to frustration (Dubey, 2020). In recent years, online shopping has seen significant growth, driven by both increased demand and a wider selection of products (Melović, 2021). Studies also suggest that uncertainty plays a key role in shaping how people shop online (Julia Koch, 2020).

This study aims to explore the relationship between various factors influencing online consumer behavior, using multiple regression analysis to better understand these dynamics. The study becomes crucial for understanding the changing trends in consumer behavior in times of crisis, particularly on really possible global health threats such as Disease X (WHO, 2018). It analyzes how this pandemic impacts online buying habits among IT professionals a group of highly tech-savvy and financially buoyant people and generates interesting food for thought in the ever-evolving landscape of e-commerce and digital marketing. These findings are of paramount importance for businesses to estimate consumption trends in future crises, like increasing reliance on digital platforms and product preference changes such as those from general consumption to technology and healthcare items. In addition, the research indicates how the IT industry reacted to the pandemic with respect to the ideas and instruments of organizing remote work in the IT sector, with consideration given to the socio-economic influences that cover the purchasing behaviors of IT professionals. The research also provides unique insights for policy-makers and business leaders to adjust their strategies for online retail regulation, digital infrastructure, and economic restoration, all of which contribute to their ability to sustain resilience against future pandemics.

While existing theories such as Social Influence Theory and Psychological theories like the Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) are frequently used to examine consumer preferences and behavior, they do not adequately address the inconsistencies between consumer attitudes and actual purchasing behavior, especially when it comes to green consumption (Manoj Kumar B R, 2022). The gap identified in the literature is the lack of comprehensive theories or frameworks to explain the unstable consumer behavior, particularly in the context of green products (Sharma, A. P, 2021). Mohammad Hossein Moshref Javadi (2012) studied how perceived risks, subjective norms, perceived behavioral control, domain-specific innovativeness, and attitudes influence online shopping behavior. Using regression analysis, the study found that financial risks and non-delivery risks negatively impacted attitudes toward online shopping, while innovativeness, attitudes, and subjective norms had a positive effect. Youngsoo Kim and Ramayya Krishnan (2015) investigated how uncertainty affects online shopping behavior, finding that uncertainty helps consumers better estimate product quality and that both product uncertainty and price influence buying behavior. Thu-Trang Thi Doan (2020) examined factors influencing online purchase intentions among Vietnamese consumers, identifying performance expectancy, social influence, effort expectancy, and facilitating conditions as key determinants.

Lastly, Seyed Nasir Ketabi (2014) found that subjective norms, behavioral control, attitudes, social influence, and credibility significantly affect online purchase intentions. The rise of the internet has significantly boosted online marketing, offering consumers a wider range of products and services to choose from. Customer reviews, in particular, have a major impact on potential buyers' decisions and can strongly influence their intention to make a purchase. However, despite the benefits, online shopping also comes

with perceived risks such as concerns over product performance, delivery issues, financial security, and other uncertainties. These risks can discourage consumers from following through with their purchase decisions. Various studies have explored different factors influencing online shopping behaviors and customer perceptions. Pejvak Oghaziet et al. (2020) examined how gender impacts online purchase intentions, finding that females tend to rely on reputation, while males prioritize trust. They also highlighted how the time gap between purchasing and receiving products can create uncertainty, and noted the importance of gender in shaping motivations for purchase intentions.

Praveen & Jyoti Singla (2019) found that the internet's tools for price comparison play a crucial role in consumers' decision-making, with security being the most significant factor influencing perceptions of online shopping. Emerson Wagner Mainardes et al. (2020) applied the Theory of Planned Behavior (TPB) to study resistance to e-commerce, identifying that attitudes and perceived behavioral control (PBC) positively influence online purchase intentions, while negative word-of-mouth and disinterest in e-commerce are outcomes of resistance. Mrs. T. Sreerekha et al. (2019) focused on price, trust, and convenience as key drivers of online purchases, with their research showing that consumers benefit from lower prices and the convenience of shopping from home. Mohammad Anisur Rahman et al. (2018) studied online shopping behavior in Bangladesh, revealing that customers are motivated by time savings, product variety, and home delivery options, but are hindered by the inability to physically inspect products. Lastly, Silvana Dakduk et al. (2017) explored the adoption of e-commerce in Colombia, proposing a combined approach of the Theory of Planned Behavior, the Theory of Reasoned Action, and the Technology Acceptance Model to understand online purchase intentions in emerging markets. Overall, these studies highlight a variety of factors such as trust, convenience, security, and gender differences, which play significant roles in shaping consumers' online shopping behaviors and perceptions across different regions (Manoj Kumar B R, 2022).

RESEARCH METHODOLOGY

In this study, a cross-sectional method was used to meet the objectives, employing descriptive research to identify interactions and associations between specific variables related to online purchasing behavior among work-from-home IT professionals. The study focuses on understanding the impact of the Covid-19 pandemic and its sub-dimensional factors on these professionals' purchasing habits. The research questions that included the relationship between online purchase intention and purchase behaviour during Covid-19 and the moderating effect of Covid-19 Pandemic fear on online purchase intention and purchase behaviour were formulated to address the knowledge gap. Research objectives included the analyzing the relationship between Online Purchase intention (Sub dimensional constructs includes Attitude, Ease of Use, Subjective Norms and Perceived Usefulness) and online purchase behavior and examination of moderating effect of Pandemic fear on online purchase behaviour and intention.

Based on this review backup, two null hypotheses are framed, which includes “Online purchase intention does not impact online purchase behaviour” and “Pandemic Fear does not moderate the relationship between online purchase intention and online purchase behaviour”.

The data was gathered primarily from IT professionals working remotely during the Covid-19 pandemic via a survey form. The study covered the metropolitan area of Bangalore, which is also referred to as India's IT hub. Data were collected from 583 respondents utilizing the Krejcie and Morgan (1970) table of sample size and using a probability multistage random sampling method among them. The designed structured survey instrument was used to obtain primary data from the participants. Earlier empirical research was used to define the construct or factors. The survey questionnaire used in this study consisted of three sections. The first section of the questionnaire contained factors concerning the Covid-19 pandemic, demographic characteristics, and subdimensions of online shopping intentions. All variables were measured with a five-point Likert-type scale. The response scale: 1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly Agree. A pilot study was conducted among 68 IT Professionals to assess the reliability and validity of the questionnaire. The items for the factors were fine-tuned by assessing their reliability through Cronbach alpha, and the value obtained was 0.955. Thus, a well-structured questionnaire was prepared for collecting the primary data. The response rate was 31%. Using Cronbach's alpha (α), the components that make up each dimension were evaluated for internal consistency (reliability).

An appropriate alpha score is considered to be a value greater than 0.70. (Nunnally 1978). The reliability technique was carried out with all 29 measurement items used in the research. The table below provides the results of the reliability test analysis for the significant and sub-dimensional constructs.

Table-1: Reliability of Scales - Items

Reliability Statistics	
Cronbach's Alpha	No of Items
0.955	55

Table-2: Reliability of Scales – Constructs

Variables / Constructs	No. of Items	Cronbach's Alpha
Online purchase intention	3	.923
Online purchase behaviour	3	.922
Attitude	5	.919
Subjective norms	3	.921
Ease of Use	5	.918
Perceived Usefulness	4	.920
Pandemic Fear	5	.924

Table-2

shows that

Cronbach's Alpha value of the seven measurement items included in the research is higher than 0.70. Hence, the items used in the current research have high reliability.

RESULTS & DATA ANALYSIS

The study used Structural Equation Model which can be classified into variance-based SEM (PLS-SEM) and covariance-based SEM (CB-SEM). The latter focuses on producing goodness of fit and reproduces the theoretical covariance matrix. Therefore, this study adopted covariance-based SEM, and CB-SEM also assessed the complex and interactive effects well. Further, CB-SEM improves the quality of the constructs by eliminating indicators with more significant errors” (Hair et al. 2014).

The PLS-SEM facilitates maximising the variance on one or more dependent variables that independent factors can explain. This investigation uses the Visual PLS 4 software application to perform PLS-SEM. The "two stages approach" recommended by Ringle et al. in 2012 and Hair et al. in 2014 was used to assess the model. Stage 1 evaluated the overall model as usual for assessing the factors' reliability and validity (Fig. 1). OPI-OPB-Pandemic fear is the name of the suggested model (where OPI-Online Purchase Intention, OPB-Online Purchase Behavior and Pandemic fear is the moderating factor of the study).

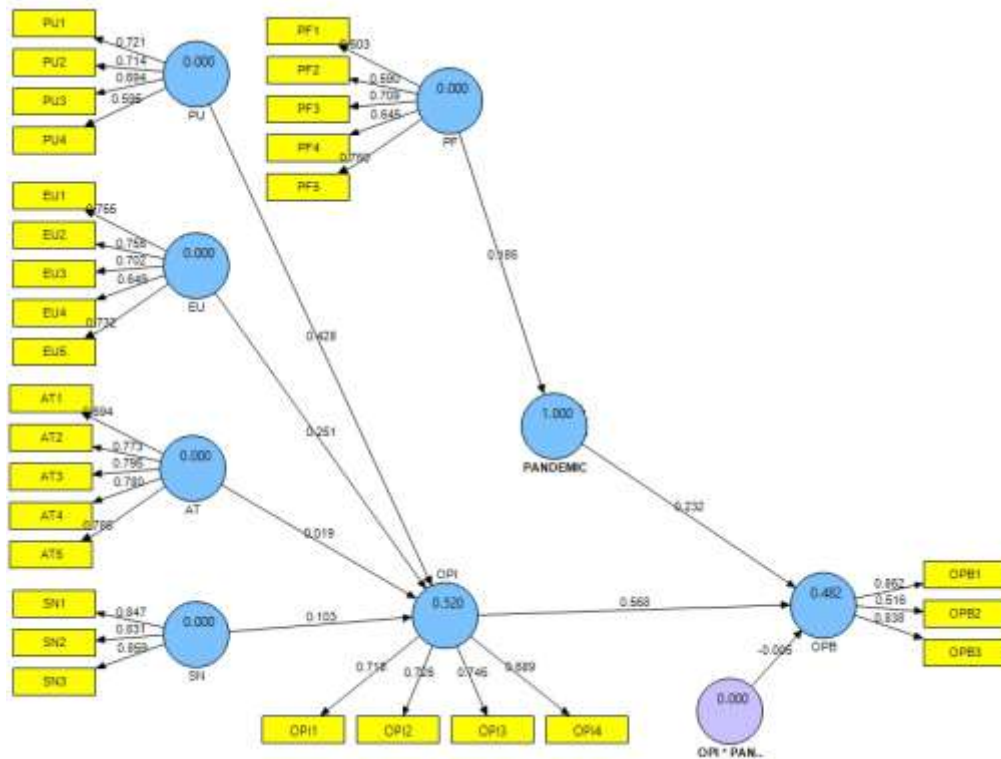


Fig 1: Estimated OPI-OPB-Pandemic Fear PLS Model – Stage – 1

SMART PLS analysis also produces estimates of the developed framework, i.e. the relationship between variables, known as path significance. The path coefficients' relevance was determined using bootstrapping with 5000 resampling. Estimates from the suggested model are shown in table 3. The table displays the outputs of the bootstrap procedures. The bootstrap technique calculates path coefficients, shown alongside the hypothesis and proved statistically.

Table-3: Structural Model – Hypotheses Results

Hypotheses	Path	β -value	t-statistics	Result of Hypotheses
H ₀ : Online purchase intention does not impact online purchase behaviour.	OPI -> OPB	0.663	21.336	Rejected
H ₀ : Covid-19 Pandemic fear does not moderate the relationship between online purchase intention and online purchase behaviour.	PANDEMIC - > OPB	0.236	5.371	Rejected (Partial Moderation)

The value of t-statistics in a bootstrapped model exceeds 1.96 at a 0.05 level of significance (Davis, 1989; Anderson & Gerbing, 1991). The obtained value in this study (table 3) firstly indicates that the direct effect from online purchase intention to online purchase behaviour in the absence of the Covid-19 pandemic fear (moderating) effect is statistically significant ($\beta = 0.663$, $t = 21.336$), that is, employees who have online purchase intention likely to have an online purchase behaviour. Hence, H₀ – 1a: is rejected where

the result is the same as the result of Yi Jin Lim (2015), W. M. Wan Ishak (2020) and Nathalie Pe~na-García (2020). The direct relationship between online purchase intention and online purchase behaviour is explained by some studies related to moderating variables in the previous literature; one such variable is “Covid-19 factors”. The moderating effect of Covid-19 pandemic fear on online purchase intention and behaviour ($\beta = 0.236$, $t = 5.371$) is statistically significant, and therefore H_0-2 is rejected, and a partial moderation is identified.

Stage 2: Moderation effect Estimation using Regression Analysis

Table-4: Regression Results – Before Moderation

Independent Variables	Dependent Variables	R Square
Online Purchase Intention	Online Purchase Behaviour	0.440

Table-5: Regression Results – After Moderation of Pandemic Factors

Independent Variables	Dependent Variables	R Square
Online Purchase Intention	Online Purchase Behaviour	0.484

Sharma et al. (1981, p. 296) defined that if the moderator variable is significantly related to the dependent variable in the model (i.e., testing if the moderator influences the form of the relationship), then the variable is a quasi-moderator. If not, the variable is a pure moderator. The result of the moderation analysis between OPI, OPB and Covid-19 pandemic fear is presented in the following paragraphs. The table – 4 & 5 indicating that comparatively, R^2 value between Online purchase intention and online purchase behaviour was 0.440 and after the introduction of moderator (Covid-19 pandemic fear), the R^2 value was 0.484. Thus, from the moderation analysis, it was noted that two different results are obtained. Hence it shows that partial moderation exists in the model.

DISCUSSION

The first objective was to understand the relationship existing between Online purchase intention and purchase behavior. A result indicates that Subjective norms, Ease of use and perceived usefulness had a higher impact on online purchase intention. A strong positive impact of online purchase intention on purchase behavior was found in the study.

The second objective was to understand the moderating effect of pandemic fear on the relationship between online purchase intention and purchase behaviour. The results suggest that pandemic Fear influenced the relationship between online purchase intention and purchase behaviour. Hence, Pandemic Fear has been

one of the Sub-dimensional constructs creating a partial positive interaction effect of the Covid-19 pandemic fear on OPI and OPB, respectively.

SUGGESTIONS

Since the rise of E-commerce, the expansion of internet access, and the significant increase in mobile users and apps, it's become clear that IT professionals have been major users of online platforms for buying products and services. This study offers several key insights: While many believed the pandemic would significantly disrupt industries, including E-commerce, this study shows that IT professionals working from home were less affected in terms of online shopping behavior. This suggests that even in times of crisis, there is always a market. Online marketers just need to identify the right target audience when planning their strategies. The study indicates that the pandemic did alter online shopping behavior for IT professionals working remotely, though the fear associated with the pandemic played a significant role. E-commerce companies could consider developing strategies or conducting future research to understand and address the impact of pandemic-related fear during crises. The pandemic has shifted consumer mindsets around online shopping. The study reveals that there's no significant difference in online purchasing opinions between male and female IT professionals, which means E-commerce companies can adopt a unified strategy for both genders during a crisis like a pandemic. One of the key findings is that "pandemic fear" had a stronger effect on online shopping behavior than other factors. As fear increases, so does its impact on buying decisions. Online marketers should develop strategies to address and normalize this fear, while also highlighting the perceived usefulness of technology to enhance consumer confidence in online shopping. The study highlights the factors such as subjective norms, attitude, and the ease of using technology are crucial in shaping online purchasing behavior. These should be prioritized when developing strategies to encourage online shopping.

CONCLUSION

This research primarily concerns the relationship between online purchase intention (OPI) and purchase behavior (OPB), where it argues that OPI is affected by such factors as perceived usefulness, usability, and subjective norms and that OPI in turn positively affects OPB. The connection was found to be influenced by fear of the pandemic, wherein the latter served as a positive partial influence driving online shopping behavior, especially among remote IT professionals. Therefore, marketing strategies need to consider fears resulting from the pandemic in their marketing communications, strategies ignore gender needing gender-neutral approaches as there were no significant behavioral differences, and focus on issues like perceived value and usability to improve online purchasing. Understanding such dynamic processes would enable companies to become relevant and survive crises.

Author Contributions: MK and BR Conceptualization; Data collection; Methodology; Analysis; Writing—original draft, review and editing, PA & TB.; Data curation, Writing—review and editing, RP.: Writing—review and editing. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflicts of Interest: The authors declare no conflict of interest

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