Exploring the E-Pharmacy Landscape in Goa: A Study on Factors Influencing Adoption and Behavioural Intention

A Dissertation for

Course code and Course Title: COM-651 Dissertation

Credits: 16

Submitted in partial fulfilment of Master's Degree

Master of Commerce

by

NILAM KUMARI

Seat Number: 29-2022

ABC ID-3443-4817-6577

PRN: 201909294

Under the Supervision of

ASST. PROF. AAKRUTHI ALARNKAR

Goa Business School
Commerce

GOA UNIVERSITY

APRIL 2024

DECLARATION BY STUDENT

I hereby declare that the data presented in this Dissertation report entitled, "**Exploring the E-Pharmacy Landscape in Goa: A study on Factors Influencing Adoption and Behavioural Intention**" is based on the results of investigations carried out by me in the Post Graduate Department of (Commerce) at the Goa Business School, Goa University under the Supervision of **Asst. Prof. Aakruthi Alarnkar** and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities will not be responsible for the correctness of observations / experimental or other findings given in the dissertation.

I hereby authorize Goa Business School, Goa University authorities to upload this dissertation on the dissertation repository or anywhere else as the UGC regulations demand and make it available to any one as needed.

Date: 30/04/24

Place: Goa University

Nilam Kumari

Seat No: 29-2022

COMPLETION CERTIFICATE

This is to certify that the dissertation report "**Exploring the E-Pharmacy Landscape in Goa: A study on Factors Influencing Adoption and Behavioural Intention**" is a bonafide work carried out by Ms. Nilam Kumari under my supervision in partial fulfilment of the requirements for the award of the degree of Master's in Commerce in the Discipline Commerce at the Goa Business School, Goa University.

Date: 30/04/24

Asst. Prof. Aakruthi Alarnkar

Goa Business School ★ Goa University ★

Signature of Dean of the School

School/Dept Stamp

Date: 30/04/2024

Place: Goa University

ACKNOWLEDGEMENT

I would like to express my sincere gratitude towards all those who mentored and supported me in the completion of this project.

Foremost, I wish to express my deepest gratitude to my research guide, **Asst. Prof. Aakruthi Alarnkar**, who guided and motivated me during the course of the study, and without her help, this dissertation would not have been completed.

I would also like to extend my thanks to all our teachers for the required support needed to complete this project.

I extend my gratitude to the respondents who played a significant role in my research by generously sharing their valuable opinions. Their contributions have greatly enriched the depth and breadth of my work.

This project has been a profound learning experience for me, and I aspire for it to serve as a guide for future references.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

ABREVIATIONS USED

Entity	Abbreviation
Unified Theory of acceptance and use of Technology	UTAUT
Online Pharmacy	OP
Behavioural Intention	BI
Actual Usage Behaviour	AUB
Technology Discomfort	TD

Exploring the E-Pharmacy Landscape in Goa: A Study on Factors Influencing Adoption and Behavioural Intention

ABSTRACT

The aim of the study is to examine the factors influencing users' behavioural intention and adoption of e-pharmacy applications and websites, using the extended UTAUT2 model. The study was carried out using a structured questionnaire, among 210 users of applications. To validate the proposed model, Structural Equation Modelling (SEM) technique was used. The findings reveal that effort expectancy, price value (PV), facilitating conditions (FC) and customer centric services (CCS) are significantly related to the BI to use e-Pharmacy services. On the other hand, performance expectancy (PE), Social Influence (SI), Switching Cost (SC) and Website Information (WI), Interestingly, the structural equation modelling results also confirmed that technology discomfort has no moderating effect on the relationship between Behavioural Intention (BI) and actual usage behaviour (AUB). The service providers need to build trust and user confidence, a platform can strategically partner with healthcare professionals for endorsement, provide clear and comprehensive information on offerings, policies, and procedures. This includes ensuring accurate product descriptions, medication information, and transparent privacy policies on the website. Additionally, continuously monitoring user feedback and addressing usability concerns demonstrates a commitment to user experience and ongoing improvement.

(Keywords- E-Pharmacy, UTAUT-2, Behavioural Intention, Actual Usage Behaviour, Technology Discomfort)

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Previously the main source of news, entertainment, and communication, the internet is increasingly used for business transactions. Indeed, a growing number of businesses and customers are drawn to online retail. Businesses use the internet to market and improve the perception of their goods. The consumer's decision about what, when, and how to buy has been influenced by the internet(Baid & Ghosh, 2021). With more and more people turning to the internet as a substitute means of obtaining medical information and making pharmaceutical purchases, the idea of online pharmacies is growing. Customers benefit from the efficiency and convenience offered by online pharmacies. They help customers who are confined to their homes and in areas where traditional pharmacies are not easily accessible (Srivastava & Raina, 2020). The attitude towards buying medications online can be predicted by one's general internet usage and online purchasing habits. This basically indicates that there would be a higher likelihood of online drug purchases among the respondents who use the internet and make purchases of items (Fittler et al., 2018).

The use of online health service technology was considered as migrating from the physical (brick and mortar) platform toward the e-commerce platform for providing the services(Nayak et al., 2023).

OPs gave patients and other consumers the chance to improve their access to products, including medications and services, after the COVID-19 pandemic struck, imposing quarantine and self-isolation worldwide. This was evident in an increase in the sales and dispensing of medications through Online Pharmacies (OPs)(Fittler et al., 2018).

With a projected compound annual growth rate (CAGR) of around 9.5% between 2023 and 2030, the size of the global online pharmacy industry is expected to increase from its estimated value of USD 18.5 billion in 2022 to USD 38.2 billion by 2030 (Research & Research, 2024). It is yet an evolving concept in India. It is at a very nascent stage but has immense potential to grow. As per a report by CRISIL, this industry is anticipated to grow at 55% CAGR

(Basu & Shenbagaraman, 2016) Just slightly more than 2% of respondents in a recent Indian study preferred to buy medications online, despite the fact that more than 83% of respondents were aware of online pharmacies (Bansal et al., 2022). Despite the obstacles, the industry has seen a sizable influx of new players as e-commerce in the nation has grown. A respectable

proportion of patients planned to buy drugs online in the future, despite a slight but significant tendency towards rejection towards online pharmacies being found (Fittler et al., 2018).

Major players in online pharmacies in India are: Pharmeasy, Net meds, 1mg, Medibuddy, Medlife, Apollo Pharmacy, Amazon and Flipkart.

With the emergence of e-pharmacies that provide consumers with a platform to buy prescription drugs and other e-services, the online pharmacy market in India has experienced substantial expansion in recent years. The Indian pharmaceutical market is predicted to grow from its 2021 valuation of US$ 41 billion to US$ 65 billion by 2024. There are currently 250 online pharmacies in India, and by 2022, e-pharmacies will have grown to $3.6 billion at a compound annual growth rate of 63% (Dcruz AC et al., 2022). The government's Digital India initiative, the country's fast internet adoption rate, and the government's growing support for e-pharmacies are the main drivers of this expansion. Unfortunately, the sector also has to deal with issues like data privacy breaches, exploitative pricing, and the sale of medications without the required authorization, which has prompted demands for an outright ban on online pharmacies (Dcruz AC et al., 2022).

The Drugs Controller General of India (DCGI) has issued show-cause notices to 20 e-pharmacies, including Amazon, Flipkart, Medi Buddy, Apollo, Amazon, and Tata 1mg, for allegedly selling drugs online in violation of regulations. This indicates that the regulation of online pharmacies in India is still in flux. While it considers a PIL from a chemist's body, the Delhi High Court has also suspended online chemists' ability to sell medications without a licence. The current drug rules in India are being replaced by a new legislation that the government is drafting. This new law is likely to feature strict guidelines for internet pharmacies. Anticipated to include measures governing internet pharmacies, the New Drugs, Medical Devices and Cosmetics Bill, 2023 aims to supersede the current Drugs and Cosmetics Act of 1940 (Online, 2023).

Given this, the goal of the study is to investigate Goa's acceptance and reach of online pharmacies. By analysing the effects of crucial elements like performance expectancy, effort expectancy, social influence, facilitating conditions, price value, and website information, this study advances the unified theory of acceptance and use of technology-2 (UTAUT-2). It also

aids in comprehending the moderating role of technology discomfort in the presence of other variables like switching costs and customer-centric services. The aforementioned elements clarify the part they play in Goa's adoption of the e-health strategy.

Furthermore, this study significantly improves theory by looking at Technology Discomfort as a moderating factor that affects the relationship between behavioural intention and actual usage behaviour.

1.2 TECHNOLOGY DISCOMFORT

The definition of Technology discomfort (TD) is feeling powerless over technology and overwhelmed by it (Parasuraman,2000). Several factors, including Price Value (PV), Habit (HA), Hedonic Motivation (HM), Social Influence (SI), and Service Quality (SQ), significantly impact older people's BI over the adoption and use of mobile health services Facilitating condition & Performance Expectancy did not significantly impact adoption intention (Palas et al., 2022). There is little scientific proof of their appeal to younger generations.

(Meuter et al., 2003) discovered that the key advantages of utilising SSTs were availability, convenience, simplicity of usage, and time savings. Additionally, they discovered that self-service technology (SST) utilisation and general satisfaction with SST interactions were both impacted by technology anxiety (TA).
According to the (Zhang & Zhang, 2024) findings, users' behaviour and perceptions may be influenced by technological fear. At first, it might concentrate on technical features like usability, stability, and availability. But when people learn about the flaws in the technology, their worry can start to include privacy issues.

(Gani et al., 2022) stated that although new technologies are becoming more widely used, research on TD has not gotten enough attention and that more study is still necessary.

Despite the industry's enormous growth potential, the restrictions imposed by Indian law and the lack of an upgrade when it comes to the sale of prescription drugs through online marketplaces are the main growth inhibitors(Basu & Shenbagaraman, 2016).

1.3 RESEARCH OBJECTIVE

Research has specific goals and focuses thanks to its objectives. The goal of this study is to examine the public awareness and usage of e-pharmacy in Goa and investigate the factors influencing the adoption and purchase intention of customers via e-pharmacy.

1.4 HYPOTHESIS

H1: Performance Expectancy positively influences the BI to use e-Pharmacy.

H2: Effort Expectancy positively influences the BI to use e-Pharmacy.

H3: Social Influence positively influences the BI to use e-Pharmacy.

H4: Facilitating Conditions positively influence the BI to use e-Pharmacy.

H5: Price Value positively influences the BI to use e-Pharmacy.

H6: Switching Cost positively influences the BI to use e-Pharmacy.

H7: Website Information positively influences the BI to use e-Pharmacy.

H8: Customer Centric Services positively influences the BI to use e-Pharmacy.

H9: Behavioural Intention (BI) positively influences Actual Usage Behaviour (AUB) in e-Pharmacy.

H10: Technology Discomfort plays a significant moderating role in the relationship between BI and AUB.

1.5 RESEARCH GAP

The scope of this study includes both e-pharmacies with physical equivalents, such as Apollo and Wellness Forever, and specialised internet pharmacies, such as 1mg, Pharmeasy, and Netmeds. It also covers online retailers selling a range of goods, including both prescription and over-the-counter medications, such as Amazon and Flipkart. A previous study supported this all-encompassing strategy by showing that consumers who purchase online now have a higher likelihood of becoming future e-pharmacy clients since they are accustomed to utilising technology. This research is also exclusive to the developing Indian state of Goa**.**

1.6 RESEARCH QUESTION

1. What are the buying habits and pattern on e-pharmacy platforms?

2. What are the factors that influence the purchase intention and adoption of e-pharmacy?

CHAPTER 2: LITERATURE REVIEW

2.1 THEORETICAL UNDERPINNING AND HYPOTHESIS

Numerous models have been created to investigate usage intention and acceptance of Information Systems (IS). In the past, researchers have used a variety of models and theories to examine customers' behavioural intentions to embrace new technologies.

Some of these models are the technology acceptance model (TAM)(Çelik, 2011) , Smart healthcare technologies (SHT) (Gani et al., 2023), Pull Push Mooring (PPM) (Nayak et al., 2023), Theory of Reasoned Action (TBP)(Venkatesh & Davis, 2000).

UTAUT-2 by incorporating additional variables pertinent to adopting e-pharmacy systems, enriching the theoretical framework and addressing contextual nuances. Drawing on the foundational work of Venkatesh et al. (2012), the research introduces customer centric services ,website information ,switching cost and the crucial conditional variable of Technology Discomfort into the UTAUT-2 model (Venkatesh et al.,2012)**.**

The four antecedents of the traditional UTAUT model—performance expectancy, effort expectancy, social influence, and facilitation condition—are the conceptual foundation of the extended UTAUT. These antecedents determine both actual use behaviour and behavioural intention to adopt technology, like wearable medical equipment (Larnyo et al., 2022).

Because UTAUT-2 has a far stronger predictive potential for determining consumer intention, it outperforms all these theories(Ter Ji-Xi et al., 2021)(Tamilmani et al., 2021).

PERFORMANCE EXPECTANCY

The efficiency with which a user completes their tasks after implementing a technology is known as performance expectancy(Venkatesh et al.,2012) However, it has greatly expanded to numerous enterprises and programmes, such as the adoption of online pharmacies and online reservations that guarantee the efficacy of multiple internet services and packages to cut expenses and offer clients convenience. (Salimon et al., 2018).Online purchase intentions are greatly impacted by customer expectations or realisations of the practical benefits associated with online purchasing (e.g., time savings, deal bargaining, round-the-clock convenience, broad product availability, and hassle-free shopping) (Çelik, 2011).

By enabling online medication purchases, customers can reduce their reliance on physical stores and have access to the pharmacy around-the-clock. When a patient has a condition for which mobility is an issue, "home delivery" of the medication helps the patient. Customers are more likely to accept and use the platform if they think that adopting and using the online pharmacy can improve their treatment patterns. As a result, this study postulates that:

H1: Performance Expectancy positively influences the BI to use e-Pharmacy.

EFFORT EXPECTANCY

The term "EE" describes how easy it is to utilise technology (Venkatesh et al., 2003).
The second important variable is effort expectancy, based on the UTAUT-2 theory. Effort expectancy, particularly in the context of the health industry, is a person's estimate of the amount of work necessary to complete a task using an information system to influence online activities(Venkatesh et al.,2012). The business connected to people's use of technology is affected by the level of effort required. However, the basis of the UTAUT model is effort expectancy (Davis, 1989; Iranmanesh el al., 2022).While it was observed that as users' technology experience increased, its predictive power decreased over time in determining BI, more recent research indicates that its predictive power holds true in cases of voluntary technology adoption (like online shopping) even beyond the initial experience period
(Lin and Nguyen, 2011). Therefore, this study postulates the following hypothesis:

H2: Effort Expectancy positively influences the BI to use e-Pharmacy.

SOCIAL INFLUENCE

Social influence is the extent to which a person thinks other social advocates, such as friends and family, may use technology in a social setting for their own ends(Venkatesh et al., 2003) .People frequently behave in ways that reflect their social interactions with others when it comes to accepting technology(Ratten, 2015). Children, friends, family, and professional carers can all have an impact on how well-received new technology is (Porter & Ganong, 2002). Consumers' behavioural intention to accept online shopping (Soh et al., 2020) and health information technology, including mHealth (Alam et al., 2020) and e-health (Boontarig et al., 2012), has been shown to be significantly positively impacted by SI. Based on the discussion, this study hypothesises that SI may positively affect consumers' intention to use online pharmacies. As a result, the following hypothesis is put forth:
H3: Social Influence positively influences the BI to use e-Pharmacy.

FACILITATING CONDITIONS

The degree to which a person feels that there is a technical and organisational infrastructure in place to facilitate using the system is known as FC(Venkatesh et al., 2003).
(Mahardika et al., 2019) looked at the pharmaceutical industry's enabling environments and customer experiences with technology adoption based on how frequently these technologies were used. The presence of outside help from staff members or technical support can boost customer confidence and encourage the uptake of new technologies(Al Halbusi et al., 2024).
According to a study by (Boontarig et al., 2012), FCs have a beneficial impact on consumers' behavioural intentions and use of cell phones for health services (Aggelidis & Chatzoglou, 2009) study found that FCs have a major impact on people's behavioural intentions to use health information systems.(Bhattacherjee & Hikmet, 2008) verified the crucial influence of infrastructure support on the use of health information systems. Therefore, this study postulates the following hypothesis:

H4: Facilitating Conditions positively influence the BI to use e-Pharmacy.

PRICE VALUE

In order to ascertain the perceived value of goods or services, marketing researchers typically consider both the monetary cost and price in addition to the quality of the goods or services(Zeithaml, 1988). In keeping with these concepts, we define price value as the cognitive trade-off that users make between the applications' alleged benefits and their actual cost(Dodds et al., 1991).
In an analysis of the various elements influencing technology adoption and an increased awareness of the significance of transaction cost analysis, the conclusion drawn by the author that price-value can play a significant role in influencing consumer’s decisions to adopt mHealth is supported by (Dwivedi et al., 2016).

When the advantages of utilising a technology are thought to outweigh the financial costs, the price value is positive and has a favourable effect on intention(Venkatesh et al.,2012). In order to anticipate behavioural intention to utilise a technology, therefore price value is included, as a result, the following hypothesis is put forth:

H5: Price Value positively influences the BI to use e-Pharmacy.

SWITCHING COST

Switching cost (SWC) measured the degree of inconvenience caused by the need for additional resources throughout the process of looking for, selecting, and implementing alternatives to the in-use system(Bansal et al., 2005).Some research participants had negative experiences as a consequence of interface issues with the online store, which might lead them to shop at another online retailer (Vera-Martínez, 2023).The SWC included both financial and non-financial expenses associated with moving from one current business model to another, such as time, effort, and psychological costs (Han et al., 2011).As a result, the following hypothesis is put forth:

H6: Switching Cost positively influences the BI to use e-Pharmacy.

WEBSITE INFORMATION

The majority of online pharmacies have comprehensive information on their products, including adverse effects, dosage recommendations, and mechanisms of action. It was discovered that purchasing medications from internet pharmacies is influenced by this comprehensive information on the medication(Dutta & Bhattacharjee, 2021).

(Zorn et al., 2011) discovered a positive relationship between BI and WI sources in healthcare. (Soltani-Nejad et al., 2020)observed that WI can favourably influence the achievement of initiatives aimed at increasing technology adoption. Consequently, this study put forth the following hypothesis.

H7: Website Information positively influences the BI to use e-Pharmacy.

CUSTOMER CENTRIC SERVICES

Although, customer centric service is frequently regarded as a touchpoint after a purchase, it is becoming an increasingly important part of outstanding consumer experiences (Sheth et al., 2023). (Priya & Subbulakshmi, 2022) showed a matrix of the customers' preference towards the variables related to e-pharmacies which includes Customer centric service as factor

As a result, the following hypothesis is put forth:

H8: Customer Centric Services positively influences the BI to use e-Pharmacy.

BEHAVIOURAL INTENTION AND ACTUAL USAGE BEHAVIOR

According to IS research, BI—defined as the propensity to utilise a service or product—is a major predictor(Alam et al., 2020). According to earlier research, BI and AUB in the healthcare industry are positively correlated (Ndayizigamiye et al., 2020; Gani et al., 2022). Therefore, subsequent hypothesis has been proposed:

H9: Behavioral Intention (BI) positively influences Actual Usage Behaviors (AUB) in e-Pharmacy.

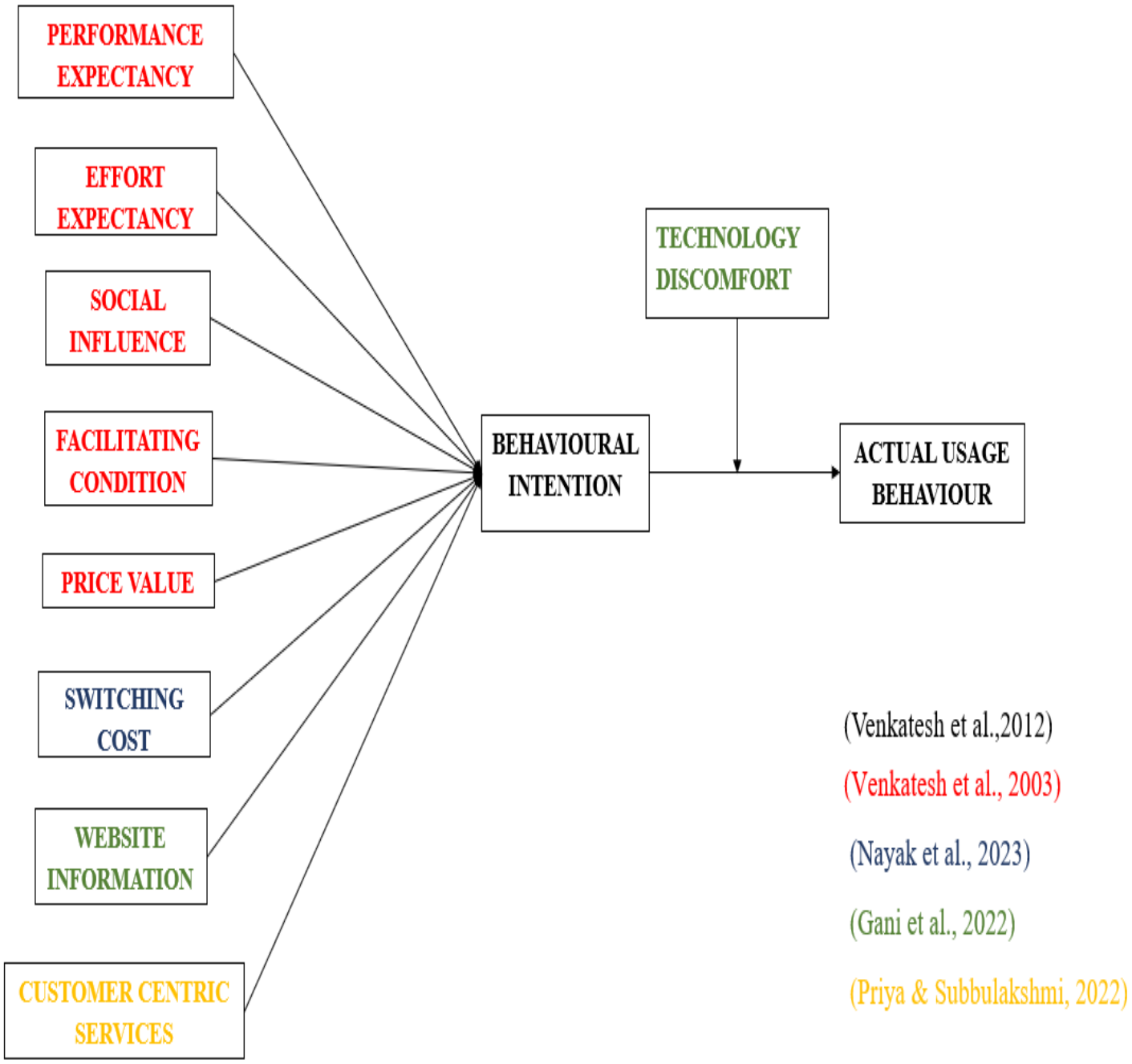
TECHNOLOGY DISCOMFORT AS A MODERATOR

(Osswald et al., 2012) used the term "anxiety" to describe how a person reacts to a situation with apprehension, uneasiness, or feelings of arousal. Meanwhile, other researchers used the term "technophobia" to refer to negative emotional responses and attitudes towards technology applications that aren't computer-related in order to symbolise technology anxiety (Anthony et al., 2000). Therefore, the user's sense of helplessness or lack of confidence in their ability to handle technology effectively can be used to define technology anxiety. This idea, however, can also apply to anxiety associated with technological tools in general (Alkhawaja et al., 2021). Thus, this theory can be developed in the context of e-pharmacy.

The relationships between Behavioural Intention (BI) and Actual Usage Behaviour (AUB) among online pharmacy clients, as well as the moderating role of Technology Discomfort (TD), are demonstrated by (Jeng et al., 2022) and (Gani et al., 2022). As a result, the following hypothesis is put forth:

H10: Technology Discomfort plays a significant moderating role in the relationship between BI and AUB.

Figure 1: Proposed Model



Source: Authors' own compilation

CHAPTER 3: RESEARCH METHODOLOGY

3.1 SAMPLE AND DATA COLLECTION

The purpose of this study is to investigate the factors influencing Goa's adoption and usage of websites and applications for online pharmacies. It has been determined that a quantitative approach is appropriate for the goals of this study. Convenience sampling was used to conduct an online survey with respondents using a structured questionnaire. Friends, family, and neighbours received a survey-related message with a URL link to the Google Form. 210 out of 225 valid responses were taken into consideration for data analysis after the useless data was filtered out. The extended UTUAT2 proposed model was validated using Smart PLS software, and the respondents' demographic profile was obtained using Jamovi

3.2 STATEMENTS DEVELOPMENT

The structured questionnaire was divided into two sections: first, to understand the demographic profile of users of e-pharmacy, and second, to identify the factors influencing intention to buy e-pharmacy products. The demographic profile includes gender, age, education, income, occupation, location, marital status, frequency of purchase, and experience with e-pharmacy. The proposed model consists of ten constructs and a moderator, which were measured using 36 items. Items used to measure PE, EE, SI, FC and PV were adopted from (Venkatesh et al., 2003); (Venkatesh et al.,2012), SW was captured from (Nayak et al., 2023), WI and TD from (Gani et al., 2022) and CCS from (Priya & Subbulakshmi, 2022)

CHAPTER 4: ANALYSIS AND RESULT

4.1 DESCRIPTIVE STATISTICS

Table 4.1.1: Demographic Profile of the Sample respondents (N*=210)

Demographic item	Categories	Frequency	%	Cumulative %
Gender	Male	89	42.4	42.4
	Female	121	57.6	100
Marital status	Married	63	30	30
	Unmarried	147	70	100
Age	Below 18	10	4.8	4.8
	18-30	139	66.2	71
	31-40	27	12.9	83.8
	41-50 years	19	9	92.9
	More than 50	15	7.1	100
Place of Residence	Urban	133	63.3	63.3
	Rural	77	36.7	100
Occupation	Student	120	57.1	57.1
	Employed (Govt)	14	6.7	63.8
	Employed (Private)	41	19.5	83.8
	Self Employed	15	7.1	90.5
	Unemployed	10	4.8	95.2
	Homemaker	10	4.8	100
Education	10^{th} Std	15	7.1	7.1
	12^{th} Std	22	10.5	17.6
	Diploma	18	8.6	26.2
	Graduate	75	35.7	61.9
	Post Graduate	69	32.9	94.8
	Doctoral	1	0.5	95.2
	Professional	10	4.8	100
Monthly Income	Below 25,000	131	62.4	62.4
	25,000 – 50,000	38	18.1	80.5
	50,000 – 75,000	20	9.5	90
	75,000 – 1,00,000	14	6.7	96.7
	More than 1,00,000	7	3.3	100
Household Size	1	10	4.8	4.8
	2-3	56	26.7	31.4
	4-5	108	51.4	82.9
	6 or more	36	17.1	100
Location	North Goa	84	40	40
	South Goa	126	60	100

Source: Authors' own compilation

Table 4.1.2: Shoppers experience with E-Pharmacy

Respondent Opinion	No of responses	%	Cumulative %
Experience with E-Pharmacy	165	78.6	78.6
New to E-Pharmacy	45	21.4	100

Source: Authors' own compilation

Table 4.1.3: Frequency of shopping Pharmacy Products

Respondent Opinion	No of responses	%	Cumulative %
Weekly	7	3.3	3.3
Monthly	50	23.8	27.1
Eventually	117	55.7	82.9
Never	36	17.1	100

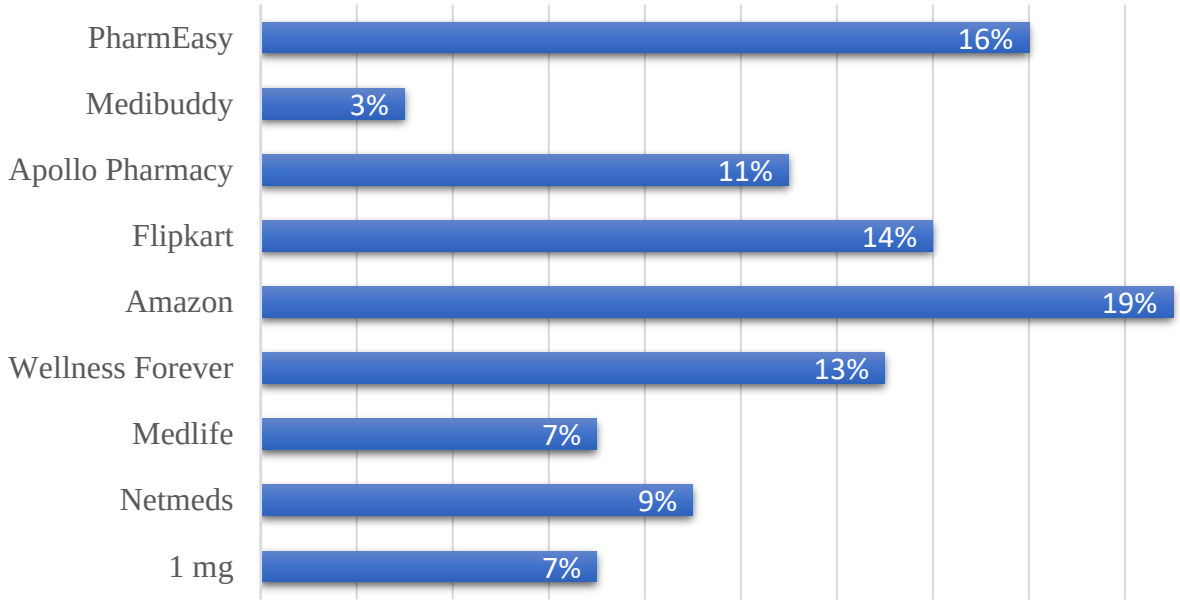
Source: Authors' own compilation

Table 4.1.1 describes the demographic profile of the sample respondent, which reveals that there was a total of 210 respondents in the sample, among which the majority, i.e., 57.6 percent, were female and the remaining 42.4 percent were male respondents. The age group is classified into five categories: below 18 years, 18–30 years, 31–40 years, 41–50 years, and above 50 years. From the table, it is observed that most of the sample respondents fall under the age group of 18–30 years, which consists of 66.2 percent of the total sample respondents, followed by the age group of 31–40 years (12.9%), 41–50 years (9%), 50 years and above (7.1%), and below 18 (4.8%). The majority of the sample respondents are students (57.1%), which means they don't have any regular income sources. But they can order a medicine from e-pharmacy for their family members and 19.5% are private sector employees followed by self-employed (7.1%), government. employees (6.7%), unemployed (4.8%), and homemakers (4.8%).

Marital status is a very important factor that may influence the buying pattern. 70% of the sample respondents are unmarried, and the remaining 30% are married. The majority of the sample were graduates (35.7%) followed by post-graduates (32.9%), 12th pass (10.5%), and diploma (8.6%).

78.6% of respondents had experience with online buying of pharmacy products; on the other hand, 21.4% were new users of e-pharmacy. Majorly 55.7% of the respondents used e-pharmacy eventually followed by monthly usage of 23.8%.

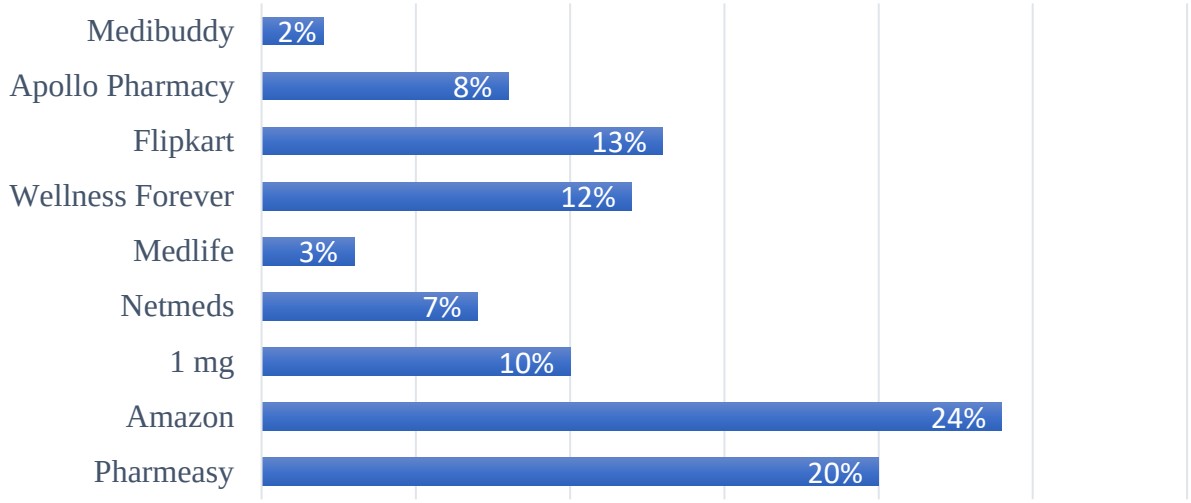
Fig 2: E-Pharmacy Platform Awareness



Source: Authors' own compilation

Respondents were most aware of e-pharmacy platforms like Amazon (19%) followed by Pharmeasy (16%), Flipkart (14%), Wellness Forever (13%), Apollo Pharmacy (11%), Netmeds (9%), Medlife(7%) and 1 mg(7%) and Medibuddy (3%).

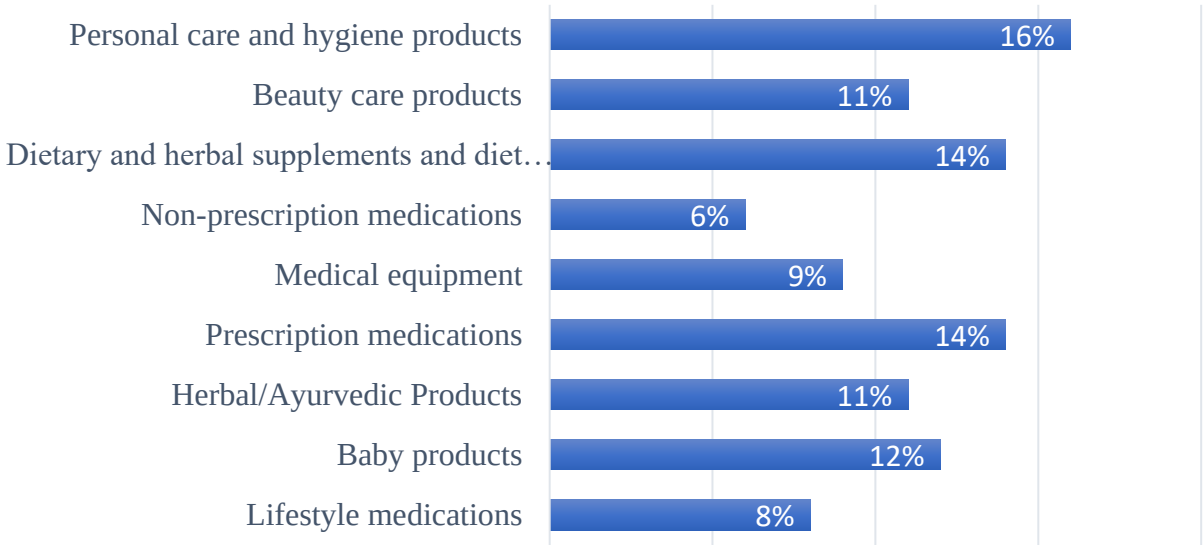
Fig 3: E-Pharmacy Platform Usage



Source: Authors' own compilation

Most used e-pharmacy platform in Goa is Amazon (24%) followed by Pharmeasy (20%), Flipkart (13%), Wellness Forever (12%), 1 mg (10%), Apollo Pharmacy (8%), Netmeds (7%), Medlife (3%) and Medibuddy (2%)

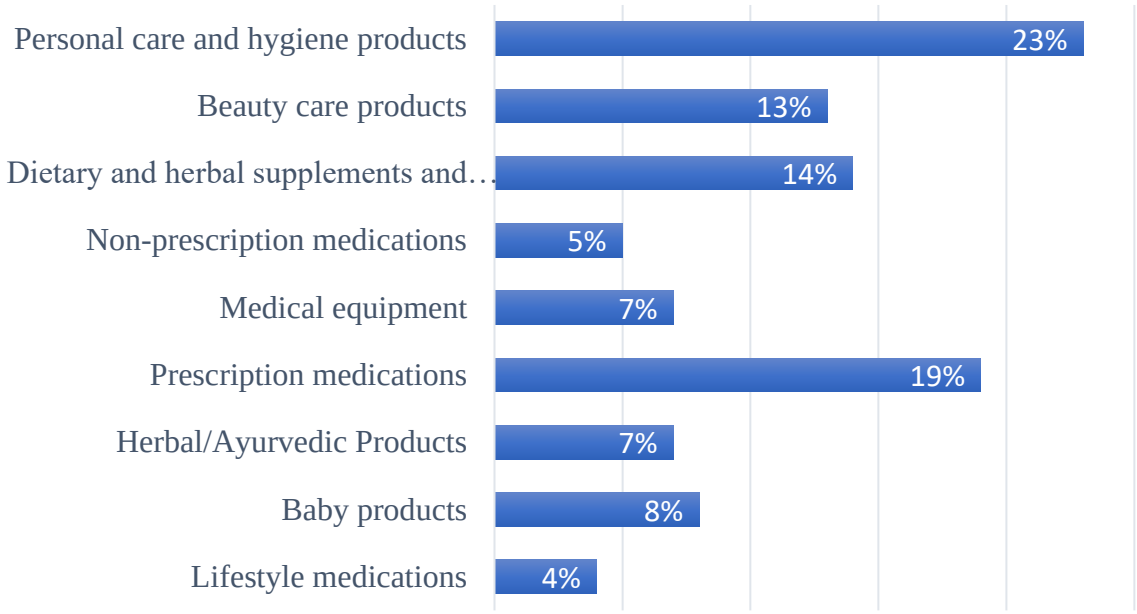
Fig 4: Product Awareness



Source: Authors' own compilation

Most of the respondents were aware about the availibility of Personal care and Hygiene Products (16%) followed by Personal care and hygiene products (16%), Prescription medications and Dietary /herbal supplements both (14%), Baby care Products (12%), Beauty Products and Ayurvedic products both (11%), Medical Equipment (9%), Lifestyle medications (8%) and non-prescription medication (6%).

Fig 5: E-Pharmacy Products



Source: Authors' own compilation

Most of the respondents have ordered and used Personal care and Hygiene Products (23%) followed by Prescription medications (19%), Dietary /herbal supplements both (14%), Beauty Products (13%), Baby care Products (8%), Ayurvedic products and Medical Equipment each (7%), non-prescription medication (5%) and Lifestyle medications (4%).

4.2 MEASUREMENT MODEL

In order to verify that the measurement model is appropriate for the study, (Hair et al., 2019) state that it must be evaluated for internal reliability as well as discriminant and convergent validity. Internal reliability was assessed in this study using composite reliability (CR) and Cronbach's alpha (α).

Similar to (van Griethuijsen et al., 2015), who state that "the acceptable values of 0.7 or 0.6" are acceptable(Churchill Júnior, 1979) also suggests that a Cronbach's alpha value of 0.6 is acceptable. Cronbach alpha present in the **Table 4.2.1** for all ten constructs in this model is more than 0.60, ranging from 0.67 to 0.93. The acceptable degree of internal consistency in a model is indicated by a composite reliability (CR) value of 0.70 and above for the constructs and the CR values greater than 0.70, ranging from 0.70 to 0.94, are displayed in the **Table 4.2.1**.

The average variance extracted is intended to be greater than 0.5 (Fornell & Larcker, 1981; Hair et al., 2010; Henseler et al., 2009), and it was discovered that all construct values, ranging from 0.50 to 0.85, are within the permissible range.

The estimated loadings of the items exceeded the benchmark of 0.50 significantly (Hair et al., 2010; Cheung et al., 2023). All the items in the table have VIF < 3 except for 4 items namely EE2, EE3, WI2 and WI4 having VIF >3 but less than 5. Since the VIF values for every construct were less than five, collinearity was not a problem (Gani et al., 2022; Hair et al., 2019).

Table 4.2.1: Result of the Measurement Model

Construct	Items	Outer loadings	Cronbach's alpha (CA)	Composite reliability (CR)	Average variance extracted (AVE)	VIF
Actual Usage Behaviour (AUB)	AUB1	0.76	0.80	0.81	0.63	2.14
	AUB2	0.78				2.19
	AUB3	0.81				1.95
	AUB4	0.82				1.99
Behavioural Intention (BI)	BI1	0.69	0.73	0.77	0.64	1.38
	BI2	0.85				1.42
	BI3	0.86				1.70
Customer Centric Services (CCS)	CCS1	0.78	0.67	0.70	0.50	1.37
	CCS2	0.64				1.27
	CCS3	0.65				1.24
	CCS4	0.76				1.28
Effort Expectancy (EE)	EE1	0.92	0.91	0.92	0.85	2.76
	EE2	0.92				3.28
	EE3	0.92				3.31
Facilitating condition (FC)	FC1	0.90	0.71	0.72	0.78	1.44
	FC2	0.87				1.44
Performance Expectancy (PE)	PE1	0.87	0.87	0.88	0.72	2.35
	PE2	0.87				2.29
	PE3	0.82				2.14
	PE4	0.83				2.05
Price Value (PV)	PV1	0.85	0.82	0.84	0.73	1.53
	PV2	0.84				2.08
	PV3	0.87				2.20
Switching Cost (SC)	SC1	0.67	0.74	0.91	0.63	1.74
	SC2	0.80				1.93
	SC3	0.89				1.28
Social Influence (SI)	SI1	0.85	0.86	0.86	0.78	1.86
	SI2	0.91				2.66
	SI3	0.88				2.28
Technology Discomfort (TD)	TD1	0.56	0.69	0.79	0.61	1.28
	TD2	0.89				1.66
	TD3	0.84				1.41
Website Information (WI)	WI1	0.88	0.93	0.94	0.83	2.85
	WI2	0.94				4.69
	WI3	0.90				2.98
	WI4	0.93				4.26

VIF: Variance Inflation Factor

Source: Authors' own compilation

Table 4.2.2: Heterotrait-monotrait (HTMT) ratio of correlations

	AUB	BI	CCS	EE	FC	PE	PV	SC	SI	TD	WI
AUB											
BI	0.614										
CCS	0.792	0.62									
EE	0.57	0.508	0.636								
FC	0.831	0.57	0.759	0.79							
PE	0.794	0.472	0.786	0.779	0.808						
PV	0.373	0.404	0.509	0.139	0.172	0.191					
SC	0.104	0.196	0.384	0.09	0.157	0.129	0.603				
SI	0.293	0.288	0.423	0.15	0.387	0.246	0.562	0.285			
TD	0.733	0.377	0.62	0.301	0.629	0.49	0.376	0.263	0.491		
WI	0.744	0.456	0.753	0.612	0.757	0.782	0.159	0.098	0.094	0.52	

Notes: AUB- Actual Usage Behaviour; BI: Behavioural Intention; CCS: Customer Centric Services; EE: Effort Expectancy; FC: Facilitating condition; PE: Performance Expectancy; PV: Price Value; SC: Switching Cost; SI: Social Influence; TD: Technology Discomfort; WI: Website Information.

Source: Authors' own compilation

(Hair et al., 2014) have observed that the Heterotrait-Menotrait (HTMT) method is a more effective means of detecting the absence of discriminant validity. Thus, as shown in **Table 4.2.2**, the discriminant validity of this study has been evaluated using the HTMT criterion. The HTMT value should be less than 0.85 in order to have a reasonable level of discriminant validity, according to (Hair et al., 2019). The HTMT results are displayed in Table, where every value passed the HTMT 0.85 test and no discriminant validity issues were found.

4.3 STRUCTURAL MODEL

Table 4.3.1: Result of Hypothesis Test

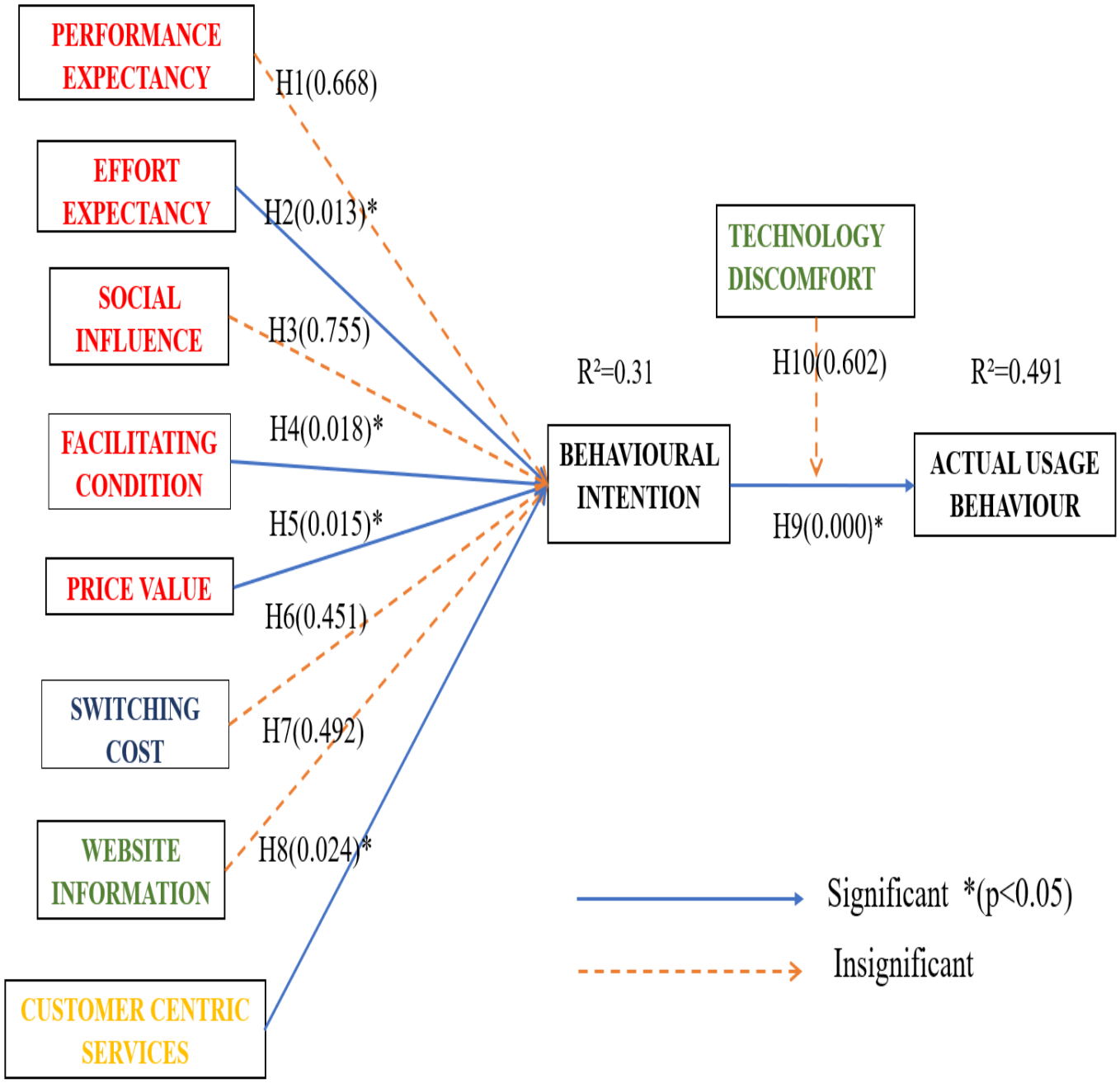
Hypothesis	Relationships	Beta Value	Standard Deviation (STDEV)	T-statistics (|O/STDEV|)	P values	Decision
H1	PE -> BI	-0.043	0.1	0.429	0.668	Not Supported
H2	EE -> BI	0.197	0.079	2.482	**0.013***	Supported
H3	SI -> BI	0.021	0.069	0.312	0.755	Not Supported
H4	FC -> BI	0.191	0.081	2.366	**0.018***	Supported
H5	PV -> BI	0.183	0.075	2.433	**0.015***	Supported
H6	SC -> BI	-0.067	0.088	0.755	0.451	Not Supported
H7	WI -> BI	0.057	0.083	0.686	0.492	Not Supported
H8	CCS -> BI	0.172	0.076	2.253	**0.024***	Supported
H9	BI -> AUB	0.337	0.059	5.761	**0.000***	Supported
H10	TD x BI -> AUB	0.027	0.052	0.522	0.602	Not Supported

**Significant at 0.05*

Source: Authors' own compilation

Table 4.3.1 presents the outcomes of the bootstrapping. **Table 4.3.1** indicates that five hypotheses—H1, H3, H6, H7, and H10—are not supported because they do not satisfy the p-value threshold, while six hypotheses—H2, H4, H5, H4, H8, and H9—are supported because their p-value is less than 0.5.

The results of this investigation show that the BI of using e-pharmacy in the Goa environment was not significantly explained by PE, SC, SI, or WI. The results appear to be at odds with other research on e-pharmacy (Gani et al., 2022; Nayak et al., 2023; Alam et al., 2020), which revealed that PE, SC, SI, and WI were important factors influencing e-pharmacy adoption. .However, the results of SI and PE in this study are consistent with those of (Boontarig et al., 2012) and (Palas et al., 2022)



Source: Authors' own compilation

Figure 6: PLS- SEM Result for the Proposed Research Model

Table 4.3.2: Result of adjusted R^2 and Q^2

	R-square	R-square adjusted	Q^2
AUB	0.491	0.484	0.488
BI	0.31	0.282	0.251

Source: Authors' own compilation

The model has a moderate level of explanatory power, as indicated by the R square value of 0.31. An R square score of 0.31 would lie between the weak (0.25) and moderate (0.50) categories in the context of the guidelines provided in the publication (Hair et al., 2019). This implies that the model has a modest level of explanatory power, explaining around 31% of the variance in the BI. Additionally, AUB had a strong R square (0.491), indicating that the current study model is predictively reliable.

In the reflective measurement model of the endogenous construct, Predictive Relevance (Q2) determines whether or not the data points of the indicators may be correctly anticipated (Wong, 2016). According to (Hair et al., 2019) , a model exhibits strong predictive relevance if its Q2 value is greater than zero. The suggested model is found to have strong predictive significance for the endogenous variables use behaviour (Q2 = 0.488) and BI (Q2 = 0.251).

4.4 TEST OF THE MODERATION EFFECT OF TECHNOLOGY DISCOMFORT

Consistent with other research (Ndayizigamiye et al., 2020; Srivastava & Raina, 2020), strong and positive associations between BI and AUB were discovered. There was no significant moderating role of TD in the relationship between BI and AUB, as ($t = 0.522$, $b = 0.027$, and $p > 0.05$) were not significant at a 5% level of significance. In some less developed or developing areas, there may be cultural factors that mitigate the impact of TD on BI and AUB. For example, strong social networks or traditional healthcare practices may influence consumer behaviour more than individual discomfort with technology. This result is similar to those of (Warden et al., 2020; Pandey et al., 2022; Gani et al., 2022).

CHAPTER 5: DISCUSSION

5.1 THEORETICAL IMPLICATIONS

This study tried to examine the factors that influence the adoption and use of online pharmacy applications and websites in the state of Goa, by using an extended UTAUT2 model and filling the missing gap in the literature. The findings of the study reveal that EE, FC, PV, and CCS positively influence the intention of users to adopt and use e-pharmacy. On the other hand, PE, SI, SC, and WI does not motivate costumer to buy pharmacy products online, it is found, from the results presented above, that EE is the strongest predictor of usage of E-Pharmacy applications, with a path coefficient value of 0.197

PE, SI, SC and WI were also found significant factors in influencing the adoption of online healthcare technology(Gani et al., 2022; Nayak et al., 2023; Alam et al., 2020) .

Performance Expectancy has a weak impact and does not significantly affect Behavioural Intention to Use. The sample had knowledge about the technology but most of the sample was not so concerned that using online pharmacy service has more benefit in improving health than traditional Pharmacies (Boontarig et al.,2012). Another possible reason for the rejection of the hypotheses about PE could be the fact that the available e-pharmacy platforms have not reached a certain level of maturity that can create enough expectancy about them (Palas et al., 2022).

Social Influence was not a significant indicator of Behavioural Intention to use. Since most of the responses are aged between 18-30. They may have a higher degree of autonomy and independence in their decision-making processes compared to older individuals. They may rely less on social influence from peers, family, or other social networks when forming intentions to use technology or services.

The fact that SC is a minor BI indicator suggests that customers' intentions to utilise e-pharmacy services are not much impacted by the perceived costs of moving from one e-pharmacy to another.

WI Hypothesis might not hold true because Users' needs and concerns may not be adequately addressed by the information on the website. Users might be reluctant to use the online

pharmacy service, for instance, if the website does not provide clear instructions for placing orders, pricing information, or thorough descriptions of the available medications. The website layout, navigation, and organization of information may be overly complex or confusing, making it difficult for users to find the information they need

Due to a combination of factors including limited access to technology, socioeconomic inequality, cultural influences, and the prominence of alternative factors influencing consumer behaviour, there does not appear to be a significant moderating effect of TD on BI and AUB among consumers using e-pharmacy in developing state like Goa.

5.2 PRACTICAL IMPLICATION

Analysing consumer behaviour and product purchasing trends is crucial for a business. The pharmaceutical industry is incredibly erratic. Because purchasing clothing and medication are two totally different things. However, as of late, there are more players in the pharmaceutical sector from which consumers can select. The finding has significant social implications since one of society's main requirements has been healthcare. The extent to which online pharmacies are adopted may significantly change who can get healthcare. Therefore, it was essential to research the variables linked to society's readiness to accept it as the preferred method of managing health care.

An improved user experience may be achieved by e-pharmacy platforms through an understanding of elements including price value, customer-centric services, and website information. To draw in and keep customers, they might place a high priority on giving thorough and accurate product information, delivering individualised services, and making sure that prices are reasonable. These insights obtained from this study can assist service providers in comprehending the types of consumers who may visit their websites and the needs of those who use online pharmacies and seek healthcare information. The service providers can then progressively expand their market presence in their operational areas by offering beneficial health services to such prospective online pharmacy seekers. To increase internet access and dependability, particularly in rural regions, invest in digital infrastructure and connections. Improving access to computers and cell phones, as well as digital literacy, will help more people make efficient use of e-pharmacy platforms.

Working together with government organisations, healthcare facilities, and traditional brick-and-mortar pharmacies to incorporate e-pharmacy services into the current healthcare system. drug adherence programmes, teleconsultation services, and partnerships for drug administration. The results of the study can be used by regulators and policymakers to create or amend rules pertaining to consumer protection, data privacy, and e-pharmacy operations. Developing an environment that supports secure and effective e-pharmacy practices can be facilitated by having a thorough understanding of the drivers of adoption and behavioural intention.

5.3 LIMITATION AND FUTURE RESEARCH DIRECTION

The study's conclusions may not be very generalizable due to its focus on the Goa setting. Goa's unique cultural, social, and economic characteristics may have an impact on the findings and how broadly applicable they are. Furthermore, the majority of respondents (79.1% of the sample) were in their 20s and 30s, which raises the possibility of age-related biases in the data collection process. While older people might be less comfortable with or inclined to conduct internet-based research, younger people are more likely to take part in online surveys.

Moreover, the study's control variables, which included demographics like age, gender, monthly income, and educational Qualification, may also act as moderating factors, affecting the associations between the variables under investigation. It is imperative to take these factors into account in order to accurately interpret the study's findings and comprehend their wider implications beyond the particular sample and context under investigation.

Longitudinal studies to determine causal effects could be useful for future research in the field of e-Health services, providing a deeper comprehension of the relationships between different factors over time. Moreover, studies conducted in both developed and developing nations should be included in the research to provide a more thorough understanding of the context-specific influences on the use of e-Health services. In addition, it is necessary to investigate whether the results of these studies apply to telecare, telehealth, and telemedicine—other categories of e-Health services that go beyond e-Pharmacy. Examining how e-Pharmacy programmes are incorporated into government e-Healthcare systems may offer insightful information about the larger healthcare environment. Important directions for future research include validating findings in diverse service contexts and investigating the role of artificial intelligence (AI) and customer relationship management (CRM) in providing e-services to customers.

5.4 CONCLUSION

The rise of information technology has fuelled the growth of e-pharmacies, particularly in developing countries. This study examined how consumers in Goa decide to use e-pharmacies. By testing a model that explores factors influencing technology adoption (UTAUT-2), the research highlights the importance of effort expectancy, price value facilitating conditions and customer centric services, and data security in driving e-pharmacy use. Interestingly, technology anxiety wasn't a significant factor. This trend of young people in developing countries embracing technology creates new opportunities for healthcare businesses. By identifying these key determinants of e-pharmacy adoption, this study offers valuable insights for developing effective marketing strategies in the future.

REFERENCES

A., P. (2000). Technology Readiness Index (TRI): A Multipleitem Scale To Measure Readiness To Embrace New Technologies. *Journal Of Service Research*, *2:307*(May).

Aggelidis, V. P., & Chatzoglou, P. D. (2009). Using a modified technology acceptance model in hospitals. *International Journal of Medical Informatics*, *78*(2), 115–126. https://doi.org/10.1016/j.ijmedinf.2008.06.006

Al Halbusi, H., Al-Sulaiti, K., Abdelfattah, F., Ahmad, A. B., & Hassan, S. (2024). Understanding consumers' adoption of e-pharmacy in Qatar: applying the unified theory of acceptance and use of technology. *Journal of Science and Technology Policy Management*. https://doi.org/10.1108/JSTPM-03-2023-0042

Alam, M. Z., Hoque, M. R., Hu, W., & Barua, Z. (2020). Factors influencing the adoption of mHealth services in a developing country: A patient-centric study. *International Journal of Information Management*, *50*(April 2019), 128–143. https://doi.org/10.1016/j.ijinfomgt.2019.04.016

Alkhawaja, M. I., Halim, M. S. A., & Afthanorhan, A. (2021). Technology anxiety and its impact on e-learning system actual use in Jordan public universities during the Coronavirus disease pandemic. *European Journal of Educational Research*, *10*(4), 1639–1647. https://doi.org/10.12973/EU-JER.10.4.1639

Anthony, L. M., Clarke, M. C., & Anderson, S. J. (2000). Technophobia and personality subtypes in a sample of South African university students. *Computers in Human Behavior*, *16*(1), 31–44. https://doi.org/10.1016/S0747-5632(99)00050-3

Baid, A. N., & Ghosh, A. (2021). Factors Affecting the Shift of Consumers Towards E-Pharmacies. *UGC Care Journal*, *44*(01), 39–45. https://www.researchgate.net/publication/350253903_FACTORS_AFFECTING_THE_SHIFT_OF_CONSUMERS_TOWARDS_E-PHARMACIES

Bansal, H. S., Taylor, S. F., & James, Y. S. (2005). "Migrating" to new service providers: Toward a unifying framework of consumers' switching behaviors. *Journal of the Academy of Marketing Science*, *33*(1), 96–115. https://doi.org/10.1177/0092070304267928

Bansal, S., Kaur, H., Mahendiratta, S., Sarma, P., Kumar, S., Sharma, A., Joshi, R., Bhattacharyya, A., Prajapat, M., Prakash, A., & Medhi, B. (2022, May 14). *A preliminary study to evaluate the behavior of Indian population toward E-pharmacy*. PubMed. https://doi.org/10.4103/ijp.ijp_836_21

Basu, N., & Shenbagaraman, V. M. (2016). Online pharmaceutical industry: Present day situation and future prospects. *International Journal of Pharmaceutical Sciences Review and Research*, *40*(1), 202–205.

Bhattacherjee, A., & Hikmet, N. (2008). Reconceptualizing organizational support and its effect on information technology usage: Evidence from the health care sector. *Journal of Computer Information Systems*, *48*(4), 69–76. https://doi.org/10.1080/08874417.2008.11646036

Boontarig, W., Chutimaskul, W., Chongsuphajaisiddhi, V., & Papasratorn, B. (2012). Factors influencing the Thai elderly intention to use smartphone for e-Health services. *SHUSER 2012 - 2012 IEEE Symposium on Humanities, Science and Engineering Research*, 479–

483. https://doi.org/10.1109/SHUSER.2012.6268881

Çelik, H. (2011). Influence of social norms, perceived playfulness and online shopping anxiety on customers' adoption of online retail shopping: An empirical study in the Turkish context. *International Journal of Retail & Distribution Management*, *39*(6), 390–413. https://doi.org/10.1108/09590551111137967

Cheung, G. W., Cooper, H. D., Rebecca, T., & Wang, L. C. (2023). Reporting reliability , convergent and discriminant and best - practice recommendations. In *Asia Pacific Journal of Management* (Issue 0123456789). Springer US. https://doi.org/10.1007/s10490-023-09871-y

Churchill Júnior, G. A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, *16*(1), 64–73.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319. https://doi.org/10.2307/249008

Dcruz, A. C., Mokashi, V. N., Pai, S. R., & Sreedhar, D. (2022). The rise of E-pharmacy in India: Benefits, challenges, and the road ahead. *Indian journal of pharmacology*, *54*(4), 282–291. https://doi.org/10.4103/ijp.ijp_445_21

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of Price, Brand, and Store Information on Buyers' Product Evaluations. *Journal of Marketing Research*, *28*(3), 307. https://doi.org/10.2307/3172866

Dutta, D., & Bhattacharjee, B. (2021). Consumer Preference and Buying Pattern of Medicines Through E-Pharmacy During the Covid-19 Pandemic in Silchar, Assam. *Current Trends in Pharmaceutical Research*, *8*(1). www.dibru.ac.in/ctpr

Dwivedi, Y. K., Shareef, M. A., Simintiras, A. C., Lal, B., & Weerakkody, V. (2016). A generalised adoption model for services: A cross-country comparison of mobile health (m-health). *Government Information Quarterly*, *33*(1), 174–187. https://doi.org/10.1016/j.giq.2015.06.003

Fittler, A., Vida, R. G., Káplár, M., & Botz, L. (2018). Consumers Turning to the Internet Pharmacy Market: Cross-Sectional Study on the Frequency and Attitudes of Hungarian Patients Purchasing Medications Online. *Journal of Medical Internet Research*, *20*(8), e11115. https://doi.org/10.2196/11115

Fornell, C., & Larcker, D. F. (1981). *Evaluating Structural Equation Models with Unobservable Variables and Measurement*. *XVIII*(February), 39–50.

Gani, M. O., Rahman, M. S., Bag, S., & Mia, M. P. (2023). Examining behavioural intention of using smart health care technology among females: dynamics of social influence and perceived usefulness. *Benchmarking*. https://doi.org/10.1108/BIJ-09-2022-0585

Gani, M. O., Rahman, M. S., Faroque, A. R., Sabit, A. A., & Fattah, F. A. (2022). Understanding the determinants of ePharmacy services: the moderating effect of technology discomfort. *Bottom Line*, *35*(2–3), 90–114. https://doi.org/10.1108/BL-03-2022-0045

Gbadebo Salimon, M., & Hassan Gorondutse, A. (2018). User adoption of Smart Homes Technology in Malaysia: Integration TAM 3,TPB, UTAUT 2 and extension of their constructs for a better prediction. *Journal of Business and Management*, *20*(4), 60–69. https://doi.org/10.9790/487X-2004016069

hair 2010.pdf. (n.d.).

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, *26*(2), 106–121. https://doi.org/10.1108/EBR-10-2013-0128

Han, H., Kim, W., & Hyun, S. S. (2011). Switching intention model development: Role of service performances, customer satisfaction, and switching barriers in the hotel industry. *International Journal of Hospitality Management*, *30*(3), 619–629. https://doi.org/10.1016/j.ijhm.2010.11.006

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, *20*(2009), 277–319. https://doi.org/10.1108/S1474-7979(2009)0000020014

Iranmanesh, M., Min, C.L., Senali, M.G., Nikbin, D. and Foroughi, B. (2022), "Determinants of switching intention from web-based stores to retail apps: habit as a moderator", Journal of Retailing and Consumer Services, Vol. 66, p. 102957.

Jeng, M. Y., Pai, F. Y., & Yeh, T. M. (2022). Antecedents for Older Adults' Intention to Use Smart Health Wearable Devices-Technology Anxiety as a Moderator. *Behavioral Sciences*, *12*(4). https://doi.org/10.3390/bs12040114

Larnyo, E., Dai, B., Larnyo, A., Nutakor, J. A., Ampon-wireko, S., Nana, E., Nkrumah, K., & Appiah, R. (2022). *Impact of Actual Use Behavior of Healthcare Wearable Devices on Quality of Life : A Cross-Sectional Survey of People with Dementia and Their Caregivers in Ghana*. 1–28.

Lin, C., & Nguyen, C. (2011). Exploring E-Payment Adoption in Vietnam and Taiwan. *Journal of Computer Information Systems, 51,* 41 - 52.

Mahardika, H., Thomas, D., Ewing, M. T., & Japutra, A. (2019). Experience and facilitating conditions as impediments to consumers' new technology adoption. *International Review of Retail, Distribution and Consumer Research*, *29*(1), 79–98. https://doi.org/10.1080/09593969.2018.1556181

Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research*, *56*(11), 899–906. https://doi.org/10.1016/S0148-2963(01)00276-4

Nayak, B., Bhattacharyya, S. S. S., Kulkarni, O., & Mehdi, S. N. (2023). Adoption of online pharmacy applications during COVID-19 pandemic; empirical investigation in the Indian context from push-pull and mooring framework. *Journal of Engineering, Design and Technology*, *21*(4), 1173–1196. https://doi.org/10.1108/JEDT-06-2021-0341

Ndayizigamiye, P., Kante, M., & Shingwenyana, S. (2020). An adoption model of mHealth applications that promote physical activity. *Cogent Psychology*, *7*(1). https://doi.org/10.1080/23311908.2020.1764703

Online, E. (2023, May 29). *How online pharmacies have landed in a regulatory limbo*. The Economic Times. https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/how-online-pharmacies-have-landed-in-a-regulatory-limbo/articleshow/100598081.cms

Osswald, S., Wurhofer, D., Trösterer, S., Beck, E., & Tscheligi, M. (2012). Predicting information technology usage in the car: Towards a car technology acceptance model. *AutomotiveUI 2012 - 4th International Conference on Automotive User Interfaces and Interactive Vehicular Applications, In-Cooperation with ACM SIGCHI - Proceedings*, *October*, 51–58. https://doi.org/10.1145/2390256.2390264

Palas, J. U., Sorwar, G., Hoque, M. R., & Sivabalan, A. (2022). Factors influencing the elderly's adoption of mHealth: an empirical study using extended UTAUT2 model. *BMC Medical Informatics and Decision Making*, *22*(1), 1–21. https://doi.org/10.1186/s12911-022-01917-3

Pandey, D., Ogunmola, G. A., Enbeyle, W., Abdullahi, M., Pandey, B. K., & Pramanik, S. (2022). COVID-19: A Framework for Effective Delivering of Online Classes During Lockdown. *Human Arenas*, *5*(2), 322–336. https://doi.org/10.1007/s42087-020-00175-x

Porter, E. J., & Ganong, L. H. (2002). Considering the use of a personal emergency response system: An experience of frail, older women. *Care Management Journals*, *3*(4), 192–198. https://doi.org/10.1891/cmaj.3.4.192.57452

Priya, J., & Subbulakshmi, S. (2022). Customers' preference towards e-pharmacies in Chennai City. *International Journal of Health Sciences*, *March*, 2129–2135. https://doi.org/10.53730/ijhs.v6ns2.5255

Ratten, V. (2015). A cross-cultural comparison of online behavioural advertising knowledge, online privacy concerns and social networking using the technology acceptance model and social cognitive theory. *Journal of Science and Technology Policy Management*, *6*(1), 25–36. https://doi.org/10.1108/JSTPM-06-2014-0029

Research, Z. M., & Research, Z. M. (2024, March 31). *Online Pharmacy Market Size, Share, Growth & Trends by 2030*. Zion Market Research. https://www.zionmarketresearch.com/report/online-pharmacy-market

Soh, P. Y., Heng, H. B., Selvachandran, G., Anh, L. Q., Chau, H. T. M., Son, L. H., Abdel-Baset, M., Manogaran, G., & Varatharajan, R. (2020). Perception, acceptance and willingness of older adults in Malaysia towards online shopping: a study using the UTAUT and IRT models. *Journal of Ambient Intelligence and Humanized Computing*, *0123456789*. https://doi.org/10.1007/s12652-020-01718-4

Soltani-Nejad, N., Mirezati, S. Z., & Saberi, M. K. (2020). Predicting intention to share information on commercial websites based on personality traits. *Bottom Line*, *33*(3), 251–261. https://doi.org/10.1108/BL-02-2020-0018

Srivastava, M., & Raina, M. (2020). Consumers' usage and adoption of e-pharmacy in India. *International Journal of Pharmaceutical and Healthcare Marketing*, *15*(2), 235–250. https://doi.org/10.1108/IJPHM-01-2020-0006

Tamilmani, K., Rana, N. P., Wamba, S. F., & Dwivedi, R. (2021). The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation. *International Journal of Information Management*, *57*(October 2020), 102269. https://doi.org/10.1016/j.ijinfomgt.2020.102269

Ter Ji-Xi, J., Salamzadeh, Y., & Teoh, A. P. (2021). Behavioral intention to use cryptocurrency in Malaysia: an empirical study. *Bottom Line*, *34*(2), 170–197. https://doi.org/10.1108/BL-08-2020-0053

van Griethuijsen, R. A. L. F., van Eijck, M. W., Haste, H., den Brok, P. J., Skinner, N. C., Mansour, N., Savran Gencer, A., & BouJaoude, S. (2015). Global Patterns in Students' Views of Science and Interest in Science. *Research in Science Education*, *45*(4), 581–603. https://doi.org/10.1007/s11165-014-9438-6

Venkatesh, V., & Davis, F. D. (2000). Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, *46*(2), 186–204. https://doi.org/10.1287/mnsc.46.2.186.11926

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). *Quarterly*. *27*(3), 425–478.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, *36*(1), 157–178. https://doi.org/10.2307/41410412

Vera-Martínez, J. (2023). From purely physical to purely online pharmacies: exploring different shopper profiles and discussing some widespread beliefs. *International Journal of Pharmaceutical and Healthcare Marketing*, *17*(2), 169–181. https://doi.org/10.1108/IJPHM-08-2021-0088

Warden, C. A., Yi-shun, W., Stanworth, J. O., Chen, J. F., Warden, C. A., Yi-shun, W., Stanworth, J. O., & Chen, J. F. (2020). Millennials ' technology readiness and self-efficacy in online classes ABSTRACT. *Innovations in Education and Teaching International*, *00*(00), 1–11. https://doi.org/10.1080/14703297.2020.1798269

Wong, K. K.-K. (2016). Mediation Analysis, Categorical Moderation Analysis, and Higher-Order Constructs Modeling in Partial Least Squares Structural Equation Modeling (PLS-SEM): A B2B Example Using SmartPLS. *The Marketing Bulletin*, *26*(May), 1–22. https://doi.org/10.13140/RG.2.1.1643.0562

Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, *52*(3), 2–22. https://doi.org/10.1177/002224298805200302

Zhang, X., & Zhang, Z. (2024). Leaking my face via payment: Unveiling the influence of technology anxiety, vulnerabilities, and privacy concerns on user resistance to facial recognition payment. *Telecommunications Policy*, *48*(3), 102703. https://doi.org/10.1016/j.telpol.2023.102703

Zorn, T. E., Flanagin, A. J., & Shoham, M. D. (2011). Institutional and noninstitutional influences on information and communication technology adoption and use among nonprofit organizations. *Human Communication Research*, *37*(1), 1–33. https://doi.org/10.1111/j.1468-2958.2010.01387.x

Appendix I

Questionnaire

SECTION I: DEMOGRAPHIC PROFILE	
Gender	Male Female
Marital status	Married Unmarried
Age	Below 18 18-30 31-40 41-50 years More than 50
Place of Residence	Urban Rural
Occupation	Student Employed (Govt) Employed (Private) Self Employed Unemployed Homemaker
Education	Primary school 10th Std 12th Std Diploma Graduate Post Graduate Doctoral Professional
Monthly Income	Below 25,000 25,000 – 50,000 50,000 – 75,000 75,000 – 1,00,000 More than 1,00,000
Household Size	1 2-3 4-5 6 or more
Location	North Goa South Goa
Previous experience with online shopping of Pharmacy Product? o Yes o No	

How often do you purchase pharmacy products online?

- o Weekly
- o Monthly
- o Eventually
- o Never

Which of these platforms you are aware of?

- ☐ 1mg
- ☐ PharmEasy
- ☐ Netmeds
- ☐ Medlife
- ☐ MediBuddy
- ☐ Apollo Pharmacy
- ☐ Wellness Forever
- ☐ Amazon
- ☐ Flipkart
- ☐ Other____

Which of these platforms you have used to buy pharmacy products online?

- ☐ 1mg
- ☐ PharmEasy
- ☐ Netmeds
- ☐ Medlife
- ☐ MediBuddy
- ☐ Apollo Pharmacy
- ☐ Wellness Forever
- ☐ Amazon
- ☐ Flipkart
- ☐ Other__

Types of Pharmacy products you know are available online?

- ☐ Personal care and hygiene products (body, hair, oral health and shaving products)
- ☐ Dietary and herbal supplements and diet products (natural vitamins and minerals)
- ☐ Non-prescription medications (analgesics and antacids, etc.)
- ☐ Beauty care products (make-up, accessories and lenses)
- ☐ Medical equipment (blood pressure or blood glucose monitors, etc.)
- ☐ Baby care products (milk, baby food, nappies and changing supplies, etc.)
- ☐ Lifestyle medications (contraceptives and health boosters)
- ☐ Prescription medications (antibiotics, diabetic medication, chronic diseases and psychiatric medication, etc.)
- ☐ Herbal/ Ayurvedic Products
- ☐ Others_____

Types of Pharmacy products you have ordered online?

- ☐ Personal care and hygiene products (body, hair, oral health and shaving products)
- ☐ Dietary and herbal supplements and diet products (natural vitamins and minerals)
- ☐ Non-prescription medications (analgesics and antacids, etc.)
- ☐ Beauty care products (make-up, accessories and lenses)
- ☐ Medical equipment (blood pressure or blood glucose monitors, etc.)
- ☐ Baby care products (milk, baby food, nappies and changing supplies, etc.)
- ☐ Lifestyle medications (contraceptives and health boosters)
- ☐ Prescription medications (antibiotics, diabetic medication, chronic diseases and psychiatric medication, etc.)
- ☐ Herbal/ Ayurvedic Products
- ☐ Others_____

SECTION II: FACTORS INFLUENCING THE BEHAVIOURAL INTENTION & ADOPTION OF E-PHARMACY IN GOA

Please tick () an appropriate answer for the following statements ranging from Strongly Disagree to Strongly Agree on 5-point Likert Scale

5- Strongly Agree 4- Agree 3- Neutral 2- Disagree 1- Strongly Disagree

	1	2	3	4	5
1.Performance Expectancy (PE)	(Venkatesh et al., 2003); (Venkatesh et al.,2012)				
I find e-pharmacy services useful.					
Using an e-pharmacy increases my chances of meeting my needs.					
Using an e-pharmacy helps me manage my daily health-care needs more quickly.					
Using e-pharmacy increases my capability to manage my health.					
2. Effort Expectancy (EE)	(Venkatesh et al., 2003).; (Venkatesh et al.,2012)				
Learning how to use an online pharmacy is easy for me.					
I know how to purchase using an online pharmacy.					
I find online pharmacy service easy to use.					
3.Social Influence (SI)	(Venkatesh et al., 2003); (Venkatesh et al.,2012)				
People who are important to me think that I should use e-pharmacy.					
People who influence my behaviour think that I should use e-pharmacy.					
People whose opinions I value prefer that I use e-pharmacy.					
4.Facilitating condition (FC)	(Venkatesh et al., 2003); (Venkatesh et al.,2012)				
I have the necessary knowledge to use an e-pharmacy.					
If I have any doubts about how to use an e-pharmacy, there are professionals available to help me.					
5.Price Value (PV)	(Venkatesh et al.,2012)				
It enables me to use health services at a reasonable price.					

Buying pharmacy products online is good value for the money.					
At the current price, e-pharmacy provides a good value.					
6.Switching Cost (SC)	(Nayak et al., 2023)				
(Even if I face inconvenience in online pharmacy, I hesitate to switch to other online pharmacies because) I would have to waste time in searching for information about them.					
It would consume much of my effort and time in deciding which other pharmacy Apps to deal with.					
I would have to incur a financial loss because I have already paid for membership.					
7.Website Information (WI)	(Gani et al., 2022)				
I am content with the information from e-pharmacy websites/Apps.					
I am pleased with the information from e-pharmacy websites/Apps.					
I am delighted with the information from e-pharmacy websites/Apps.					
Overall, the information I get from e-pharmacy websites/Apps is very satisfying.					
8.Customer Centric Services (CCS)	(Priya & Subbulakshmi, 2022)				
I find it easy to use e-pharmacy from anywhere.					
I receive pharmacy products in Safe packaging.					
I have a diverse selection of products and services to choose from.					
I rarely have trouble getting the item I want to return to the shipping company.					
9.Technology Discomfort (TD)	(Gani et al., 2022)				
Technical support lines are not helpful because they do not explain things in plain language.					
When I need technical support, the agent helping me makes me feel silly.					
Instructions for e-Pharmacy services are hard to understand.					
10.Behavioural Intention (BI)	(Venkatesh et al.,2012)				
I intend to continue using e-pharmacy services in the future.					
I will always try to use e-pharmacy services in my daily life.					

I plan to continue using e-pharmacy services frequently.					
11. Actual Usage Behaviour (AUB)	(Venkatesh et al.,2012)				
Using an e-pharmacy service is a pleasant experience.					
I really want to use e-pharmacy services to protect my health.					
I spend a lot of time on e-pharmacy services.					
I use e-pharmacy services on a regular basis.					

Appendix II

Models

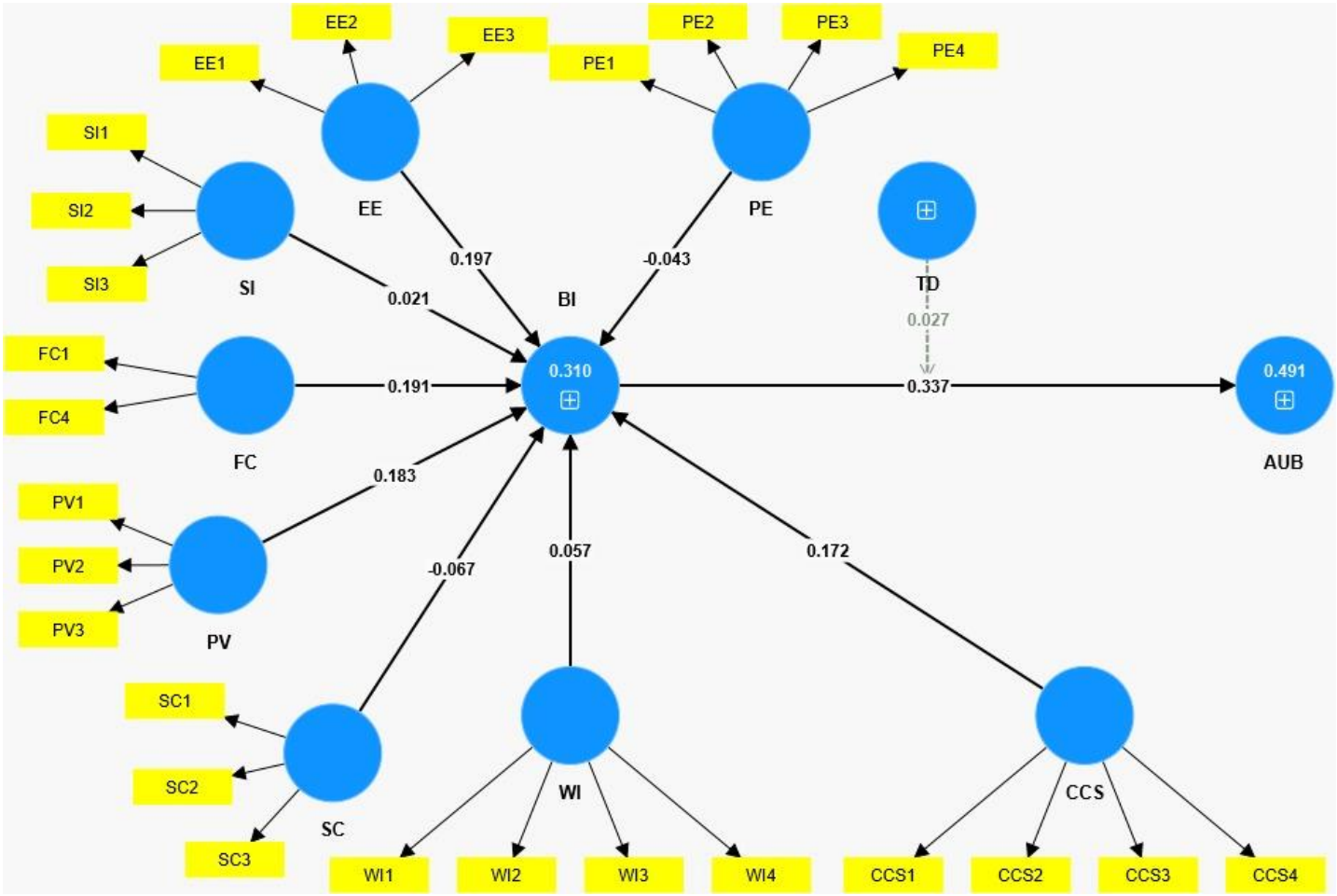


Figure 7: Result of Measurement Model

Source: Authors' own compilation

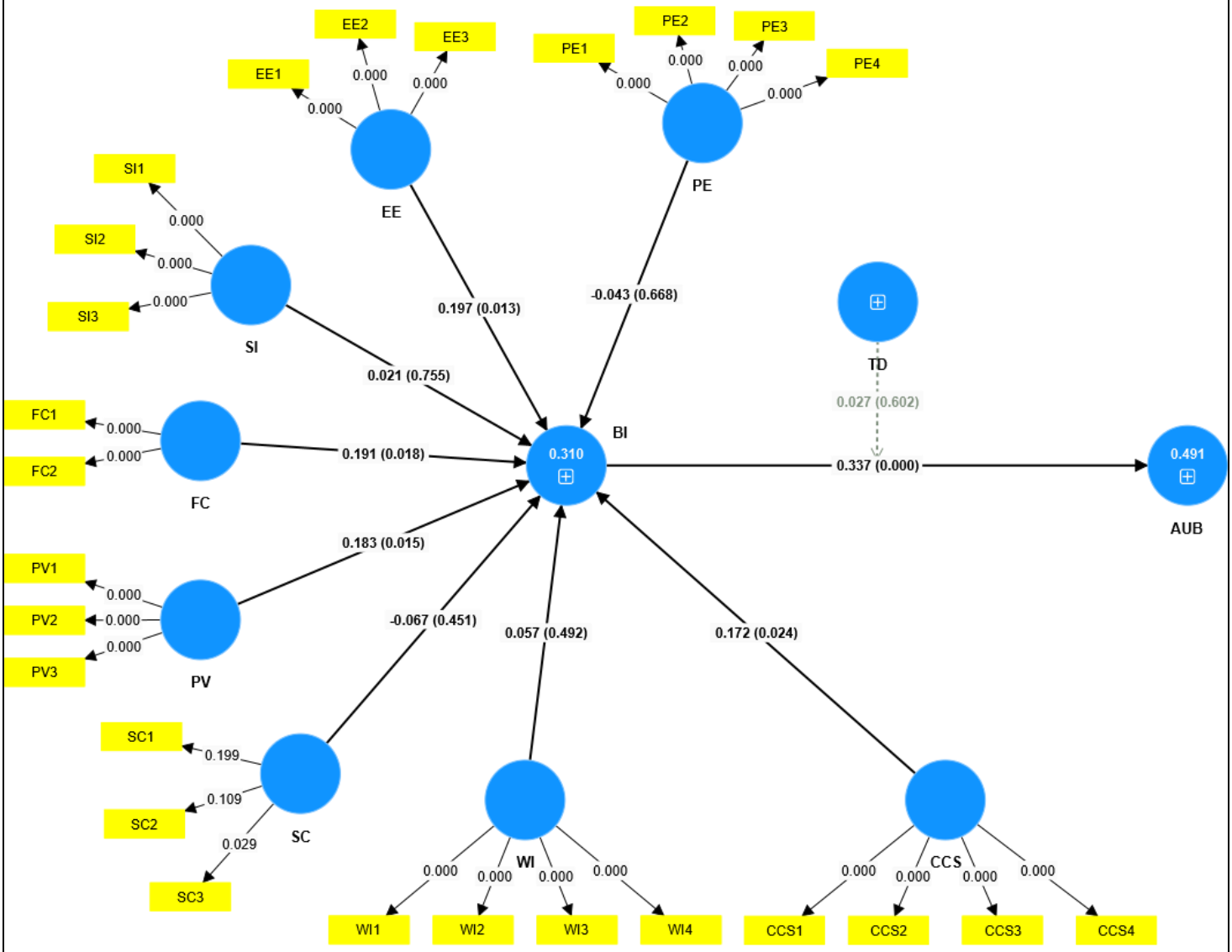


Figure 8: Result of Structural Model

Source: Authors' own compilation