



**A STUDY OF SUPPLY CHAIN TRUST AND CONSUMER
BEHAVIOR IN SOCIAL COMMERCE: AN EXTENDED
THEORY OF PLANNED BEHAVIOR ANALYSIS IN
THAILAND'S DIGITAL MARKETPLACE**

WEI LI

**MASTER OF BUSINESS ADMINISTRATION
IN
INTERNATIONAL LOGISTICS AND
SUPPLY CHAIN MANAGEMENT**

**SCHOOL OF MANAGEMENT
MAE FAH LUANG UNIVERSITY**

2024

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**THIS THESIS IS A PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
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MASTER OF BUSINESS ADMINISTRATION
IN INTERNATIONAL LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Thesis Title: A Study of Supply Chain Trust and Consumer Behavior in Social
Commerce: an Extended Theory of Planned Behavior Analysis
in Thailand's Digital Marketplace

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Wei Li

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ABSTRACT

Social commerce, commonly referred to as s-commerce, has become a subset of e-commerce. This innovative approach not only optimizes the purchasing process but also aligns with the growing trend of merging technology into daily life, it is a significant step towards the development. In recent years, S-commerce has emerged as a main online shopping trend in Thailand, reflecting the country's rapid adoption of digital commerce and social platforms.

This research aims to explore the concept of "trust" from multiple perspectives by adapting the Theory of Planned Behavior model to better understand purchasing characteristics within the S-commerce landscape and testing the hypothesis, also to investigate the influence of various behavioral factors on consumer decisions. Key factors under consideration include customer purchase norms, purchase attitude, and purchase behavior control, and 4 trust factors, which relates to the perceived ease or difficulty of making a purchase, then present 8 hypotheses, found out p-value of 6 hypotheses are higher than 95%, and 2 of hypothesis are lower than 95% means not supported hypothesis, which is trust in retailer to future behavior and trust in e-word of mouth to future behavior.

Addressing existing research gaps, this research integrates additional dimensions of trust, specifically trust in payment methods and trust in logistics providers. Trust in payment methods encompasses the security and reliability

of financial transactions, while trust in logistics providers pertains to the efficiency and dependability of product delivery services.

The findings of this research offer valuable insights into the factors that influence consumer behavior in S-commerce, provide theoretical, managerial, and social value and impact for academics, practitioners, and society. Also, can aid businesses in developing strategies to enhance consumer trust and satisfaction, thereby improving future purchase intentions. For entrepreneurs and businesses interested in entering the S-commerce sector, this study highlights essential considerations for fostering trust and optimizing the customer experience. Ultimately, our research contributes to the broader understanding of S-commerce dynamics and supports the advancement of this rapidly evolving industry.

Keywords: S-commerce, Theory of Planned Behavior, Purchase Intentions, Confirmatory Factor Analysis, Structural Equation Model

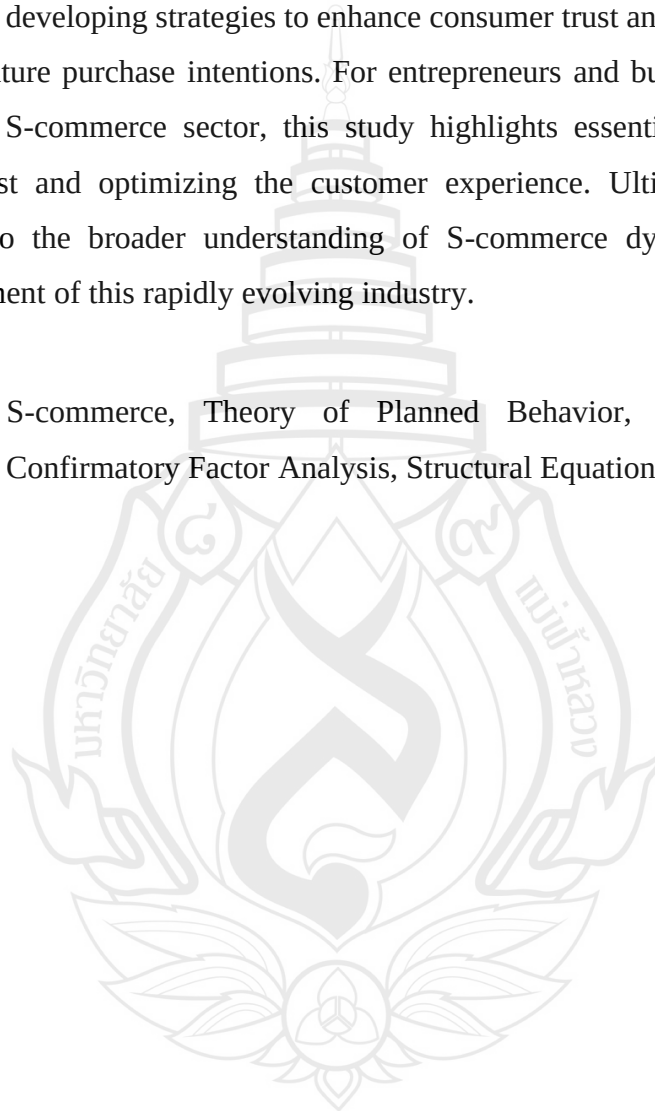
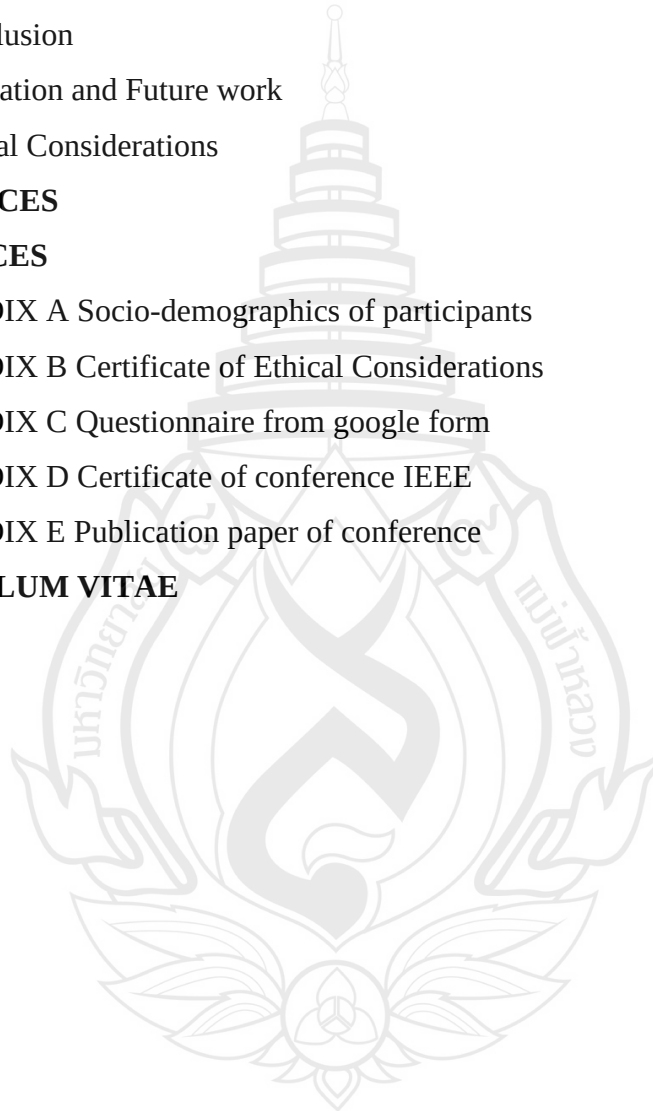


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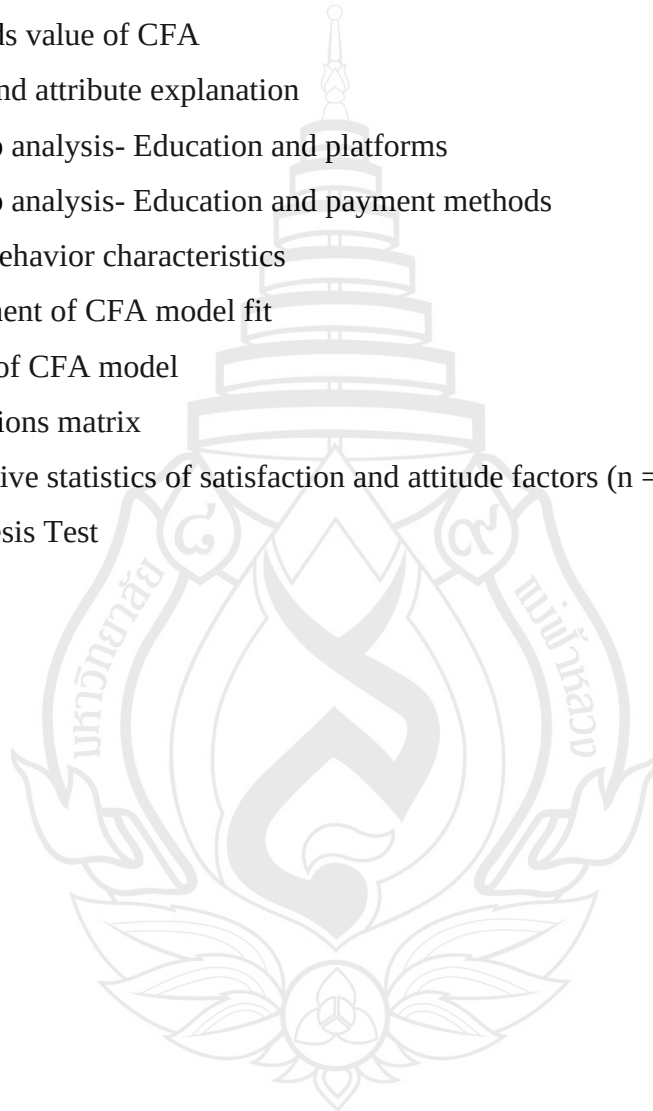
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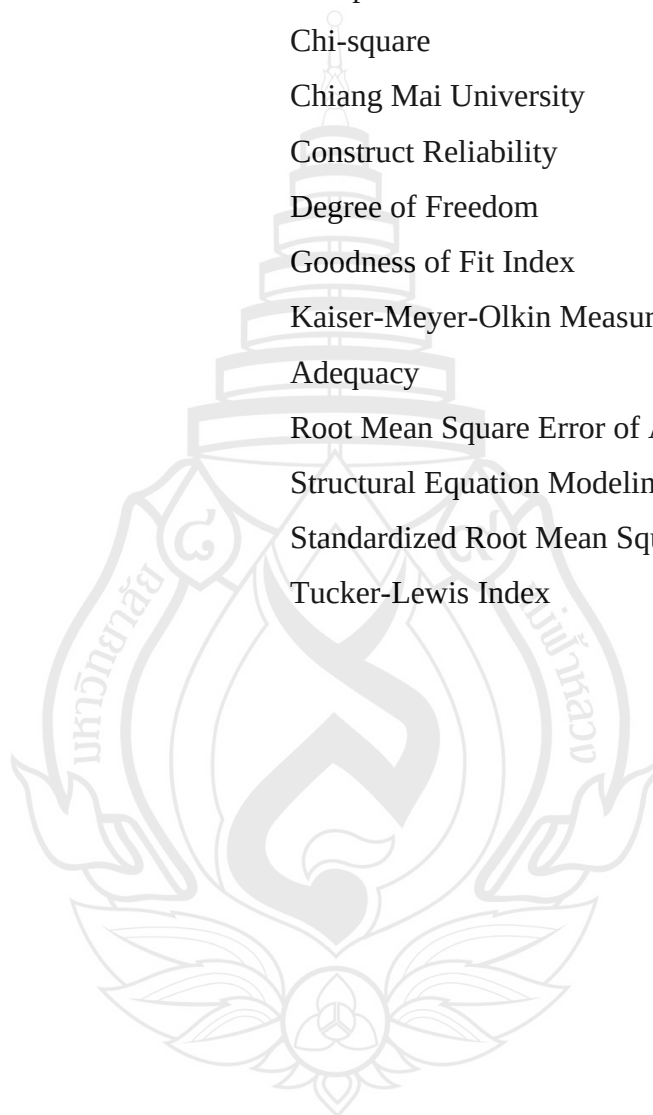


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ABBREVIATIONS AND SYMBOLS

AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMIN	Chi-square
CMU	Chiang Mai University
CR	Construct Reliability
df	Degree of Freedom
GFI	Goodness of Fit Index
KMO	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
SRMSR	Standardized Root Mean Square Residual
TLI	Tucker-Lewis Index



CHAPTER 1

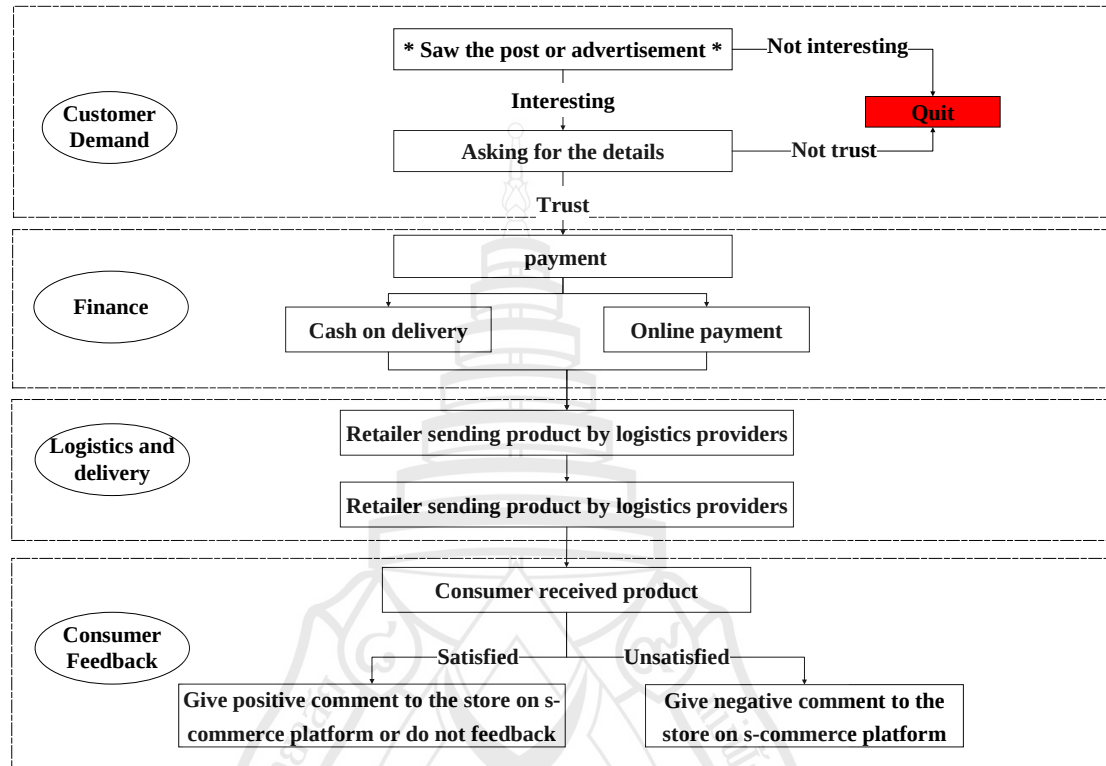
INTRODUCTION

1.1 Background

E-commerce has been a hot topic for decades, since the development of the internet, e-commerce has been described as a transaction on online platforms, s-commerce has become a subset of e-commerce (Kim & Park, 2013; Turban et al., 2010). E-commerce relies on platforms for transactions, normally trading as business to business, business to customer and customer to customer. It emphasizes direct commercial transactions through the platforms, but s-commerce relies on social platforms such as Facebook, Line, TikTok etc., and uses user interaction, comments, sharing and other functions in social networks to promote and sell products. Social commerce emphasizes social interaction and word-of-mouth communication between users.

Currently, social commerce (s-commerce) is a new trend in online commerce, it combines social platforms and online shopping or electronic commerce (e-commerce) to become a new business promotion model and it is increasingly necessity in everyday life(Wijaya et al., 2019). Thus, s-commerce has been increasingly popular over the past few years (Shin, 2013) .Various studies (Liébana-Cabanillas & Alonso-Dos-Santos, 2017) show that online users keep increasing, which means the s-commerce audience also keeps increasing. According to (Kim & Park, 2013), s-commerce appeared in Korea in 2008 and showed explosive growth in Korea, then, in 2011, an s-commerce company in Korea generated approximately \$300–500 million in sales. Also, Facebook has 2.7 billion users in the world, and it is the king of social platforms (Bhattacharyya & Bose, 2020a). Thus, the economic benefits that s-commerce can bring to the country are enormous. In addition, s-commerce not only limits the interaction on social platforms, but it also includes any social interaction on e-commerce platforms or websites. Nevertheless, the use of e-commerce platforms is more for chatting and communication between users and retailers, while on social commerce platforms, users

will carry out life sharing, content publishing, and other activities, which also enhances the social commerce progress (Atchariyakarn & Zhang, 2021; Kim & Park, 2013). This is also the main reason for the rapid development of s-commerce in recent years.



Source Khan et al. (2020)

Figure 1.1 Flow chart diagram of purchase products on s-commerce platforms (consumers' perspective)

Most process purchase products on s-commerce in Thailand – consumers' perspective shown in Figure 1.1, which develop from the flow chart (Khan et al., 2020), which divided into 4 parts in supply chain perspective in this research, customer demand refers the quality or service that consumer willing to purchase, as shown on figure 1.1, when the consumers see the advertisement on the s-commerce platforms, if consumers are interested in the product, they will ask for the price details, information details and so on can influence the consumer demand. Finance refers all the transactions involving money, as shown on figure 1.1, the premise for customers to confirm the order is to trust the product on platform, consumer can select the payment methods via online pay or cash on delivery after confirming the orders, which related to finance

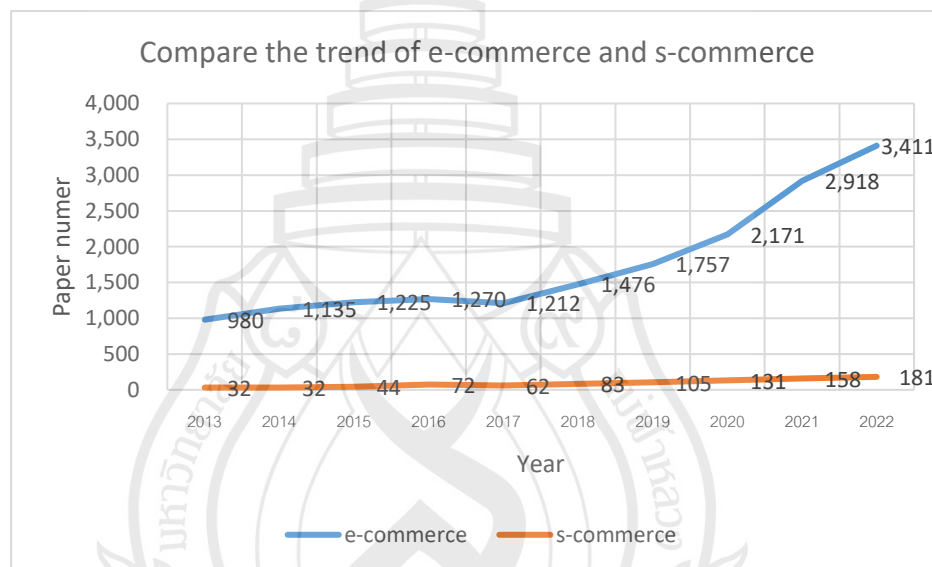
process in supply chain. Logistic and delivery represent the process of sending product included the retailer send out, and consumer receive, as shown on figure 1.1, when retailers select the logistics provider to send products, can consumer need to wait for the parcels, then after consumers confirm received parcels, the final part is consumer feedback, consumers comment about the product on any social platforms (positive or negative depends on consumers satisfaction). In recent years, supply chain management has been deeply investigated and considered critically significant, today's competitive world driven by globalization, supply chain management is important to online commerce(Chong et al., 2009; Gibson, n.d.). Therefore, since s-commerce is the future trends, and the appearance of online business brings a new difficulty for coordinating supply chain operations, s-commerce necessary to focus on the supply chain management (Rahardja et al., 2021), as illustrated in Figure 1.2, supply chain management of social commerce flow chart, it involves several key components, which work together to optimize the entire process from suppliers to consumers. When market have consumer demand, first, start with procurement, then after purchasing, the product needs to stock in the warehouse, when consumer ordering the product, next step is logistics management, especially delivery parcel, after consumer got the product, they're post or comment about product, data analysis for supply management and cooperation. In additionally, this research is focus on the e retailer post on social media order which can affect the order processing in supply chain, and trust in logistics can affect logistics management, also, trust in e-word of mouth, trust in retailer and trust in payment methods are all about the trust which can affect the consumer service and after-sales experience.

According to (Golicic et al., 2002), logistics is the value part these components include supplier relationship management, product sourcing, inventory management, logistics, also, (Rahardja et al., 2021) also present the customer service and e-word of mouth, and post-purchase support, all of which are interlinked through social interactions and technological advancements.

Logistics companies and their supply chain managers will benefit from this research, especially in the context of social e-commerce, where logistics and supply chain management requirements are often different from traditional e-commerce.

The research will provide recommendations on trust-related issues that customers are concerned about, helping logistics companies improve their service quality.

For the academic community, this study will fill the academic gap in the field of social e-commerce and supply chain management, especially exploring the formation mechanism of customer trust and logistics management optimization solutions based on the theory of planned behavior (TPB). The research results will provide a theoretical basis for subsequent academic research and promote cross-disciplinary research in the fields of social e-commerce, supply chain management and behavioral science.



Source Searching results from Science Direct

Figure 1.2 Compare the trend of e-commerce and s-commerce in science direct

Various research has been conducted on user behavior, overview, and business model in the s-commerce field (Han et al., 2018). Also, in figure 1.3, searching keywords on science direct, in the e-commerce filed, key word setting is E-commerce, e-commerce, electronic commerce, and key word in s-commerce filed is s-commerce, S-commerce, social commerce. The number shown on the figure is the paper number that related with those of keywords in science direct. Based on the record, both e-commerce and s-commerce are on the rising trend in search frequency on science direct, even though the search frequency of s-commerce is lower than e-commerce. However, s-commerce also is on the rising trend, which means s-commerce still has

many research gaps. This research will propose to update the Theory of Planned Behavior (TPB), which will be explained in chapter 2, to determine factors that influence consumers' purchase intentions and predict future consumer behavior.

1.2 Research Objectives and Questions

This research aims to identify the relationship between factors, purchase intentions, and future behavior in products on s-commerce platforms.

Research objective: Find out the factors influencing consumers' purchase intentions and future behavior in products on s-commerce platforms.

Research question: What factors affect consumers' purchase intentions and future behavior of products on the s-commerce platforms?

This research methodology depends on after literature review to find the primary factors and develop the model from the TPB, a theory using, and Structural Equation Model (SEM) based to analyze the influence factors and model to find results.

1.3 Expected Outcomes

The expected outcome is the significant factor that can influence the purchase intentions and future behavior on s-commerce platforms in products after testing the TPB model and point out the guideline that new consumers also can using the attribute to measure the retailers when they need to purchase agriculture products. For business, retailers can refer to those factors that confirm from this research, what's the consumer really concern, and develop their business.

1.3.1 Able to understand the associated factors of s-commerce in Thailand.

1.3.2 Able to determine the factors affecting the purchase intentions in Thailand.

1.3.3 Able to suggest the policy to promote the s-commerce services towards sustainable development.

1.4 Scope of Study

This research study about the s-commerce assessment in Thailand based on the factor analysis to analyze the factors affecting the purchase intentions and future behavior of consumer in s-commerce in Thailand which collecting from the questionnaire focusing on customer who experienced or used the s-commerce platforms services in Thailand.

1.5 Research Conceptual Framework

This research is divided into 3 phases, as shown in figure 1.4: Phase 1 Literature review, factor identifies. Phase 2, develop the TPB model by adding factors, setting hypotheses, designing a questionnaire, doing the research ethics certification, and collecting data, using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to analyze the relationship. Phase 3 uses SEM to analyze the model, test the hypothesis, and then get the result and conclusion.

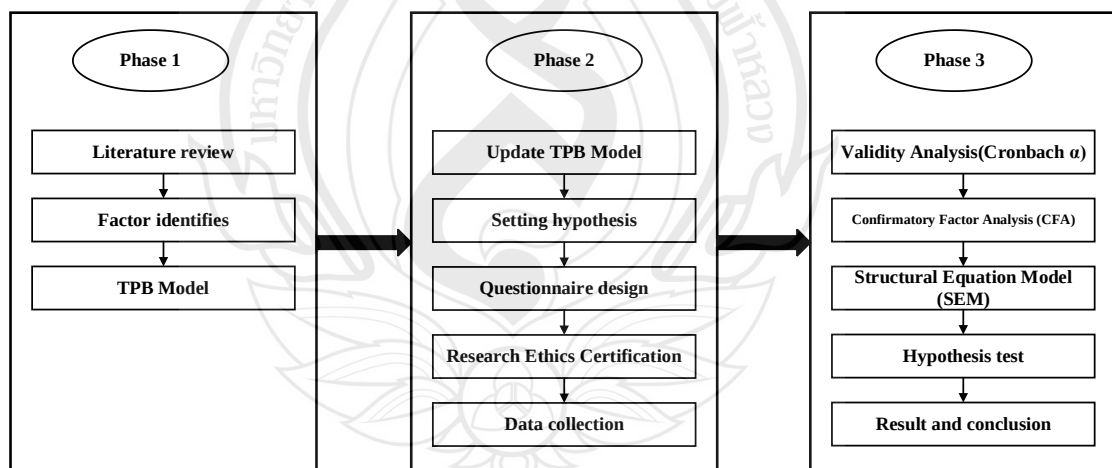


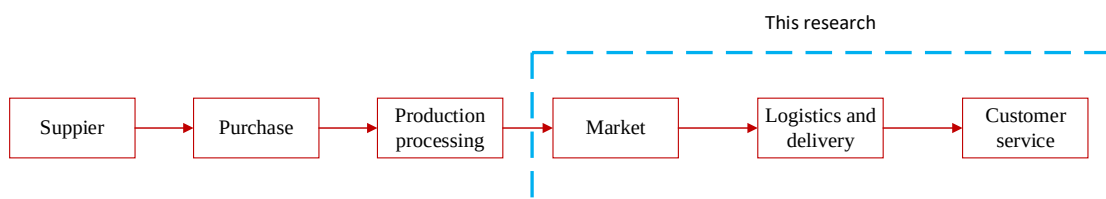
Figure 1.3 Research flow chart

CHAPTER 2

LITERATURE REVIEW

2.1 Supply Chain Management in S-commerce

E-commerce is an online shopping style on online electronic platforms (Kim & Park, 2013; Turban et al., 2010), normally trading as business to business, business to customer and customer to customer (Gefen, 2000), s-commerce is online shopping also, but it is relying on social platforms (Bhattacharyya & Bose, 2020b; Leeraphong & Papasratorn, 2018b), definition as trade on social media platforms, and is a new trend in online commerce, combines social platforms and online shopping (Wijaya et al., 2019), it's difference from e-commerce, type of transaction in s-commerce are business to customer and customer to customer, according to (Mentzer et al., 2001), both of e-commerce and s-commerce as a company that brings the product or service to consumer. Supply chain management is always to be important in online shopping roles Min (Wu, 2024), it has been deeply investigated and considered critically significant, today's competitive world driven by globalization, supply chain management is important to online commerce (Chong et al., 2009; Gibson, n.d.). Therefore, s-commerce is the future trends (Bhattacharyya & Bose, 2020b), and the appearance of online business brings a new difficulty for coordinating supply chain operations, s-commerce necessary to focus on the supply chain management, social commerce and supply chain management complement each other. (Akil & Ungan, 2022; Gibson, n.d.; Rahardja et al., 2021).



Source Wu (2024)

Figure 2.1 Mapping of supply chain

In general, the supply chain can be conceptualized as a network of functional entities or processes (Wu, 2024), supply chain management has special influence on e-commerce (Nikakhtar, 2012). Figure 2.1 is supplying chain mode of e-commerce, as shown in figure 2.1, focuses on three critical parts of s-commerce supply chain management, which are market, delivery and customer service. In the context of supply chain management, market of social commerce offers valuable opportunities to enhance the flow of information and improve decision-making processes, which can predict the customer demand in supply chain (Chong et al., 2017; Golicic et al., 2002).

Customer service management in social commerce revolves around deeply understanding consumer needs and preferences, personalizing the shopping experience, and establishing strong, meaningful relationships through direct interaction on social platforms (Neslin et al., 2006). Furthermore, the strong relationships built through social interactions on s-commerce platforms contribute to a more transparent and responsive supply chain (Chong et al., 2009). According to (Neslin et al., 2006; Sharma et al., 2019), this personalized approach allows companies to build long-term customer loyalty, making it a crucial element in the competitive s-commerce environment. On the logistics side, logistics and delivery management encompasses supply chain coordination. The logistics of s-commerce platforms must be agile and efficient (Akil & Ungan, 2022), offering flexible delivery options, real-time tracking, and clear communication with customers to enhance their trust in the process. Additionally, the timely delivery of products, transparent return policies, and reliability of logistics partners are vital in building long-term customer loyalty (Delfmann et al., 2002).

2.2 Online Purchase and Transaction

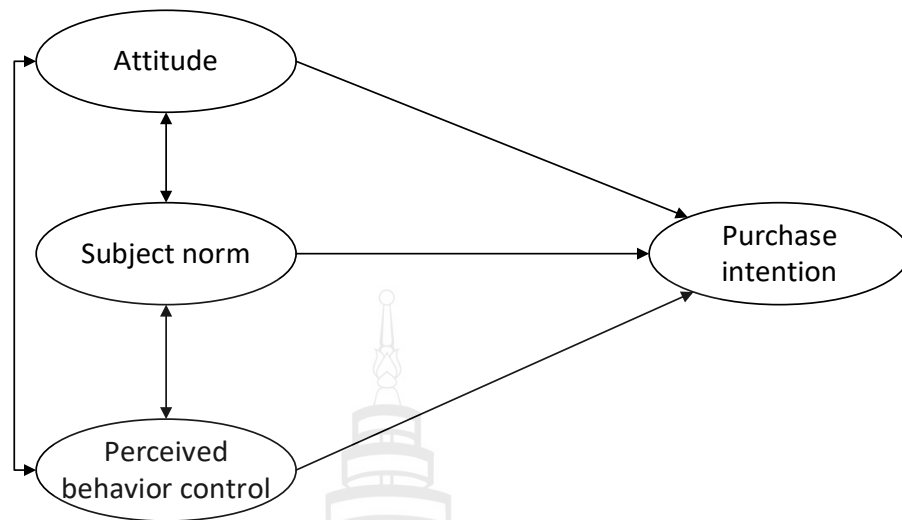
Online social networking is becoming more and more popular. It has become an essential part of daily life, which is an opportunity for the business developer to combine “social media” and “commerce” (Harris & Goode, 2010; Liang & Turban, 2011). Therefore, s-commerce has generated new business models for online transactions. Since s-commerce began popular since 2005, many researchers have given “s-commerce” a different definition, so it did not have a standard definition of s-commerce (Al-Adwan & Kokash, 2019). S-commerce, or social commerce, is an

e-commerce and transaction activity made up of social networks and network users (Liang & Turban, 2011). Thus, s-commerce is a branch of e-commerce (Turban et al., 2010), the only difference is that s-commerce is via social platforms for transactions and activities. Definition of s-commerce in (Hajli, 2015), s-commerce is to be the result of developed e-commerce, and (Meilatinova, 2021) shows that s-commerce combines social platforms and web 2.0 to attract users to have interactions and create content on the internet, more importantly, it can facilitate the use of social commerce. On the other side, (Lăzăroiu et al., 2020) focus on how trust influences the purchase intentions of s-commerce from a psychological perspective.

2.3 Theory of Planned Behavior (TPB)

Based on the prior research, The Theory of planned behavior (TPB) model from (Ajzen, 1991) was used in the current study as a theoretical framework to explain the attribute of the purchase intentions in agriculture products on s-commerce platforms, which is shown in the figure 2.1. TPB was developed from the theory of reasoned action (TRA) (Hajli, 2015), and the TPB model was widely used to analyze consumers' intentions or predict future behavior in tourism, hospitality management marketing, and psychology (Chansuk et al., 2022; Nadlifatin et al., 2021; Vo & Laukkanen, 2021).

The TPB model has three critical factors that can influence consumers' intentions: attitude, subject norm, and perceived behavioral control. Research of (Carfora et al., 2019) used the TPB model to investigate the elements that can predict consumers' purchase intentions in purchasing organic milk, and TPB models can be demonstrated as powerful in predicting food purchase choices. A study in (Maheshwari, 2022) used the TPB model to find out the motivation factors to determine Vietnam university students' entrepreneurial intentions (Chansuk et al., 2022). Used the TPB model to determine the factors influencing travel intentions and predicting future behavior.



Source Ajzen (1991)

Figure 2.2 Original TPB model

2.3.1 Custome Purchase Norms (CPN)

Subjective norm strongly impacts individual decisions, and it also injunctive norms in the TPB theory (Chau et al., 2018; Thøgersen, 2006) Ajzen described personal behavior or inaction of social needs as affected or caused by intimate relationship groups: family, and relatives, friends, etc., and non-intimate relationship groups: colleagues, classmates, etc (Ajzen, 1991). Previous research determined that subjective norms, which will describe as Customer purchase norms in this research, significantly impact purchase intentions (Abbasi et al., 2021; Carfora et al., 2019; Chansuk et al., 2022; Yazdanpanah & Forouzani, 2015). Thus, the Customer purchase norms can define as when any person recommends purchasing agriculture products on s-commerce platforms or saw the recommendation on social, the consumer intends to purchase. The hypothesis of this factor was as follows:

H1: CPN can significantly influence the consumers' intentions to purchase products on s-commerce.

2.3.2 Purchase Attitude (PA)

Attitude is a part of the TPB model, referring to consumers' personal concerns when deciding to do a specific task (Hajli, 2015). This research will describe purchase attitude. In terms of s-commerce, many studies have revealed that consumers' positive attitude toward social commerce generally leads to them promote to purchase online products (Yeon et al., 2019). Also, attitude is related to the personal thinking and evaluation of behavior, whether favorable or not (Ajzen, 1991). In consequence, attitude can be defined as satisfaction with the experience of purchasing agriculture products on s-commerce platforms. Hence, if attitude comprehensive measures of attitude demonstrate a positive relationship between attitude and behavioral intentions, the same in purchasing products on s-commerce platforms. The hypothesis of this factor was as follows:

H2: PA can significantly influence the consumers' intentions to purchase products on s-commerce.

2.3.3 Perspective Behavioral Control (PBC)

If people perceive behavioral and believe the outcome is easily controllable, they are significantly more likely to conduct that behavior (Chansuk et al., 2022). On the opposite, the outcome of perceiving behavior is complicated and difficult to control, and the proclivity to participate in the behavior will be decreased (Ajzen, 1991). Numerous studies have found that perspective behavioral control will positively affect purchase intentions. Therefore, perspective behavior control can define as when the person can perspective the more, they can control their behavior, the possibility of selecting s-commerce to purchase agriculture products will be higher. The hypothesis of this factor was as follows:

H3: PBC can significantly influence the consumers' intentions to purchase products on s-commerce.

2.4 Role of Trust

Trust is an important factor in social research. A large body of work explores trust as an important factor in s-commerce, and it's the most critical factor for the success of e-commerce (Gefen, 2000) , it also has an impact on s-commerce (Lu et

al., 2016; Turban et al., 2010). Trust is also a main factor that researchers' studies about s-commerce need to mention, (Al-Adwan & Kokash, 2019) identify the role of trust in social network site platforms in influencing customers' behavioral intentions to purchase from e-sellers through Facebook social commerce in Jordan. Trust is the key attribute in the interaction between companies and consumers, and it is important to mutual (Gefen et al., 2003). According to (Hajli et al., 2017) described, trust influences purchase intentions directly and partially mediate this impact through familiarity and social presence as the preparation for social commerce information searching. Also, (Meilatinova, 2021) identifies trust as important to the positive comment in word of mouth in s-commerce. S-commerce in Thailand has been a new trend since 2015, with more than 35 million social networking sites registered in Thailand at the same time, but still have many people didn't choose to purchase online because of the trust problem (Bu & Go, 2008; Pothong & Sathitwiriawong, 2017). Therefore, factors added to develop the TPB model in this research are extended by trust and important factors in s-commerce consideration based on the original model as shown in Figure 2.1, which is trust in payment methods, trust in logistics providers, trust in retailers, and trust in e-word of mouth.

2.4.1 Trust in Payment Methods (TP)

Payment method is an important influencing factor in online shopping (Chau et al., 2018). Thailand used to use cash in daily life, even though online commerce is common, but cash on delivery is more popular in Southeast Asia (Leeraphong & Papasratorn, 2018a; Sakdulyatham & Preeyanont, 2021). Also, the convenience of payment methods in online shopping is important, online payment is starting to be popular nowadays, and customers also need clarification about the security of online payment, especially in Thailand. Thus, trust in payment methods can be defined as when consumers trust the payment methods of the s-commerce, they will purchase products on it. The hypothesis of this factor was as follows:

H4: TP can significantly impact the consumers' future behavior on s-commerce.

2.4.2 Trust in Logistics Provider (TL)

Since the difference between online and offline shopping is the time of receiving the products, s-commerce needs to send their products by logistics providers. Therefore, logistic providers as an important part of s-commerce, and it's also a big challenge in

s-commerce (Delfmann et al., 2002; Maia et al., 2019). Also, online shopping has been increasing in recent years, which means logistics providers in Thailand are rapidly increasing too (Laohapensang, 2009). In addition, many studies show that logistics providers can influence consumers' intentions (Briggs & Grisaffe, 2010; Oflaç et al., 2012). Accordingly, the hypothesis of this factor was as follows:

H5: TL can significantly impact purchasing products on s-commerce future behavior.

2.4.3 Trust in Retailers (TR)

Retailers as the only online product information provider, which can most influence the purchase consumers' intentions (Kim et al., 2008), the importance of retailers is self-evident. Additionally, many researchers have studied about trust in retailers, for example, (Oliveira et al., 2017) remark that if online consumers understand the consumers' perspective on honesty and kindness, it can improve the entire trust in their business. (Yahia et al., 2018) reveal that social dealing with s-commerce retailers and product differentiation can reduce trust, and trust also determines by price and word of mouth. (Flavián et al., 2006) discuss the usability and satisfaction of websites can increase the trust of consumers in electronic retailers. In addition, trust in retailers can influence the entire trust of consumers in s-commerce platforms, it also can affect consumers' online buying intentions (Lien et al., 2017). Thus, trust in retailers can define as when consumers trust in retailers, they will prefer to purchase products with the s-commerce platforms. Accordingly, the hypothesis of this factor was as follows:

H6: TR can significantly impact purchasing products on s-commerce future behavior.

2.4.4 Trust in E-word of Mouth (TE)

Word of mouth is the clear way to know the quality of products expected of retailers, and (Brown & Reingen, 1987; Goraya et al., 2021) indicated that consumers prefer to purchase products based on word of mouth by other consumers rather than watching advertisements. Although, word of e-word of mouth (e-WOM) intentions was created by (Lin et al., 2017; Ortiz et al., 2017), and defined it as online consumers users' sharing their experiences and comments on the platforms. In additional, (Kim & Park, 2013) shows trust of e-word of mouth is the variable attribute of s-commerce. Therefore, trust in e-word of mouth can be defined as when consumers trust in e-word

of mouth, they will prefer to purchase on the s-commerce platforms. The hypothesis of this factor was as follows:

H7: TE has significantly impact on purchasing products on s-commerce future behavior.

2.4.5 Purchase Intentions (PI)

Besides, researcher also hypothesized the use of purchase intentions to predict behavioral (Gracia & de Magistris, 2008), according to (Nuttavuthisit & Thøgersen, 2017; Vo & Laukkanen, 2021), purchase intentions can predict future behavioral, forecast future sales, and forecast the demand of consumer. Therefore, purchase intentions can be defined as what is the intentions of consumers in the short-term future to purchase on s-commerce platforms. Thus, the hypothesis between purchase intentions and future behavioral was as follows:

H8: PI has significant impact on the future behavior of s-commerce consumers.

2.4.6 Future Behavior (FB)

Future behavior is an essential factor in marketing, psychology, and trade role, (Canny, 2013; Ouellette & Wood, 1998; Prayag, 2009), showing the importance of future behavior. Moreover, predicting the consumer's future behavior is important in many TPB studies. It is also influenced by past behavior, even if it cannot lead to future behavior (Mullen et al., 1987; Rogers, 2008). However, according to (Carfora et al., 2019; Norman & Conner, 2005), past behavior is a strong predictor of future behavior. Therefore, in this research, future behavior can be defined as whether consumers purchase agriculture products on s-commerce platforms in the long-term future.

2.5 Analysis Methods in Behavioral Study

As Table 2.1 shown many methods have been extensively employed in the s-commerce field to analyze consumer behavior. Analysis of variance was used to find mobile internet user segments by consumer behavior (Chau et al., 2018). Additionally, (Bhattacharyya & Bose, 2020a) used secondary data and analysis by randomized controlled experiment to find the influence of Facebook likes on s-commerce. Research by (Busalim et al., 2021) shows improving the understanding of consumer behavior by applying PLS-SEM to analysis. To illustrate, OLS regression

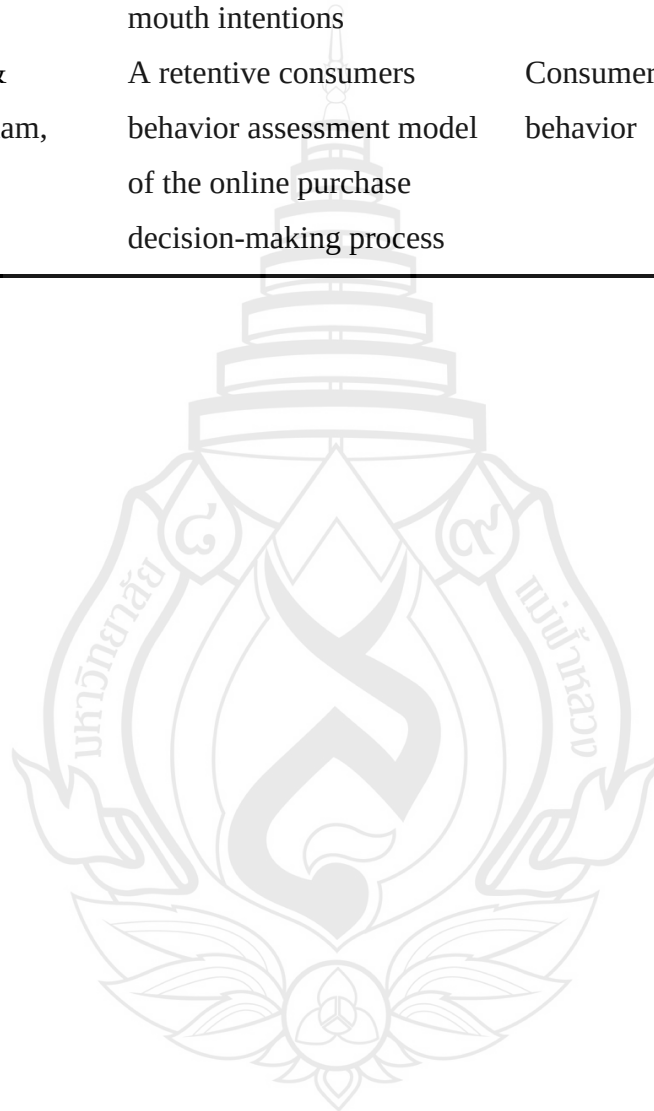
has been used to find the consumer behavior intentions of the university group, which is students joining social commerce for social value, also showing the new function of s-commerce, not only the trend (Doha et al., 2019). EFA is a method used to find or observe the hidden correlations factors in the items. Meanwhile, CFA is a methodology that focuses on finding the relationship between factors (Chansuk et al., 2022; Faller et al., 2006). In addition, other research used Partial least squares regression combined with SEM to identify the factors of influence s-commerce consumers' intentions. The result shows that repurchase and word of mouth are the most important attributes (Meilatinova, 2021). However, in the s-commerce field, the typical approach is a survey (Chen et al., 2014); this research also uses the CFA and SEM to analyze consumers' behavior on Facebook and find out perceived usefulness and perceived ease of use that can entice consumers.

Table 2.1 Summarize methods in consumers' behavior in s-commerce filed

Authors	Topic	Focus on	Method
(Chen et al., 2014)	Exploring the commercial value of social networks	Consumers behavior	CFA, SEM
(Chau et al., 2018)	An Exploratory Study of Mobile Shopping Behaviors of Young Adults in Thailand	Consumers behavior	Variance analysis
(Doha et al., 2019)	Social commerce as social networking	Consumers behavior	EFA, CFA, OLS regression
(Bhattacharyya & Bose, 2020a)	S-commerce: Influence of Facebook likes on purchases and recommendations on a linked e commerce site	Consumers behavior	randomized controlled experiment
(Busalim et al., 2021)	Customer engagement behaviour on social commerce platformss: An empirical study	Consumers behavior	PLS-SEM

Table 2.1 (continued)

Authors	Topic	Focus on	Method
(Meilatinova, 2021)	Social commerce: Factors affecting customer repurchase and word-of-mouth intentions	Consumers behavior	Partial least squares regression, SEM
(Petcharat & Leelasantitham, 2021)	A retentive consumers behavior assessment model of the online purchase decision-making process	Consumers behavior	Statistical data analysis



CHAPTER 3

RESEARCH METHODOLOGY

3.1 Survey Instrument

As outlined previously this research intended to analyze online shopping consumers' intentions and future behavior in Thailand's s-commerce era in purchasing products. We updated the TPB constructs plus trust in e-word of mouth, payment methods, seller, logistics and delivery, and pandemic to explain consumers' intentions and future behavior in relation to products purchasing in s-commerce by using EFA, CFA, and SEM methodology. This study employs convenience sampling as the target population comprises individuals who have used s-commerce for product purchases. The research questionnaire consisted of three sections: (1) Socio demographics, (2) consumer intentions, and (3) consumers' future behaviors. A 5-point Likert scale was employed to evaluate the 45 attributes with (1) Strongly disagree; (2) Disagree; (3) Neutral; (4) Agree; (5) Strongly agree (Joshi et al., 2015). All the attributes developed from prior research factors but did not in the trust perspective. This study employed a convenience sampling method, targeting individuals who have utilized s-commerce for product purchases, engagement in the study was voluntary. The questionnaire evaluated 45 attributes relevant to consumers' purchasing intentions within Thailand's s-commerce sector. These attributes were informed by factors identified in previous research, including aspects related to trust.

3.2 Population and Sampling

This study utilized a convenience sampling technique, focusing on individuals who have engaged in s-commerce for product purchases. The 45 attributes assessed in the questionnaire were focused on consumers' purchase intentions within Thailand's s-commerce sector, based on factors identified in prior studies, including trust-related elements.

The questionnaires were distributed to 500 participants, collected from Thailand. After excluding the invalid questionnaires, the most effective questionnaires for further analysis were 476 questionnaires. The method to eliminate invalid questionnaires is number all the data using numbers as codes, for example: male is 1, female is 2 and add up all the items measured by Liker Scale and eliminate questionnaires with a total number of questions that are multiples by 5, 4,3,2, to find out the invalid data and delete it. (Shown in Appendix).

3.3 Data Collection

The study aims to examine the factors that influence consumers' intentions and future behavior of s-commerce consumers. Data collection is a critical component of research, influencing the quality and credibility of study findings. This paper examines the methodology of a research project conducted over a seven-month period, Data collection spanned from May 1, 2023, to July 21, 2023. This period allowed for a comprehensive accumulation of data while accommodating the academic calendar and participant availability. The duration of data collection ensured a substantial sample size and increased the likelihood of capturing diverse perspectives within the study's context.

The sampling methods focus on the use of convenient sampling. The questionnaires were carried out at Thailand, and to refine the design and enhance its validity, feedback was solicited from classmates and academic peers, with feedback from classmates and rigorous data filtration employed to enhance data quality.

Data filtering and cleaning were conducted using Microsoft Excel, which provided a robust platform for managing and analyzing the dataset.

The primary objective was to ensure the integrity of the data by identifying and removing invalid entries. The filtering process involved: Initial Data Review: First, data entries were reviewed for accuracy and completeness. Any obvious discrepancies or missing values were flagged for further investigation. Second, filtering Criteria: Specific criteria were established to identify invalid data. This included the removal of data entries with values that were multiples of 2, 3, 4, and 5. The rationale behind this criterion was to eliminate potential anomalies and errors that could skew the results.

Since online consumers are a big population number, and the internet development, the user can increase every time, so providing a precise number is difficult. Therefore, the suitable solution is using the formula from (Cochran, 1953) which is the formula to calculate the infinity population, and confidence level of 95% and precision value of 15% is an acceptable level in social science for sample size determination and set the desired precision to be $\pm 5\%$ (Dzoga et al., 2018):

$$N = \frac{Z^2 pq}{e^2} = \frac{(1.92)^2 (0.5)(0.5)}{([0.05])^2}$$

When.

N = sample size,

Z = is the selected critical value of the desired level of confidence,

p = is the estimated proportion of an attribute that is present in the population,

q = 1-p,

e = is the desired level of precision.

The confidence level was set to 95%, hence $z = 1.96$

Therefore, the Sample size is.

$$N = \frac{(1.92)^2 (0.5)(0.5)}{[(0.05)]^2} = 384.16 \approx 384$$

The target demographic consisted of online consumers who had purchased products through s-commerce platforms in Thailand. Questionnaires were distributed to 500 participants via social platforms channels such as Facebook, Line, and TikTok. After excluding invalid responses, 477 questionnaires remained for further analysis.

3.4 Data Analysis

Data analysis was carried out with SPSS version 26 and AMOS version 21.0. The analysis began with SPSS for demographic data using descriptive statistics. Following this, one-way ANOVA was employed to examine the effects of demographic variables on various factors. AMOS was then used for Confirmatory Factor Analysis

(CFA) to assess the accuracy of the model's structure. The analysis concluded with Structural Equation Modeling (SEM) for hypothesis testing and data verification.

3.4.1 Reliability

In general, Cronbach's alpha is a coefficient that quantifies the internal consistency of a scale. It measures how well a set of items (e.g., questions on a survey) reflects a single underlying construct or dimension. The coefficient ranges from 0 to 1. The value of Cronbach's alpha more than 0.7 are valid,

Cronbach's alpha helps evaluate the reliability of a measurement instrument. High reliability indicates that the items consistently measure the same construct, leading to more valid and dependable results.

Cronbach's alpha measures scale reliability and might be referred to as:

$$\alpha = \frac{k\bar{r}}{1 + \bar{r}(k - 1)}$$

k = items,

$\bar{r}$ = mean correlation between the items,

Table 3.1 Summary standards value of Cronbach's Alpha

Index type index name	Cronbach's Alpha
Standard value requirement	>0.7

1.) Confirmatory Factor Analysis

The Confirmatory Factor Analysis (CFA) technique was employed to validate the factor structure derived from the Exploratory Factor Analysis (EFA). To determine the quality of fit in CFA, a model fit analysis was conducted (Chatzoglou et al., 2022; Guo et al., 2019).

The Chi-square statistic (χ^2) measures how well a model fits the observed data compared to an expected model. Its measure is applied due to the high sensitivity of 'X2' to the sample size. 1-3 is desirable value, 1-5 is acceptable value.

The average variance extracted is the sum of squared loadings divided by the number of items and is given by as below. The average variance extracted (AVE) standard is higher than 0.50. It is a tool for evaluating a factor's convergent validity. This term is commonly employed to evaluate the convergent validity of a construct (Fornell & Larcker, 1981a; TomassMHultt, n.d.-b).

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$$

The composite reliability (CR) index standard is higher than 0.7. This is measuring the evaluation of the internal consistency of a group of items that are associated and is used complimentary with the "Cronbach Alpha".

$$CR = \frac{\sum_{i=1}^n \lambda_i^2}{\sum_{i=1}^n \lambda_i^2 + \sum_{i=1}^n \varepsilon}$$

Here,

n= number of items,

λ_i^2 =factor loading of item,

ε = the variance of the error of the item,

Root Mean Square Error of Approximation (RMSEA) value more than 50% is acceptable. This item evaluates the accuracy of an approximation, while considering the sample size. Comparative Fit Index (CFI) standard is 0.9 or more than it. This item evaluates the accuracy of an approximation, while considering simple size. Goodness of Fit Index (GFI) standard is 0.9 or more than it.

Table 3.2 Standards value of CFA

Items	Normed X ²	CR	AVE	CFI	GFI
Standard value requirement	1-5	>0.7	>0.5	>0.9	>0.9

2.) Structural Equation Model

By addressing the limitations inherent in traditional statistical methods, Structural Equation Modeling (SEM) proves to be effective for social science research. (Gu et al., 2019).

In this research, researcher develops the TPB model for identifying those factors that significantly impact on purchase intentions of consumers who purchase on s-commerce platforms, as shown in Figure 3.1, which are original factors are attitude, subjective norms, perspective behavioral control, and purchase intentions. In addition, researcher adds those factors, which are trust in payment method, trust in logistics provider, trust in retailer, trust in e-word of mouth, and future behavior. And each factor

extends different attributes, attribute explanations and measure standards of each factor are shown in table 3.3. Each factor is measured by their attribute.

This model integrates the core components of the Theory of Planned Behavior (TPB) — including attitude, subjective norms, perceived behavioral control, and purchase intentions — with additional factors specific to social commerce. These extended factors focus on various forms of trust, such as trust in payment methods, logistics providers, retailers, electronic word of mouth (e-WOM), and consumers' future behavior. The goal is to explore how these elements interact and influence consumers' purchase intentions on social commerce platforms.

By combining traditional TPB elements with the added trust-related factors, the model offers a more complete framework for understanding consumer purchasing behavior, particularly in the dynamic field of social commerce. This approach highlights the importance of trust in shaping consumer decisions, especially given the reliance on social interactions, reviews, and recommendations in this environment. Overall, this extended TPB model serves as a valuable tool for both researchers and practitioners aiming to enhance consumer engagement and optimize strategies on social commerce platforms.

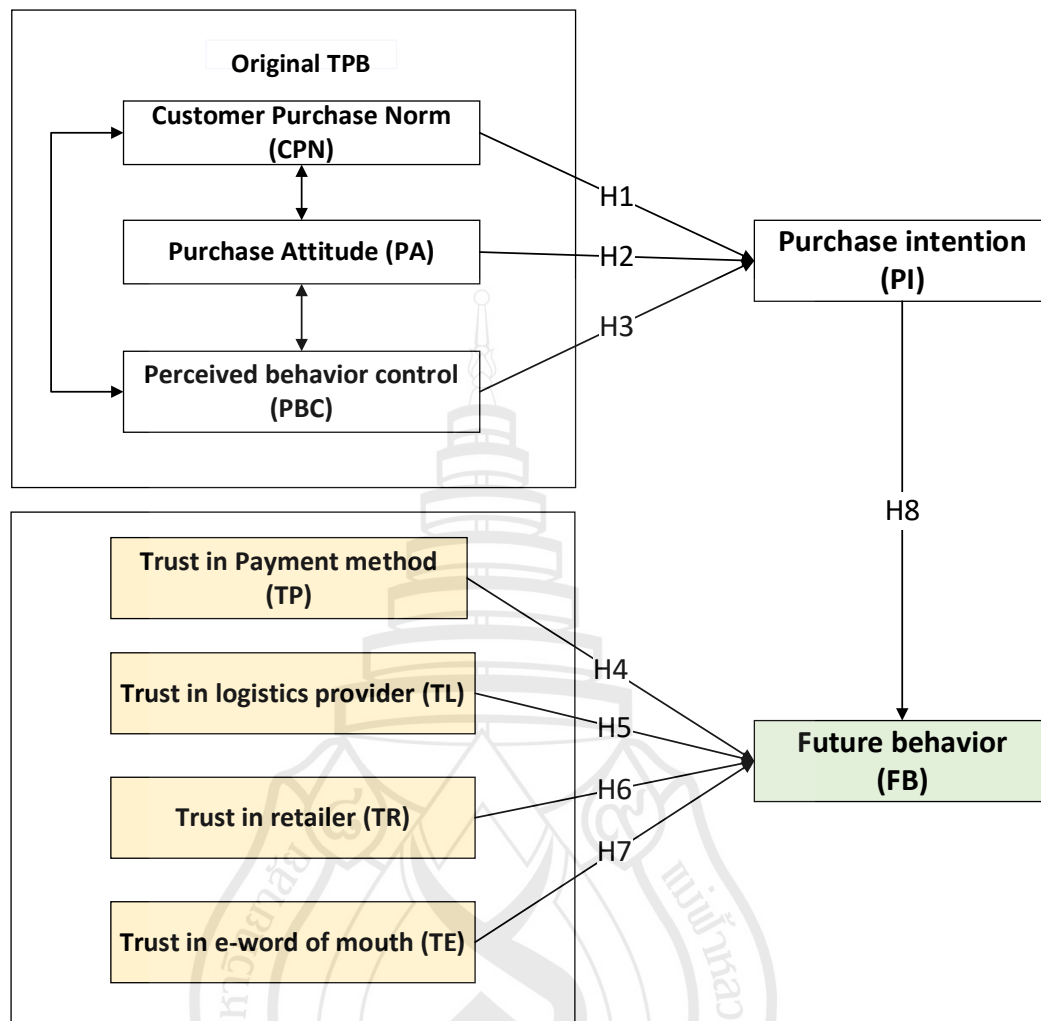


Figure 3.1 Theory framework adapted from the theory of planned behavior (TPB)

Table 3.3 Factor and attribute explanation

Factors	Attribute	Statement
Customer purchase norms (CPN) (Abbasi et al., 2021; Carfora et al., 2019; Chansuk et al., 2022)	CPN1	I would like to purchase products on s-commerce platforms because of the social trend.
	CPN2	I would like to purchase the products on the s-commerce platforms that my friend recommended to me.
	CPN3	I would like to purchase the products on the s-commerce platforms that my family recommended to me.
	CPN4	I would like to purchase products on s-commerce platforms that the influencers on the internet recommended.
	CPN5	I would like to purchase products on s-commerce platforms which have ranked in the top 5 on the internet.
Purchase Attitude (PA) (Abbasi et al., 2021; Carfora et al., 2019; Chansuk et al., 2022)	PA1	I enjoy purchasing products on s-commerce platforms because it does not need talking with people.
	PA2	I enjoy purchasing products on s-commerce platforms because it's comfortable.
	PA3	I enjoy purchasing products on s-commerce platforms because it's reliable.
	PA4	I enjoy purchasing products on s-commerce platforms because it's easier to prepare what I need.
	PA5	I enjoy purchasing agricultural products on s-commerce platforms because it's given me more satisfaction.
Perceived Behavioral Control (PBC) (Carfora et al., 2019; Chansuk et al., 2022)	PBC1	I am capable of purchasing products on s-commerce platforms.
	PBC2	I can decide whether to prepare products on s-commerce platforms.
	PBC3	I am confident that I can decide whether to purchase products on s-commerce platforms is entirely up to me.
	PBC4	I can predict whether I will purchase products on s-commerce platforms.
	PBC5	If I have enough money and time, I will choose s-commerce platforms for purchasing products.
Trust in Payment method (TP) (Carfora et al., 2019)	TP1	If the website/page on s-commerce platforms is easy to do the payment, I will purchase products on it.
	TP2	If the website/page on s-commerce platforms has high information quality on the payment page, I will purchase products on it.
	TP3	If the website/page on s-commerce platforms has multiple payment methods, I will purchase products on it.
	TP4	If the website/page on s-commerce platforms has the cost on the delivery payment method, I will purchase products on it.

Table 3.3 (continued)

Factors	Attribute	Statement
Trust in logistic provider (TL) (Carfora et al., 2019; Hajli et al., 2017)	TL1	I do not doubt the honesty of the logistics provider that s-commerce platforms selected.
	TL2	I believe logistics providers that s-commerce platforms selected could control the safety of products.
	TL3	I believe logistics providers that s-commerce platforms selected have sufficient knowledge to guarantee the safety of products.
	TL4	Logistics providers give special attention to the products from s-commerce platforms.
	TL5	Based on my experience with the s-commerce system, I know it cares about users.
Trust in retailer (TR) (Carfora et al., 2019; Hajli et al., 2017)	TR1	I trust the introduction of products from the seller because s-commerce platforms are reliable.
	TR2	I trust the seller of s-commerce platforms because they reply to me in time.
	TR3	I trust the recommendation from the seller on s-commerce platforms because their explanation has logic and is reasonable.
	TR4	Based on my experience, I trust s-commerce platforms because they're honest.
Trust in e-word of mouth (TE) (Cheng et al., 2019; Noh et al., 2013)	TE1	I will likely encourage others to consider using social platforms commerce to purchase products based on my experience.
	TE2	I would like to give a negative comment when I feel unsatisfied when I purchase products on s-commerce platforms.
	TE3	I would like to talk to my friends about the products that I purchase on s-commerce platforms quality or impression of the seller.
	TE4	I would like to cancel my order that I purchased on s-commerce platforms because I heard about the bad comment.
Purchase Intentions (PI) (Kumar & Mohan, 2021; Liu et al., 2020; Vabø & Hansen, 2016)	PI1	If I need to purchase products today, I will choose s-commerce platforms.
	PI2	If I need to purchase products today, I am willing to choose s-commerce platforms.
	PI3	If I need to purchase products on s-commerce platforms today, I will put the required efforts into it.
Future Behavioral (FB) (Aydin & Aydin, 2022; Chansuk et al., 2022)	FP1	I will use the s-commerce platforms to purchase agriculture products in the future.
	FP2	I will not use the s-commerce platforms to purchase products in the future.
	FP3	I will still use the s-commerce platforms if I have capable to purchase products on the s-commerce platforms in the future.

CHAPTER 4

RESEARCH RESULTS

4.1 Socio-demographics of Participants

In this section, research results are shown in Figure as below, Figure 4.1.1 – 4.1.6 are shown the socio-demographics analysis, they provide valuable insights into the characteristics of the study participants.

The data presented in Figure 4.1 reveals a notable gender imbalance among respondents, with a substantial majority identifying as male (70.6%). In contrast, female respondents constitute 25.4% of the sample, while 4% opted not to disclose their gender. This disproportionate representation of male participants suggests a potential limitation in the generalizability of the research findings.

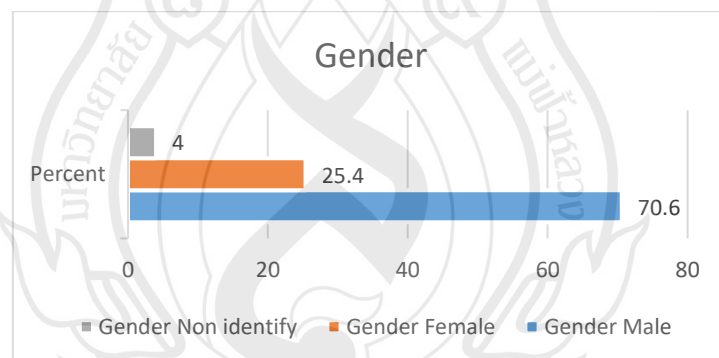


Figure 4.1 Gender proportion in sample (%)

Figure 4.2 illustrates that the predominant age group among participants is individuals under 21 years old, comprising 54.4% of the sample. Participants aged 21-30 years make up 25.6% of the sample. Collectively, over 80% of the respondents are under 30 years of age, reflecting a youthful demographic within the s-commerce sector. This age distribution is critical in understanding consumer behavior and preferences in s-commerce, as younger individuals may exhibit distinct online shopping habits, technological proficiency, and engagement patterns compared to older age groups.

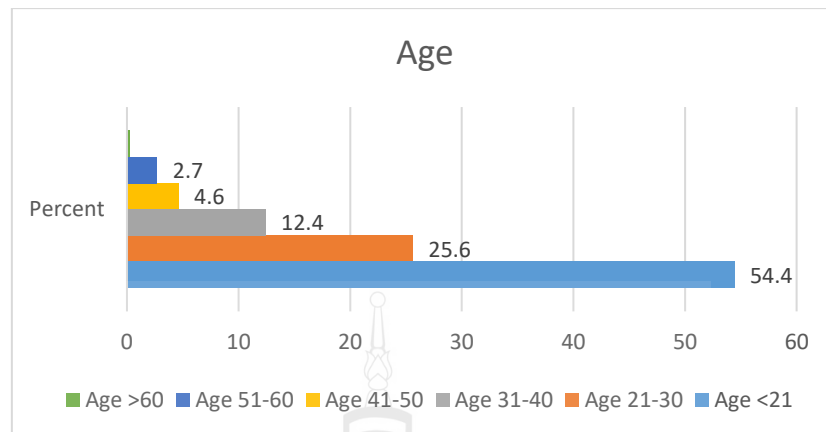


Figure 4.2 Age proportion in sample (%)

Figure 4.3 shows that a significant majority of the respondents (59.5%) are unmarried. This finding is consistent with the youthful demographic observed in the study and may have implications for understanding consumer behavior in s-commerce. Unmarried individuals, particularly those in the younger age brackets, may have different purchasing behaviors, financial priorities, and social interactions compared to their married counterparts. For instance, their purchasing decisions might be more influenced by trends, peer recommendations, and social platforms, rather than household needs or family-oriented products.

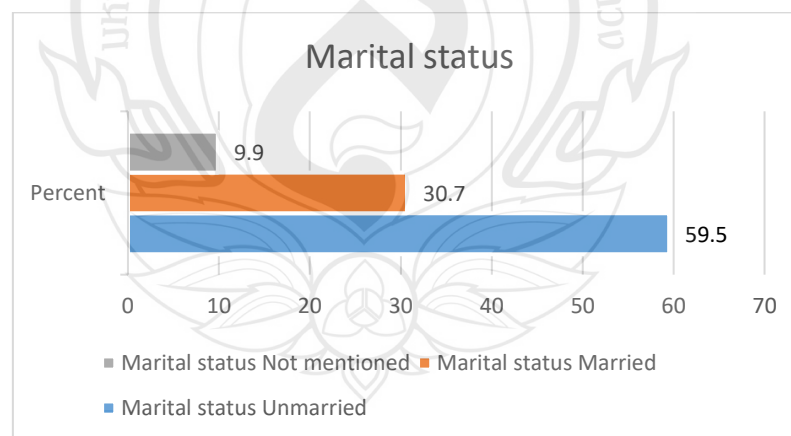


Figure 4.3 Marital status proportion in sample (%)

As illustrated in Figure 4.4, the Eastern region of Thailand is the most represented area in the sample, accounting for 42.9% of respondents. This regional concentration may reflect regional variations in s-commerce engagement and highlight the geographic diversity within the study population. The dominance of respondents

from the Eastern region may influence the generalizability of the findings across other regions in Thailand. Understanding regional differences in s-commerce behavior can provide valuable insights into localized trends.

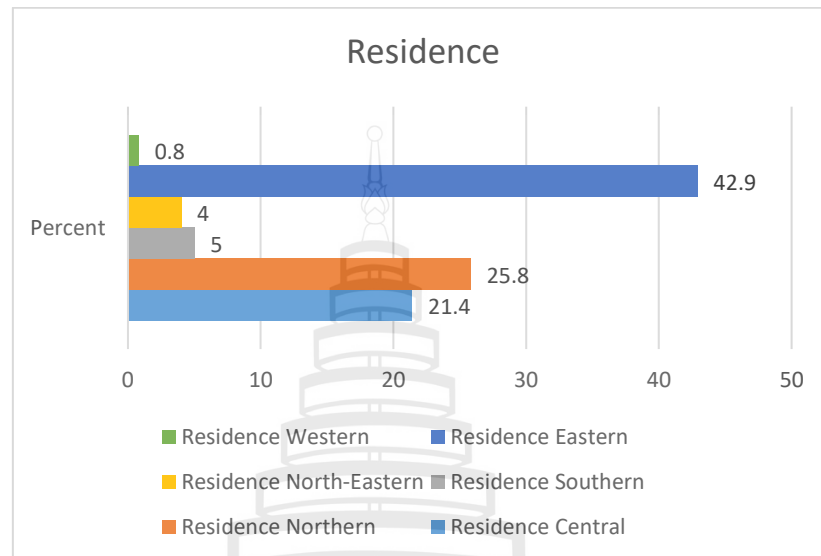


Figure 4.4 Residence proportion in sample (%)

Figure 4.5 reveals that the majority of respondents (51.9%) have less than a bachelor's degree. This educational distribution aligns with the high proportion of participants aged under 21 years, many of whom may still be pursuing or have not yet completed higher education. The prevalence of lower educational attainment among respondents may affect their s-commerce behaviors, including their purchasing power, product preferences, and engagement with online platforms.

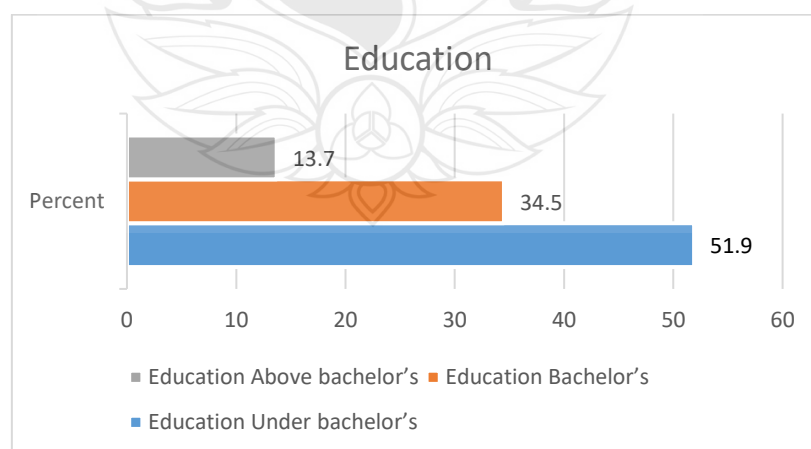


Figure 4.5 Education proportion in sample (%)

See the figure 4.6 below for the information income data indicates that 65.8% of participants earn less than 15,000 baht per month, the sample reflects a financially constrained demographic, predominantly consisting of students and younger individuals. This income level impacts purchasing power and could influence the types of products and services that are in demand. S-commerce platforms might need to focus on budget-friendly offerings, discounts, and promotions to cater to this segment effectively.

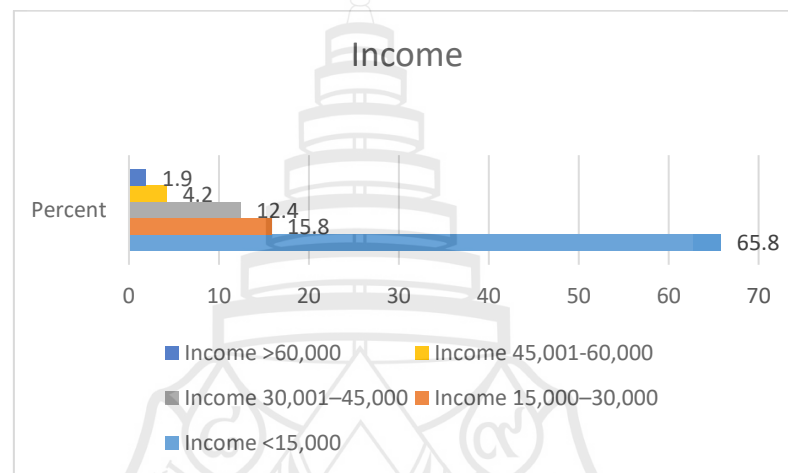


Figure 4.6 Income proportion in sample (%)

The subsequent figure 4.7 outlines notably, students constitute 54.6% of the respondents, with an additional 16.2% identifying as being in other occupations. Further underscores the youthful and possibly part-time employment status of the sample. Students are likely to be highly engaged with social media and online platforms, making them significant targets for s-commerce activities. The engagement patterns of students might include frequent, smaller-scale purchases driven by trends, social influence, and peer recommendations.

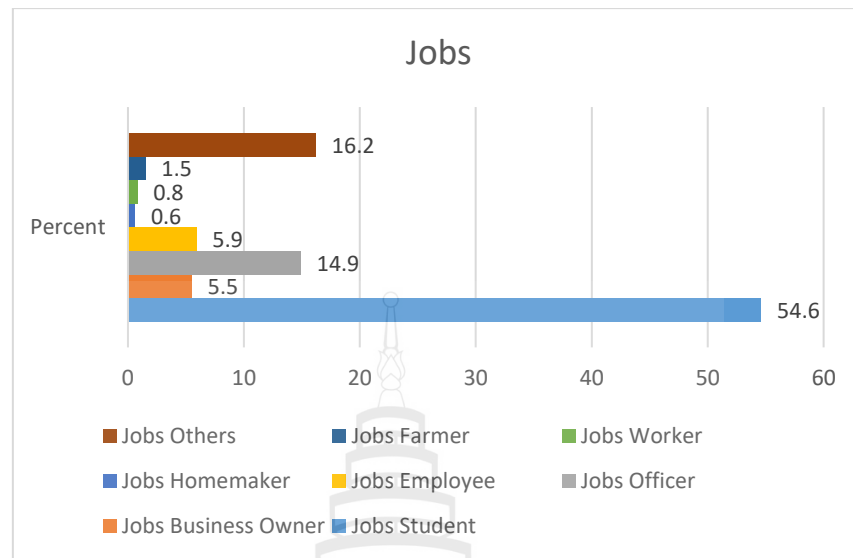


Figure 4.7 Jobs proportion in sample (%)

The demographic profile of s-commerce consumers, characterized by a preponderance of young males, students, and individuals with lower income and educational attainment, offers valuable insights for tailoring s-commerce strategies. Understanding these characteristics helps in designing targeted marketing campaigns, product offerings, and engagement strategies that resonate with this specific consumer base. However, researchers and practitioners should also consider these findings' limitations and seek to include a broader range of demographics in future studies to enhance the comprehensiveness of the insights into s-commerce consumer behavior.

4.2 Crosstab Analysis

Crosstab Analysis, or cross-tabulation, is a statistical method used to examine the relationship between two or more categorical variables. This technique involves creating a table (known as a crosstab or contingency table) that displays the frequency distribution of variables and their intersections. Each cell in the table shows the count or percentage of cases falling into each category of the variables. It helps in understanding the relationship between variables. For instance, it can reveal how different levels of one variable (e.g., education) are associated with categories of another variable (e.g., social platforms usage). Crosstab analysis provides

a straightforward way to see how different categories intersect, which is useful for descriptive statistics.

Crosstab analysis reveals distinct usage patterns of social platforms across different educational levels, highlighting how platforms preferences vary based on educational attainment. In social commerce, this information is crucial for tailoring marketing strategies to align with the preferences of different educational demographics. Table 4.1 depicts the results of the cross tabulation between education and s-commerce platforms selection, the participant who have education under bachelor's have 33.2% chose TikTok as the s-commerce purchasing platforms, and participant of bachelor's degree and above, 29.9% select Facebook as the s-commerce purchasing platforms. Platforms like TikTok and Facebook stand out for their broad appeal, while Instagram and Line have targeted effectiveness. The lower engagement with Twitter and YouTube suggests these may be less effective for social commerce in this context. The significant use of niche platforms among users with under bachelor's education points to opportunities for exploring diverse social commerce avenues.

Table 4.1 Crosstab analysis- Education and platforms

Platforms/ Education	Under bachelor's	bachelor's	Above bachelor's
Facebook	6.9%	29.9%	29.9%
Instagram	16.2%	14.0%	18.5%
Line	2.0%	14.0%	15.4%
Twitter	8.5%	3.7%	0%
YouTube	0.8%	0.6%	1.5%
TikTok	33.2%	26.8%	21.5%
Other	32.4%	11.0%	13.8%
Total	100%	100%	100%

Crosstab analysis reveals distinct patterns in payment preferences across different educational levels, indicating that social commerce platforms need to adapt their payment solutions to cater to these diverse consumer needs. Table 4.2 depicts the results of the cross tabulation between education and payment methods selection in

s-commerce, the results show participant who have education under bachelor's and above bachelor's have 43.3% and 43.1% chose cash on delivery as the payment method on s-commerce purchase, and participant of bachelor's degree have 42.7% select bank transfer as the s-commerce purchasing platforms. Social commerce platforms should consider tailoring payment options based on the educational background of their target audience. For instance, platforms targeting individuals with lower educational attainment might emphasize cash-on-delivery options, while those focusing on more educated users might highlight digital payment options and credit/debit card facilities.

Table 4.2 Crosstab analysis- Education and payment methods

Payment/ Education	Under bachelor's	bachelor's	Above bachelor's
Debit/Credit card	4.9%	11.0%	12.3%
Bank Transfer	37.7	42.7%	32.3%
True Money	7.7%	7.9%	6.2%
Line pay	0%	2.4%	1.5%
Cash on Delivery	43.3%	27.4%	43.1%
PayPal	0.4%	0.6%	1.5%
QR Payment	4.0%	6.1%	3.1%
Other	2.0%	1.8%	0%
Total	100%	100%	100%

4.3 Purchase Behavior Characteristics

Table 4.3 showed the travel behavior characteristics of 477 participants from a questionnaire survey. A large majority of participants (93.9%) are aware of s-commerce, highlighting its widespread recognition. Among these, 76.9% have engaged in shopping through s-commerce platforms. This demonstrates a high level of familiarity and engagement with s-commerce among the sample population.

Clothes are the most purchased product category, with 49.6% of participants buying apparel through s-commerce. The second most frequent purchase is agriculture

machinery (12%), which is unexpected given its niche market. Daily necessities follow with 10.5%. This suggests a diverse range of products bought through s-commerce, from everyday items to specialized equipment.

E-Word of mouth is the primary reason for choosing s-commerce platforms, cited by 44.5% of participants. Credit of the retailer and logistics speed are also significant factors, with 25.2% and 21.6% respectively. Conversely, the service quality of retailers is the least influential factor (8.6%). This indicates that recommendations and retailer credibility are critical in platforms selection.

Bank transfer is the most popular payment method, chosen by 38.7% of participants, closely followed by cash on delivery (37.8%). Other payment methods such as debit/credit cards and True money wallet are less commonly used. This preference for bank transfers and cash on delivery reflects a possible concern for security or convenience in the payment process.

The majority of participants (58.4%) prefer to shop in the evening, while 35.9% shop in the afternoon and a small proportion (5.7%) shop in the morning. Regarding shopping frequency, 64.3% shop on s-commerce platforms less than twice a week, indicating a relatively infrequent but consistent usage pattern.

The predominant price range for products purchased on s-commerce is between 101-500 Baht, with 68.7% of participants spending within this range. This range aligns with the spending per purchase, where 67.9% of participants also spend between 101-500 Baht per transaction.

The primary reasons for using s-commerce are the rich product range (44.7%) and convenience/fast service (37.2%). Price affordability and social trends are less significant factors, with only 13% and 5% respectively. This highlights that product variety and efficiency are key drivers for s-commerce usage.

The most significant factors influencing product selection on s-commerce are user reviews (26.5%) and product price (14.9%). Product information and retailer service also play roles but to a lesser extent. This suggests that consumers place substantial weight on reviews and competitive pricing when making purchasing decisions.

The analysis reveals a strong familiarity with and engagement in s-commerce among participants, with significant usage concentrated on visual-centric platforms like

TikTok and Facebook. The diverse range of products purchased, from clothing to agricultural machinery, indicates that s-commerce caters to both general and specialized needs. The prominence of e-word of mouth in platforms selection underscores the importance of reputation and consumer feedback in influencing shopping behaviors. Payment preferences lean towards secure methods like bank transfers and cash on delivery, reflecting consumer concerns about payment security and convenience. Shopping patterns are predominantly evening-based with relatively infrequent transactions, suggesting that while s-commerce is a popular shopping channel, it may not yet be a daily habit for many consumers. The price range most frequently associated with purchases indicates a middle-ground affordability that appeals to a broad segment of shoppers. Overall, the findings highlight key areas for s-commerce platforms to focus on: enhancing product variety, ensuring convenience, and leveraging positive user reviews to attract and retain customers. Addressing these factors can improve platforms attractiveness and consumer satisfaction, potentially leading to increased engagement and spending on s-commerce platforms.

Table 4.3 Travel behavior characteristics

Variable	Category	Frequency	Percent
S-commerce popularization	1: Knowing	447	93.9
	2: Never heard	29	6.1
S-commerce shopping experience	1: Yes	366	76.9
	2: No	110	23.1
Application of s-commerce using	1: Facebook	85	17.9
	2: Instagram	75	15.8
	3: Line	38	8
	4: Twitter	27	5.7
	5: YouTube	4	0.8
	6: TikTok	140	29.4
	7: Others	107	22.5

Table 4.3 (continued)

Variable	Category	Frequency	Percent
Type of product	1: Fruit, tea, coffee	26	5.5
	2: Clothes	236	49.6
	3: Ornaments	40	8.4
	4: Electronics	27	5.7
	5: Sporting goods	15	3.2
	6: Agriculture machine	57	12
	7: Daily necessities	25	10.5
	8: Others	50	5.3
Reason of chose s-commerce platforms	1 e-word of mouth	212	44.5
	2: Credit of retailer	120	25.2
	3: Sale service	41	8.6
	4. Logistics	103	21.6
Payment methods	1: Debit/credit card	38	8
	2: Bank transfer	184	38.7
	3: True money wallet	36	7.6
	4. Rabbit line pay	5	1.1
	5. Cash on delivery	180	37.8
	6. Pay Pal	3	0.6
	7. QR payment	22	4.6
	8. Others	8	1.7
Time of shopping on s-commerce	1: Morning	27	5.7
	2: Afternoon	171	35.9
	3: Evening	278	58.4
Frequency of shopping on s- commerce per week	1. Less than 2 times	306	64.3
	2. 2-3 times	119	25
	3. 3-4 times	38	8.0
	4. More than 5 times	13	2.7
Price range for purchasing product on s-commerce	1 Less than 100 Baht	66	13.9
	2 101-500 Baht	327	68.7
	3 501-1000 Baht	66	13.9
	4 More than 1001 Baht	17	3.6

Table 4.3 (continued)

Variable		Category	Frequency	Percent
Price range pre 1 time for purchasing product on s-commerce	1	Less than 100 Baht	47	9.9
	2:	101-500 Baht	323	67.9
	3:	501-1000 Baht	85	17.9
	4.	More than 1001 Baht	21	4.4
Reason of using s-commerce platforms	1	Rich product range	213	44.7
	2:	Conveniency and fast	177	37.2
	3:	Affordable price	62	13
	4.	Popular social trends	24	5
Reason can influence the decision of chosen product on s-commerce platforms	1.	Product information	69	14.5
	2.	Price of product	71	14.9
	3.	Product trading volume	52	10.9
	4.	Review of user	126	26.5
	5.	Service of retailer	60	12.6
	6.	Conveniency and fast	28	5.9
	7.	Affordable price	64	13.4
	8.	Popular social trends	6	1.3

4.4 Validity and Reliability

Using data gathered from 476 participants, the exploratory factor analysis was assessed using principal component analysis (PCA) and the rotation approach using varimax with Kaiser Normalization.

The Cronbach's alpha for reliability analysis were above 0.7 (component 1 = 0.807, component 2 = 0.763, component 3 = 0.820, component 4 = 0.778, component 5 = 0.849, component 6 = 0.858, component 7 = 0.727, component 8 = 0.789, and component 9 = 2.755), which indicated as acceptable and credible. The nine components were described as following:

A: Customer purchase norms (CPN): This component contained 5 factors items explaining 17.497% of the variance, and factor loading ranged from 0.59 – 0.76. Factors in this component were related to participants' perspective about Customer purchase norms, including the social trends, friend recommendations, family recommendations, internet recommendations, and products ranking on the internet.

B: Purchase Attitude (PA): This component contained 4 factors items explaining 12.947% of the variance, and factor loading ranged from 0.59 – 0.74. Factors in this component were related to participants' perspective about purchase attitude, including the personality, feeling, shopping planning, and satisfaction.

C: Purchase Behavior Control (PBC): This component contained 5 factors items explaining 13.477% of the variance, and factor loading ranged from 0.47 – 0.72. Factors in this component were related to participants' perspective about purchase behavior control, including the economic ability control, decision control, complete control of personal finances, and prediction control.

D: Trust in Payment methods (TP): This component contained 4 factors items explaining 9.093% of the variance, and factor loading ranged from 0.39 – 0.83. Factors in this component were related to participants' perspective about payment methods, including the convenience of payment, The quality of the payment page, diversification of payment methods, and delivery service provided.

E: Trust in Logistic providers (TL): This component contained 5 factors items explaining 12.772% of the variance, and factor loading ranged from 0.61 – 0.76. Factors in this component were related to participants' perspective about logistic providers in s-commerce, including the loyalty of courier, safety, efficiency, quality assurance and service attitude of logistics providers.

F: Trust in Retailer (TR): This component contained 4 factors items explaining 8.471% of the variance, and factor loading ranged from 0.73 – 0.82. Factors in this component were related to participants' perspective about retailers in s-commerce, including the reliability, reply in time, and before-after service attitude of retailers.

G: Trust in E-word of mouth (TE): This component contained 4 factors items explaining 7.701% of the variance, and factor loading ranged from 0.48 – 0.75. Factors in this component were related to participants' perspective about e-word of mouth in s-commerce, including the social network comment, experience, quality, or impression.

H: Purchase Intentions (PI): This component contained 3 factors items explaining 5.771% of the variance, and factor loading ranged from 0.69 – 0.81. Factors in this component were related to participants' perspective about purchase intentions in s-commerce, including the platforms decision, willingness to purchase, and take practical action for purchase intentions.

I: Future Behavior (FB): This component contained 2 factors items explaining 0.787% of the variance, and factor loading ranged from 0.77 – 0.78. Factors in this component were related to participants' perspective about future behavior in s-commerce, which are purchase in s-commerce platforms in future or not.

4.5 Confirmatory Factor Analysis (CFA) and Structural Equation Model (SEM)

To verify the model's validity, the maximum likelihood estimation approach was used in the CFA. The nine components including Customer purchase norms, purchase attitude, purchase behavior control, trust in payment methods, trust in logistic providers, trust in retailer, trust in e-word of mouth, purchase intentions and future behavior, and a total of 37 measurement items were analyzed as an initial model.

The Structural Equation Model is the methodology that resolves the weaknesses in traditional statistical methods and is suitable for social science research, the table 4.4 presents model fit indices for a Confirmatory Factor Analysis (CFA) model, comparing the initial and modified models against established acceptable levels. These indices evaluate how well the model fits the observed data, which is essential for validating the measurement model in CFA. Here is an explanation and discussion of each fit index provided:

CMIN/df measures the chi-square statistic relative to the degrees of freedom. A value below 3.0 is considered acceptable, indicating a good model fit relative to its complexity. The initial model, with a CMIN/df of 4.265, suggests that the fit was not ideal, as it exceeds the acceptable threshold. The modified model improves this fit substantially, with a CMIN/df of 2.634, falling well within the acceptable range and thus passing the fit criterion.

Based on the data collected, the result showed that the indexes for the initial model were chi-square = 2703.958, df = 634, CMIN/df = 4.265, CFI = 0.769, GFI = 0.746, TLI = 0.744, and RMSEA = 0.083, which indicated as poor indicators. After treating the covariances between the free parameters, the fitting indexes for the modified model were chi-square = 1512.115, df = 574, CMIN/df = 2.634, CFI = 0.893,

GFI = 0.858, TLI = 0.876, and RMSEA = 0.059, according to (H. Kim et al., 2016), the CMIN/df value is good fit, other value is slightly less than the good fit values are acceptable. Table 4.4 and Figure 4.5 showed the results of CFA in diagrammatically model with unstandardized and standardized estimates.

Table 4.4 Assessment of CFA model fit.

Index	CMIN/df	CFI	GFI	TLI	RMSEA	NFI
Acceptable level	< 3.0	> 0.9	> 0.9	> 0.9	< 0.07	> 0.9
Initial model	4.265	0.769	0.746	0.744	0.083	0.720
Modified model	2.634	0.893	0.858	0.876	0.059	0.840
Result	Pass	Pass	Pass	Pass	Pass	Pass

Note Pass represents the model index are fit, can process it to next analysis.

To analyze the table 4.5 in the context of social commerce (s-commerce), we need to understand the meanings and importance of the metrics provided: Unstandardized loadings, Standardized loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). These metrics help in evaluating the measurement quality and reliability of various constructs relevant to s-commerce.

In CFA, unstandardized loadings represent the raw factor loadings of indicators on their latent constructs, reflecting the relationship strength in the original measurement units. They are essential for deriving standardized loadings and understanding each item's contribution to the construct. Standardized loadings are scaled values, typically ranging from 0 to 1, that reflect the strength of the relationship between each item and its construct after adjustment. They facilitate comparison across different factors and items by providing a normalized measure of association. A standardized loading of 0.70 or higher is generally considered strong, suggesting that the item is a significant indicator of the construct.

Average Variance Extracted (AVE) quantifies the proportion of variance in a set of items attributable to a construct, relative to the variance arising from measurement error, and is calculated as the mean of the squared standardized loadings for the items. AVE serves as an indicator of convergent validity; an AVE value

exceeding 0.50 suggests that the construct accounts for more than half of the variance in the items, thereby affirming that the items are robust indicators of the construct.

Composite Reliability (CR) assesses the internal consistency of a construct by incorporating factor loadings and measurement error, serving as an alternative to Cronbach's Alpha for evaluating construct reliability. CR value greater than 0.70 is deemed acceptable, indicating that the items consistently measure the construct and that the construct exhibits strong internal cohesion. This measure ensures that the items collectively reflect the underlying construct with reliability.

In factor analysis, a low AVE with a high CR indicates that while the indicators are consistently measuring the latent construct (high CR), the construct itself does not explain a substantial portion of the variance in the indicators (low AVE). This situation suggests that the indicators are reliable but may not be capturing the construct's variance effectively (Fornell & Larcker, 1981; TomassMHultt, n.d.).

Table 4.5 Results of CFA model

Component	Factor	Unstandardized	Standardized	AVE	CR
Customer purchase norms (CPN)	CPN1	0.79	0.59	0.437	0.793*
	CPN2	0.76	0.62		
	CPN3	0.83	0.58		
	CPN4	1.00	0.75		
	CPN5	0.94	0.70		
Purchase Attitude (PA)	PA1	0.79	0.46	0.387	0.756*
	PA2	0.94	0.67		
	PA3	0.91	0.62		
	PA4	1.00	0.71		
	PA5	0.85	0.62		
Perceived behavioral control (PBC)	PBC1	1.00	0.72	0.482*	0.822*
	PBC2	0.94	0.70		
	PBC3	0.99	0.71		
	PBC4	0.98	0.76		
	PBC5	0.89	0.60		

Table 4.5 (continued)

Component	Factor	Unstandardized	Standardized	AVE	CR
Trust in payment methods (TP)	TP1		0.74	0.5*	0.791*
	TP2		0.83		
	TP3	0.93	0.82		
	TP4	1.00	0.41		
Trust in Logistic provider (TL)		0.93		0.531*	0.849*
		0.52			
	TL1	0.81	0.51		
	TL2	0.92	0.66		
	TL3	0.92	0.65		
Trust in Retailer (TR)	TL4	1.00	0.71	0.602*	0.858*
	TL5	0.96	0.75		
	TR1	0.82	0.70		
	TR2	0.90	0.73		
	TR3	1.00	0.81		
Trust in e- word of mouth (TE)	TR4	0.93	0.78	0.408	0.725*
	TE1	1.00	0.69		
	TE2	0.79	0.53		
	TE3	0.91	0.74		
Purchase intentions (PI)	TE4	.070	0.47	0.488*	0.740*
	PI1	0.89	0.68		
	PI2	0.94	0.79		
Future Behavior (FB)	PI3	1.00	0.80	0.609*	0.757*
	FB1	0.98	0.77		
	FB2	1.00	0.79		

Note * Means strongly consistency, AVE > 0.4, CR > 0.7

Customer purchase norms (CPN) unstandardized loadings range from 0.76 to 1.00. The unstandardized factor loading for CPN1 is 0.79, this means that for every 1 unit increase in customer purchase intentions, CPN1 increases by 0.79 units, in the

units of customer purchase intentions. And standardized loadings range from 0.58 to 0.75. Most items have reasonable loadings, it means the standardized factor loading for CPN1 is 0.59, this means that for every 1 standard deviation increase in customer purchase intentions, CPN1 increases by 0.59 standard deviations, but CPN3 is slightly weaker. AVE value is below 0.50, indicating that the construct may not fully explain the variance in its items that the construct has good internal consistency.

Purchase Attitude (PA) unstandardized loadings range from 0.79 to 1.00. The unstandardized factor loading for PA1 is 0.79, this means that for every 1 unit increase in purchase attitude, PA1 increases by 0.79 units, in the units of customer purchase attitude. Standardized loadings range from 0.46 to 0.71. It means the standardized factor loading for PA1 is 0.46, this means that for every 1 standard deviation increase in customer purchase attitude, PA1 increases by 0.46 standard deviations. Some items (PA1 and PA5) have lower loadings. AVE value is 0.387, it's below the recommended threshold, suggesting that the construct's convergent validity could be improved.

Perceived Behavioral Control (PBC) unstandardized loadings range from 0.89 to 1.00. The unstandardized factor loading for PBC1 is 1, this means that for every 1 unit increase in purchase attitude, PBC1 increases by 1 unit, in the units of perceived behavioral control. Standardized loadings range from 0.60 to 0.76. It means all items are fairly strong indicators of the construct.

Trust in Payment Methods (TP) unstandardized Loadings: Range from 0.52 to 1.00. Standardized loadings range from 0.41 to 0.83. TP4 has a notably lower loading, the standardized factor loading for TP4 is 0.41, this means that for every 1 standard deviation increase in customer purchase attitude, PA1 only increases by 0.41 standard deviations.

Trust in Logistic Provider (TL) unstandardized loadings range from 0.81 to 1.00. The unstandardized factor loading for TP1 is 0.93, this means that for every 1 unit increase in trust in logistics provider, TP1 increases by 0.79 units, in the units of trust in logistics provider. Standardized loadings range from 0.51 to 0.75. Items have moderate to strong relationships with the construct.

Trust in Retailer (TR) unstandardized loadings range from 0.82 to 1.00. And standardized loadings range from 0.70 to 0.81. All items have strong loadings.

Trust in E-word of Mouth (TE) unstandardized loadings range from 0.07 to 1.00, TE4 has a very low loading, it means TE4 only increases 0.07 when TE increase 1 unit. Standardized loadings range from 0.47 to 0.74. TE4's low loading suggests it might not fit well with the construct.

Purchase Intentions (PI) unstandardized loadings range from 0.89 to 1.00. Standardized loadings range from 0.68 to 0.80. Items are strong indicators of the construct. It means

Future Behavior (FB) unstandardized loadings range from 0.98 to 1.00. Standardized loadings range from 0.77 to 0.79. All items are strong indicators of the construct.

As shown in Figure 4.6 and Figure 4.7, when doing structural equation model (SEM) analysis in AMOS, both unstandardized estimates and standardized estimates are the results of model parameter estimation, which are used for different analysis and interpretation purposes. Unstandardized estimates are most straightforward when needs to explain the actual relationship between variables.

Most researchers used their own unit to explain unstandardized estimates and standardized estimates, like hour, minutes, but in this research, the variables it's unquantifiable, therefore, units are present as below.

The raw numbers of the relationship between variables and are suitable for describing the actual effects in the model. As shown in Figure 4.8, CPN to PI's unstandardized estimates is 0.16, it means that CPN increases 1 unit, PI increases 0.16 units. PA to PI's unstandardized estimates is 0.25, PA increase 1 unit, PI increases 0.25 units. PBC to PI's unstandardized estimates is 0.43, it means PBC increases 1 unit, PI increases 0.43 units.

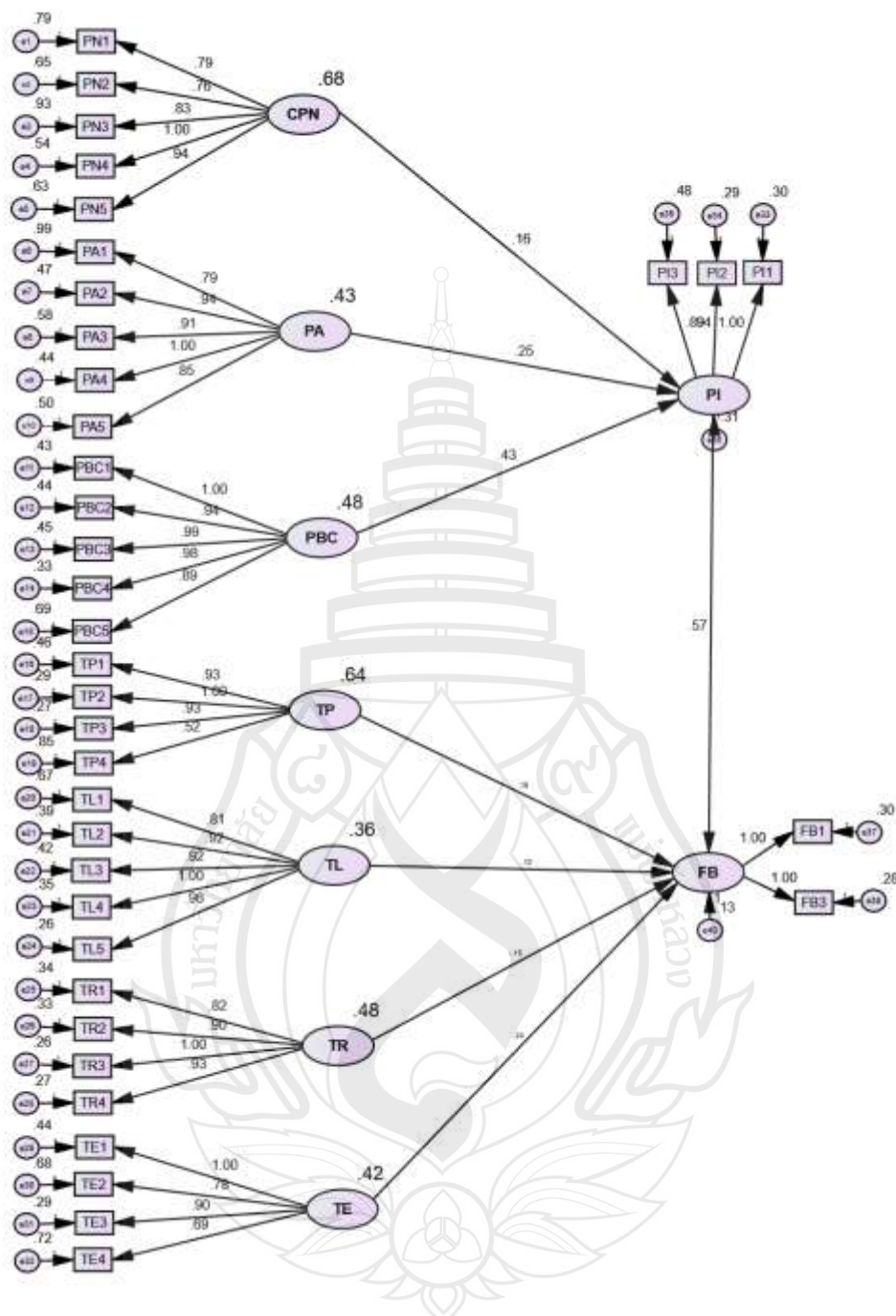


Figure 4.8 Diagrammatically model with an unstandardized estimate

Standardized estimates are unit-free values that have been standardized and are suitable for comparing relative effect sizes between different pathways or models because they eliminate the influence of units. As shown in Figure 4.7, CPN to PI's standardized estimates are 0.18, it means that CPN to PI standardization impact is 0.18 units. PA to PI's standardized estimates is 0.22, it means that PA to PI standardization

impact is 0.22 units. PBC to PI's standardized estimates is 0.41, it means that PA to PI standardization impact is 0.41 units.

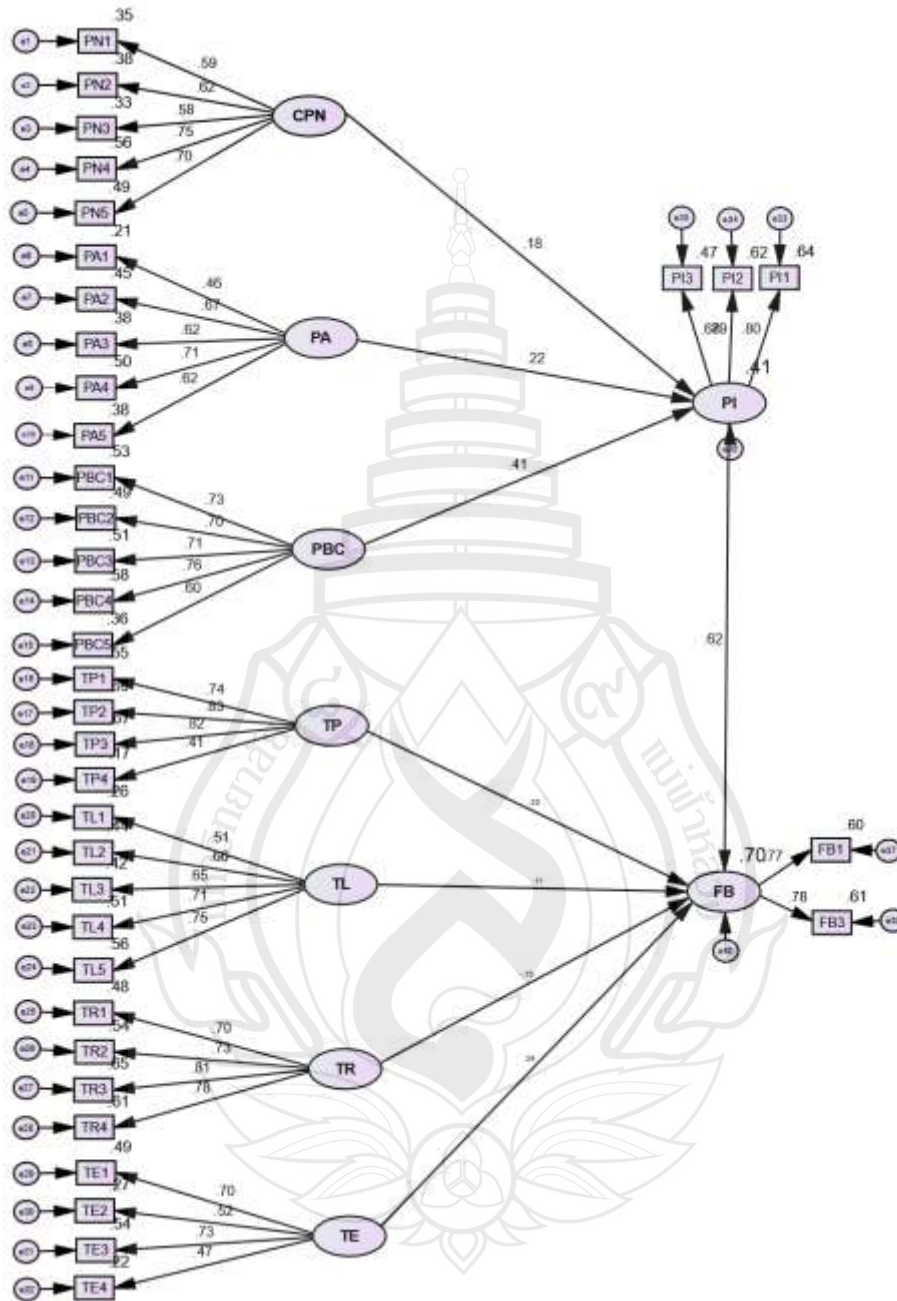


Figure 4.9 Diagrammatically model with a standardized estimate

4.6 Purchase Characteristics Factors Descriptive Statistics

The correlation matrix is a table that shows the correlation coefficients between multiple variables. It is an important tool in statistics for summarizing, analyzing, and exploring the relationship between variables. According to the value of the correlation coefficient, the strength and direction of the relationship between variables can be judged. Common correlation coefficients are explained as follows: 0.00 to 0.10: Very weak or almost no correlation, 0.10 to 0.30: Weak correlation. 0.30 to 0.50: Moderate correlation., 0.50 to 0.70: Strong correlation, 0.70 to 1.00: Strong correlation. Close to 1 or -1: Indicates a very strong relationship between the two variables, in additional, correlations are high, means can be co-linear situations. (Cohen, 1988; Kyriazos, 2018; Marsh et al., 2009).

More specifically, as shown on table 4.6, the median factor correlation is .50 (range 0.305–0.716) and most of correlations are less than 0.50 and most of purchase attitude factor are less than .55. Of the remaining correlations, only a few are more than 0.70, most of them are less than 0.70.

Therefore, none of the variables have negative correlation, that means all of them have positive correlation between those of them, that means Customer purchase norms are positive correlation with all of them, same as trust in e-word of mouth and trust in logistics. But trust in retailer and trust in e-word of mouth and perceived behavioral control or future behavior and have weakly positively correlated, it is consistent with the following hypothesis results.

Table 4.6 Correlation matrix

Attribute	CPN	PA	PBC	TP	TL	TR	TE	PI	FB
CPN	1								
PA	.491**	1							
PBC	.351**	.695**	1						
TP	.305**	.632**	.716**	1					
TL	.359**	.546**	.509**	.545**	1				
TR	.417**	.516**	.498**	.509**	.678**	1			
TE	.349**	.372**	.423**	.329**	.413**	.542**	1		
PI	.373**	.546**	.561**	.515**	.603**	.602**	.556**	1	
FB	.302**	.519**	.586**	.544**	.493**	.488**	.479**	.694**	1

Note **. Correlation is significant at the 0.01 level (2-tailed).

The frequency of agreement regarding various purchase characteristics for s-commerce platforms provides insights into consumer preferences and priorities. This analysis evaluates the highest and lowest frequencies for each factor and elaborates on their implications for s-commerce platforms, descriptively analyzed to enumerate the priorities of the attitude factors from the participants' perspectives.

Table 4.7 presented the highest frequency of strong disagreement (8.28%) associated with CPN3, indicating a significant rejection of the influence of social trends on purchase decisions. This suggests that consumers are not strongly influenced by social norms when choosing s-commerce platforms. Conversely, CPN1, which relates to family recommendations and social trends, has the lowest frequency of strong agreement (1.22%), reinforcing the notion that social norms are less significant in this context.

PA3, reflecting a positive attitude towards s-commerce purchases, has the highest strong agreement (3.45%). This indicates that a positive attitude toward purchasing is a notable factor for consumers. PA2, which deals with overall purchase attitudes, has the lowest strong disagreement (2.76%), suggesting that while attitudes toward s-commerce are generally positive, there is still some degree of negativity.

PBC3, which refers to the perceived control over the purchase process, shows the highest strong agreement (4.90%). This indicates that consumers highly value their perceived control in the purchasing process on s-commerce platforms. PBC1 has the lowest strong disagreement (1.95%), implying that while there are minor concerns about control, it is not a major barrier.

The highest level of strong agreement (5.23%) is seen in TP3, which reflects trust in payment methods. This is a crucial factor for consumers, underscoring that trust in payment security is essential for using s-commerce platforms. TP1 has the lowest strong disagreement (2.44%), indicating that concerns about payment methods are relatively minimal but still present.

TL1 shows the highest strong disagreement (6.17%), suggesting that trust in logistic providers is a significant concern for consumers. On the other hand, TL5 has the lowest strong agreement (2.20%), indicating that while logistics are important, they are less critical compared to other factors like payment methods.

TR3, which involves trust in the retailer, has the highest strong agreement (3.02%). This reflects the importance of retailer trust in purchase decisions. TR1 has the lowest strong disagreement (1.46%), suggesting that while trust in retailers is important, it is less significant compared to other factors like payment methods and perceived control.

TE3 has the highest strong agreement (2.99%), indicating that while trust in e-word of mouth is somewhat important, it is not a primary factor. TE1 has the lowest strong disagreement (1.46%), showing that concerns about e-word of mouth are relatively minor.

PI3 shows the highest strong agreement (3.55%), highlighting that purchase intentions is a significant factor for consumers. PI1 has the lowest strong disagreement (2.27%), indicating that purchase intentions are generally positive but there are still some concerns.

FB3, related to future behavioral intentions, has the highest strong agreement (4.17%), reflecting its importance. FB2 shows the highest strong disagreement (9.09%), indicating that concerns about future behavior are more pronounced and may be a significant barrier to purchase decisions.

The analysis reveals that trust in payment methods and perceived behavioral control are the most critical factors for consumers when selecting s-commerce platforms. High levels of strong agreement for trust in payment methods (TP3: 5.23%) and perceived behavioral control (PBC3: 4.90%) indicate that these aspects are paramount in consumer decision-making. Conversely, factors such as social norms and trust in logistic providers show relatively high levels of strong disagreement, suggesting that they are less influential.

For s-commerce platforms, it is crucial to focus on enhancing payment security and providing features that empower consumers with control over their purchases. While logistical aspects and retailer trust are important, they are secondary to the primary concerns of payment security and behavioral control. Addressing these priorities can significantly impact consumer satisfaction and platforms success.

Table 4.7 Descriptive statistics of satisfaction and attitude factors (n = 476)

Item	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	Frequency (%)		Frequency (%)		Frequency (%)		Frequency (%)		Frequency (%)	
Customer purchase norms (CPN)										
CPN1	50	8.12	87	6.32	151	2.60	151	2.60	37	1.22
CPN2	27	4.38	70	5.08	143	2.46	192	3.30	44	1.45
CPN3	51	8.28	82	5.95	136	2.34	139	2.39	68	2.23
CPN4	40	6.49	72	5.23	146	2.51	159	2.73	59	1.94
CPN5	32	5.19	80	5.81	126	2.17	169	2.91	69	2.27
Purchase Attitude (PA)										
PA1	39	6.33	70	5.08	163	2.81	129	2.22	75	2.46
PA2	17	2.76	43	3.12	194	3.34	137	2.36	85	2.79
PA3	14	2.27	27	1.96	148	2.55	182	3.13	105	3.45
PA4	14	2.27	31	2.25	178	3.06	179	3.08	74	2.43
Perceived Behavioral Control (PBC)										
PBC1	12	1.95	15	1.09	125	2.15	167	2.87	157	5.16
PBC2	11	1.79	34	2.47	174	3.00	174	2.99	83	2.73
PBC3	8	1.30	25	1.82	131	2.26	163	2.80	149	4.90
PBC4	4	0.65	26	1.89	157	2.70	179	3.08	110	3.61
PBC5	15	2.44	40	2.90	140	2.41	158	2.72	123	4.04
Trust in Payment method (TP)										
TP1	15	2.44	27	1.96	138	2.38	171	2.94	125	4.11
TP2	12	1.95	22	1.60	111	1.91	191	3.28	140	4.60
TP3	4	0.65	24	1.74	101	1.74	188	3.23	159	5.23
Trust in logistic provider (TL)										
TL1	38	6.17	62	4.50	209	3.60	134	2.30	33	1.08
TL2	14	2.27	35	2.54	201	3.46	178	3.06	48	1.58
TL3	11	1.79	30	2.18	195	3.36	164	2.82	76	2.50
TL4	15	5.44	22	1.60	199	3.43	173	2.98	67	2.20
TL5	9	1.46	16	1.16	169	2.91	215	3.70	67	2.20
Trust in retailer (TR)										
TR1	9	1.46	32	2.32	207	3.56	176	3.03	52	1.71
TR2	8	1.30	34	2.47	209	3.60	160	2.75	65	2.14
TR3	7	1.14	23	1.67	187	3.22	167	2.87	92	3.02
TR4	3	0.49	31	2.25	188	3.24	175	3.01	79	2.60
Trust in e-word of mouth (TE)										
TE1	9	1.46	40	2.90	193	3.32	145	2.48	89	2.92
TE2	17	2.76	39	2.83	184	3.17	159	2.73	77	2.53
TE3	4	0.65	18	1.31	168	2.89	195	3.35	91	2.99

Table 4.7 (continued)

Item	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	Frequency (%)		Frequency (%)		Frequency (%)		Frequency (%)		Frequency (%)	
Purchase Intentions (PI)										
PI1	14	2.27	33	2.40	188	3.24	157	2.70	84	2.76
PI2	9	1.46	27	1.96	185	3.18	169	2.91	86	2.83
PI3	11	1.79	34	2.47	174	3.00	149	2.56	108	3.55
Future Behavioral (FB)										
FB1	11	1.79	26	1.89	178	3.06	174	2.99	87	2.86
FB2	56	9.09	81	5.88	168	2.89	118	2.03	53	1.74
FB3	6	0.97	19	1.38	145	2.50	179	3.08	127	4.17

4.7 Hypothesis Testing Results

This section delves into hypothesis testing, a statistical technique vital for evaluating assumptions and guiding decisions based on data. Hypothesis testing provides a systematic approach to validate these assumptions, ensuring that decisions are grounded in empirical evidence rather than conjecture. Employing hypothesis testing enhances the credibility of research findings by providing a transparent and objective framework for analysis. Hypothesized relationships were tested through a structural model developed based on the TPB. Which shows in Table 4.7 that H1, H2, H3, H4, H5 and H8 are significant, but H6, H7 are not significant.

Hypothesis (H1): Thus, the p-value between these two variables (CPN – PI) were 0.004, which means CPN does significantly influence PI also means it's supports hypothesis H1, perceived norm positively impacts consumers' intentions to purchase products on s-commerce. This suggests that when individuals perceive that their peers or social norms endorse s-commerce, their intentions to purchase through these platforms increases. Also, social trends, environmental or recommended does significantly influence the consumer intentions to purchase products on s-commerce.

Hypothesis (H2): Also, p-value between PA-PI, PA significantly influenced PI, which supports hypothesis H2. This indicates that favorable attitudes towards the use of s-commerce platforms enhance the likelihood of purchasing through these channels. Therefore, a positive attitude among consumers can enhance their intentions to engage in s-commerce purchasing.

Hypothesis (H3): Perceived Behavioral Control has the strongest impact on purchase intentions among the factors considered, which supports hypothesis H3. This demonstrates that when consumers feel they have control over the s-commerce purchasing process, their intentions to buy through these platforms is significantly higher. This implies that consumer purchase product on s-commerce perceiving behavior is challenging to control, and it can be influencing the purchase intentions of consumers of s-commerce.

Hypothesis (H4): TP significantly influenced FB, which supports hypothesis H4, Trust in the s-commerce platforms strongly influences future behavior, suggesting that consumers who trust the platforms are more likely to engage in repeat purchases or continued use of the platforms, which signifies that trust in payment methods can significantly impact consumer purchase intentions in s-commerce.

Hypothesis (H5): Trust in logistics is a significant factor affecting future behavior. Reliable logistics services enhance consumers' confidence in s-commerce, leading to more frequent purchases. TL significantly influenced FB, which supports hypothesis H5, whatever trust in logistic provider also affects the consumer purchase intentions in s-commerce.

Hypothesis (H6): On the other hand, Trust in the retailer does not significantly affect future behavior in s-commerce. This indicates that, within this context, other factors may be more influential in shaping consumers' future engagement with the platforms.

Hypothesis (H7): TR does not significantly influence FB, which does not support hypothesis H6, which means that trust in retailer cannot significantly impact consumer purchase intentions in s-commerce. Trust in e-commerce has a negligible or negative impact on future behavior. This suggests that, contrary to expectations, higher trust in e-commerce as a general category does not translate into increased future behavior on s-commerce platforms.

Hypothesis (H8): Finally, PI significantly influenced FB, which supports hypothesis H8, consumers who have a high intention to purchase are likely to engage more with s-commerce in the future, reinforcing the importance of fostering strong purchase intentions, which signifies that future behavior of consumer in s-commerce can be influenced by purchase intentions.

The analysis reveals several critical factors influencing consumer behavior in s-commerce. Perceived Norms, Attitudes, and Behavioral Control play essential roles in shaping consumers' intentions to make purchases, which in turn affect their future behaviors on these platforms. Furthermore, the level of trust in the platforms and its logistics significantly strengthens this connection, underscoring the need for a reliable and efficient s-commerce environment. On the other hand, general trust in the retailer and the broader e-commerce sector does not significantly affect future engagement, indicating that trust tailored specifically to the s-commerce context is more important for fostering long-term consumer loyalty. By prioritizing these elements, s-commerce platforms can gain deeper insights into consumer motivations and craft more effective strategies to enhance both initial and repeat transactions.

Table 4.8 Hypothesis Testing Results

Hypotheses	Paths	Beta	S.E.	t-value	P Value	Decision
H1	CPN→PI	0.158	0.054	2.899	0.004*	Supported
H2	PA→PI	0.246	0.125	1.970	0.049*	Supported
H3	PBC→PI	0.545	0.065	8.402	***	Supported
H4	TP→FB	0.429	0.113	3.8	***	Supported
H5	TL→FB	0.234	0.057	4.113	***	Supported
H6	TR→FB	0.06	0.105	0.573	0.567	Not Support
H7	TE→FB	-0.086	0.098	-0.881	0.378	Not Support
H8	PI→FB	0.212	0.078	2.717	0.007*	Supported

Note * p-value<0.05, 95%
 ** p-value<0.001, 99%
 *** p-value <0.0001, 99.99%

CHAPTER 5

CONCLUSION AND DISCUSSION

5.1 Discussion

This research focuses on determining the critical factors which can influence the purchase intentions and future behavior in s-commerce platforms in Thailand, which is a developing country. The research demonstrated that Customer purchase norms, purchase attitude, and personal behavior control, also the trust in payment methods and logistic providers in the concern points of the startup and s-commerce business owner.

In the past few years, internet usage and social connect development have increased considerably, additionally, online shopping is the derivatives of network development. There are several channels of online shopping, such as electronic commerce, social commerce, a lot of reasons can lead consumer chose the channel of online shopping, such as find information of product, check price of products, reviews, order, and pay for purchase. In many countries, the internet has been the important way of product or service transaction. Plus, online shopping behavior of consumers has been a hot study topic in the past decade, but it's almost in the e-commerce field (). Moreover, s-commerce is fresher than e-commerce, in the era of rapid information dissemination, s-commerce also needs corresponding results to fill up the gap of research.

This section explains about how the original factor from TPB model and the research highlights, trust as a main attribute influence on consumer purchase intentions and future behavior.

First, the results provide support for H1, H2 and H3 of original factor in TPB model, which relation of H1 predicted positive relationship between Customer purchase norms and purchase intentions, this recommends the consumer of s-commerce or new business owner on s-commerce consider the social trends on TikTok, Instagram, Facebook can influence the purchase intentions of online consumer, such as TikTok

influencer make social trends through advertisement or other ways to improve the impact, or product ranking on internet, or recommend from friends and family also can influence the purchase intentions.

The result shows H2 are positive relation, which means personal attitude can influence purchase intentions on s-commerce, for example that consumer who doesn't like to communicate with sales in onsite shop can avoid to talking with stranger, and consumer who doesn't like walking or find product they needed, which cause their own personal attitude reason, it will influence the purchase intentions of consumers. Also, supported of H3 means perceived behavioral control and purchase intentions are positive relationship, as an instance the capability of decision, income, and confidence on shopping in s-commerce.

Additionally, H4 and H5 show the accepted relation in future behavioral. Thus, the trust factor proposed in this paper indicates trust in payment methods and trust in logistics provider is more important than trust in e-word of mouth and retailers. It shows in the s-commerce application, consumer may or may not have knowing with the retailers, the payment methods are necessary consider condition when consumer decided to purchase on s-commerce.

On the other side H6, H7 show they're not supported of the relation, it means both of trust in retailer and trust in e-word of mouth didn't have positive influence with future behavior, also shows introduction of product are not influence by trust of retailer, but reply to client on time, talking as an logical, despite the lack of significance, these results do not rule out the possibility that trust in retailer and trust in e-word of mouth could be related to future behavior under different conditions or in larger samples. Finally, H8 shows the supported results that means purchase intentions of consumer in s-commerce can influence the future behavior of them, the psychological activities will directly affect consumer behavior.

As the results show, the majority of participants know about s-commerce and have experience of purchasing products on s-commerce. According to the outcomes of the research, this was evaluated as well and verified to support the model by CFA utilizing various quality of fit indicators such as CFI, GFI, TLI, and NFI. The components are CPN, PA, PBC, TP, TL, TR, TE, PI, and FB. It shows the trust in payment methods is the most significant factor of future behavior in consumer

perspectives, following purchase attitude and personal behavioral control. The results also confirm multiple payment methods can improve consumer trust s-commerce platforms which directly affects the future behavior of consumer on s-commerce platforms. On the other hand, consumers in s-commerce are concerned about the trust of retailers and trust of e-word of mouth less than trust in payment methods and logistic providers, which means convenience in payment on the website in s-commerce, high-quality information and a completely safety payment system when consumers paying, and delivery choice are necessary factors when consumers decided to use s-commerce platforms, further, the logistics provider also a critical concern, logistics courier loyalty, knowledge and performance to confirm the safety of the delivery, service quality of delivery, included the attitude of courier.

As illustrated in Figure 5.1, the conceptual model of this research demonstrates how various factors influence supply chain management, consumer purchase intention as demand side in supply chain, and effect to retailers who is supply side by TPB and trust factor in this research, also, retailers' operation can affect to consumer intention by logistics selection, and payment method setting. Specifically, the model highlights the critical role of trust and the Theory of Planned Behavior (TPB) as key elements that indirectly shape supply chain outcomes. Trust, being a central factor, affects consumer behavior and decision-making processes, thereby influencing the overall efficiency and effectiveness of supply chain operations.

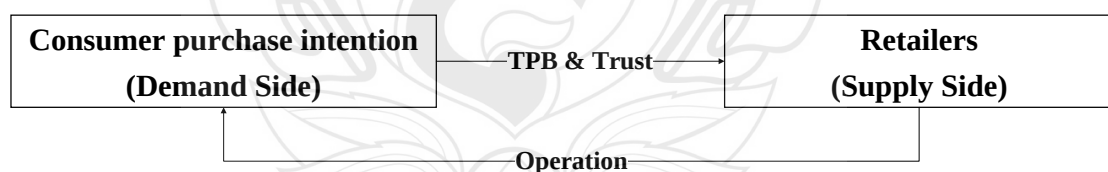


Figure 5.1 Supply chain conceptual model

5.2 Conclusion

Most of the study focuses on concept and customer satisfaction, this research focus on identifying the critical aspects of the Theory of planned behavior and trust influencing the s-commerce consumer of Thailand to investigate the consumer purchase characteristics on the s-commerce platforms. More specifically, the original

factors from TPB are customer purchase norms, purchase attitude, and personal behavioral control. In addition, the research model provides a cogent framework to understand the relation between trust and purchase intentions and future behavior.

Through the lens of Theory of planned behavior, this research aims to identify the specific factors within customer and logistics Management that significantly influence customers' trust in s-commerce. Understanding how attitudes, norms, and control perceptions shape consumer behavior can help businesses refine their strategies to enhance customer experience, and ultimately drive sales. By optimizing the management of these elements, companies can not only meet customer expectations but also leverage social interactions and technological advancements to create a seamless and trustworthy online shopping environment. The statement highlights the importance of supply chain management in social commerce, particularly focusing on customer and logistics management. However, it also points out that there is a gap in academic research, specifically related to understanding how factors from the Theory of Planned Behavior influence customer trust in s-commerce.

The research results will help retailers interact with customers more effectively and use elements such as reviews and recommendations on social networks and platforms to enhance brand image and consumer purchase trust, retailers can improve their marketing strategies, product presentation and customer service by understanding the factor of this research about customer trust, thereby increasing sales opportunities.

Thus, except for trust in retailer and trust in e-word of mouth, the results for the structural model demonstrate that all path coefficients were significant. They are corresponding answer the research objective and research question of the researcher in the beginning. Find out the factors influencing consumers' purchase intentions and future behavior in products on s-commerce platforms, and what factors affect consumers' purchase intentions and future behavior of products on the s-commerce platforms?

The study identifies several crucial factors that impact consumer purchase intentions and future behaviors on s-commerce platforms: Customer purchase norms: The influence of social norms plays a significant role in shaping consumer behavior. If consumers observe that their peers value and participate in s-commerce, they are more likely to engage in similar behaviors. Purchase Attitude: A positive attitude towards

s-commerce platforms boosts consumers' willingness to make purchases and repeat transactions. This encompasses the perceived advantages and overall satisfaction derived from using these platforms. Perceived Behavioral Control: Consumers' perceptions of their control over the purchasing process, including ease of use, transaction security, and decision-making autonomy, directly affect their purchasing choices.

Based on these findings, the study recommends that s-commerce businesses should prioritize enhancements in logistics and payment methods and wariest in building trust in both their retail practices and the authenticity of e-word of mouth. Addressing these areas will help businesses effectively drive consumer purchase intentions and future behaviors, contributing to success in the s-commerce domain.

5.3 Limitation and Future Work

Although the literature on e-commerce supply chain management is expanding, it is less typical to find studies that specialize only on s-commerce, research examines the effects of s-commerce's main factor (including Theory of Behavioral, and trust factor) on the supply chain, particularly in relation to logistical selection and consumer trust.

The limitation of this research was the gender of data collected is not balanced, which can cause the deviation of the results, also its most participants from western Thailand. Expanding the sample group to be more diverse to the population of all areas of Thailand will make the results more effective and credible. In addition, this research focuses on analysis of the purchase characteristics of s-commerce, the future study can discuss the satisfaction of s-commerce users, or other perspectives such as the characteristics of retailers on s-commerce, finding the reason of why they chose to sell products on s-commerce instead of e-commerce platforms. Moreover, the indicators of this research also could be useful in future analysis for those who would like to predict the purchase characteristics.

Thus, since the trust in retailer and trust in e-word of mouth are not support in hypothesis, but the research area is limited in Thailand, and the internet and social commerce are rapid and unpredictable development, therefore the future work in academic also can finding the factor to improving the trust of retailer and e-word of mouth in s-commerce, it could be the interest topic in s-commerce area. A deeper exploration of how these dynamics work in practice, particularly with the rise of social media and influencers, will contribute to the advancement of both SCM and s-commerce fields.

5.4 Ethical Considerations

The authors have done the ethical test and got the certificate, certificate shown on appendix C; therefore, authors ensure participants the confidentiality and anonymity of the information associated with the surveys, and all subjects were informed about the study, and participation was entirely voluntary.

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APPENDIX A

SOCIO-DEMOGRAPHICS OF PARTICIPANTS

Table A1 Socio-demographics of participants (N = 476)

Item	Description	Frequency	Percent
Gender	Male	336	70.6
	Female	121	25.4
	Non identify	19	4
Age	<21	259	54.4
	21-30	122	25.6
	31-40	59	12.4
	41-50	22	4.6
	51-60	13	2.7
	>60	1	0.2
Marital status	Unmarried	283	59.5
	Married	146	30.7
	Not mentioned	47	9.9
Residence	Central	102	21.4
	Northern	123	25.8
	Southern	24	5
	North-Eastern	19	4
	Eastern	204	42.9
	Western	4	0.8
Education	Under bachelor's	247	51.9
	Bachelor's	164	34.5
	Above bachelor's	65	13.7

Table A1 Socio-demographics of participants (N = 476)

Item	Description	Frequency	Percent
Income	<15,000	313	65.8
	15,000–30,000	75	15.8
	30,001–45,000	59	12.4
	45,001-60,000	20	4.2
	>60,000	9	1.9
Jobs	Student	260	54.6
	Business Owner	26	5.5
	Officer	71	14.9
	Employee	28	5.9
	Homemaker	3	0.6
	Worker	4	0.8
	Farmer	7	1.5
	Others	77	16.2

APPENDIX B

CERTIFICATE OF ETHICAL CONSIDERATIONS



คณะกรรมการจริยธรรมการวิจัยในคน มหาวิทยาลัยธรรมศาสตร์ สาขาแพทยศาสตร์

ประกาศนียบัตรฉบับนี้ให้ไว้เพื่อแสดงว่า

Wei Li

ได้ผ่านการอบรมหลักสูตร GCP online training (Computer-based)

“แนวทางการปฏิบัติการวิจัยทางคลินิกที่ดี (ICH-GCP:E6(R2))”

ประกาศนียบัตรฉบับนี้มีผลตั้งแต่วันที่ 09 มกราคม 2566 ถึงวันที่ 09 มกราคม 2568



(รองศาสตราจารย์ นายแพทย์วิพงษ์ จันทรวิเศษ)

ประธานคณะกรรมการจริยธรรมการวิจัยในคน
มหาวิทยาลัยธรรมศาสตร์ สาขาแพทยศาสตร์



(รองศาสตราจารย์ นายแพทย์สมบัติ มุ่งทวีพงษา)

รองคณบดีฝ่ายวิจัยและนวัตกรรม



APPENDIX C

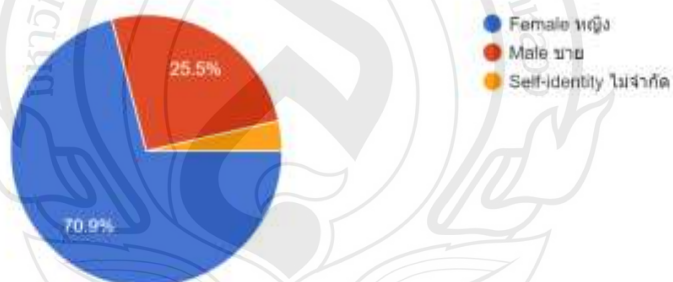
QUESTIONNAIRE FROM GOOGLE FORM

Section 1

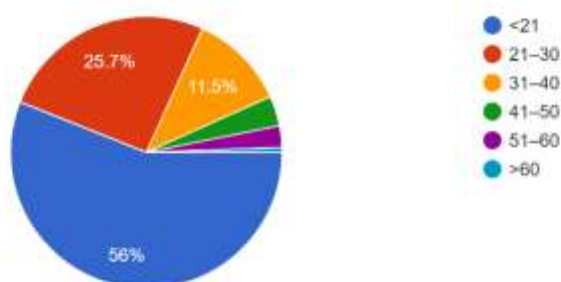
You have understood the details of this research. By giving your consent to participate in this research or not. ท่านได้ทำความเข้าใจรายละเอียดของก...แล้ว โดยท่านให้ความยินยอมเข้าร่วมการวิจัยนี้หรือไม่
505 responses



What gender do you identify as? เพศ
505 responses

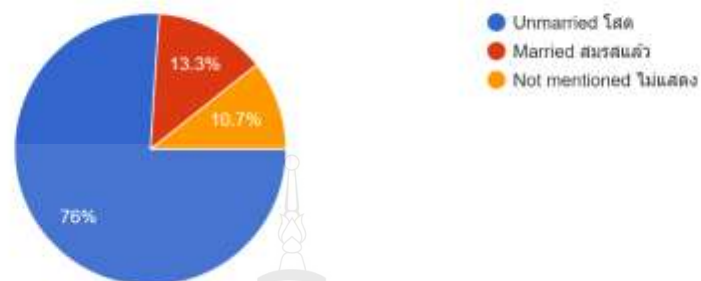


What is your age? อายุ
505 responses



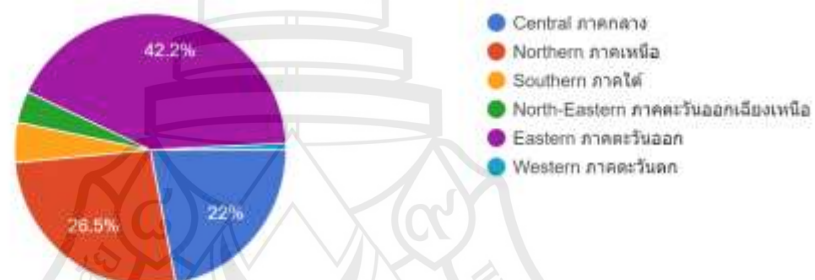
What is your marital status? สถานภาพ

505 responses



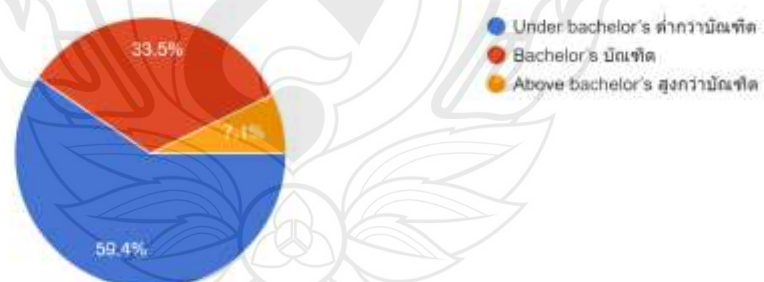
Where is your home located? ภูมิลำเนา

505 responses



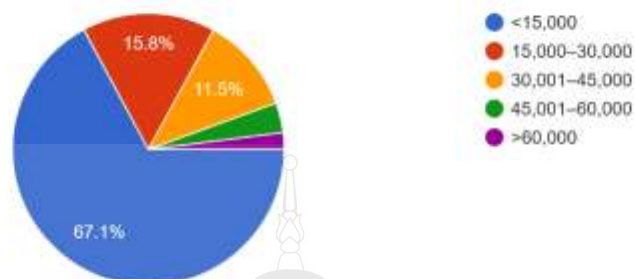
What is the highest degree or level of education you have completed? ระดับการศึกษา

505 responses



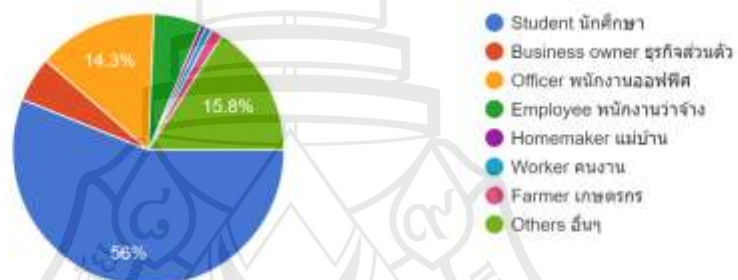
What is your annual income (baht/per month)? รายได้ต่อเดือน (บาท)

505 responses



What is your current job status? อาชีพ

505 responses

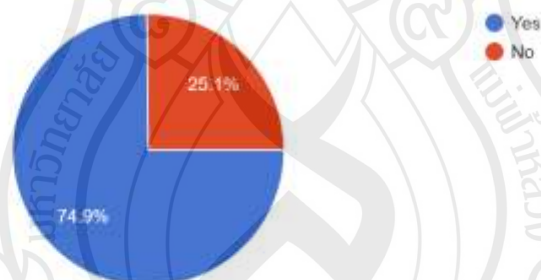


Section 2

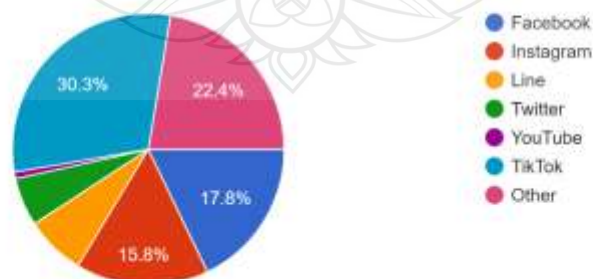
Do you know about the s-commerce platform? คุณรู้จักการซื้อขายสินค้าบนสื่อสังคมออนไลน์(s-commerce)หรือไม่
505 responses



Have you ever been purchasing product on s-commerce platforms? คุณเคยซื้อสินค้าบน s-commerce หรือไม
505 responses

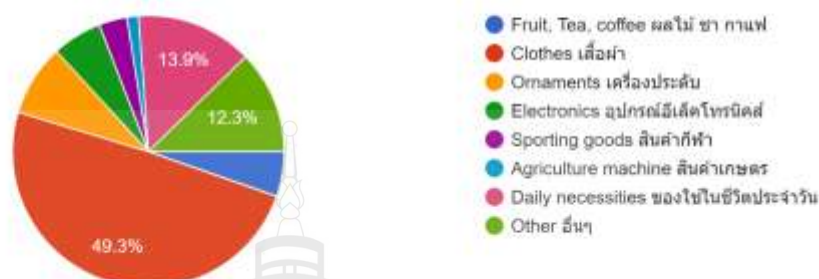


Which s-commerce platforms you usually use to purchase product the most? คุณซื้อของผ่านแอปโซเชียลไหนบ่อยที่สุด
505 responses



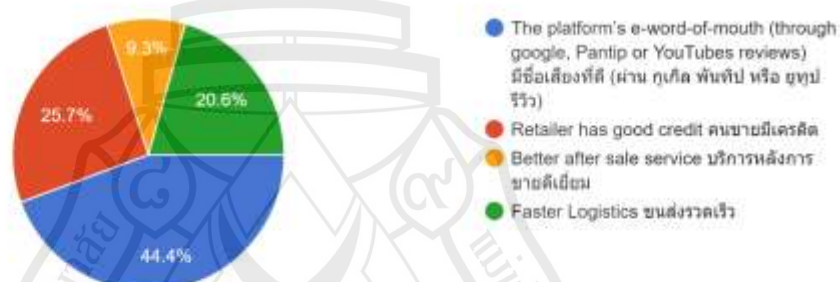
What's product you usually purchase on s-commerce platforms the most? ปกติคุณซื้อสินค้าประเภทใดผ่านแพลตฟอร์ม-commerce มากที่สุด

505 responses



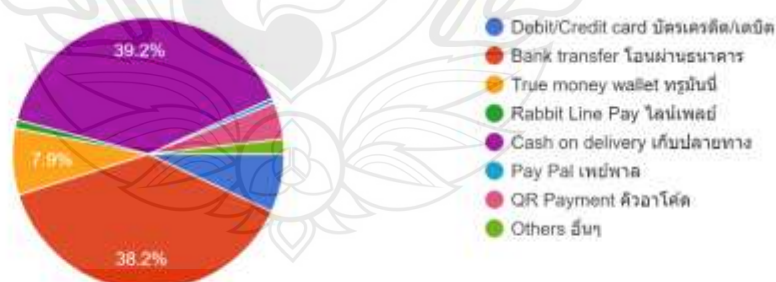
What's the reason of select the platform? เหตุผลที่เลือกแพลตฟอร์ม-commerce

505 responses



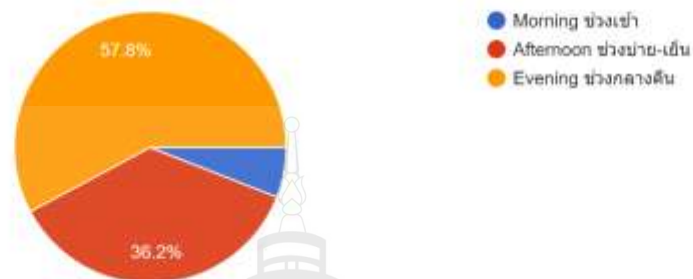
What are the payment method that you mostly chose when you purchase products on s-commerce? เมื่อซื้อของผ่าน s-commerce คุณจ่ายเงินผ่านช่องทางอะไรบ่อยที่สุด

505 responses



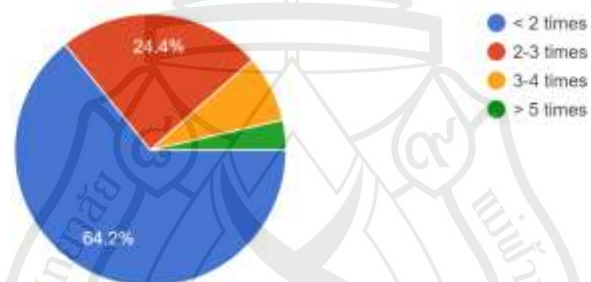
What's time do you like to purchase product on s-commerce platform mostly? คุณซื้อสินค้าในระยะเวลาไหนมากที่สุด

505 responses



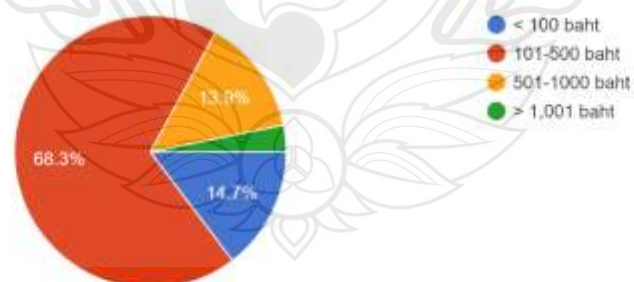
How many times do you purchase product on s-commerce platforms per week? คุณซื้อของผ่านs-commerceอาทิตย์ละประมาณกี่ครั้ง

505 responses

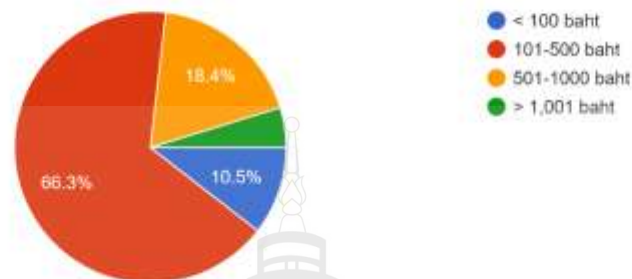


What's the price of product that you most purchase? คุณซื้อสินค้าช่วงราคาไหนมากที่สุด

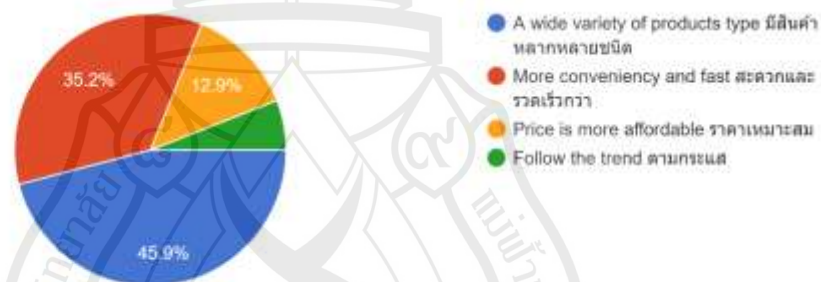
505 responses



What is your average spending on one shopping trip? โดยเฉลี่ยแล้ว คุณซื้อสินค้าครั้งหนึ่งใช้เงินประมาณเท่าไหร่
505 responses



What is the reason are you chose to purchase products on s-commerce platform? เหตุผลที่คุณเลือกใช้ s-commerce platform?
505 responses



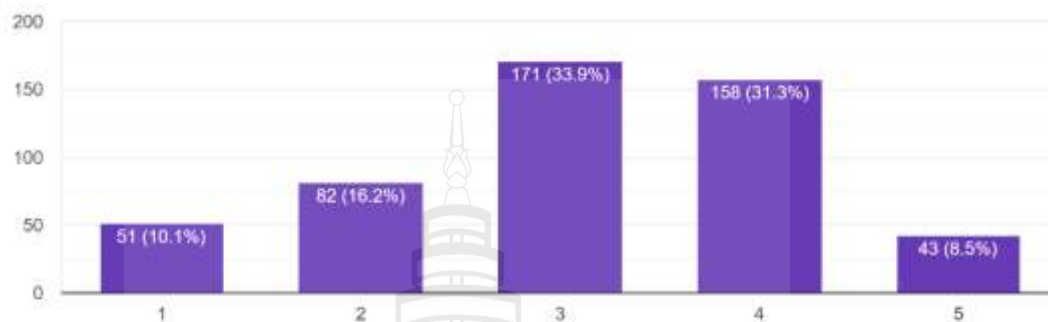
Which reasons can influence your purchase decide? เหตุผลอะไรที่มีผลกระทบต่อการเลือกใช้ s-commerce ในการซื้อสินค้า
505 responses



Section 3 – Customer purchase norms (CPN)

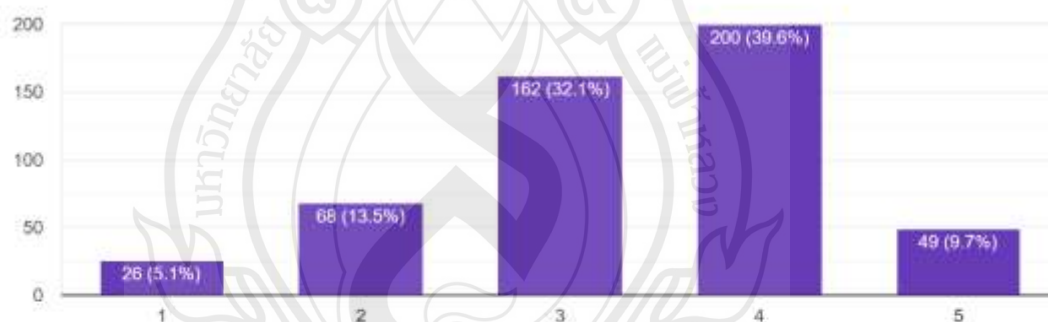
I would like to purchase products on s-commerce platforms because the social trend. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce เพราะกระแสสังคม

505 responses



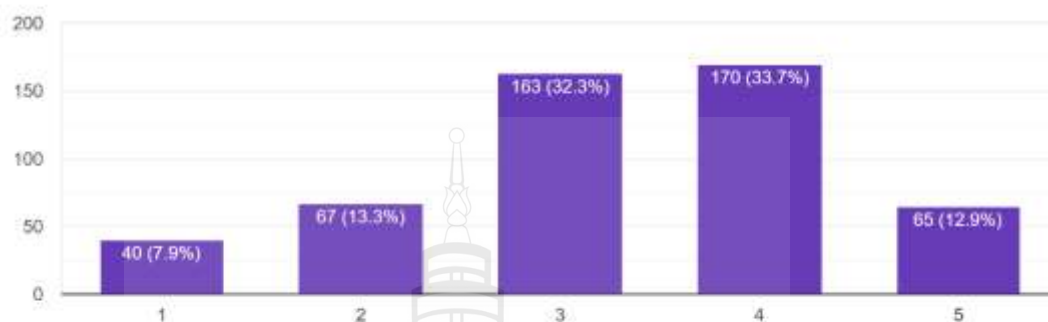
I would like to purchase the products on the s-commerce platforms that my friend recommended to me. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce ที่เพื่อนแนะนำ

505 responses



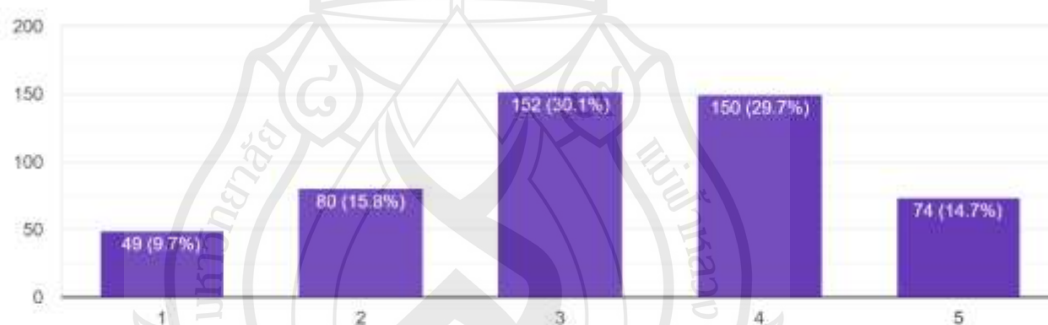
I would like to purchase products on s-commerce platforms that the influence on the internet recommended. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce ที่อินฟลูเอนเซอร์ออนไลน์แนะนำ

505 responses



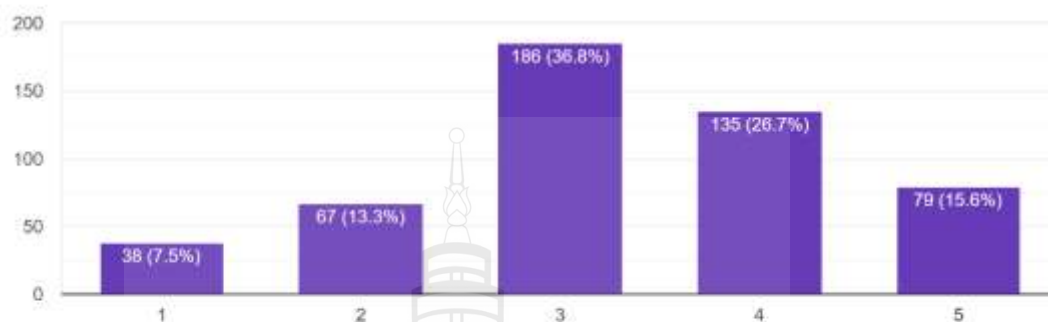
I would like to purchase products on s-commerce platforms that family recommended. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce ที่ครอบครัวแนะนำ

505 responses



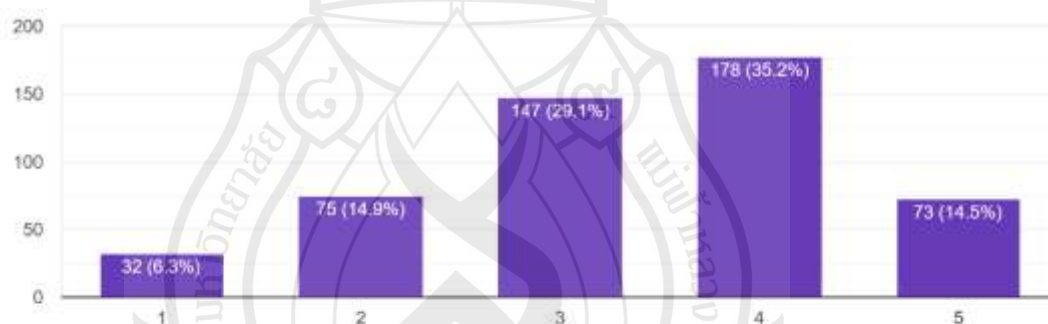
I enjoy purchasing products on s-commerce platforms because it does not need talking with people. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce เพราะไม่ต้องพูดคุยกับคนอื่น ๆ

505 responses



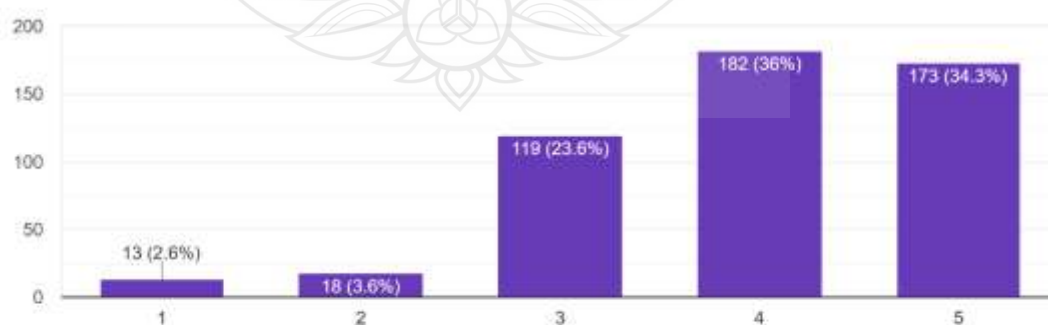
I would like to purchase products on s-commerce platforms which have ranked in the top 5 on the internet. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce 5 อันดับแรกบนอินเทอร์เน็ต

505 responses



I enjoy purchasing products on s-commerce platforms because it's comfortable. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce เพราะสะดวกสบาย

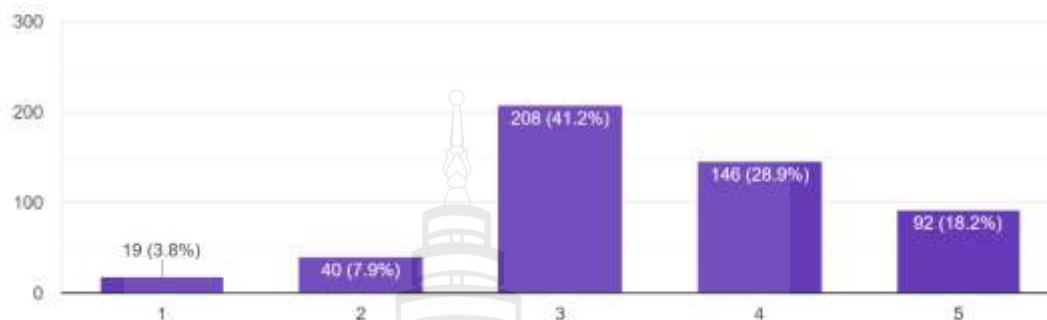
505 responses



Purchase Attitude (PA)

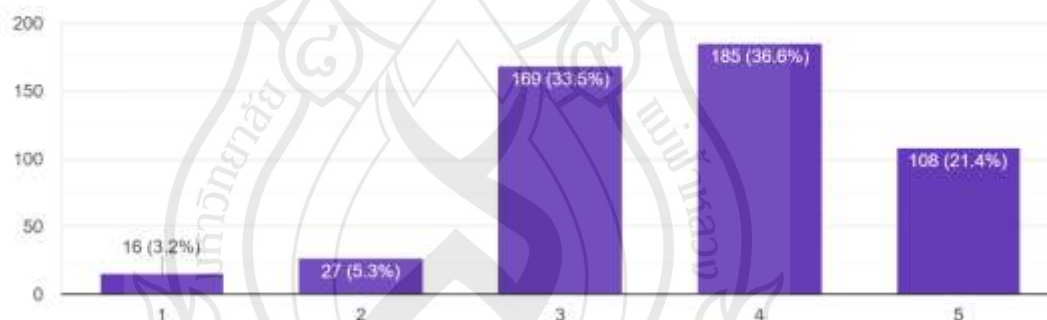
I enjoy purchasing products on s-commerce platforms because it's reliable. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce เพราะน่าเชื่อถือ

505 responses



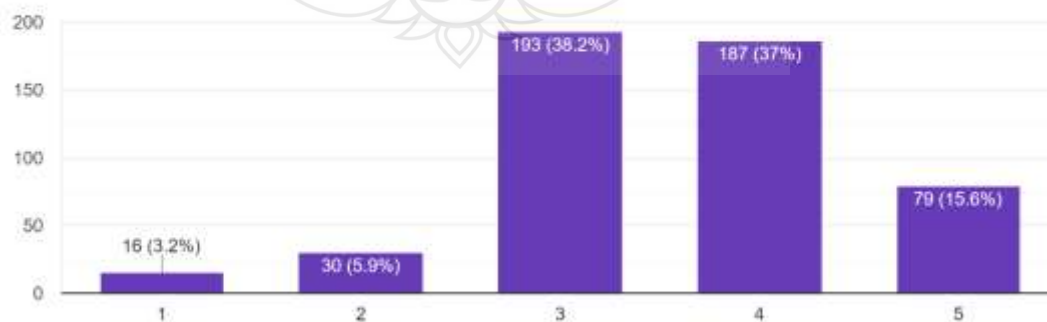
I enjoy purchasing products on s-commerce platforms because it's easier to prepare what I need. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce เพราะจัดเตรียมของที่ต้องการได้ง่ายกว่า

505 responses



I enjoy purchasing products on s-commerce platforms because it's given me more satisfaction. ฉันซื้อสินค้าบนแพลตฟอร์ม s-commerce เพราะทำให้พอใจมากขึ้น

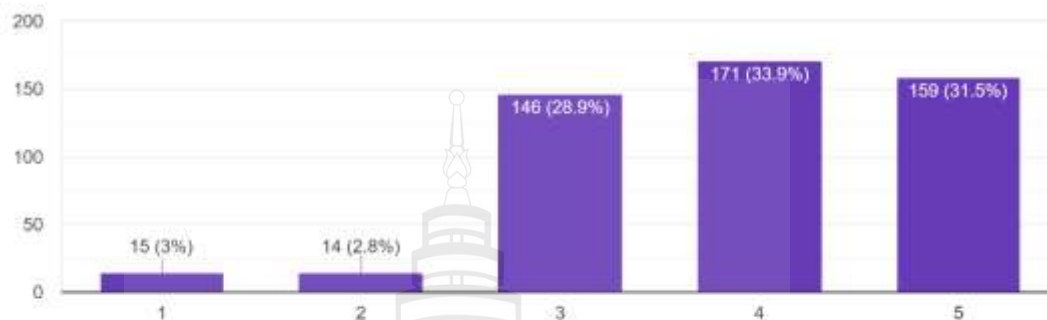
505 responses



Perceived Behavioral Control (PBC)

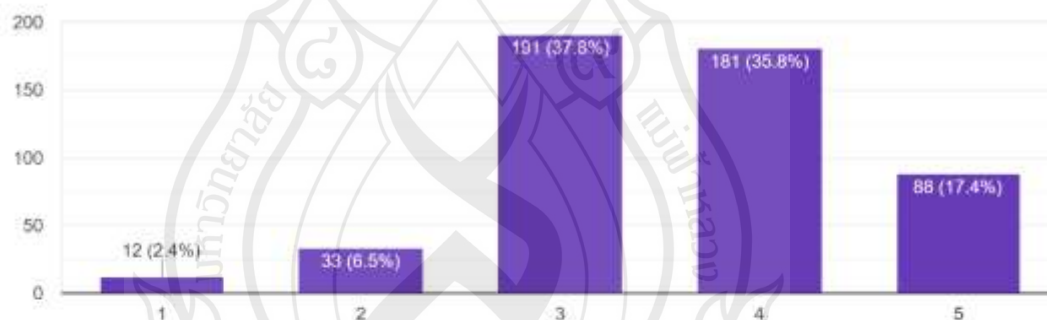
I am capable of purchasing products on s-commerce platforms. ฉันสามารถซื้อสินค้าบนแพลตฟอร์ม s-commerce ได้

505 responses



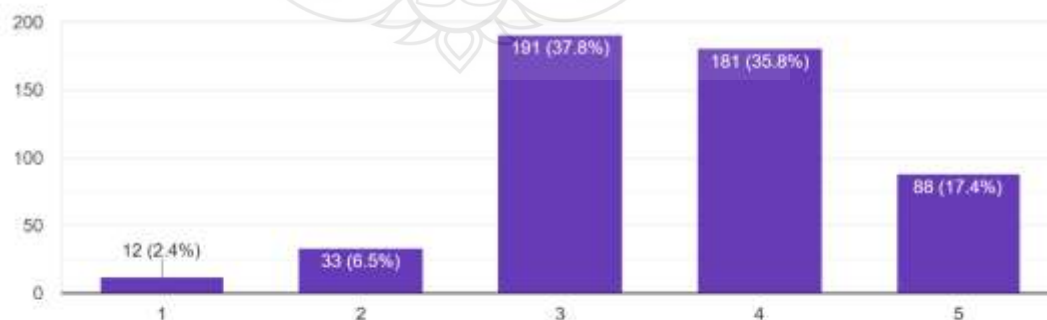
I can decide whether to prepare products on s-commerce platforms. ฉันสามารถตัดสินใจได้ว่าจะจัดเตรียมสินค้าบนแพลตฟอร์ม s-commerce หรือไม่

505 responses

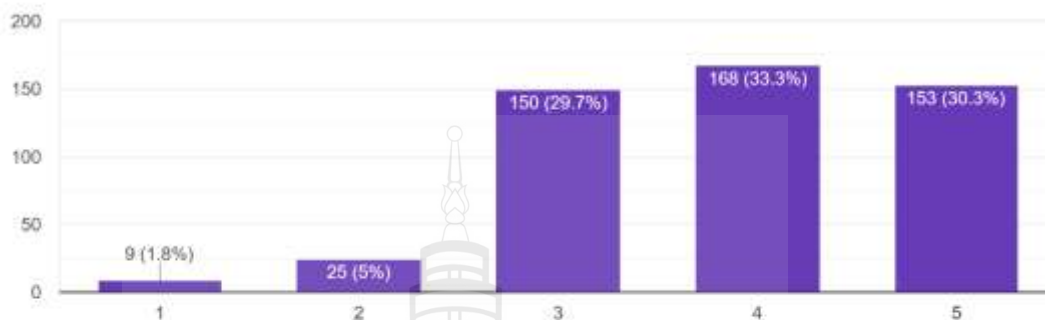


I can decide whether to prepare products on s-commerce platforms. ฉันสามารถตัดสินใจได้ว่าจะจัดเตรียมสินค้าบนแพลตฟอร์ม s-commerce หรือไม่

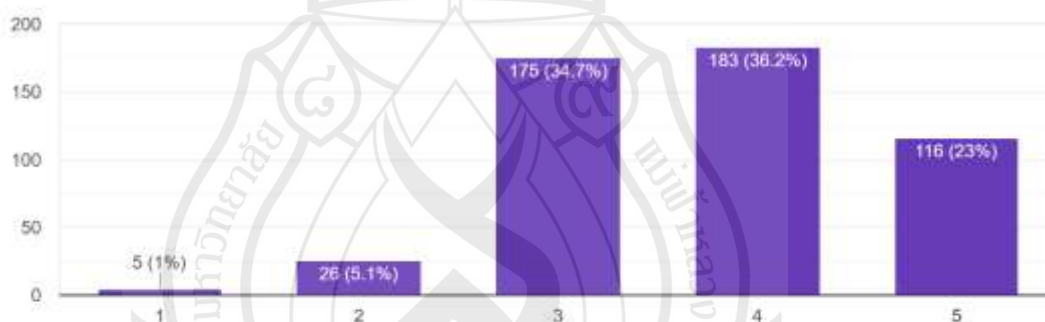
505 responses



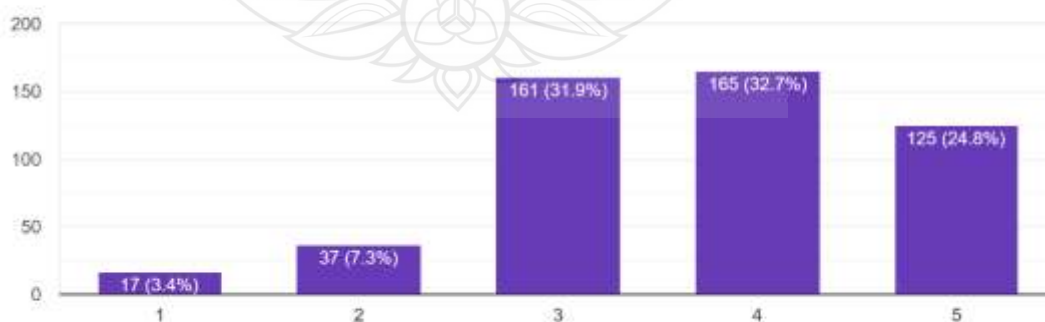
I am confident that I can decide whether to purchase products on s-commerce platforms is entirely up to me. ฉันเชื่อว่าทั้งหมดขึ้นอยู่กับฉันที่จะตัดสินใจได้ว่าจะซื้อสินค้าบนแพลตฟอร์ม s-commerce หรือไม่
505 responses



I can predict whether I will purchase products on s-commerce platforms. ฉันคาดการณ์ได้ว่าจะซื้อสินค้าบนแพลตฟอร์ม s-commerce หรือไม่
505 responses

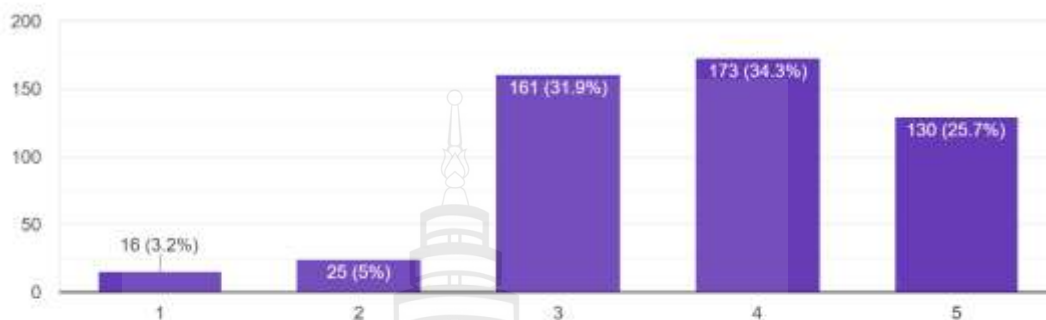


If I have enough money and time, I will choose s-commerce platforms for purchasing products. ถ้ามีเงินและเวลา ฉันจะเลือกซื้อสินค้าบนแพลตฟอร์ม s-commerce
505 responses

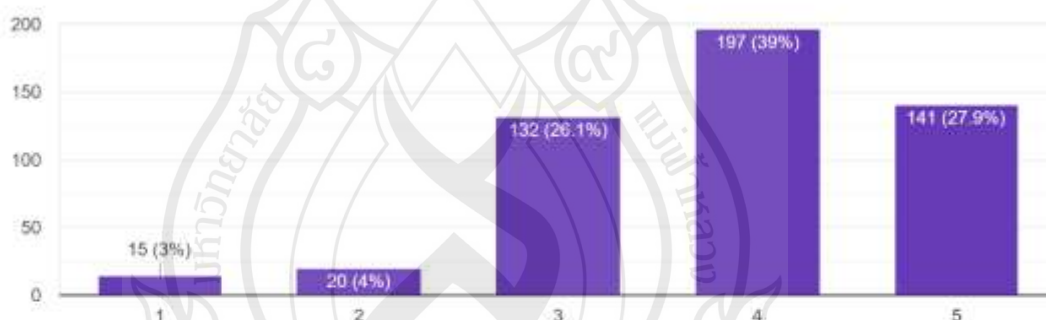


Trust in Payment method (TP)

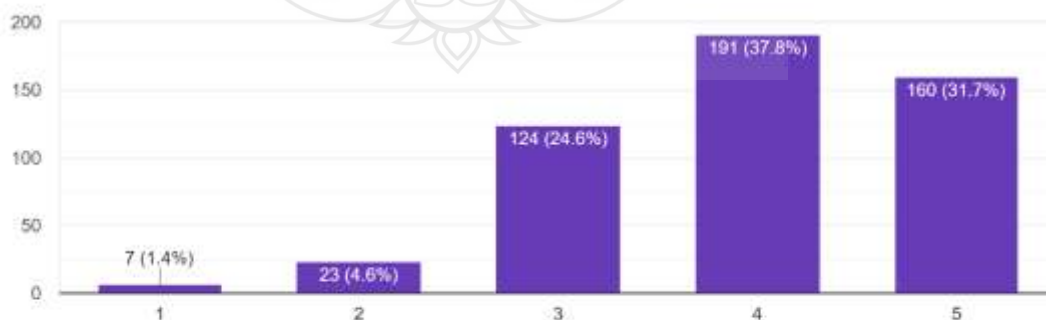
If the website/page on s-commerce platforms has been identified before payment, I will purchase products on it. ฉันจะซื้อสินค้าบนแพลตฟอร์ม s-com...บนแพลตฟอร์ม s-commerce มีการยืนยันก่อนชำระเงิน
505 responses



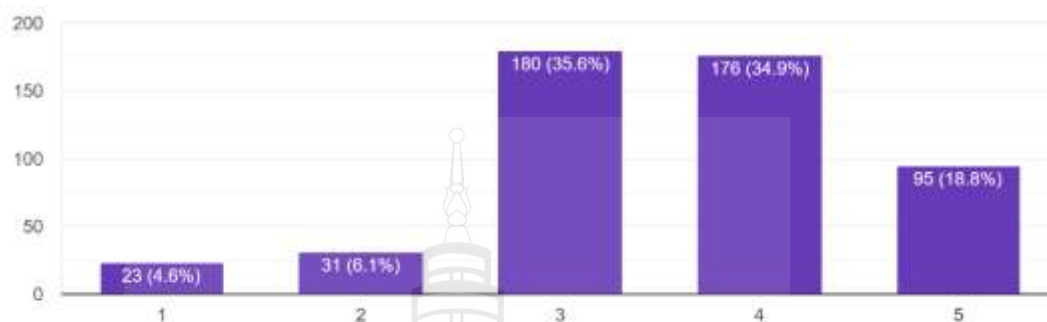
If the website/page on s-commerce platforms has high information quality on the payment page, I will purchase products on it. ฉันจะซื้อสินค้าบนแพล... / หน้าบนแพลตฟอร์ม s-commerce มีข้อมูลที่คุณภาพสูง
505 responses



If the website/page on s-commerce platforms has multiple payment methods, I will purchase products on it. ฉันจะซื้อสินค้าบนแพลตฟอร์ม s-com...แพลตฟอร์ม s-commerce มีวิธีการชำระเงินที่หลากหลาย
505 responses

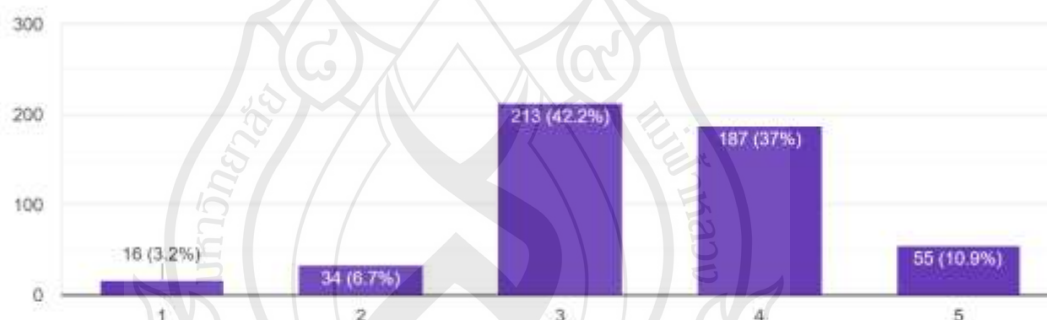


If the website/page on s-commerce platforms has the cost on the delivery payment method, I will purchase products on it. ฉันจะซื้อสินค้าบนแพลตฟอร์ม...ม s-commerce มีค่าใช้จ่ายในวิธีการชำระเงินการจัดส่ง
505 responses

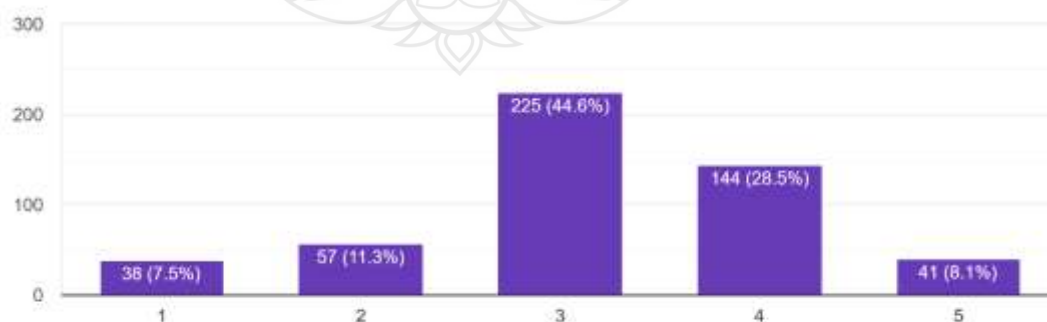


Trust in logistic provider (TL)

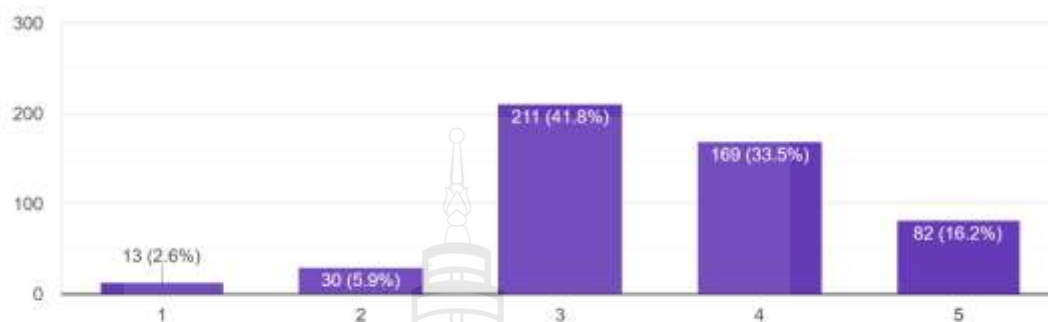
I believe logistics providers that s-commerce platforms selected could control the safety of products. ฉันเชื่อว่า ผู้ให้บริการโลจิสติกส์ที่แพลตฟอร์ม s-commerce เลือกใช้ สามารถควบคุมความปลอดภัยของสินค้าได้
505 responses



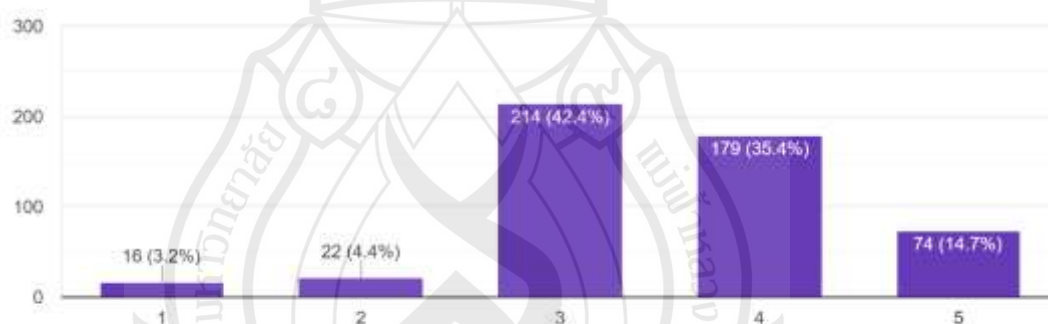
I do not doubt the honesty of the logistics provider that s-commerce platforms selected. ฉันไม่สงสัยความซื่อสัตย์ของโลจิสติกส์ที่แพลตฟอร์ม s-commerce เลือก
505 responses



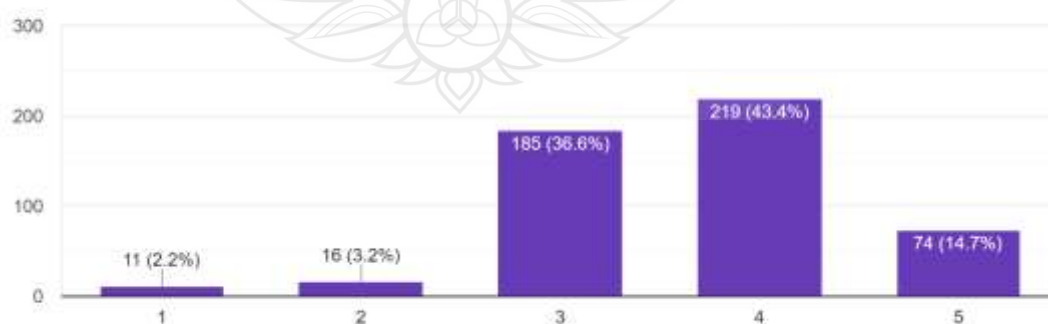
I believe logistics providers that s-commerce platforms selected have sufficient knowledge to guarantee the safety of products. ฉันเชื่อว่าผู้ให้บริการโลจิสติกส์ที่แพลตฟอร์ม s-commerce เลือกมีความรู้เพียงพอที่จะรับประกันความปลอดภัยของผลิตภัณฑ์
505 responses



Logistics providers give special attention to the products from s-commerce platforms. ผู้ให้บริการโลจิสติกส์ให้ความสนใจเป็นพิเศษกับผลิตภัณฑ์ของแพลตฟอร์ม s-commerce
505 responses

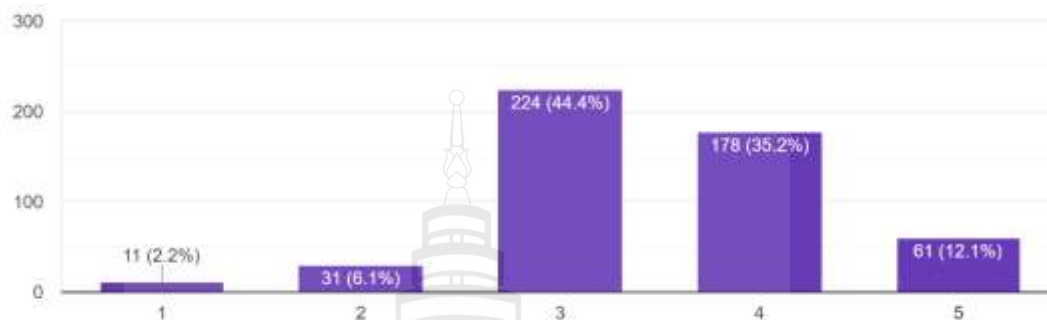


Based on my experience with the s-commerce system, I know it cares about users. จากประสบการณ์ที่เคยใช้แพลตฟอร์ม s-commerce ฉันรู้ว่าผู้ให้บริการให้ความสำคัญกับผู้ใช้บริการ
505 responses

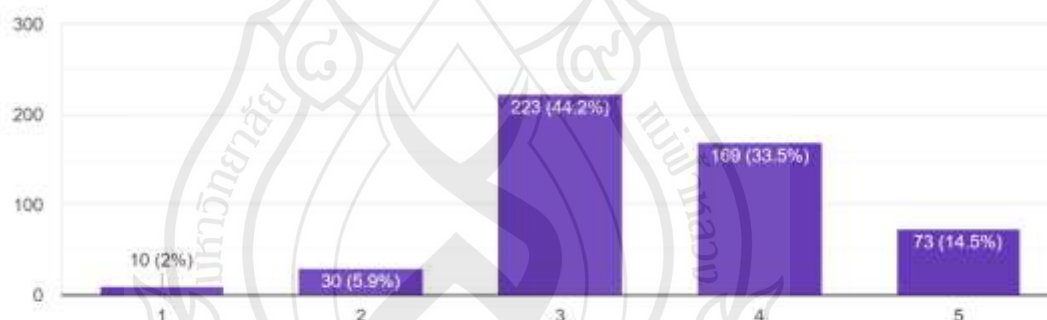


Trust in retailer (TR)

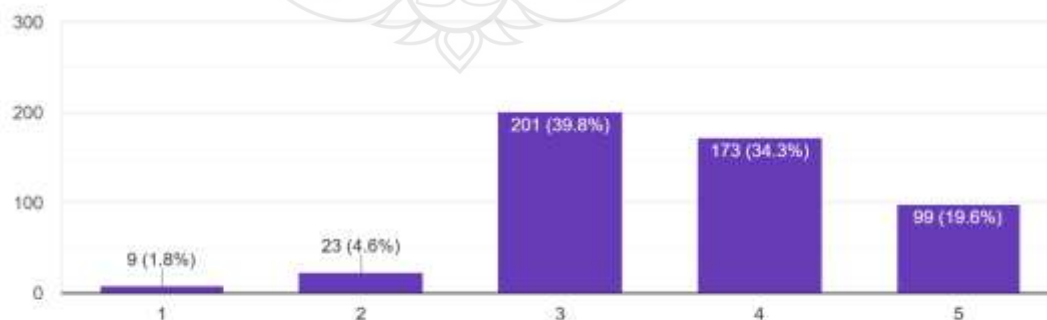
I trust the introduction of products from the seller because s-commerce platforms are reliable. ฉันเชื่อมั่นในการแนะนำสินค้าของผู้ขาย เพราะแพลตฟอร์ม s-commerce มีความน่าเชื่อถือ
505 responses



I trust the seller of on s-commerce platforms because they reply to me in time. ฉันเชื่อใจผู้ขายบนแพลตฟอร์ม s-commerce เพราะผู้ขายตอบฉันทันเวลา
505 responses



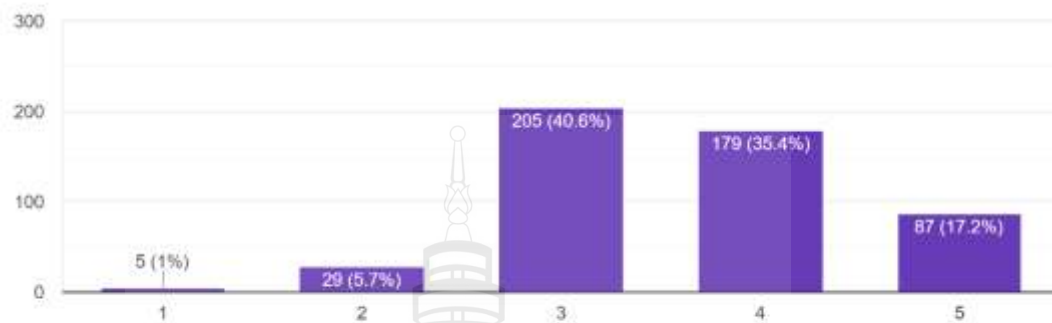
I trust the recommendation from the seller on s-commerce platforms because their explanation has logic and it's reasonable. ฉันเชื่อในคำแนะนำของ...commerce เพราะคำอธิบายของผู้ขายมีความสมเหตุสมผล
505 responses



Based on my experience, I trust s-commerce platforms because they're

honest. จากประสบการณ์ของฉัน ฉันเชื่อใจแพลตฟอร์ม s-commerce เพราะผู้ขายมีความซื่อสัตย์

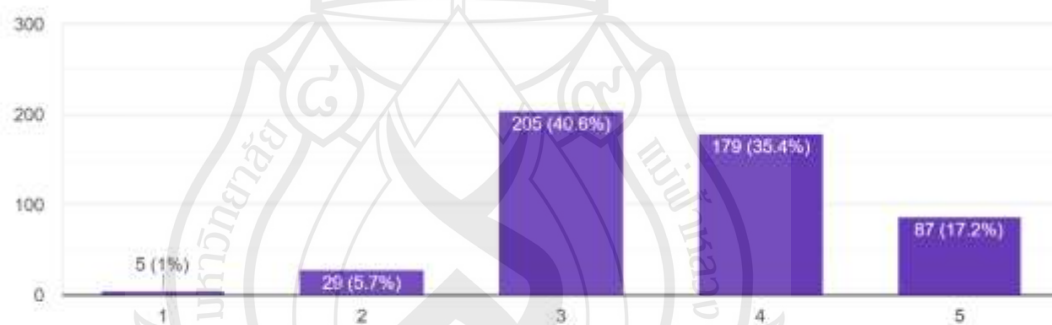
505 responses



Based on my experience, I trust s-commerce platforms because they're

honest. จากประสบการณ์ของฉัน ฉันเชื่อใจแพลตฟอร์ม s-commerce เพราะผู้ขายมีความซื่อสัตย์

505 responses

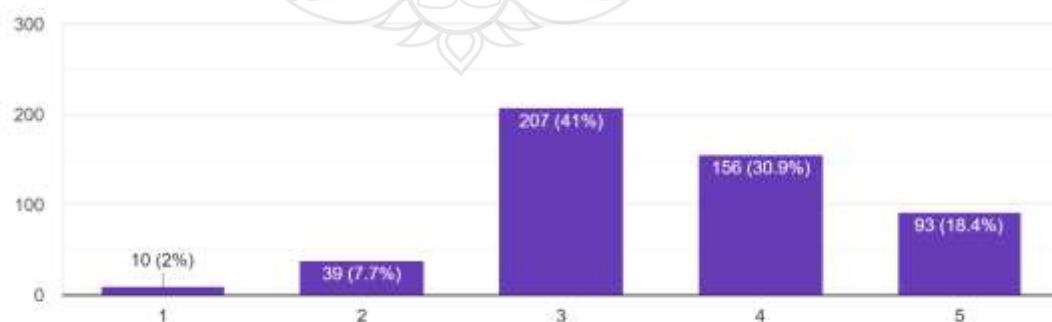


Trust in e-word of mouth (TE)

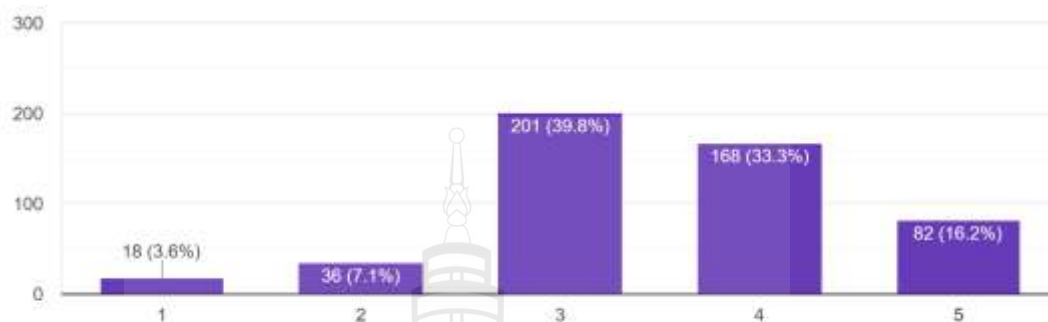
I will likely encourage others to consider using social platforms commerce to purchase products

based on my experience. อยากแนะนำให้เพื่อนๆ หรือใคร...ใช้โซเชียลแพลตฟอร์มในการซื้อสินค้า เพราะเห็นรีวิวดี ๆ

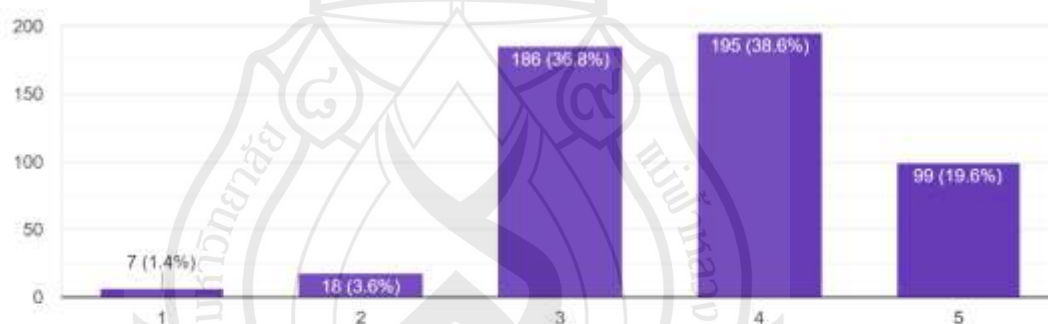
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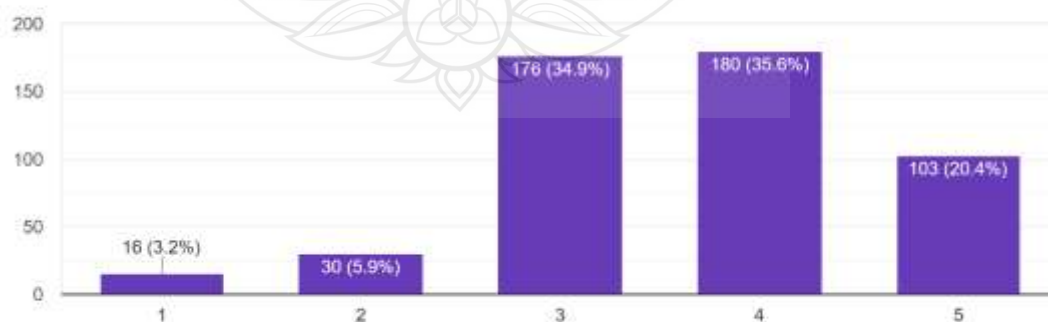
I would like to give a negative comment when I feel unsatisfied when I purchase products on s-commerce platforms. ฉันอยากจะให้รีวิวในเชิงลบ...พึงพอใจในสินค้าที่ซื้อจากบนแพลตฟอร์ม s-commerce
505 responses



I would like to talk to my friends about the products that I purchase on s-commerce platforms quality or impression of the seller. ฉันอยากจะให้...บนแพลตฟอร์ม s-commerce หรือความประทับใจของผู้ขาย
505 responses



I would like to cancel my order that I purchased on s-commerce platforms because I heard about the bad comment. ฉันต้องการยกเลิกคำสั่งซื้อที่ฉันข...แพลตฟอร์ม s-commerce เพราะฉันได้ยินรีวิวในเชิงลบ
505 responses

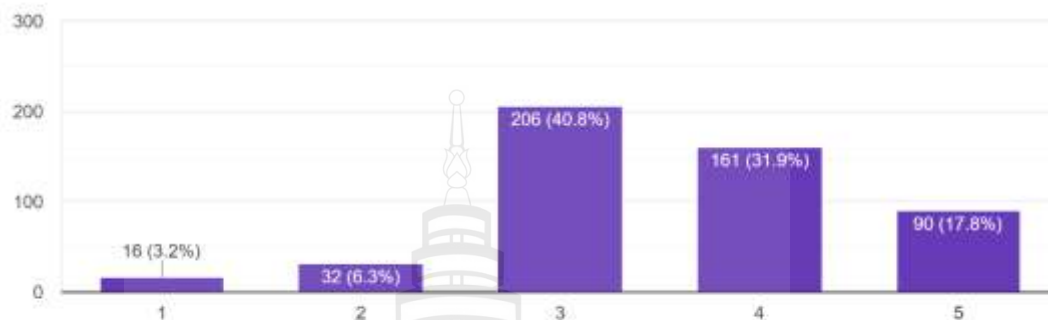


Purchase Intentions (PI)

If I need to purchase products today, I will choose s-commerce

platforms. ถ้าวันนี้ฉันต้องการสั่งซื้อสินค้า ฉันจะเลือกซื้อสินค้าบนแพลตฟอร์ม s-commerce

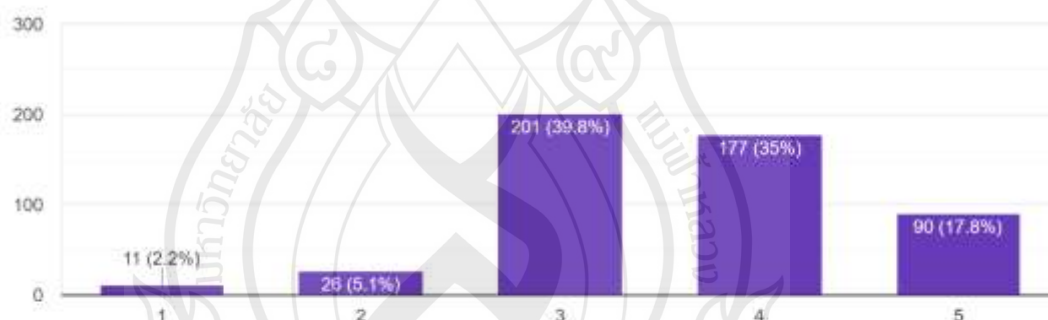
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If I need to purchase products today, I am willing to choose s-commerce

platforms. ถ้าวันนี้จำเป็นต้องซื้อสินค้า ฉันยินดีจะเลือกแพลตฟอร์ม s-commerce

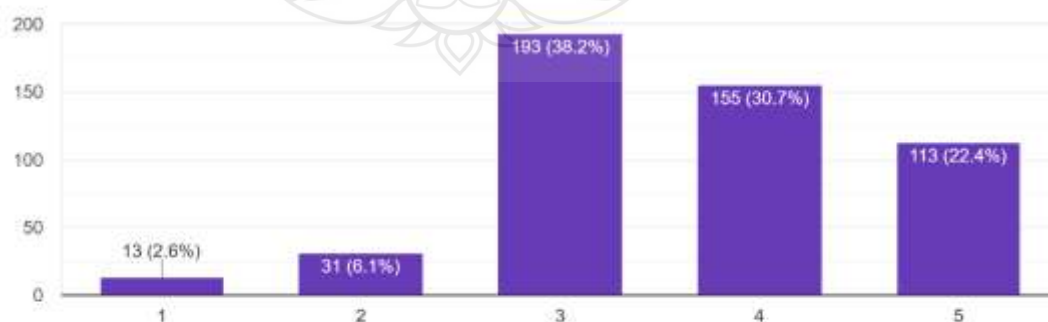
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If I need to purchase products on s-commerce platforms today, I will put the required efforts into

it. ถ้าวันนี้ฉันต้องซื้อสินค้าบนแพลตฟอร์ม s-commerce ฉันจะพยายามทำทุกอย่างเพื่อซื้อสินค้าที่ต้องการ

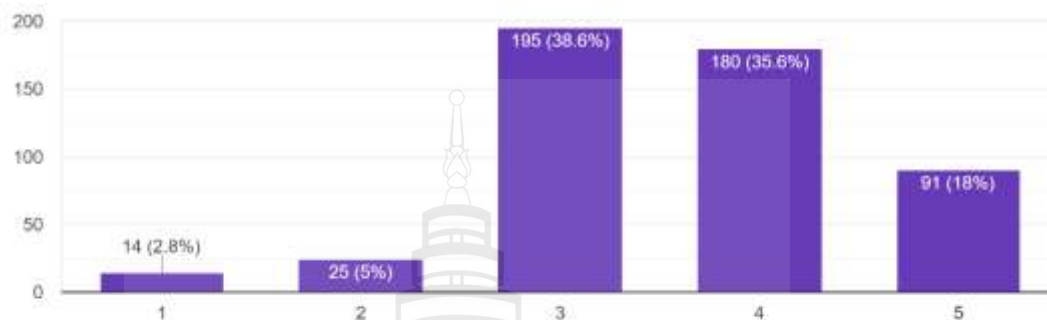
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Future Behavioral (FB)

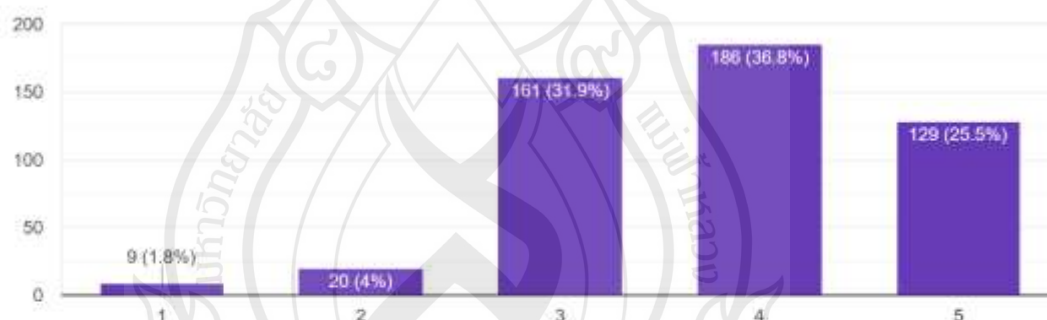
I will use the s-commerce platform to purchase products in the future. ฉันจะใช้แพลตฟอร์ม s-commerce เพื่อซื้อสินค้าในอนาคต

505 responses



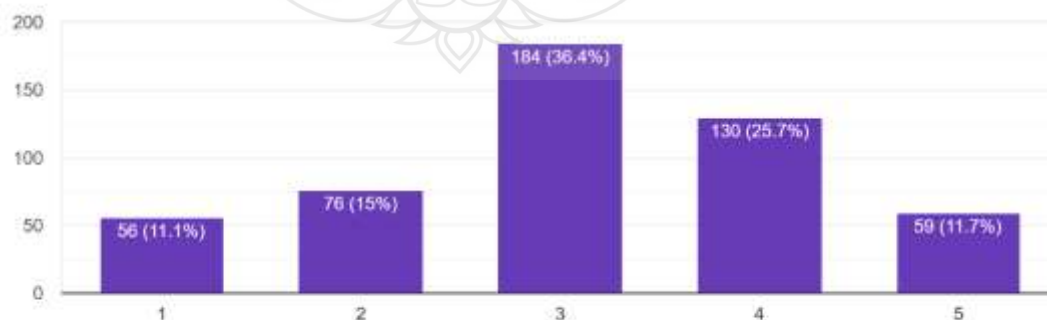
I will still use the s-commerce platform if I have capable to purchase products on the s-commerce platform in the future. ในอนาคตฉันจะยังคงซื้อสินค้าบนแพลตฟอร์ม s-commerce

505 responses



I will not use the s-commerce platform to purchase products in the future. ฉันจะไม่ใช้แพลตฟอร์ม s-commerce เพื่อซื้อสินค้าในอนาคต

505 responses



APPENDIX D

CERTIFICATE OF CONFERENCE IEEE



APPENDIX E

PUBLICATION PAPER OF CONFERENCE

2023 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT)

Factors Influencing Purchase Intentions in Smart City Social Commerce

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Abstract—Social media commerce is known as S-commerce as a subset of e-commerce. It's an industry that can save time and effort for people in purchasing products and is a crucial step to move in the era of smart city. It is also a new online shopping trend in Thailand in recent years. In this research, we aim to investigate "trust" from different perspectives by modifying the TPB model to understand the purchase characteristic using confirmatory factor analysis and the structural equation model. The research took into consideration crucial behavioral aspects, including purchase norm (PN), purchase attitude (PA), and purchase behavior control (PBC). According to the research gap, we included trust in payment methods (TP) and trust in logistics providers (TL) to examine the purchase characteristic of s-commerce platforms in Thailand. The finding of this research can help comprehend which factors can influence the s-commerce consumer and future purchase intention for s-commerce business development and who is interested in joining s-commerce business need to concern.

Keywords—social commerce, theory of planned behavior, purchase, smart city, factors

I. INTRODUCTION

The exponential growth of the internet has resulted in the appearance of an entirely new trend in online commerce known as social commerce (s-commerce). S-commerce combines social media and electronic commerce (e-commerce), creating a novel business promotion model that has become increasingly indispensable in our daily lives [1]. Over the past few years, s-commerce has experienced a significant surge in popularity [2]. Simultaneously, the concept of smart cities is perpetually undergoing evolution and advancement, smart cities are an advanced urban concept that exploits communications technology to stimulate economic activity, enhance living standards, and foster sustainable development; e-commerce is both a beneficiary of smart city technologies and a contributor to the broader goals of urban development and efficiency. [3]–[5] It is worth noting that s-commerce is a subset of e-commerce, which refers to transactions conducted on online platforms and websites [6], [7]. In Thailand, s-commerce has emerged as a prominent trend since 2015, with more than 35 million users registered on social networking sites. Even though the number of users is growing, a large number of people still didn't purchase any products via the s-commerce platform. This population segment remains hesitant about online shopping due to trust issues [8], [9]. Trust is crucial for fostering consumer confidence in s-commerce platforms, as it directly impacts their purchase intentions and subsequent behaviors.

The premise of online social networking has become increasingly popular and ingrained in daily life, presenting an opportunity for business developers to combine "social media" and "commerce" [10], [11]. This convergence has given rise to s-commerce, which introduces new business models for online transactions. However, due to the various definitions attributed to s-commerce by researchers, a standardized definition has yet to be established [12]. S-commerce can be defined as an e-commerce and transactional activity conducted within social networks and among network users [11]. It is essentially a branch of e-commerce, differing only in that s-commerce leverages social media platforms for transactions and activities. Researchers such as [13] view s-commerce as an evolution of e-commerce. At the same time, [14] emphasizes the integration of social media and Web 2.0 to foster user interactions and content creation on the Internet, ultimately facilitating social commerce. In addition to the complexities of defining s-commerce, researchers have also examined the influence of trust on purchase intentions within the realm of s-commerce from a psychological perspective [15]. Trust plays a pivotal role in shaping consumers' purchase intentions and understanding its impact in the context of s-commerce. Developing effective strategies to foster trust, enhance user experiences, and drive increased participation in s-commerce within smart cities is essential.

In summary, the objective of this research is to conduct an analysis, the factors influencing purchase intentions in social commerce within the context of smart cities. By addressing trust-related concerns and investigating the determinants of purchase intentions, this research seeks to contribute to the existing body of knowledge. The subsequent sections will delve into the theoretical framework, research methodology, data analysis, and findings, providing valuable insights for academia and industry stakeholders in the ever-evolving landscape of s-commerce within smart cities.

II. THEORETICAL AND HYPOTHESIS

A. Theory of Planned Behavior

Depending upon prior research investigations, the present investigation employs the Theory of Planned Behavior (TPB) model proposed by [16] as the study proposes a theoretical framework for analyzing the various variables that influence individuals' purchase intention in products on s-commerce platforms. The TPB model is derived from the Theory of Reasoned Action (TRA) [17] and has been widely utilized to analyze consumer intentions and predict future behavior in various fields such as tourism,

hospitality management, marketing, and psychology [18]–[20].

The TPB model consists of three key factors that can shape consumers' intentions: attitude, subjective norms, and perceived behavioral control. For instance, [21] utilized the TPB model to investigate the elements influencing consumers' purchase intentions when buying organic milk, highlighting the effectiveness of the TPB model in predicting food purchase choices. Similarly, [22] employed the TPB model to identify motivational factors determining entrepreneurial intentions among Vietnamese university students. Another study by [18] used the TPB model to identify factors influencing travel intentions and predict future behavior. Figure 1 illustrates the original TPB model proposed by [16], depicting the relationships among the three critical factors: attitude, subjective norms, and perceived behavioral control.

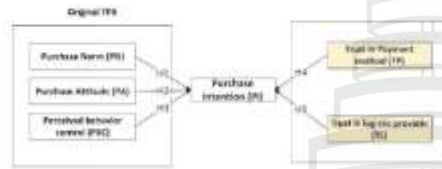


Fig. 1. Conceptual framework adapted from TPB

The present research applies this model as a framework to analyze the various aspects that impact customers' purchase intentions in the s-commerce platforms context. Overall, the TPB model offers a comprehensive framework to understand and predict consumers' intentions. It has been successfully applied in various research domains and demonstrated its group's directive power in determining purchase intentions, food choices, entrepreneurial intentions, and travel behavior. By employing the TPB model, this research intends to add to the reservoir of knowledge in this area by exposing the variables affecting consumers' decision-making on s-commerce platforms.

1) *Purchase Norm (PN)*: The purchase norm is the pressure and influence that people think they are getting from their social environment to buy things on social commerce (s-commerce) platforms. It includes what people think and expect about whether other people, like friends, family, or influencers, recommend or support buying on these platforms. The purchase norm is a person's subjective evaluation of the expectations and norms of society when it comes to shopping on s-commerce platforms. This, in turn, affects a person's intentions and behaviors when shopping.

Hypothesis (H1): PN can significantly influence consumers' intention to purchase products on s-commerce.

2) *Purchase Attitude (PA)*: A person's purchase attitude is how they feel about buying products on social commerce (s-commerce) networks. It encompasses consumers' s-commerce purchasing attitudes, beliefs, and views. A person's buying attitude reflects their assessment of the pros, cons, convenience, enjoyment, and satisfaction with online product purchases. These attitudes influence a person's intent to buy and their s-commerce activity.

Hypothesis (H2): PA can significantly influence consumers' intention to purchase products on s-commerce.

3) *Perceived Behavioral Control (PBC)*: Perceived behavioral control is a person's feeling of how successfully they can execute the action they want, such as buying things on social commerce (s-commerce) platforms. It comprises how simple the individual feels the platform is to use, what technical skills are needed, how well they know how to buy anything, and how sure they can solve any issues. Perceived behavioral control measures how much consumers feel in control of their activities and think they have the means and abilities to make s-commerce purchases. It influences their plans and behaviors by making it easier or harder for people to do what they want.

Hypothesis (H3): PBC can significantly influence consumers' intention to purchase products on s-commerce.

B. Role of Trust in Extended TPB Model

Trust is a crucial aspect of social research. Much research examines trust as a vital aspect of s-commerce, the most critical aspect of e-commerce success. Additionally, [23] it affects e-commerce [7], [24]. [12] analyze the importance of trust in social network site platforms in influencing consumers' behavioral intention to purchase from e-sellers through Facebook social commerce in Jordan. Trust is also a critical aspect that academics studying s-commerce must include. Trust is the defining characteristic of interactions between businesses and customers, and it is essential to mutual success [25]. According to [26], trust impacts purchase intentions directly and is somewhat mediated by familiarity and social presence in social commerce information seeking. In addition, [14] recognizes trust as a crucial component of positive word-of-mouth in e-commerce. Based on the basic model depicted in Figure 1, this research extends the TPB model with trust and essential s-commerce consideration elements, including trust in payment methods, confidence in logistics providers, trust in merchants, and trust in e-word of mouth.

1) *Trust in Payment Methods (TP)*: Trust in social commerce (s-commerce) payment mechanisms relates to a person's belief in their reliability, security, and authenticity. It entails trusting the chosen payment methods to protect personal and financial data, secure transactions, and maintain privacy. Trust in payment systems affects e-commerce purchases. It influences an individual's decision-making and likelihood of adopting different payment methods on e-commerce platforms, along with other TPB factor.

Hypothesis (H4): TP can significantly influence consumers' intention to purchase products on s-commerce.

2) *Trust in Logistic Provider (TL)*: An individual's faith in the dependability, competency, and effectiveness of social commerce (s-commerce) logistics services for product delivery is called logistic provider trust. It implies that the chosen logistic provider will deliver things on schedule, securely package them, and handle them properly. Trust in the logistic supplier influences s-commerce purchases. It interacts with other TPB elements, including attitudes, subjective norms, and perceived behavioral control, to influence an individual's decision-making process and tendency to use certain logistic providers for online purchases.

Hypothesis (H5): TL can significantly impact consumers' intention in purchasing products on s-commerce purchase intention.

3) *Purchase Intention (PI)*: Purchase intention is a person's intention to buy things on social commerce (s-commerce) networks. It indicates a buyer's preparedness and motivation. TPB element. These factors influence s-commerce buyers' intentions and actual purchases. Purchase intention represents the individual's cognitive and emotional assessments, attitudes, and intentions about online shopping.

III. METHODOLOGY

A. Survey Instrument

The survey instrument used in this research consisted of two sections: socio-demographics and consumer intention. The respondents were selected through convenience sampling, and participation was voluntary. The questionnaire assessed 22 attributes related to consumers' intentions in purchasing products within Thailand's s-commerce sector. Participants rated their agreement with each attribute using a 5-point Likert scale ranging from "Strongly disagree" to "Strongly agree" [27]. The attributes were derived from prior research factors, excluding those related to trust.

B. Data Collection

Data collection for this study took place between April and June 2023. Given Thailand's enormous population of online consumers and the continuous growth of internet usage, providing an exact number of participants is challenging. A formula was used to determine an appropriate sample size, in social science research, a 95% confidence level and a 15% acceptable precision value are acceptable [28]. With a desired precision of $\pm 5\%$, a sample size of 400 surveys was determined. The study obtained 241 valid responses from online consumers in Thailand who had previously made purchases on s-commerce platforms. An online questionnaire was distributed through various social media outlets such as Facebook, Line, and TikTok to gather the required data for analysis.

C. Data Analysis

This research used Statistical Package for the Social Sciences (SPSS) version 26 to analyze the collected data. The demographic makeup of the individuals was examined using descriptive statistics. AMOS version 21.0 was used for structural equation modeling (SEM) for data verification and hypothesis testing. This involved employing confirmatory factor analysis techniques to assess the measurement model and test the validity and reliability of the constructs. Additionally, Hypothesis testing was conducted to investigate the relation between the intention variables. The combination of SPSS and AMOS allowed for a comprehensive data analysis approach, ensuring rigorous examination and validation of the research model and hypotheses.

IV. RESULT

A. Demographic of Participants

Table 1 provided significant information about the participants' personalities in the research. The data demonstrate that most of the respondents identified as female (54.8%), while males accounted for 42.3%, and a small percentage chose not to identify their gender (2.9%). The largest group fell into the 21-30 age range (47.7%), followed by those over 31 (16.2%). Married individuals constituted the highest proportion of participants (58.9%), and the Northern region had the highest representation (50.2%). Bachelor's degree holders were the most prevalent

(59.3%) among the education categories. Furthermore, students (29.5%) and officers (26.1%) comprised significant portions of the job roles. These findings provide valuable demographic information for understanding the study population and their perspectives within the context of s-commerce.

TABLE I. CHARACTERISTICS OF PARTICIPANTS (N=241)

Item	Description	Frequency	Percent
Gender	Male	102	42.3
	Female	132	54.8
	Not identify	7	2.9
Age (Years old)	>31	39	16.2
	21-30	115	47.7
	31-40	56	23.2
	41-50	18	7.5
	51-60	12	5.0
	<20	1	0.4
Marital status	Unmarried	79	32.8
	Married	142	58.9
	Not mentioned	20	8.3
Residence	Central	61	25.3
	Northern	121	50.2
	Southern	20	8.3
	North-Eastern	12	5.0
	Eastern	25	10.4
	Western	2	0.8
Education level	Under bachelor's	41	17
	Bachelor's	143	59.3
	Above bachelor's	57	23.7
Monthly income (Thai Baht)	<15,000	102	42.3
	15,000-30,000	68	28.2
	30,001-45,000	48	19.9
	45,001-60,000	15	6.2
	>60,000	8	3.3
Occupation	Student	71	29.5
	Business Owner	27	11.2
	Officer	63	26.1
	Employee	28	11.6
	Homemaker	3	1.2
	Worker	3	1.2
	Farmer	6	2.5
	Others	40	16.6

B. Validity and Reliability

Regarding Validity and reliability [29], the Kaiser Meyer Olkin test (KMO) and Bartlett sphericity test are necessary before factor analysis, and the partial correlation between the various factor variables must be examined, the results indicated that Cronbach's alpha coefficients for each variable varied from 0.59 to 0.866. This overall coefficient is above the threshold of 0.70, indicating satisfactory internal consistency. The results of each variable are shown in Table 2. High sampling adequacy for factor analysis is indicated by the Kaiser-Meyer-Olkin (KMO) score of 0.91. The Bartlett sphericity test yielded an estimated Chi-Square value of 2267.95 with 171 degrees of freedom. The resulting significance level is below 0.5, and KMO values closer to 1 indicate that the data is suitable for factor analysis. AVE ranged from 0.488-0.647, meanwhile, the CR values were in the range between 0.776 and 0.853.

C. Confirmatory Factor Analysis

The Confirmatory Factor Analysis (CFA) technique validated the factor structure. Model fit analysis was conducted to determine the appropriate fit in CFA [29], [30]. Thus, as shown in Fig 2, it's the structural model with the standardized estimate value, also there are 5 latent variables and a total of 22 indications. PN1-PN4 can be defined as consumer influence by recommendations from friends, PA1-PA4 can be explained as personal attitude

influencing consumer selection, and PBC1-PBC4 can summarize as the individual control ability that influences consumers. TP1-TP3 can be defined as consumer trust in the safety of payment method, TL1-TL4 as consumer trust in logistics providers from different perspectives, such as the personal qualities of couriers, and quality control of providers. PI1-PI3 can be concluded as the willingness to choose the s-commerce platform of consumers. The factor loading value is within the range of 0.59-0.86, all of the constructs' CR value is more than 0.7, but some AVE values are less than 0.5. Based on [18], it's acceptable when CR value more than 0.6.

D. Structural Equation Model

The Structural Equation Model is the methodology that resolves the weaknesses in traditional statistical methods and is suitable for social science research [31]. The data obtained is used for evaluating the research model. The model generated satisfactory fit values as following, $\chi^2 = 182.23$, $df = 170$, $\chi^2/df = 1.129$, $p\text{-value} < 0.001$, $CFI = 0.992$ (> 0.90), $TLI = 0.989$ (> 0.90), $NFI = 0.937$ (> 0.90), $GFI = 0.936$ (> 0.90), $AGFI = 0.902$ (> 0.80), $RMSEA = 0.045$ (< 0.80), and $RMR = 0.053$ (< 0.05), $SRMR = .0535$ (< 0.08) [29], [32]. The findings of the confirmatory factor analysis indicated that the scales employed in this study successfully established satisfactory measurement models.

TABLE II. CONFIRMATORY FACTOR ANALYSIS

Component	Factor	Loading	AVE ^a	CR ^b
Purchase Norm (PN)	PN1	0.71	0.491	0.793
	PN2	0.59		
	PN3	0.77		
	PN4	0.72		
Purchase Attitude (PA)	PA1	0.61	0.488	0.791
	PA2	0.77		
	PA3	0.76		
	PA4	0.64		
Perceived behavioral control (PBC)	PBC1	0.71	0.515	0.809
	PBC2	0.75		
	PBC3	0.72		
	PBC4	0.69		
Trust in payment methods (TP)	TP1	0.62	0.539	0.776
	TP2	0.79		
	TP3	0.78		
Trust in Logistic provider (TL)	TL1	0.66	0.593	0.853
	TL2	0.77		
	TL3	0.81		
	TL4	0.83		
Purchase intention (PI)	PI1	0.79	0.647	0.846
	PI2	0.86		
	PI3	0.76		

^a Average Variance Extracted; ^b Composite Reliability

E. Hypothesis Test

Hypothesized relationships were tested through a structural model developed based on the TPB. Which shows in Table 3 that H2, H4, and H5 are significant, but H1 and H3 are not significant.

Thus, PN does not significantly influence PI, which does not support hypothesis H1, which means environmental or recommended it does not significantly influence between consumer intention and buying products on s-commerce; PA significantly influenced PI, which supports hypothesis H2. Therefore, a positive attitude among consumers can enhance their intention to engage in s-commerce purchasing. PBC also did not significantly influence PI, which did not support hypothesis H3. This implies that consumers purchase product on s-commerce perceiving behavior is challenging

to control, and it cannot influence the purchase intention of consumers of s-commerce. TP significantly influenced PI, which supports hypothesis H4, which signifies that trust in payment methods can significantly impact consumer purchase intention in s-commerce. Finally, TL significantly influenced PI, which supports hypothesis H5, whatever trust in logistic provider also affects the consumer purchase intention in s-commerce.

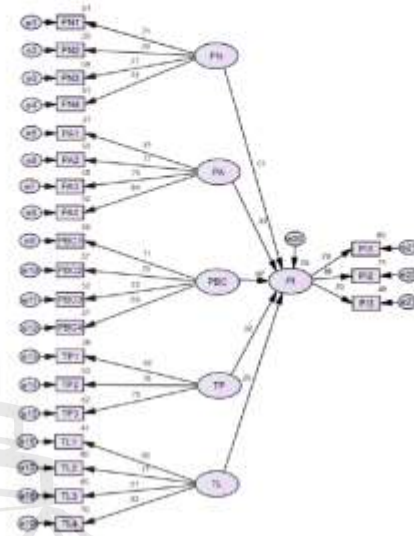


Fig. 2. The structural model standardized estimates

TABLE III. HYPOTHESIS TESTING

Hypotheses	Paths	Beta	S.E.	t-value	Decision
H1	PN→PI	0.013	0.104	0.127	Not Support
H2	PA→PI	0.350	0.171	2.052*	Supported
H3	PBC→PI	0.079	0.174	0.454	Not support
H4	TP→PI	0.349	0.146	2.385*	Supported
H5	TL→PI	0.200	0.086	2.335*	Supported

Note: *p<0.05

V. CONCLUSION

This research investigates the primary aspects of the Theory of Planned Behavior and trust that impact Thai consumers' interaction with s-commerce. The objective is to analyze the purchasing characteristics of consumers on the s-commerce platform. The link between trust and the Theory of Planned Behavior in relation to purchase intention was examined by employing a paired sample t-test, which showed important customer purchasing characteristics. On the other hand, we also found out that in order to adapt to the changes of the times, under the context of the continuous development of smart cities, better social commerce must be the trend [33]. In addition, we found that 80.1% of respondents have experience purchasing products on an s-commerce platform. Thai s-commerce consumers select

Facebook and TikTok to purchase there. Moreover, they usually buy clothes on the s-commerce platform, and the reason for choosing the s-commerce platform is the review on YouTube or the internet, also because retailers on s-commerce platforms have excellent credit. Besides, during the online payment situation in Thailand, the s-commerce consumer in Thailand used bank transfers to do the payment, and many consumers used cash on delivery for the payment. Furthermore, 56.4% of respondents prefer to purchase products in the evening. Until now, a great majority of consumers buy products on s-commerce less than two times per week, and the amount of purchase and the price of the product is 100-500 baht. Expect consumers of s-commerce in Thai to choose the s-commerce platform because it is more convenient and faster, and the s-commerce platform has a wide variety of products type.

Additionally, we developed the Theory of Planned Behavior (TPB) as a theoretical framework to predict consumer intention to engage in s-commerce in Thailand. This expansion involves the examination of five dimensions, namely PA, PN, PBC, TP, and TL. The research results confirm that the suggested model is a suitable match for the empirical data. We found that PA to PI is in a positive relationship, which means when the consumer has an excellent attitude to s-commerce, such as feeling convenience or relaxation when they do online shopping, the more likely they will be chosen to use the s-commerce platform. TP and TL to PI are also in a positive relationship, which can show that trust in payment methods and logistics providers is important to the s-commerce business. Smart cities as well as the characteristics have an impact on s-commerce development. Smart cities provide people with a more convenient life, which is also the reason for the rapid development of s-commerce.

The major limitation of the present study is that the original theory does not perfectly fit the situation of the smart city context since the TPB model is a relatively subjective theory. Still, the smart city and s-commerce is a product that complies with the times and the development of technology. Future research should be undertaken to explore more suitable theories to develop s-commerce in the smart city context since the research on s-commerce is quite limited, researchers need considerably more work will need to be done to research this topic. Also, s-commerce has been a new topic in recent years in Thailand, it still lacks research about the policy of regulatory aspects and consumer behavior.

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