Study of Consumer's Perception towards Adoption of eCommerce (online shopping and e-banking) in Kathmandu Valley among corporate workers in the post-pandemic.

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May 19, 2022

Farmingdale State College

State University of New York

This research report is submitted for partial fulfillment

Of

Master of Science Degree

In

Technology Management

Spring 2022

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Abbreviations

eCommerce	Electronic Commerce
B2C	Business to Consumers
B2B	Business to Business
TRA	Theory of Reasoned Action
TAM	Technology Acceptance Model
DOI	Diffusion of Innovation Theory
UTAUT	Unified Theory of Acceptance and the Use of Technology
TPB	Theory of Planned Behavior
PU	Perceived Usefulness
PEOU	Perceived Ease of Use
PR	Perceived Risks
EE	Effort Expectancy
SI	Social Influence
FI	Facilitating Conditioning
IS	Information System

Abstract

This paper analyzes the customer perception of corporate workers towards adopting eCommerce (online shopping and e-banking) in Kathmandu Valley, considering age, gender, education, and birthplace as demographic variables in the post-outbreak COVID-19 pandemic. The study shows that COVID-19 highlights the need for digital transformation due to the change in customer needs. The pandemic world strongly enforces the enhanced digital transformation, which benefits businesses or organizations.

This study integrates the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Diffusion of Innovation (DOI), and Unified Theory of Acceptance and Use of Technology (UTAUT) as a practical implication for the analysis of the study. Descriptive and causal research designs are adopted for this study. A total of 60 respondents (corporate workers) of the Kathmandu Valley were selected for the study purposes. Likert scale questionnaires were used to gather information about their perception of e-commerce. Reliability is measured using Cronbach's Alpha Test. The statistical tool computed descriptive analysis, independent t-test/ANOVA, correlation, and linear regression analysis.

The study explains the customer perception of adopting e-commerce services based on perceived usefulness, ease of use, and risk. The analysis indicates that perceived usefulness and ease of use influence and has a statistically significant relationship with the adoption of e-commerce. In contrast, perceived risk is statistically non-significant and does not influence the adoption of e-commerce.

Keywords: digital transformation, perceived risk, perceived ease of use, perceived risks

1. Introduction

Electronic commerce is also known as eCommerce, defined as trading services or products using computer networks. E-commerce employs technologies like electronic funds transfer, mobile commerce, supply chain management, online transaction processing, internet marketing, electronic data exchange, automated data collection system, and inventory management systems. On the World Wide Web, e-commerce has been booming. It generates big business through trading, focusing on digitally enabled commercial transactions between individuals and organizations that use the internet in all commercial transactions, buying goods and services, and transmitting data and functions. Moreover, e-commerce uses the internet to accomplish business transactions locally or internationally.

The main elements of e-commerce are business to consumers (B2C) and business to business (B2B). B2C is the consumer's shopping web, and B2B is the transaction conducted between businesses. Nowadays, people's style of banking and shopping has changed; they do not want to waste time going in crowds. E-banking enables a convenient method of doing bank business from the security and comfort of their own home. For instance, customers can check account balances and review account information using the internet. In online shopping, shoppers can buy goods and services from web stores that are open 24 hrs from the comfort of their own homes. Business to consumers or B2C eCommerce is related to the customer's activity to purchase a product over the internet, and this type of e-commerce has received minimal attention for research.

Online shopping was invented by an English innovator, entrepreneur, and inventor Michael Aldrich in 1979, which enabled online transaction processing between businesses and consumers. Online shopping was done by connecting the TV to a real-time transaction via a domestic telephone line (landline) for the first time. Later, in 1990, Tim Berners-Lee took the online processing to the general public by creating World Wide Web. Netscape 1994 launched the first commercial browse. The same year, the pizza hut on their website offered online ordering of Pizza (Vaidya, 2019).

In recent decades, online shopping and e-banking have revolutionized the world. Nepal is also not an exception to emerging online shopping and e-banking, mainly after the post-pandemic. The coronavirus pandemic is also the reason behind the unprecedented boom in e-commerce. Many small businesses are forced to close due to the COVID-19 pandemic crisis. The existing and new technologies are constantly pushing the forefront of every business. Throughout the phase of the pandemic, the industry learned to adapt to the COVID-19 pandemic with the latest digital technology. Companies are forced to shift towards the digital economy due to the different pandemic-related business restrictions, which created opportunities through sales

diversification online. Hence, the COVID-19 crisis has accelerated e-commerce towards new firms where the customers have access to a significant variety of products from the safety and convenience of their homes. Despite restrictions, the businesses continue to operate. In addition, these changes in e-commerce are likely to be of a long-term nature. We can say that the COVID-19 crisis is expected to have long-lasting effects on e-commerce. Also, COVID-19 has brought specific shifts which are likely to involve long-term changes in e-commerce (OECD, 2020). The post-COVID-19 crisis is enhancing the expansion of e-commerce in the new forms, customers, and types of products, likely to involve a long-term shift of e-commerce transactions from luxury goods and services to everyday necessities. Consumers need efficient virtual services but do not care about glamour stores after the post-COVID-19 scenario.

Nepal is a developing country between India and China, with 147,181 square kilometers (Shakya, 2018). Both India and China have the fastest-growing e-commerce rate, so the same trend is transferred to Nepal. However, the rural part lacks access to the internet infrastructure. E-commerce is popular in the urban areas of Nepal. Numbers of e-commerce companies are growing up in Nepal. Popular e-commerce sites or companies are Nepalbay, Sastodeal, Dharaj, Hamrobazar, Muncha, Shopmandu, Metrotarkari, etc.

Mobile banking is a remote transactional service provided by commercial banks and financial institutions to its customers using a mobile device like a smartphone or tablet. Mobile banking is extremely higher in developed countries than the developing countries because of technological and proper infrastructure. Though mobile banking is in the development phase in Nepal, mobile banking users are increasing every year in urban areas (Sherpa, 2015).

Similarly, internet banking is a remote electronic transactional system via related financial institution’s websites to their customers. Internet banking is getting famous due to its convenience and flexibility. It provides higher levels of customer satisfaction reducing operational costs to the bank. In Nepal, urban cities like Kathmandu, with good internet facilities, have internet banking banks (Khatri & Upadhyaya-Dhungel, 2013).

As more and more people have started doing transactions online in Nepal, internet banking is an increasing trend. Recent data from Nepal Rastra Bank inform that financial institutions provide services to four million mobile banking customers and 0.28 million internet banking customers. However, data shows that adoption is relatively slow. The banks of Nepal have become so proactive in promoting electronic payments and internet banking that people have started going cashless (Khalti Digital Wallet, 2018).

Online Shopping and e-banking activities have increased with the development of the internet. Electronic payment has evolved in many ways. People discover online shopping as a convenient and proper platform to compare a product's price from their comfort zone, either at home or

workplace, via online stores (Keisidou et al., 2011). The outbreak of COVID-19 significantly affected the business of conventional retailers. Countries' social life has been dramatically restricted to slow down the virus's rapid spread. This restriction imposed the shutdown of most retail stores and services, which forced online shopping as the only way for consumers to satisfy their consumption needs. There has been a long-term shift in e-commerce after the post-COVID outbreak, mainly in online buying and e-banking. Hence the study on the impact of different factors on e-commerce adoption is essential in Kathmandu valley.

The Kathmandu Valley was chosen for the survey as it is the most developed and populous region of Nepal and is considered Nepal's economic hub, where many offices and headquarters are situated. The number of mobile banking subscribers grew 64% and rose to 8347187 in 2075/76 B.S. Similarly, there was a 10% rise in online banking subscribers to 344917. Further, there is a rise in e-payment services, but the exact number of users is not identified ((Karki et al., 2021).

This research helps to find consumer’s perceptions and influential factors that are important in the effectiveness and friendliness of eCommerce and further helps to improve the overall strategy mitigating the risk factors.

2. Problem Statement

In March 2020, the world went into lockdown, which forced many businesses to shut down. Some companies were reopened but with a restriction like social distancing, wearing masks, and limiting the number of customers entering at one time. The difficulties in traditional shopping make people inclined to shop online. There are meteoric rises in online sales on web traffic analysis amid the coronavirus pandemic. The COVID pandemic-related business restriction had forced the digital economy to shift, creating an opportunity for online sales diversification. During the COVID-19 crisis, people turned to online shopping, 67% of consumers started to shop differently, and 20-30% of businesses moved online (Fryer, n.d.). Retailers stepped up and supported more online sales, making the customer experience convenient.

Though the worldwide economy is hugely devastated by the outbreak of COVID-19, the data shows that COVID-19 has led to an increase in eCommerce and has accelerated digital transformation and adoption of eCommerce sales. Consumer behavior changed when the physical stores were restricted, causing online shopping to grow, resulting in the development of digital commerce. The consumer and businesses of the developing countries have not capitalized on pandemic-induced e-commerce opportunities because of the persistent barriers. Even though

the retail industry is open entirely, this trend continues, and there is tremendous growth in online shopping revenue. Many customers now appreciate the convenience of online shopping. Besides COVID-19, competitive business strategies and the convenience of e-commerce are other reasons behind the growth of eCommerce. Other significant features are various products, services on a single screen, sales without due, doorstep deliveries, and adequate information in a single platform.

To enhance e-commerce and make customers happy, businesses and the government need to offer flexible policies and convenient solutions.

Increased internet access and usage make firms in rural areas have easier access to domestic and international markets. For developing countries, internet penetrations increase the exports of services to developed countries. In Nepal, with increased access to the internet and increased mobile users, there are positive changes in e-commerce. The sales of products, sales of movie tickets, mobile recharge cards, payment of phone bills and electricity, and online banking is increasing day by day.

Even though e-commerce is the most significant money-making industry globally, Nepal has many hurdles to e-commerce. Hence, research on the changing behavior of customers and changes in online banking due to the adoption of e-commerce is necessary for Nepal. This type of research will help to develop e-commerce marketers to analyze the quick market requirement response to the change in demand and help to get the consumer's actual expectations. It is essential to learn how the customers shop for business success and to avoid the probability of failure.

3. Goal and objectives

Perception is defined as the subjective judgments of any people towards the environment, which can be substantially different from one person to another. The corporate workers of Kathmandu Valley’s perception level have been examined as the possible consequences of those influencing factors. The relationships between perception and demographic variables like age, gender, education level, and birthplace have been measured.

The objectives of the study are

- To know customer perceptions towards online shopping and e-banking

- To examine the customer behavior based on different services and products for online shopping and e-banking on the adoption of e-commerce in the Kathmandu Valley.

-Customer behavior is measured in experience based on perceived usefulness, ease of use, and risk while using the online portal for shopping and banking.

- To discriminate analysis of perception on age, gender, education level, and birthplace

-Survey questions are based on these attributes will be asked to the corporate employees of the Kathmandu Valley.

-The study is conducted to determine the relationship among the demographic variables (gender, age, education level, and birthplace) with the customer's perception of the e-commerce portal for online shopping and e-banking. Moreover, the study determines the impact of customer perception usefulness, ease of use, and risks on the adoption of e-commerce.

4. Scope

In Nepal, at present, e-commerce is in the embryonic stage, but e-commerce will be part of the day-to-day activity of business firms in the future. This study is conducted in Nepal as e-commerce is relatively new. Our study is about the customer perception of e-commerce adoption among corporate employees. Hence, this study can assist small e-commerce companies, and business entrepreneurs understand the requirement of e-commerce services and their customer adaptation in Nepal. It is equally helpful for the individual customer to find the weakness and learn about Nepal's e-commerce. The researchers can use this study to reference those who want to study the impact of customer's perceptions on e-commerce adoption.

5. Literature Review

5.1 Review of Theories

The various models used in explaining the customer's intention are as follows

1. Theory of Reasoned Action(TRA)
2. Technology Acceptance Model(TAM)
3. Diffusion of Innovation(DOI)
4. A Unified Theory of Acceptance and Use of Technology (UTAUT)

5.1.1 Theory of Reasoned Action

The Theory of Reasoned Action is known for predicting people's behavior. The best predictor of people's behavior is their intention to perform the behavior in any given situation. We know that the best predictor of people doing something is whether they intend to do it, the person's intention to perform the behavior, the attitudes of people important to them, and related perceived social pressures (www.iresearchnet.com, n.d.). This theory explains that behavior is a function of behavioral intentions, which is, in turn, a function of attitudes and subjective norms (Nission& Allison, 2020). As per this theory, a person's behavioral intention determines what they do and is based on their attitudes about the behavior and perceived social pressures from people (subjective norms). Attitudes toward specific behaviors are based on expectations or beliefs about the consequences of the behavior. The person will have a positive attitude toward the behavior if people believe that primarily positive consequences will result from the behavior. Similarly, they will have negative attitudes toward the behavior if they believe that negative consequences will result from the behavior.

In 1967, TRA was developed by Martin Fishbein and Icek Ajzen; the theory is derived from social psychology, attitude theories, and persuasion models. TRA explains that stronger intentions increase the effort to perform the behavior and further increase the likelihood of the behavior being performed (Wikipedia, 2021). The theory recognizes that factors can limit the influence of attitude on behavior. The theory of reasoned action predicts behavioral intention between stopping at attitude predictions and predicting behavior because it separates behavioral intention from actual behavior.TRA is used to predict an extensive range of behavior like health, consumer purchases, voting, and religious involvement. TRA is applied to deliberate behavior and is under control.

5.1.2 Technology Acceptance Model

Technology Acceptance Model (TAM) is the influential model with two primary factors, perceived ease of use and perceived usefulness which influence an individual's intention to use new technology. Perceived usefulness explains how technology improves a potential user's performance. Perceived ease of use is the effort needed to use technology effectively.

The Technology Acceptance Model is explicitly developed for the information system industry to improve understanding of user acceptance processes and provide a theoretical basis for a user acceptance testing methodology. The primary goal was to demonstrate system prototypes to potential users and measure their motivations to use the alternative systems.

The technology acceptance model differs from the theory of reasoned action. Davis theorized that social norms do not directly affect attitudes or behavior about system use. Instead, attitude

toward using a system is the function of perceived usefulness and perceived ease of use. He contended that perceived ease of use would have a casual effect on perceived usefulness. Two core beliefs form the technology acceptance model. Perceived usefulness is defined as how an individual believes that using a particular system will enhance his or her job performance. Perceived ease of use refers to how individual believe that using a particular system will be free of physical and mental effort. Perceived ease of use was hypothesized to affect usefulness directly. A system that is easier to use would make an individual more productive and more likely to use a system (Thompson, 2019).

TAM can predict the user acceptance of e-commerce technology and examine customer behavior on the web. There are various factors to which the TAM model can be extended, such as trust, culture, and sociology of technology which determine the consumer's attitude to accepting and using e-commerce technology. From an eCommerce perspective, perceived usefulness can be used to represent the predicted advantages gained from the acceptance and use of online buying and banking. Similarly, perceived ease of use reflects that online shopping and e-banking are acceptable and usable if viewed or experienced as easy as painless (Al-Haraizah& Choudhury, 2012). Perceived usefulness is the consumer’s experience that the technology contributes to online shopping via gadgets effortlessly, improving effectiveness, performance, and competence. Similarly, perceived ease of use means what boundary the user is comfortable in using the innovative technology features. They can be influenced by external variables that determine the consumer's attitude towards using technology.

5.1.3 Diffusion of Innovation Theory

In 1962, the oldest social science theory named diffusion of innovation was developed by E.M Rogers. It states that people part of the social system adopt a new behavior, idea, or product. Diffusion is possible after the person perceives the idea, product, and behavior is new or innovative. It is found that early adoption of innovation builds different characteristics in people than those who adopt innovation later; additionally, some people are more likely to adopt the innovation than others. Depending on the way the target population hinders the adoption of the innovation, there are five established adopter categories which are as follows (Al-Haraizah& Choudhury, 2012),

1. Innovators
2. Early Adopters
3. Early Majority
4. Late Majority
5. Laggards

E-commerce is emerging in Nepal. It is an entirely new idea to many people. Businesses need to understand how and why people adopt new ideas, tools, or practices. Here the new idea is e-commerce. Diffusion of Innovation Theory is one specific model that explains why people behave that way and gives a hint to change how they behave. This model represents the adoption rate and stages people go through before adopting innovation (Pease & Rowe, 2005).

5.1.4 Unified Theory of Acceptance and the Use of Technology

UTAUT looks into the user's acceptance of technology. Recently, it has been constructed as the most developed model that tests technology adoption and acceptance. This theory was developed by reviewing and combining eight different models(theory of reasoned action, motivational model, technology acceptance model, theory of planned behavior, model of personal computer use, a combined theory of planned behavior/technology acceptance model, social cognitive theory and diffusion of innovations theory) used by other researchers to explain information systems.

UTAUT has goals to explain the user intentions by proposing a unified model for information system use. It explains the technological use of intention and behavior with numerous constructs, including social influence. The user perception and acceptance behavior are explained by measuring the effect of four potential constructs, which are Performance expectancy (PE), social influence (SI), facilitating condition (FC), and effort expectancy (EE). The independent variable's effects on dependent variables are detailed by four variables: age, gender, experiences, and voluntariness of use (Dwivedi et al., 2011). Performance expectancy (PE) can be mapped to Perceived Usefulness (PU), and Effort expectancy (EE) can be mapped to the Perceived ease of use (PEOU). The other two constructs, Social Influence (SI) and Facilitating Condition (FC), are from the theory of planned behavior (TPB). UTAUT model is a robust and broad model in Information System (IS) adoption.

5.2 Empirical Literature Review

(Alnsour& Khalil, 2011)The article studied the Jordanian Corporate customer's acceptance behavior of technology (online banking) based on a conceptual model on two critical issues. The study mainly focuses on the business and corporate customers who use the internet for banking. Research result shows that perceived ease of use positively affects perceived usefulness (PU). Similarly, trust has positive effects on ease of use whereas not on usefulness. As users trust the bank and its website more, it says that online banking becomes easier. Perceived security directly affects trust and usefulness, and it indirectly affects perceived ease of use. Hence, security is the main contributor to the acceptance of internet banking by Jordanian corporate customers.

(Selase& Benedict, 2021) In developing countries, the adoption of internet banking is yet to reach the desired level. Research on benefits, difficulties, and significant success factors are necessary for the adoption of internet banking in the banking industries of Ghana. The key factors influencing customer attitude are perceived usefulness, perceived ease of use, and trust. The result shows that age and gender do not significantly influence internet usage. Respondents were made sure to use internet banking for at least six months. The study found a moderate level of faith in internet banking services by customers. The results also show a moderate level of commitment to internet banking usage. Internet banking is easy and simple to use via the internet on a computer which is an important characteristic of ease of use. Time-saving is a vital indicator of the usefulness of internet banking. Customers are satisfied with available online products and services. Lastly, the age distribution and gender of customers do not significantly influence the use of internet banking.

(Adhikari, 2019) The research helps to find the determinants of e-banking in Nepal. With the rapid advances in IT and intensive competitive banking markets, e-banking adoption has started to occur extensively as a distribution channel for financial services. Businesses and banks are improving IT to improve business efficiency and service quality and attract new customers. As a prime attractive feature, customers have started to perceive bank services through the internet based on the convenience and comforts that the bank provides. Acknowledging the challenges of e-banking in Nepal, the study provides the strategic measures to bloom the e-banking and innovative approach for making e-banking accessible. The study revealed that convenience, time-saving, security, and communications are the determinants of e-banking in Nepal. The survey methods used are descriptive analysis and t-test. The study identified the Nepalese e-banking system as drifting towards modern internet banking. Research findings are valuable assets for Nepalese banking customers and the bank itself.

(Budhathoki, 2020) This research paper focuses on the present status of youth's perception between e-payments and demographic factors. The methodology uses descriptive and t-tests for the study. Youth perception towards e-payment has increased attention among management scholars. The demographic value depends on the study of gender respondent information, occupation of respondents, and age group academic qualification. Youth's perceptions of e-payment are affected by these variables. Different age groups and educational backgrounds affect youths' perception of e-payment. In Pokhara, Nepal, the study indicated the e-payment perception values more in academically qualified youths than in other's samples. At the same time, demographic variables like gender, age, and occupation do not affect e-payment. Furthermore, product safety and trustworthiness do not affect the perception of youths. The survey method was conducted as descriptive statistics and multiple regressions.

(Urne&Aggrawal, 2016) The best technology in a global market that helps organizations and customers both for two-way business and communication is e-commerce. E-commerce enhanced marketing and communications positively influenced to respond to the change in customer's purchase decision-making process and improve their performance. On the other hand, consumer behavior is their decision-making process individually and in groups. It helps to understand the characteristics of individual consumers and their behavioral variables. This research paper discusses e-commerce enhanced marketing and communications positively influenced to respond to the change in customer's purchase decision-making process and improve their performance. The survey method is a literature review for descriptive analysis and interpretation.

(OECD, 2020) Self–imposed social distancing, significantly limiting physical interactions, and strict confinement measures have held a large share of traditional brick-and-mortar retail. After a while, brick-and-mortar retail had slowly increased to e-commerce. Hence, the pandemic had increased the share of e-commerce in total retail. This shift brought by a pandemic is the long-term changes in e-commerce. Research helps the policymakers digitally transform retail to support business adoption and provide significant access to customers with various products from the safety of their homes. These changes in e-commerce are likely to be a long-term change, shifting to the new purchasing habits and learning costs. The COVID-19 crisis brings long-lasting effects on e-commerce: there is a shift on-demand from brick–and–mortar retail to e-commerce. The way new business models are growing, it is difficult to predict the challenges of traditional policy frameworks. Policymakers need to foster and enable the environment for online transactions. Similarly, governments need to support and promote e-commerce.

6. Methodology

6.1 Conceptual framework of the study

In this theoretical framework, adoption of e-commerce is referred to as the dependent variable, and elements such as perceived usefulness, perceived ease of use, and perceived risk are independent variables. The unified theory of acceptance and use of technology (UTAUT) is affected by facilitating conditions regarded as demographic variables. The demography variables are age group, gender, education level, and birthplace in this study. Age is divided into two groups; one is below or equal to 30 years regarded as a young group, and the other is above 30 years regarded as an old group. The groups in gender are male and female. The groups in education level are below secondary level, bachelor level, and master or above. The groups in the birthplace are the Kathmandu Valley, urban or out of the Kathmandu Valley; rural areas which are regarded according to a geographic area of Nepal.

The present study considered the perceived usefulness, perceived ease of use, and perceived risk, which affect the adoption of online shopping and e-banking. It shows the relationship between the independent and demographic variables and how they influence the dependent variable (e-commerce adoption). Additionally, how e-commerce, in this case, e-banking and online shopping, spread among a specific group of people according to the diffusion of innovation (DOI) theory.

The conceptual framework of the study is explained in the below figure.

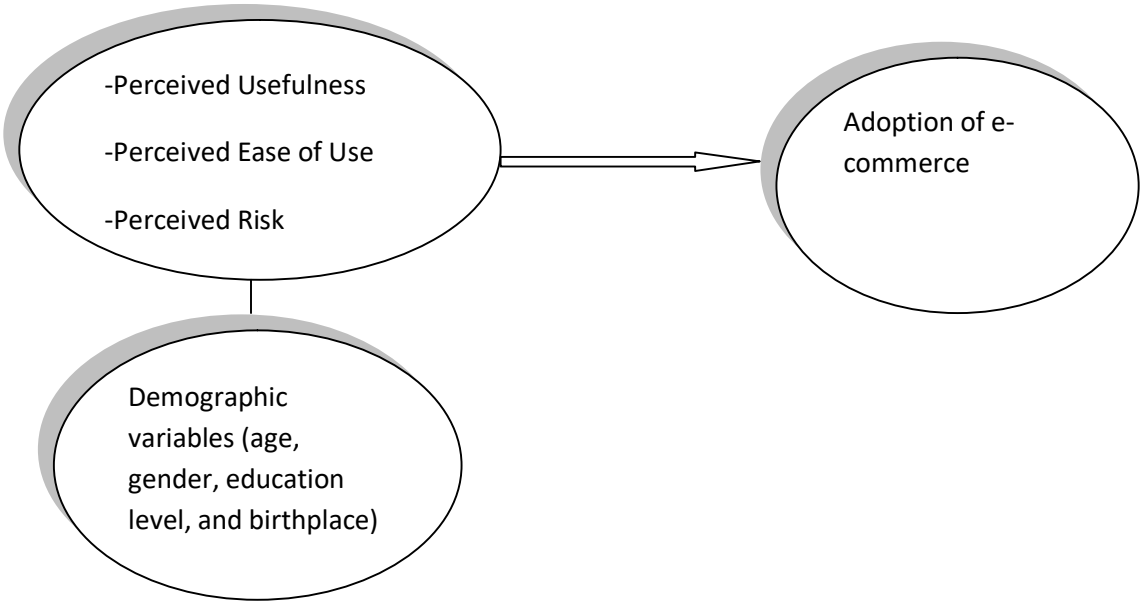

Figure 1: Conceptual framework

The study examines the customer perception when adopting e-commerce on its different services and products as perceived usefulness (PU), perceived ease of use (PEU), and perceived risk (PR).

6.2 Hypothesis

Hypothesis 1

H0: No significant mean difference between Perceived Usefulness and demographic factors

H1: A significant mean difference between Perceived Usefulness and demographic factors

Hypothesis 2

H0: No significant mean difference between Perceived Ease of Use and demographic factors

H1: A significant mean difference between Perceived Ease of Use and demographic factors

Hypothesis 3

H0: No significant mean difference between Perceived Risks and demographic factors

H1: A significant mean difference between Perceived Risks and demographic factors

Hypothesis 4

H0- No significant association of Perceived usefulness with the adoption of e-commerce

H1: A significant association of Perceived usefulness with the adoption of e-commerce

Hypothesis 5

H0: No significant association of Perceived ease of use with the adoption of e-commerce.

H5: A significant association of Perceived ease of use with the adoption of e-commerce

Hypothesis 6

H0: No significant association of Perceived risk with the adoption of e-commerce

H1- A significant association of Perceived risk with the adoption of e-commerce

Hypothesis 7

H0: No significant impact of Perceived usefulness in the adoption of e-commerce

H1: A significant impact of Perceived usefulness in the adoption of e-commerce

Hypothesis 8

H0: No significant impact of Perceived ease of use in the adoption of e-commerce

H1: A significant impact of Perceived ease of use in the adoption of e-commerce

Hypothesis 9

H0: No significant impact of Perceived risk in the adoption of e-commerce

H9: A significant impact of Perceived risk in the adoption of e-commerce

Regression model equation of the study

$$\boldsymbol{Y = \alpha + \beta_1(PU) + \beta_2(PEU) + \beta_3(PR) + e_i}$$

Where,

Y=Adoption of online shopping and e-banking (e-commerce)

$\alpha =$ Intercept

PU=Perceived Usefulness

PEU=Perceived Ease of Use

PR=Perceived Risks

e_i=error terms

β_1=Coefficient of Perceived Usefulness

β_2=Coefficient of Perceived Ease of Use

β_3=Coefficient of Perceived Risks

6.2.1 Perceived Usefulness

Perceived usefulness is essential in the field of online shopping and e-banking. Usefulness is considered the subjective probability that explains that user's use of technology can prove the way they could complete the task. In a TAM, perceived usefulness is how a person trusts that using a particular technology would enhance his or her job performance (D.Davis, 1993). Perceived usefulness is the customer's perception regarding the result of the experience. It is also defined as how people consider a particular technology to boost their job performance (Jahangir & Begum, 2008). Perceived usefulness depends on online shopping and e-banking services like applying for a loan, transferring money, paying utility bills, online shopping, discounts, payments mode, etc. It is a vital factor in determining the adaptation of e-commerce; the greater the perceived usefulness of online shopping and e-banking, the more likely it is to adopt online shopping and e-banking.

6.2.2 Perceived Ease of Use

Perceived Ease of Use is defined as how innovation is welcomed or perceived with no difficulty learning, understanding, and operating (Jahangir & Begum, 2008). Further, it is explained as the degree to which consumers accept a new service or product better than its substitution. It is the degree to which the use of innovation is easy to understand and free of effort (Zeithaml et al., 2002). Perceived ease of use is the customer's ability to experiment with new innovative technology and quickly evaluate the benefit. Additionally, perceived ease of use determines online shopping and banking growth. It has a significant effect directly or indirectly on usage intention (Selase& Benedict, 2021). It is the way of getting information of authentication of easiness that buys heart to adopt e-commerce.

6.2.3 Perceived Risk

Security and privacy are essential in e-commerce studies. With the growth of the products and services, consumers are more concerned about privacy and security issues. These privacy and security issues come as an essential barrier while using online services. This perceived security risk is a vital predictor in online shopping and e-banking. People fear giving their personal information to the internet universe at the risk of losing privacy, so financial service customers are reluctant to use online services (Hanafizadeh et al., 2014). People fear giving their personal information to the internet universe at the risk of losing privacy; financial service customers are reluctant to use online services. Perceived risk indirectly and directly influences customer trust in transactions related to e-commerce (Jarvenpaa et al., 1999). The degree of the unwanted situation and dangerous beliefs of potential loss while adopting a new system or technology. Potential danger or loss of user's perception and tolerance of risk influence the adoption of any new technology or system.

6.2.4 Adoption of Ecommerce

Adoption of eCommerce in this study refers to corporate users' acceptance and actual use of online shopping and e-banking. Technology Acceptance Model (TAM) explains that customer adaptation behavior is found by the intentions to use that system, which determines perceived usefulness, ease of use, and risk. Customer adoption of e-commerce is also determined by the intention to perform that behavior. Hence, eCommerce adopted by a consumer is a person's readiness to adopt the system. Behavioral intentions will have a statistically significant positive effect on consumer adoption of e-commerce.

ECommerce integrates the TAM (Technology acceptance model) with perceived usefulness, ease of use, and risk in eCommerce adoption. Also, the impact of the factors on the customer's purchasing behavior is examined. The adoption of e-commerce can be examined through the determinants of usage intention and consumer behavior on online retail habituation.

6.3 Research Design

This study collects data from structured questionnaires by administering them to the respondent. The descriptive and casual design is used for the research. A quantitative approach is used to study as it focuses on collecting numerical data and is generalized to explore the characteristics and facts of the research. Casual methods examine the cause and effect relationship between the two variables that impact the independent variables on dependent variables. Moreover, this study also follows the analytical research design on eCommerce expansion after the post-COVID-19 crisis.

6.4 Data Collection

The study collected the primary data from 60 respondents from the corporate sectors of the Kathmandu Valley. Research data is collected with an electronic questionnaire distributed in Google forms. The question tool is the Likert 5 point questionnaire which is followed by 1 indicates strongly disagree to 5 indicates strongly agree. Correlation, regression, and hypothesis tests are used to make an analysis. As our study is interested in analyzing the impact of customer perception of adoption of e-commerce, the respondents were guaranteed that they were adopters of e-commerce, and non-adopters were removed from the data collection.

6.4.1 Demographic Profile of Respondents

Table 1 Respondents Profile

Age	**Frequency**	**Percent**
Below or Equal to 30 Years	19	31.66666667
Above 30 Years	41	68.33333333
Total	60	
Gender	**Frequency**	**Percent**
Male	37	61.66666667
Female	23	38.33333333
Total	60	
Birthplace	**Frequency**	**Percent**
Kathmandu Valley	32	53.33333333
Urban Area/Out of Kathmandu	18	30
Rural Area	10	16.66666667
Total	60	
Education Level	**Frequency**	**Percent**
Below or Equal to Higher Secondary Education	13	21.66666667
Bachelor or Equivalent Level	30	50
Master or Above Level	17	28.33333333
Total	60	

Participants were from corporate sectors like telecom, insurance companies, banking financing, and other e-distribution sectors from the Kathmandu Valley. Demographic factors of respondent profiles are segregated into two age groups; one is below or equal to 30 years, and the other is above 30 years. Since the population below 30 years is regarded as a younger age group, and above 30 years age group is regarded as an older age group, so age group is divided into two

groups. Gender group was found as two groups after survey data collection. According to Nepal's geographic area, birthplace groups were considered three different groups. Level primarily considers they are three groups which are necessary education level to take a supervisor position of corporate jobholders. In this study, other researcher's articles, books, and publications are reviewed as secondary data sources to examine the influence of a range of factors that affects the adoption of e-commerce. Questionnaires are modified to obtain acceptable, reliable values. Mainly, the questionnaires are based on Likert-scale questions, and the reliability of the scale is ensured using Cronbach's Alpha Test.

6.5 Data Analysis

6.5.1 Reliability Test

Cronbach's alpha is a measure of the scale of reliability. The reliability test is done using Cronbach's alpha calculation in all statements.

Table 2: Cronbach's Alpha Reliability Test

Data Reliability Test		
Factor on Scale	**No of Statements**	**Cronbach's Alpha**
Perceived Usefulness	6	0.622396147
Perceived Ease of Use	6	0.60856362
Perceived Risk	6	0.762312013
Adoption of Ecommerce	9	0.801698722

Table 2 shows that questionnaires are inferred as reliable for further data analysis.

According to the general rule, Cronbach's alpha value of 0.70 and above is good, 0 .80 and above is best, and 0.90 and above is excellent.

6.5.2 Analysis Tools

Inferential and descriptive statistical methods are used for the analysis of data collection. The statistical tools computed descriptive analysis, independent t-test/ANOVA, correlation, and linear regression analysis.

6.5.3 Factors and Services on Perceived Usefulness

Perceived Usefulness is the independent variable. The statement mentioned is the theme of the questionnaire, which is asked towards the respondents of corporate workers of Kathmandu Valley during the online survey. Statements in the perceived Usefulness discuss why consumers feel e-commerce is effective in their daily lives and how the particular e-commerce boosts their job performance. The survey used the 5-point Likert Scale to collect the information. Tabulated information was analyzed as descriptive statistics and is arranged with mean value-based ranks.

Table 3: Mean Perceived Usefulness

Statements	Total Response	Mean	Ranks(based on mean value)	S.D	Variance
Safety from contamination	60	4.35	1	1.204863028	1.4275
Accomplish Tasks	60	3.566666667	4	0.592800497	0.345555556
Useful	60	3.85	3	0.659352533	0.4275
Personnel information secure	60	3.066666667	6	0.709897741	0.495555556
Increase productivity	60	4.25	2	0.654191181	0.420833333
Products Availability	60	3.383333333	5	0.666172133	0.436388889

Table 3 shows that among the statements of Perceived Usefulness, the statement "safety" strongly relates to Perceived Usefulness from respondent responses. Similarly, the statement "increase productivity" has a second rank. Moreover, "Useful" got the third rank, "Task accomplishment" got the fourth rank, "products availability" got the fifth rank, and "secure personnel information" got the sixth rank. Here, the "availability of products" and "secure personnel information" in e-commerce sites get a minor rank for attribution of perceived usefulness effectiveness. We can conclude that the perceived usefulness factor has an important influence on the consumer toward e-commerce.

6.5.4 Factors and Services on Perceived Ease of Use

Perceived ease of use here is the degree to which the use of innovation is easily understood, and it is free of effort to the adoption of e-commerce through TAM and TRA approaches. The statements mentioned below are the theme of respondent's questionnaires during the survey.

Table 4 Mean Perceived Ease of Use

Statements	Total Response	Mean	Ranks(based on mean value)	S.D	Variance
Clear and Understandable	60	3.966666667	1	0.68807436	0.465555556
User Friendly Interface	60	3.616666667	4	0.61317917	0.369722222
Hassle Free Checkout	60	3.233333333	5	0.8899946	0.778888889
Fast average loading speed	60	3.183333333	6	0.50393928	0.249722222
Important information accessible	60	3.916666667	2	0.80867472	0.643055556
Familiar with material and Services ratings	60	3.866666667	3	0.81233429	0.648888889

In Table 4, descriptive statistics show that the statement "interaction of eCommerce is clear and understandable" ranks first. Similarly, the statement "important information accessible" is in rank second; "familiar with product rating" is in rank third; "user-friendly interface" is in rank fourth; "hassle-free checkout" is in rank fifth, and "the fast average loading speed is less than 2 seconds" statement is least rank sixth. It indicates that consumers find the interaction of eCommerce web portals clear and understandable.

6.5.5 Factors and Services on Perceived Risks

About the TRA theory, it is found that personal attitudes and performance of behavioral intentions are based on the results of the individual expectation. Here, the expectation is related to Perceived Risk for a user's perception, and their tolerance of risk is the main factor influencing the adoption of online shopping technology.

Table 5 Mean Perceived Risks

Statements	Total Response	Mean	Ranks(based on mean value)	S.D	Variance
Fear being cheated	60	2.066666667	6	0.73338469	0.528888889
Not convinced to buy only with visualization	60	2.216666667	4	0.64022418	0.403055556
No way to complain	60	2.25	3	0.54071516	0.2875
Fake products and services	60	2.45	2	0.594466	0.3475
No Return Policy	60	2.216666667	5	0.82527174	0.669722222
Delivery not in time	60	2.566666667	1	0.6978579	0.478888889

Descriptive Statistics shows that respondents like to accept the risk of the factor and services of eCommerce. There is the highest chance of not getting delivered on time. The second rank is "fear of getting fake products and services" from eCommerce; the third rank is for the statement that the respondent fears no way to complain if they get cheated by e-commerce sites and payment issues. The fourth rank is that some consumers are not convinced to buy any products and services only upon visualization. The fifth rank is for the statement where respondents fear not having a good return policy. The final rank is for the statement, which states that the respondents fear cheating while shopping and online banking. Overall, the average score for this independent variable is in the mid-range. This means the consumer's perception is neutral on the perceived risk variable for the electronic retailing service.

6.5.6 Factors and Services on Adoption of eCommerce

ECommerce adoption uses selling and buying, exchanging, or transferring products, services, and information using the internet. ECommerce is very advantageous to organizations, and its use expands the market with minimum capital investment to national and international markets.

Adopting eCommerce can be regarded as a consumer’s behavioral intentions that reflect a statistically significant positive effect on products and services through online shopping and banking. ECommerce adoption reduces paperwork, provides good customer services, and improves the brand image. In addition, eCommerce adoption has made the online shopping and e-banking process for the customer easier.

Table 6 Mean Adoption of Ecommerce

Statements	Total Response	Mean	Ranks(based on mean value)	S.D	Variance
check the reviews	60	4.35	1	0.54694839	0.294166667
Increase the frequency	60	4.166666667	2	0.6680776	0.438888889
Become skillful	60	4.05	5	0.69927323	0.480833333
Recommend Others	60	3.7	9	1.12445844	1.243333333
Ease and Friendliness	60	3.85	8	0.81977674	0.660833333
Reduced visibility of transactions	60	4	6	0.6377928	0.4
Excellent Customer Service representative	60	3.9	7	0.57342267	0.323333333
Comfortable	60	4.05	4	0.50169205	0.2475
Comparing different providers and suppliers	60	4.2	3	0.68395659	0.46

A statement in Table 6 shows the different factors or customer's desires and their level while adopting e-banking and online buying. The statement "check the reviews" is in the highest rank, followed by "increased frequency" in Rank 2. It shows that eCommerce customers tend to check the reviews before using eCommerce to buy, sell or transfer products or services. The frequency of use is also high in the market. The statement "Comparing different providers and suppliers" ranks third, followed by comfortable in ranks fourth. People are adopting e-commerce because better and quicker services can be accessed comfortably from any place. Become skillful in Rank 5th, Reduced visibility of transactions in rank 6th, excellent customer service representative in rank 7th, Ease and Friendliness is in Rank 8th, and Recommend others is in Rank 9th.

6.6 Descriptive Statistics of Variables

Descriptive Statistics, mean rank, standard deviation, and variance of variables are determined in the table below. The mean rank of Perceived Usefulness is highest among other independent variables, followed by the Perceived Ease of Use of Rank 2; Perceived Risk has a rank score of 3.

Table 7 Rank (Statistics of Variables)

Variables	Total Response	Mean	rank	S.D	Variance
Perceived Usefulness	60	3.744444444	1	0.89643194	0.801358025
Perceived Ease of Use	60	3.630555556	2	0.79318808	0.627399691
Perceived Risk	60	2.276836158	3	0.66941563	0.448117284

6.6.1 Variation of Perception of Customers by Demographic Variables

Independent T-tests/ ANOVA is performed to study the variation among the customers of different demography categories during the adoption of eCommerce. Demographic variables are age group, gender, education level, and birthplace. An Independent t-test is performed for two groups of categorical variables, and One Way Analysis of Variance (ANOVA) is performed for more than two groups to identify the significant difference through demographic variables.

6.6.2 Independent T-test for the variation of Perception by age groups

An Independent T-test is performed between the age factor and the respondent's observation of eCommerce service.

Table 8 Independent T-test by Age Group

Variables	Age Group	N	Mean	Variance	SD	P-value
Perceived Usefulness	Below or Equal to 30 Years	19	3.692982	0.380442	0.6168	0.62627
	Above 30 Years	41	3.768293	0.134553	0.366814	
Perceived Ease of Use	Below or Equal to 30 Years	19	3.552632	3.666667	1.914854	
	Above 30 Years	41	0.206953	0.169444	0.411636	0.359173
Perceived Risk	Below or Equal to 30 Years	19	2.192982	0.207602	0.455634	
	Above 30 Years	41	2.308943	0.157724	0.397144	0.347439

The P-value for all observations is greater than the level of significance of 0.05, which are 0.62627, 0.35917, and 0.34743, respectively. However, the customer perceives online shopping and e-banking, and the age of the consumers would not matter. Statistically, no significant difference existed between the age factor and the respondent observation of e-commerce services.

6.6.3 Independent T-test for the variation of Perception by gender

An Independent T-test is performed between the gender factor and the respondent's observation of eCommerce service.

Table 9 Independent T-test by Gender

Variables	Gender	N	Mean	Variance	SD	P-Value
Perceived Usefulness	Male	37	3.702703	0.205455	0.453272	0.377293
	Female	23	3.811594	0.215415	0.464128	
Perceived Ease of Use	Male	37	3.612613	0.12817	0.358008	
	Female	23	3.65942	0.273935	0.523388	0.70808
Perceived Risk	Male	37	2.306306	0.224558	0.473875	
	Female	23	2.217391	0.092007	0.303327	0.379234

The P-value for the observation is greater than the level of significance of 0.05 from the analyzed P-values 0.377293, 0.70808, and 0.379234, respectively. The above statistics indicate that services and products impact the adoption of e-commerce on individual independent variables with no variance by gender. Hence, gender does not matter in the customer's perception of usefulness, ease of use, and perception risk, with all p values more significant than the significance level of 0.05.

6.6.4 ANOVA Test for the Variation of Perception by Education Level

ANOVA test is used to compare the means of more than two population groups

Here ANOVA test is performed to do the statistical measurement to test if there is a statistically significant mean difference for each of the three groups across demographic variables. The three groups are below or Equal to Higher Secondary Education Level, Bachelor or Equivalent Level, and Master or Above Level. The table below shows no statistical mean difference in any of the below variables (Perceived Usefulness, Perceived Ease of Use, and Perceived Risk) as the P-value is more significant than 0.05(level of significance), which are 0.423090117, 0.110949452and 0.78669317 9respectively.

Table 10 ANOVA Test by Education Level

Table 10.1 ANOVA Test by Education Level for Perceived Usefulness

Perceived Usefulness

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Below or Equal to Higher Secondary Education Level	13	49.8333333	3.833333333	0.092592593
Bachelor or Equivalent Level	30	110	3.666666667	0.293103448
Master or Above level	17	64.8333333	3.81372549	0.145424837

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.365795207	2	0.182897603	0.873282234	0.423090117	3.158842719
Within Groups	11.9379085	57	0.209436991			
Total	12.3037037	59				

Table 10.2 ANOVA Test by Education Level for Perceived Ease of Use

Perceived Ease of Use

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Below or Equal to Higher Secondary Education Level	13	49	3.769230769	0.0997151
Bachelor or Equivalent Level	30	105.5	3.516666667	0.219061303
Master or Above level	17	63.3333333	3.725490196	0.145629085

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.792334925	2	0.396167463	2.285714695	0.110949452	3.158842719
Within Groups	9.879424334	57	0.173323234			
Total	10.67175926	59				

Table 10.3 ANOVA Test by Education Level for Perceived Risks

Perceived Risks

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Below or Equal to Higher Secondary Education Level	13	30.3333333	2.333333333	0.175925926
Bachelor or Equivalent Level	30	68.1666667	2.272222222	0.219316731
Master or Above level	17	37.8333333	2.225490196	0.103962418

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.085675381	2	0.042837691	0.240929635	0.786693179	3.158842719
Within Groups	10.13469499	57	0.177801666			
Total	10.22037037	59				

6.6.5 ANOVA Test for the Variation of Perception by Birthplace

ANOVA test is performed in the table below to check a statistically significant difference for each factor under study through the demographic variable birthplace. ANOVA test compares the means of more than two population groups.

Table 11 ANOVA Test by Birthplace

Table 11.1 ANOVA Test by Birthplace for Perceived Usefulness

Perceived Usefulness

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Kathmandu Valley	32	119.8333333	3.744791667	0.163054435
Rural	10	35.83333333	3.583333333	0.445987654
Urban	18	69	3.833333333	0.166666667

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.401793981	2	0.200896991	0.962125301	0.388197248	3.158842719
Within Groups	11.90190972	57	0.208805434			
Total	12.3037037	59				

Table 11.2 ANOVA Test by Birthplace for Perceived Ease of Use

Perceived Ease of Use

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Kathmandu Valley	32	115.8333333	3.619791667	0.185007841
Rural	10	36.33333333	3.633333333	0.344444444
Urban	18	65.66666667	3.648148148	0.107480029

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.00935571	2	0.004677855	0.025007282	0.975313504	3.158842719
Within Groups	10.66240355	57	0.187059711			
Total	10.67175926	59				

Table 11.3 ANOVA Test by Birthplace for Perceived Risks

Perceived Risks

SUMMARY				
Groups	*Count*	*Sum*	*Average*	*Variance*
Kathmandu Valley	32	73.5	2.296875	0.150061604
Rural	10	23	2.3	0.196296296
Urban	18	39.83333333	2.212962963	0.218318809

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.090374228	2	0.045187114	0.254261253	0.776364025	3.158842719
Within Groups	10.12999614	57	0.177719231			
Total	10.22037037	59				

Three groups for the birthplace are Kathmandu Valley, Rural, and Urban (Out of the Kathmandu Valley). Information of descriptive statistics variables samples indicated no statistically significant mean difference in Perceived Usefulness, Perceived Ease of Use, and Perceived Risk since the P-Value of each of the variables is 0.388197248, 0.975313504, and 0.776364025, respectively, which are more significant than 0.05.

6.7 Relationship of Perceived Usefulness/Perceived Ease of Use and Perceived Risk on Adoption of eCommerce

This relationship helps to know the relationship between the independent variables (Perceived Usefulness, Perceived Ease of Use, and Perceived Risks) associated with eCommerce adoption. The correlation between the variables is determined, which examines how the factors of customer's perceived usefulness, ease of use, and risk correlate with each other.

Table 12 Correlation Analysis

Table 12.1 Correlation

	Ecommerce Adoption	*Perceived Usefulness*	*Perceived Ease of Use*	*Perceived Risk*
E-commerce Adoption	1			
Perceived Usefulness	0.756307664	1		
Perceived Ease of Use	0.715949744	0.698320135	1	
Perceived Risk	-0.429948854	-0.377865288	-0.250114555	1

Table 12.2 T-test

	Ecommerce Adoption	*Perceived Usefulness*	*Perceived Ease of Use*	*Perceived Risk*
E-commerce Adoption				
Perceived Usefulness	8.80422768			
Perceived Ease of Use	7.809921352	7.42994536		
Perceived Risk	-3.626716668	-3.108174534	-1.967345311	1

Table 12.3 P test

	Ecommerce Adoption	*Perceived Usefulness*	*Perceived Ease of Use*	*Perceived Risk*
E-commerce Adoption				
Perceived Usefulness	2.79399E-12			
Perceived Ease of Use	1.27622E-10			
Perceived Risk	0.171280096	0.198162866	0.299379924	1

Table 12.4 Correlation with *

	Ecommerce Adoption	*Perceived Usefulness*	*Perceived Ease of Use*	*Perceived Risk*
E-commerce Adoption	1			
Perceived Usefulness	0.76***	1		
Perceived Ease of Use	0.72***	0.7***	1	
Perceived Risk	-0.43	-0.38	-0.25	1

The above Tables show the depicted correlation analysis of variables under the study, which helps determine the relationship between the defined variables. Correlation is done between the factors and the adoption of eCommerce. Here adoption of eCommerce is a dependent variable, and Perceived Usefulness, Perceived Ease of Use, and Perceived Risk are independent variables. Perceived Usefulness and Perceived Ease of use indication found positive and statistically significant relationships toward e-commerce adoption. However, Perceived risk has a negative and inverse relationship.

According to Table 11, the correlation for all samples between e-commerce adoption and perceived usefulness is positive and statistically significant at a 99 percent confidence level with a correlation coefficient of 0.76. Similarly, the relationship between e-commerce adoption and Perceived Usefulness is positive and statistically significant at a 99 percent confidence level with a correlation coefficient of 0.72, which means the customer's feelings on Perceived Ease of Use towards the adoption of e-commerce are positive. Hence, it can be said that the associated customer recognizes perceived Usefulness and Perceived Ease of Use for the adoption of e-commerce services in the Kathmandu Valley. Perceived Usefulness and Perceived Ease of Use are also statistically associated.

On the contrary, the relationship between e-commerce adoption and Perceived Risk is negative and statistically non-significant, with a significance level of 0.17128, more significant than 0.01(at 99 percent confidence level), and the correlation coefficient is -0.43. Hence, the result shows that the way cooperative workers perceive risk involved in e-commerce is not significantly correlated with their decision to adopt the e-commerce and how they perceive the usefulness and

ease of use of eCommerce. They are not aware of the risk involved in e-commerce when deciding to adopt an e-commerce service.

6.8 Impact of Perceived Usefulness, Perceived Ease of Use, and Perceived Risks on Adoption of Ecommerce

The impact of independent variables (Perceived Usefulness, Perceived Ease of Use, and Perceived Risks) on the dependent variables (adoption of eCommerce for online shopping and online banking) are analyzed by conducting the regression analysis.

Table 13 Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.816593637
R Square	0.666825169
Adjusted R Square	0.648976517
Standard Error	0.264119466
Observations	60

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	7.818593707	2.606197902	37.35997435	2.14934E-13
Residual	56	3.906509174	0.069759092		
Total	59	11.72510288			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	1.416580647	0.429310722	3.299662864	0.001687188	0.556567934	2.276593361
Perceived Usefulness	0.421005913	0.110032224	3.826205605	0.000329947	0.200584883	0.641426944
Perceived Ease of Use	0.389122004	0.112977782	3.44423477	0.001091525	0.162800313	0.615443695
Perceived Risk	-0.168618675	0.080687255	-2.089780784	0.041191522	-0.330254669	-0.006982682

The result shows that eCommerce is positive and statistically significant at a 99 percent confidence level with Perceived Usefulness and Perceive Ease of Use with the coefficients 0.421

and 0.389, respectively. Hence, the perceived usefulness and perceived ease of use positively impacts eCommerce services; that is, the increase in Perceived usefulness and perceived ease of use increases the adoption of e-commerce.

The impact of perceived risk on the adoption of e-commerce is negative, and it is not statistically significant at a 99 percent confidence level with a coefficient of -0.168. Moreover, the significance value (p-Value) is 0.04119, higher than 0.01. Perceived Usefulness and Perceived Ease of use brought a resilient impact on the customer's adoption of online shopping and e-banking with coefficient values of 0.421 and 0.389, respectively, with a statistically significant level of 1 percent.

7. Result of Data analysis

7.1 Hypothesis Result

Hypothesis 1 (Accepted)

H0: No significant mean difference between Perceived Usefulness and demographic factors
H1: A significant mean difference between Perceived Usefulness and demographic factors

Hypothesis 2 (Accepted)
H0: No significant mean difference between Perceived Ease of Use and demographic factors
H1: A significant mean difference between Perceived Ease of Use and demographic factors

Hypothesis 3 (Accepted)
H0: No significant mean difference between Perceived Risks and demographic factors
H1: A significant mean difference between Perceived Risks and demographic factors

The study is performed with a t-test/ANOVA to identify if significant variations exist between the demographic variables (age, gender, education level, and birthplace) and perception of e-commerce, i.e., perceived usefulness. The table (8, 9, 10, 11) shows that P-values are more significant than the level of significance of 0.05. Hence, it shows that the demographic variables of the respondents do not matter in the case of how corporate workers of Kathmandu valley perceive e-commerce.

Here none of the demographic variables have impacted independent variables (Perceived Usefulness, Perceived Ease of Use, and Perceived Risks). Hence Hypothesis 1, 2, 3 are accepted as there is no statistically significant mean difference between the Perceived Usefulness, Perceived Ease of Use, and Perceived Risks and demographic variables.

Hypothesis 4 (Rejected)

H0: No significant association of Perceived usefulness with the adoption of e-commerce
H1: A significant association of Perceived usefulness with the adoption of e-commerce

Hypothesis 5 (Rejected)

H0: No significant association of Perceived ease of use with the adoption of e-commerce.
H1: A significant association of Perceived ease of use with the adoption of e-commerce.

Hypothesis 6 (Accepted)

H0: No significant association of Perceived Risks with the adoption of e-commerce.
H1- A significant association of Perceived Risks with the adoption of e-commerce

Further, this study finds the customer perception and their e-commerce adoption behavior and the impact of customer perception on the adoption of e-commerce. This correlation is performed between the studied variables to examine the degree to which the factors of independent variables (Perceived Usefulness, Perceived Ease of Use, and Perceived Risks) are correlated with each other and with the adoption of e-commerce by the customers. Table 12 shows that dependent variable adoptions of e-commerce significantly correlate with the two independent variables (Perceived Usefulness and Perceived Ease of Use). In contrast, the adoption of e-commerce is not significantly correlated with another independent variable, Perceived Risks. So, Hypothesis 4 and 5 are rejected, and Hypothesis 6 is accepted. Hypothesis 4 and 5 are rejected because there is a statistically significant relationship between Perceived Usefulness, Perceived Ease of Use with the adoption of e-commerce. However, hypothesis 6 is accepted because there is a statistically non-significant relationship between Perceived Risk with the adoption of e-commerce.

Hypothesis 7 (Rejected)

H0: No significant impact of Perceived usefulness on the adoption of e-commerce
H1: A significant impact of Perceived usefulness on the adoption of e-commerce

Hypothesis 8 (Rejected)

H0: No significant impact of Perceived ease of use on the adoption of e-commerce.
H1: A significant impact of Perceived ease of use on the adoption of e-commerce

Hypothesis 9 (Accepted)

H0: No significant impact of Perceived Risks on the adoption of e-commerce.
H9: A significant impact of Perceived Risks on the adoption of e-commerce

The regression model is performed to know the impact of customer perception variables with the adoption of e-commerce employed in the study.

In Table 13, R^2 is equal to 0.667 which indicates that the regression model of independent variables explains 66.7 percent of the variance. Adjusted R^2 is equal to 0.6489, representing that the tune of 64.89 percent has the explanatory power of the regression models that hold the different number of predictors in e-commerce adoption, which are Perceived Usefulness, perceived ease of use, and perceived risks. Overall, the regression model fits the ultimate data in interpreting the F-value of 37.359, which is statistically significant at a 1 percent at 99 percent confidence level with a p-value of 0.000. Customer perception about the Perceived Ease of Use and Perceived Usefulness of e-commerce service brought a resilient impact on the customer's adoption of the e-commerce service with beta coefficient values of 0.421 and 0.389, respectively, with a statistically significant level of 1 percent.

Hypothesis 7 and 8 are rejected. The finding represents a statistically significant impact of Perceived Usefulness and Perceived Ease of Use on e-commerce adoption, respectively, because the P-value is less than 0.01. Whereas hypothesis 9 is accepted as the analysis data indicate a statistically non-significant relation between Perceived Risk on e-commerce adoption with a P-value greater than 0.01.

This section discusses the results of the data analysis and interpretation of the study's findings. At first, this study shows an overview of respondent’s demographic profiles and characteristics. Secondly, it analyzed the data using descriptive statistics-test, correlation, and regression analysis. The technology acceptance model (TAM) theory is linked with perceived Usefulness

and Perceived Ease of Use. Similarly, the theory of reasoned actions is linked with perceived risk as it explains the relationship between attitudes and behavior within human action. Diffusion of Innovations theory explains how innovations spread in a population where innovation is a behavior, idea, or object perceived as new by its audience.

8. Conclusion

The present study presents how perceived usefulness, ease of use, and risk affects customer's adoption of e-commerce during the post-COVID-19 outbreak, mainly online shopping and e-banking. The post-outbreak of the COVID-19 crisis impacted a long-term shift of e-commerce towards digital business transformation from traditional retail to electronic retailing and adopted positively to be saved through social distancing. The data analysis shows the impact of customer perception of usefulness, ease of use, and perceived risks on the adoption of e-commerce in online shopping and e-banking. The survey is done on 60 respondents who are corporate workers in the Kathmandu Valley. Data is analyzed using descriptive statistics-test, correlation, and regression analysis. In general, the finding supports the developed hypothesis relationship.

Among other independent variables, perceived usefulness became the highest persuading rank for the adoption of e-commerce. Perceived ease of use is the second most influencing factor for the adoption of e-commerce services, and perceived risk is the least important variable. Further, analysis shows that demography factors such as age, gender, education level, and birthplace do not have a statistically significant relationship for all independent variables. Moreover, the study analyzes the impact of customer perception on the adoption of e-commerce. It shows that customers have a positive impression of perceived usefulness and perceived ease of use. The perceived risk negatively influences it, and it is not statistically significant for online shopping and e-banking. It shows that consumers are not interested or unaware of analyzing the risk of using e-commerce transactions while deciding whether to adopt online shopping and e-banking services.

It can be said that an increase in perceived usefulness and ease of use leads to increased customer adoption of e-commerce. However, increased perceived risk leads to a decrease in customer adoption of online shopping and e-banking. PU and PEOU are determinants of purchase intention with a positive linear relationship with dependent variables of e-commerce adoption. However, perceived risk is found to be a linear negative interpreter to influence but accept the adoption of e-commerce.

The findings of this research will benefit the retailers, commerce service developers, bankers, and policymakers to determine the success of online shopping and e-banking in Kathmandu Valley. The findings recommend that customers are attracted not only by introducing an e-commerce system, but it is also a necessity to develop e-commerce systems that are easy to use, comfortable and secure. Government policy could revise national policy by evaluating the impact and significance of Perceived Usefulness, ease of use, and risk on e-commerce adoption from consumer's perspective and encouraging in-hand click-based shopping experience from the comparatively reasonable price and easy fashioned.

9. Next Step

All research is with limitations, and this study also has certain limitations. The participant's number or sample size could not be significant due to the distant coordination and pandemic situations, and only online survey forms are used at such times. However, the COVID cases are fewer; the people are concerned and not at ease. This research could be more effective if a survey could be conducted all over Nepal, but the participants are only from Kathmandu Valley, the capital city. Ecommerce is still growing in Nepal, and people are more concerned about the delivery time, ease of use, and quality vendors rather than security issues. However, the uses of secure e-commerce platforms are also equally important.

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