



An Investigation of Customers' Loyalty to Social Commerce Websites

A thesis submitted in fulfilment of the requirements for the degree of Doctor of
Philosophy

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Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

Hilal Nafil Alhulail

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List of Abbreviations

eCommerce	Electronic commerce
IS	Information systems
IS success	Information systems success
IS success model	Information systems success model
MCAR	Missing completely at random
MNAR	Missing not at random
OSE	Online shopping experience
POE	Panel of experts
PLS	Partial least squares
sCommerce	Social commerce
SNS	Social networking sites
SP	Social presence
SPO	Social presence of other users
SPW	Social presence of a website
WOM	Word-of-mouth

Abstract

The emergence of web 2.0 has brought new applications that have played a significant role in extending electronic commerce websites with social commerce functionality. Social commerce is a relatively new extension of B2C electronic commerce where customers purchase products and services online with the existence of social cues in the websites (such as reviews, recommendations and sharing). In this thesis, the research examines those websites which fulfil the role of a traditional eCommerce website but have also had added to them a range of social interaction features. There has been little research in the area of customer loyalty to social commerce websites. Drawing upon theories of social presence and trust—and the Delone and McLean model of information systems success—this study aims to determine what factors affect customer loyalty to social commerce websites and to develop a framework that helps in investigating those factors. In order to achieve this objective, a quantitative approach was employed. Data was collected from social commerce users in Australia through an online survey. The quantitative survey of online social commerce customers' opinions regarding the measurement items was based on a probability sample of qualified Australian customers of social commerce websites. A stratified random sampling was used with all Australian states that constitute the strata of the Australian population. The population of the study consisted of male and female customers of multiple social commerce websites who live in Australia. Nine hundred and ninety-seven surveys were collected. After screening the data, 797 surveys were ready to be analysed. An analysis was performed using a Partial Least Squares Structural Equation Modelling (PLS-SEM) technique with SmartPLS 3 software. The findings demonstrated that reputation, satisfaction, word-of-mouth, and social presence positively contribute to explaining the variance in trust. In contrast, communication, and online shopping experience did not contribute to explain the variance in trust. Examining the relevance of significant relationships between the six exogenous constructs with trust, the results showed that satisfaction, reputation, word-of-mouth, and social presence carried comparable weights in impacting trust with path coefficients that were different in magnitude. The results imply that satisfaction, reputation, word-of-mouth and social presence are important factors to predict trust rather than communication, and online shopping experience. Among the exogenous constructs as predictors of satisfaction, service quality and information quality influence satisfaction were the most significant, whereas system quality did not influence satisfaction

significantly. Finally, this study found that satisfaction, trust and social presence have a significant influence on customer loyalty to a social commerce website. This study contributes to the social commerce literature through a theoretical framework that shows how the loyalty of customers can be generated in social commerce websites. In addition, it is expected that this study will help businesses to have an understanding of how to retain their customers, which will result in higher profits. From a customer perspective, this study will give customers a way to objectively evaluate whether a social commerce site provides quality products and services. Furthermore, the study will motivate businesses to improve their websites, which in turn will provide customers with better website services.

List of Publications

Alhulail, H, Dick, M & Abareshi, A 2018a, Factors that Impact Customers' Loyalty to Social Commerce Websites. CONF-IRM 2018 Proceedings. 6.<http://aisel.aisnet.org/confirm2018/6>

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Alhulail, H, Dick, M & Abareshi, A 2018b, The Influence of Word-of-Mouth on Customer Loyalty to Social Commerce Websites'. CONF-IRM 2018 Proceedings. 49.<http://aisel.aisnet.org/confirm2018/49>

Alhulail, H, Dick, M & Abareshi, A 2017a, THE IMPACT OF SOCIAL PRESENCE AND TRUST ON CUSTOMER LOYALTY TO SOCIAL COMMERCE WEBSITES, The Internet Technologies & Society 2017 Conference (ITS 2017), pp. 137-41.

Alhulail, H, Dick, M & Abareshi, A 2018c, The Influence of Social Presence and Trust on Customers' Loyalty to Social Commerce Websites, In: Saeed F., Gazem N., Mohammed F., Busalim A. (eds) Recent Trends in Data Science and Soft Computing. IRICT 2018. Advances in Intelligent Systems and Computing, vol 843. Springer, Cham.

Alhulail, H, Dick, M & Abareshi, A 2017b, THE SATISFACTION OF CUSTOMERS TOWARD SOCIAL COMMERCE WEBSITE: APPLYING INFORMATION SYSTEMS SUCCESS MODEL, The 8th International Conference on Internet Technologies & Society 2017, pp. 147-51.

Alhulail, H, Dick, M & Abareshi, A 2018d, The Influence of Word of Mouth on Customer Loyalty to Social Commerce Websites: Trust as a Mediator., In: Saeed F., Gazem N., Mohammed F., Busalim A. (eds) Recent Trends in Data Science and Soft Computing. IRICT 2018. Advances in Intelligent Systems and Computing, vol 843. Springer, Cham.

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Alhulail, H, Dick, M & Abareshi, A (under review), A Multi-Lens Factor Model for Customer Loyalty to Social Commerce Websites, *Internet Research Journal*. Manuscript under review.

Chapter 1 **Introduction**

This thesis discusses social commerce (sCommerce), as today's Internet consumers communicate, look for and share information by means of social features and social networking (Swamynathan et al., 2008, Stephen and Toubia, 2009) According to Shen and Eder (2009), the term sCommerce is an extension of electronic commerce (eCommerce)—otherwise known as B2C—in which customers interact with each other when doing online shopping activities; such as, exploring items, the accumulating and sharing of product information, and collectively making and taking shopping decisions. Therefore, sCommerce can be considered as a type of eCommerce that uses social interaction to support consumers in their shopping activities and dealings.

The emergence of Web 2.0 has brought with it new applications that have played a significant role in developing eCommerce sites that are enhanced with social features. Social media sites have offered users the opportunity to communicate with each other, exchange opinions, post comments, photos, and videos, as well as give recommendations and referrals. The dynamic nature of social interaction through social media sites and the potential financial benefits of these sites have been recognised by eCommerce businesses and social networks throughout the world.

The term “sCommerce” was introduced at Yahoo in 2005 (Wang and Zhang, 2012a), and since then, many studies have been published that have sought to define the characteristics of sCommerce for future research (Wang and Zhang, 2012a, Zhou et al., 2013, Liang and Turban, 2011), to study the factors that may affect and drive sCommerce (Kim, 2013, Liang et al., 2011), and to speculate as to the future of sCommerce (Kim, 2013, Liang and Turban, 2011).

Zhong (2012) describes sCommerce as an extension of eCommerce in which a social component allows users to discuss their purchasing decisions. Afrasiabi Rad and Benyoucef (2011) define sCommerce as “both networks of sellers and networks of buyers; it is the evolution of ‘eCommerce 1.0’ which is based on one-to-one interactions, into a more social and interactive form of eCommerce”. Alternatively, Leitner et al. (2007) define sCommerce as “an emerging phenomenon characterised by offering platforms where consumers collaborate online, get advice from trusted individuals, find the right products of a repository and finally purchase them”. Furthermore, Wang (2009b) defines sCommerce as a new type of

eCommerce link between the shoppers and the social media. According to Shen and Eder (2009), sCommerce is an extension of business-to-consumer eCommerce in which consumers interact with each other while conducting online shopping activities, such as discovering products, aggregating and sharing product information, and collaboratively making shopping decisions. For the purposes of this study, the researcher chose to follow Shen and Eder's definition of sCommerce from the above definitions. This was chosen because it describes sCommerce in significant detail and is focused on the activities of social commerce, which makes it more appropriate to the research method chosen.

Researchers have predominantly discussed sCommerce in two different ways: first, in terms of commercial features added to social networking sites that allow people to make purchases such as Facebook (Liang et al., 2011). The second way is in terms of traditional eCommerce sites that add social features and content to allow people to socialise while making purchases, such as Amazon and eBay (Shen and Eder, 2009). This study uses the second definition as the majority of sCommerce transactions currently being made throughout the world are of this type (Lunden, 2018).

Previous literature has explored opportunities to research sCommerce. Possible outcomes (dependent variables) of sCommerce, such as customer satisfaction, purchase intention, and customer loyalty, have been suggested by Liang and Turban (2011). Furthermore, several researchers have focused on purchasing and behavioural intentions (Hajli, 2012a, Ng, 2013). For example, Hajli (2012b) and Hajli (2013) identified many independent variables that affect customers' intentions to buy from an sCommerce website, such as trust, ratings and reviews, forums and communities, recommendations and referrals, and perceived usefulness. Moreover, Pöyry et al. (2013) have identified independent variables such as hedonic motivations, utilitarian motivations, participation, and browsing, which affect the purchasing intentions of users on sCommerce websites. Alternatively, various dependent variables of sCommerce have been identified by different researchers. For example, Gatautis and Medziausiene (2014) have stated behavioural intention to be a dependent variable, and Pöyry et al. (2013) state referral intention and membership continuance intention to be dependent variables.

Many studies that have been published have sought to investigate various factors of sCommerce (see Table 2.1), yet there is a gap in the literature in terms of customer loyalty. The exception is Liang et al. (2011) who conducted an empirical study on a social networking

site (SNS) to investigate how social factors such as social support and relationship quality affect the user's intention of future participation in sCommerce. However, in this study customer loyalty was studied from a different angle. Therefore, this study conducted a survey to investigate sCommerce customer loyalty in Australia. The following factors of customer loyalty in the sCommerce context were considered in this study: satisfaction, trust, social presence (SP), service quality, system quality, information quality, reputation, online shopping experience (OSE), word-of-mouth (WOM), and communication. Of these, little research has been done to investigate the influence of SP on customer attitudes in the sCommerce context (see Table 2.5), as well as the influence of SP on customer loyalty. Lu and Fan (2014) argue that the multidimensional nature of SP should be taken into consideration when studying SP because people in virtual communities do not only deal with the computer medium; they interact with other people in such a medium. They propose three dimensions of SP in the sCommerce context: (1) the social presence of a website (SPW) (i.e., websites that are rich in information and have social cues, such as images, audio, and videos); (2) the social presence of other users (SPO) (i.e., websites that allow for the social cues of users, such as recommendations, reviews, and rankings); and (3) the SP of customers interactions with sellers. This study focuses on customer loyalty from a buyer perspective whilst examining the impact of SP on customer loyalty in the sCommerce context from two perspectives: the SPW and the SPO.

The main aim of this thesis is to evaluate sCommerce websites in order to determine the factors that impact customers' loyalty to sCommerce sites. The next section discusses the motivation for this study.

1.1 Motivation

The social interactions that occur on social media are now creating profits and sales for companies (Wu and Li, 2018). Today, 74% of online shoppers research on social networks to guide their purchases. For example, 75% of Instagram users visit external websites, after viewing an Instagram advertising post (Gains, 2017). It is reported that about 40% of American consumers use Facebook for searching local online stores (Brown, 2018). According to an online report, about \$6.5 billion worth of social shopping was earned from the top 500 online retailers in 2017, which is 24% more than the previous year (Pandolph, 2018). It is also reported that the average value of online shopping orders is 78.17 USD

(Statista, 2018a). It is predicted that the growth of the sCommerce market will be about 34% from 2017 to 2021 (Wire, 2017).

Online vendors are recognising the need to have an sCommerce presence to increase their brand reach and trust among customers and communities (Doherty, 2018). A report showed that Facebook continues as the leading sCommerce with a 64% share of total social generated electronic commerce eCommerce revenue. Pinterest is also a major sCommerce player with a 16% share of total social generated eCommerce revenue (Gonzalez, 2018). Moreover, Leeraphong and Papasratorn (2018) reported that about 33% of online purchases take place on social media in Southeast Asia. They also reported that 51%, 31% and 30% of online users shop through social media in Thailand, Malaysia and Indonesia respectively (Leeraphong and Papasratorn, 2018).

According to Li and Ku (2018), consumers are keen to switch from the traditional eCommerce business to sCommerce business as they wish to have others' opinions on the shopping process. In this regard, the factor of customer loyalty is important for customer retention and business growth. According to Wu and Li (2018), customer value has a positive influence on customer loyalty in the sCommerce context—where customer loyalty is considered as the customer's acts of recommendation, endorsement and engagement about a product on social media. Since 55% of online consumers still want to see and touch products before buying (Sanni et al., 2018), social recommendation can be very influential in online shopping, especially in the context of sCommerce.

Overall, the sCommerce market is large and is growing rapidly. It is also a complex and novel business area where online retailers are struggling to adapt to their rapidly changing circumstances. Therefore, it is of great value for both academic and practical reasons to perform a study to understand how customer loyalty can be increased for sCommerce businesses.

The details of the thesis' aims, objectives and research question are discussed in the next section.

1.2 Research Objective and Research Question

The current study seeks to achieve the following objectives:

To provide an empirical and theoretical understanding of how customer loyalty is influenced by sCommerce websites.

To develop a framework to assist businesses using sCommerce to improve customer loyalty to their websites (this will aid online businesses currently facing difficulties with customer retention to better understand how to retain customers and increase profitability).

To achieve the above objectives, the following question was formulated:

What are the key factors that influence customer loyalty to sCommerce websites?

1.3 Outline of the Thesis

This section provides an overview of the thesis.

Chapter 1: Introduction. The first chapter presents an introduction covering the aims, research objectives and the research question.

Chapter 2: Literature Review. This chapter provides a literature review of the sCommerce research area and the related work. The research papers reviewed are based on the following information: definitions of sCommerce, theories and models, elements of sCommerce and its history, which include definitions and the importance of eCommerce as well as its challenges. This chapter also presents sCommerce, customer loyalty, attitudinal and Behavioural Customer Loyalty, Factors Directly Affecting Customer Loyalty, commerce websites, Factors Indirectly Affecting Customer Loyalty and the Delone and McLean information systems success model (IS success model). Chapter 2 aims to present a thorough understanding of eCommerce in the context of sCommerce and customer loyalty, which addresses the gap in the current literature and the objectives of this thesis.

Chapter 3: Theoretical Framework and Research Hypotheses. This chapter details the theoretical background, research model, and the development of the study's hypotheses. The chapter first presents the background of the theoretical framework and second, it presents the basic ideas of social presence theory and trust theory.

Chapter 4: Research Methodology. This chapter discusses the research methodology of this thesis, which has been categorised into four steps. Step 1, the research philosophy is defined and the epistemological and ontological aspects of the research are discussed. Step 2, the research design and sampling are presented. Step 3, the instrument process is described in

relation to how measurement errors were minimalised in the research. Step 4, the online survey and the data collection are explained in detail.

Chapter 5: Descriptive Analysis. A descriptive analysis of the survey data is presented.

Chapter 6: Data Preparation. This chapter describes how the data was prepared to allow for the SEM analysis to be conducted.

Chapter 7: Data Analysis and Results. The chapter reviews the existing quantitative method design and its related strengths and weaknesses. It also describes the data collection methods and data analysis used in this research. It finally reports the results of the hypotheses.

Chapter 8: Discussion. This chapter discusses the results of the research, both in terms of their theoretical and practical significance and in comparison, to existing theory.

Chapter 9: Conclusion. This chapter summarises the outcomes of the research and explains the significance of its findings.

1.4 Summary

This chapter introduced the thesis. It explained the research background and motivation. Moreover, this chapter presented the research objectives, questions and outline. In the next chapter, the literature review is presented.

Chapter 2 Literature Review

An important difference between offline and online electronic markets that was hindering the development of eCommerce was the reduced level of social elements in the online eCommerce environment. More recently, this has been improved by integrating Web 2.0 elements into eCommerce applications to support online interaction among users (Liang and Turban, 2011) to enable social sharing, such as regular customer reviews (Liang et al., 2011). This evolution is referred to as the birth of sCommerce (Liang and Turban, 2011). New features constructed upon social broadcasting and Web 2.0 tools help improve consumer participation and permit organisations to gather socially rich data information, resulting in a more dependable and socially operational eCommerce environment (Liang and Turban, 2011). However, subsequently the emergence of sCommerce as a subset of Web 2.0 and a newer extension of eCommerce entails the necessity of conducting new research and developing new theories to recognise and interpret new issues related to sCommerce (Liang and Turban, 2011). For example, the social features of eCommerce are yet to be completely understood, similarly it is also important to look at the influences of the eCommerce environment on trust (Hassanein et al., 2009). According to Liang and Turban (Liang and Turban, 2011), the main emerging areas of sCommerce include: research theme (e.g. user behaviour), social media (e.g. microblogs), commercial activities (e.g. knowledge management, rating, reviews etc.), related theories (e.g. trust, social exchange theory etc.), outcome measures (e.g. customer loyalty), and research methods (e.g. conceptual development).

This chapter reviews prior literature on eCommerce, sCommerce and customer loyalty. In addition, both the direct (satisfaction, trust, and SP) and indirect (service quality, system quality, information quality, reputation, OSE, WOM, and communication) factors that positively impact customer loyalty to sCommerce websites will be reviewed. Appendix 1.1 shows a summary of this literature review.

2.1 Definitions of SCommerce, Theories and Models

SCommerce can be defined as a new eCommerce platform where individual sellers interact and collaborate with each other through social networks to market and sell their products or services to online marketplaces and communities (Stephen and Toubia, 2010). In brief, it is a platform for trading—mediated by social media (Curty and Zhang, 2011). It began with the

notion of customer oriented social website content, which was introduced by the development and use of Web 2.0 (Wang and Zhang, 2012b, Friedrich, 2015). The main four elements of sCommerce are business, technology, individual users, and information that come together in the form of an eCommerce platform that lets its users market, sell, buy, compare, and share products and service experiences in online marketplaces and communities (Zhou et al., 2013).

sCommerce is built upon and extends the traditional eCommerce platform. *Table 2-1* summarises the key similarities and differences.

Table 2-1 Similarities and Differences between eCommerce and sCommerce

Factor	eCommerce	sCommerce
Product Discovery	Yes	Yes
Product Browsing	Yes	Yes
Shopping Cart	Yes	Yes
User reviews	No	Yes
User recommendations	No	Yes
Social media linkages	No	Yes
Ranking	No	Yes
Social influence	No	Yes
Payment	Yes	Yes

In general, the sCommerce model has four major features which are: (1) sellers are individual users rather than businesses; (2) sellers possess personalised online shops; (3) sellers own specific hyperlinks for their personalised online shops; and (4) the commissions earned by sellers are based on sales made by their respective online shops (Stephen and Toubia, 2010). However, literature reviews show that there are many different features and terminologies of sCommerce that have been introduced in academic articles (Wang and Zhang, 2012b,

Friedrich, 2015). Therefore, the sCommerce terminologies have been summarised below. (Wang and Zhang, 2012b). This summary of sCommerce terminologies was developed and introduced by Wang and Zhang (2012b), that covers years 2005-2011.

Table 2-2 SCommerce Terminologies from the Academic Research (Wang and Zhang, 2012b)

Date	SCommerce Terminology	SCommerce Notion/SCommerce Idea	Authors
2005	SCommerce, Social shopping	- Yahoo in 2005	(Zhu et al., 2006)
2006	SCommerce	- ECommerce	(Jascanu et al., 2007, Zhu et al., 2006)
2007	SCommerce,	- SCommerce and - electronics commerce	(Jascanu et al., 2007, Leitner et al., 2007)
2008	Social shopping	- Customer collaboration online - Find right products online	(Ganesan et al., 2008, Masseti, 2008)
2009	SCommerce, Social shopping	- Business money for sCommerce budgets - Electronics commerce shopping - Social networking - Business to consumer sCommerce - Platform to review people comments - Social blogs - Social networking function	(Wang, 2009a, Kang and Park, 2009, Cha, 2009)
2010	SCommerce, Social shopping	- Social services - Social networks - Social network for sellers - Social network for buyers	(Stephen and Toubia, 2010, Afrasiabi Rad and Benyoucef, 2011)

		- One to one transaction	
2011	SCommerce, Social shopping	- Facebook, Twitter, LinkedIn - Social websites to form strategic alliance	(Liang and Turban, 2011, Wang, 2013)
2012	SCommerce, Social shopping	- SCommerce environment both online and offline	(Wang and Zhang, 2012b)
2013	SCommerce, Social shopping	- Growth of social networking websites - Products price discussion - ECommerce transaction	(Kim and Park, 2013, Yadav et al., 2013)
2014	SCommerce, Social shopping	- Appearance of new technologies in sCommerce - Information and communication	(Hajli, 2014)
2015	SCommerce, Social shopping	- SCommerce through customer point of view	(Salvatori and Marcantoni, 2015)
2016	SCommerce	- Collaborative and participative in sCommerce - Instruction among sCommerce actors	(Baghdadi, 2016)

There are numerous comparable theoretical terms of sCommerce that are employed in the field of following sCommerce areas (Wang and Zhang, 2012b, Friedrich, 2015), “collaborative shopping”, “collaborative commerce” and “social shopping” (Friedrich, 2015, Wang and Zhang, 2012b). In academic research, all these three sCommerce terminologies have been employed interchangeably with sCommerce or developed as a sub-category of social networking or sCommerce (Wang and Zhang, 2012b, Friedrich, 2015). Even though, Stephen and Toubia (2010) stated that when employing the term “social shopping” in the field of sCommerce, it is in relation to the events of activities of purchasers, however “sCommerce” relates more to the venders (Stephen and Toubia, 2010, Friedrich, 2015, Wang and Zhang, 2012b).

Today’s Internet operators interconnect to each other by sharing their data and use social networking platforms. For example, eBay, Kogan, Amazon, Gumtree, Target (Wang and Zhang, 2012b, Swamynathan et al., 2008, Ng, 2013). Through this process users establish their trust relationships with the social networking websites and vice versa (Wang and Zhang,

2012b). Many investigators in the field of social networking believe that the use of eCommerce using social networking applications and features can enhance trust among transaction stakeholders and bring economic value (Wang and Zhang, 2012b, Swamynathan et al., 2008, Ng, 2013). The idea of sCommerce in this study signifies the means of social features (or social cues) either through SNS or through the traditional eCommerce website itself (comments, reviews, and rankings) (Wang and Zhang, 2012b). According to Wang and Zhang (2012b) sCommerce is a type of commerce facilitated by social platforms and media. Many other researchers in the field of commerce agree and share this definition of sCommerce (Zhang et al., 2014, Wang and Zhang, 2012b).

Liang and Turban Model

Literature shows several sCommerce models, the most important are presented in this study. Liang and Turban (2011) proposed a framework for sCommerce to reduce the complexity and innovativeness of sCommerce, as according to the authors, it is essential to have a theoretical framework to establish applicable and appropriate knowledge in a consistent way that may be employed to guide investigators and practitioners.

The framework of sCommerce is categorised into six main elements for classifying sCommerce research (Liang and Turban, 2011) as shown in Figure 2.1. The first category is research theme, which is further categorised into the sub-elements: user behaviour, business performance, network analysis, adoption strategy, business model, enterprises strategies, website design, social process and security and privacy policy (Liang and Turban, 2011). The second category—social media—is further categorised into the sub-elements: blogs, SNSs, presentation sites, social shopping websites and group buying websites (Liang and Turban, 2011). The third category—commercial activities—is further categorised into the sub elements: marketing, advertising, ratings/reviews, referring/recommendations, information sourcing, transitions, customer services, knowledge management collaboration and human resource (Liang and Turban, 2011).

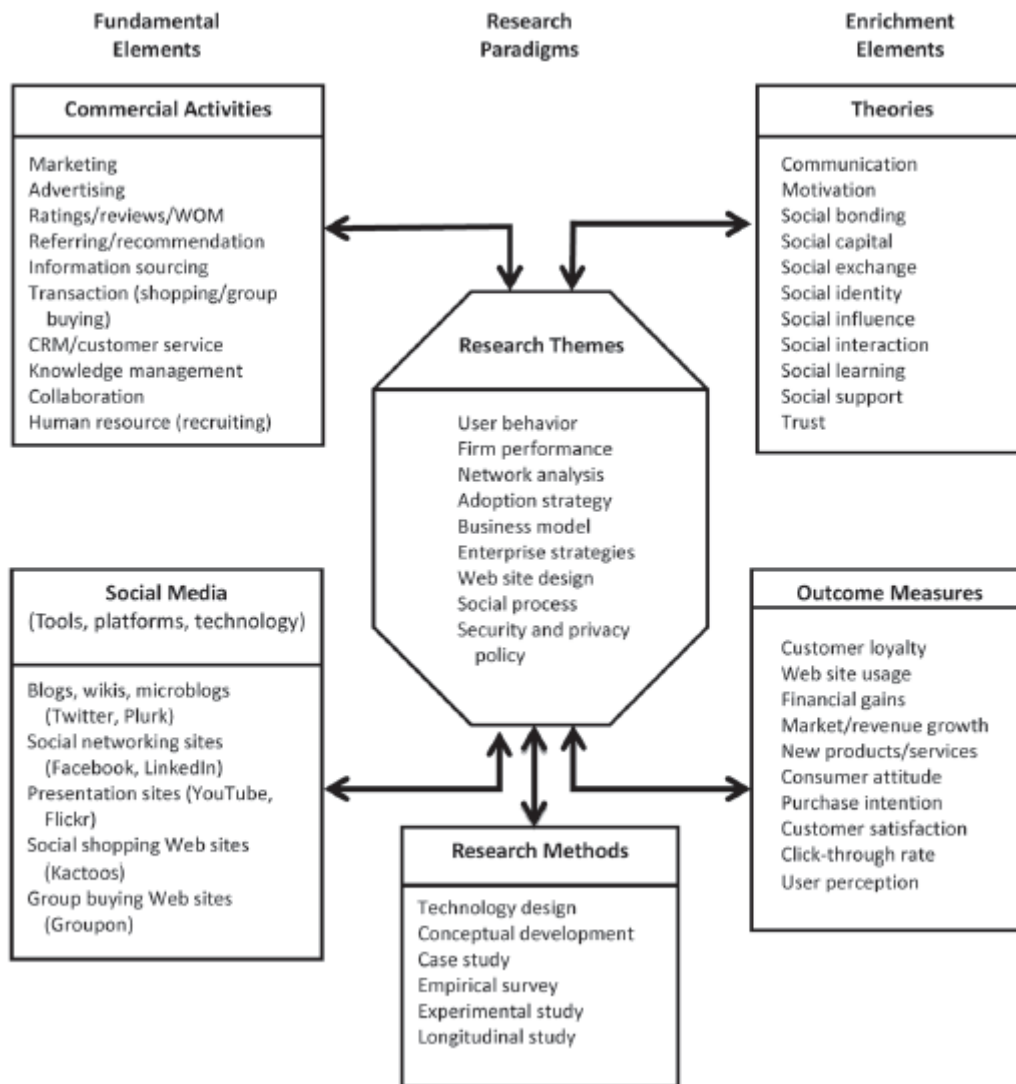


Figure 2.1 Framework for sCommerce Research (Liang and Turban, 2011)

The fourth category—underlying theories—is further categorised into the sub-elements: communication, motivation, social bonding, social capital, social exchange, social identity, social influence, social interaction, social learning, social support and trust (Liang and Turban, 2011). The fifth category—outcomes—is further categorised into the sub-elements: customer loyalty, website usage, financial gains, market/revenue growth, new products or services, consumer attitudes, purchase intention, customer satisfaction, click through rate and user perception (Liang and Turban, 2011). The sixth and final category—research methods—is further categorised into the sub-elements: technology design, conceptual development, case study, empirical survey, experimental study, and longitudinal study (Liang and Turban,

2011). This proposed framework of sCommerce is valuable in defining opportunities and recognising possible research issues in the field of sCommerce (Liang and Turban, 2011).

Liang and Others Framework

Liang et al. (2011), proposed a research framework of what drives sCommerce. Authors identified five main constructs of sCommerce that are associated to the relationship viewpoint of sCommerce: research website quality, social support, sCommerce intention, relationship quality and continuance intention (which refers to loyalty) as is shown in Figure 2.2 (Liang et al., 2011). Based on the research facts—relationship social support, website quality and marketing paradigm elements of sCommerce—are enablers that improve association quality. The results of Liang et al.’s study may affect the decisions of researchers wishing to explore the area of sCommerce. (Liang et al., 2011). For the determination of contrast, authors also examined the indirect and direct effects of social website quality and website support (Liang et al., 2011).

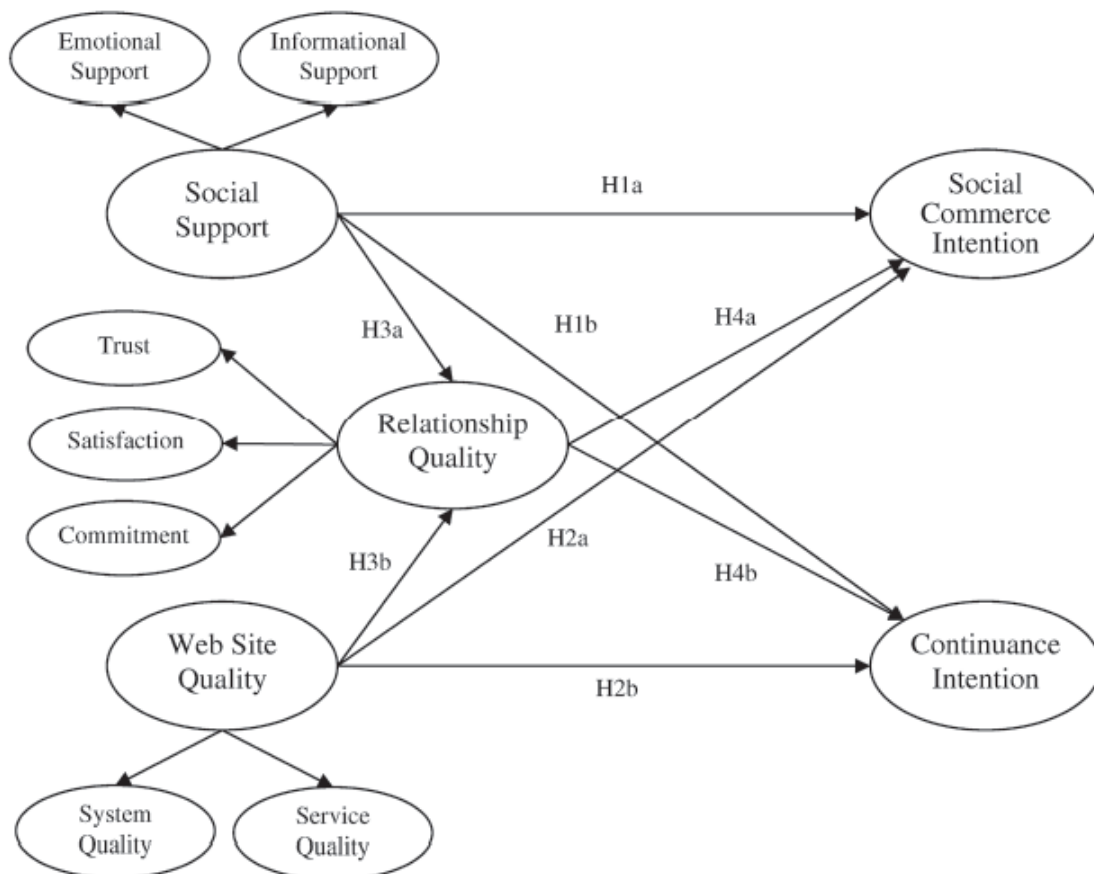


Figure 2.2 Research framework of What Drives SCommerce (Liang et al., 2011)

To understand and recognise the sCommerce user's social shopping intention and social sharing in social networking platform and websites, authors conducted an empirical research on a widespread microblog to examine how sCommerce factors (Liang et al., 2011), for example, relationship quality and social support influence the user's intention (Liang et al., 2011). The study results showed that both factors (social support and relationship quality) play a serious role (Liang et al., 2011). Website quality and social support factors do influence the user's viewpoint and intention to practice sCommerce based applications and to stay using the applications of the social networking website (Liang et al., 2011). The effects that were found by the study need to be facilitated by the social networking applications, websites and the relationship quality among the users of sCommerce (Liang et al., 2011). The study's findings helps researchers and practitioners in the following ways: helps researchers to understand the importance of sCommerce and why the area of sCommerce has become popular (Liang et al., 2011);for practitioners, it assists them in developing suitable sCommerce policies and strategies (Liang et al., 2011).

Huang and Benyoucef Model

Having examined the design applications and features that are generally applied to eCommerce, sCommerce and Web 2.0 Model as proposed by (Huang and Benyoucef, 2013). Figure 2.3 presents the conceptual model for sCommerce design. This sCommerce model is derived from the well accepted sCommerce model proposed by Fisher (Huang and Benyoucef, 2013). The authors identified three essential elements of social design, namely community, conversation and identity (Huang and Benyoucef, 2013). Features of sCommerce and eCommerce are captured in the model (Huang and Benyoucef, 2013). This proposed model of sCommerce—in the context of design—contains four different layers: commerce, individual, conversation, and community (Huang and Benyoucef, 2013).

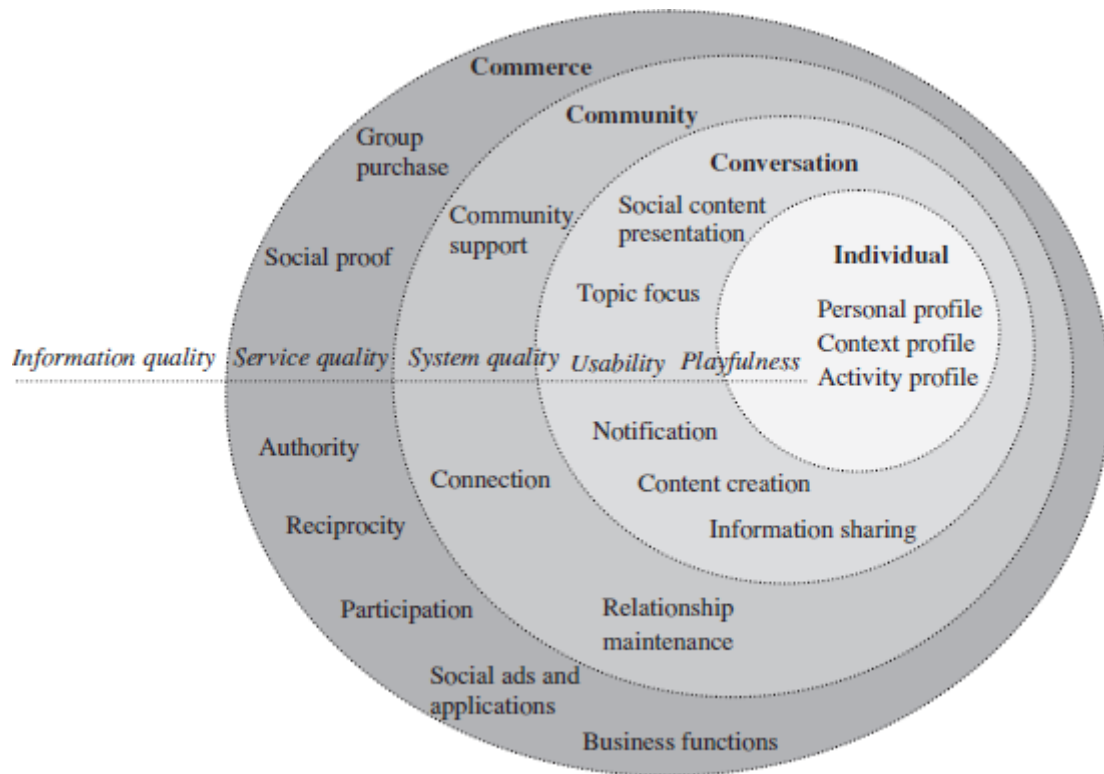


Figure 2.3 Model of eCommerce to sCommerce (Huang and Benyoucef, 2013)

The findings showed that, for any electronic and sCommerce application of a website, it is necessary to attain a least a set of electronic and sCommerce design services and features (Huang and Benyoucef, 2013). However, this study had some limitations (Huang and Benyoucef, 2013). First, this proposed model of sCommerce was only studied and applied into two sCommerce and social networking websites, as a result the empirical data that is collected to validate this proposed model was not sufficient enough make the study’s outcome more meaningful (Huang and Benyoucef, 2013). Second, was the concern of identifying sCommerce and Web 2.0 design features. The procedure of choosing suitable design characteristics and the assemblage of the features into applicable design philosophies were based on a literature review (Huang and Benyoucef, 2013). This model assembles these features of sCommerce into one design procedure based on their key structures (Huang and Benyoucef, 2013).

Yadav and Others Framework

Yadav et al. (2013), proposed a contingency framework for assessing marketing potential in the context of sCommerce. As shown in Figure 2.4, the framework has the following

components (Yadav et al., 2013): first, companies' presence and creativities in computer mediated social environments. second, the results associated to customers' decision power that stem from the companies' attendance and creativities in computer mediated social environments (Yadav et al., 2013); and third, aspects that moderate the associations between the key predecessor outcomes and constructs. The framework design is based on two vital opinions: (1) computer mediated social environments offer possible value to customers in the procedure of knowledge that is eCommerce (Yadav et al., 2013); and (2) the companies' determination that is interrelated to computer mediated social environments can play a significant role in manipulating results associated to customer decision power, in regards to the strength of this approachable platform and product characteristics (Yadav et al., 2013).

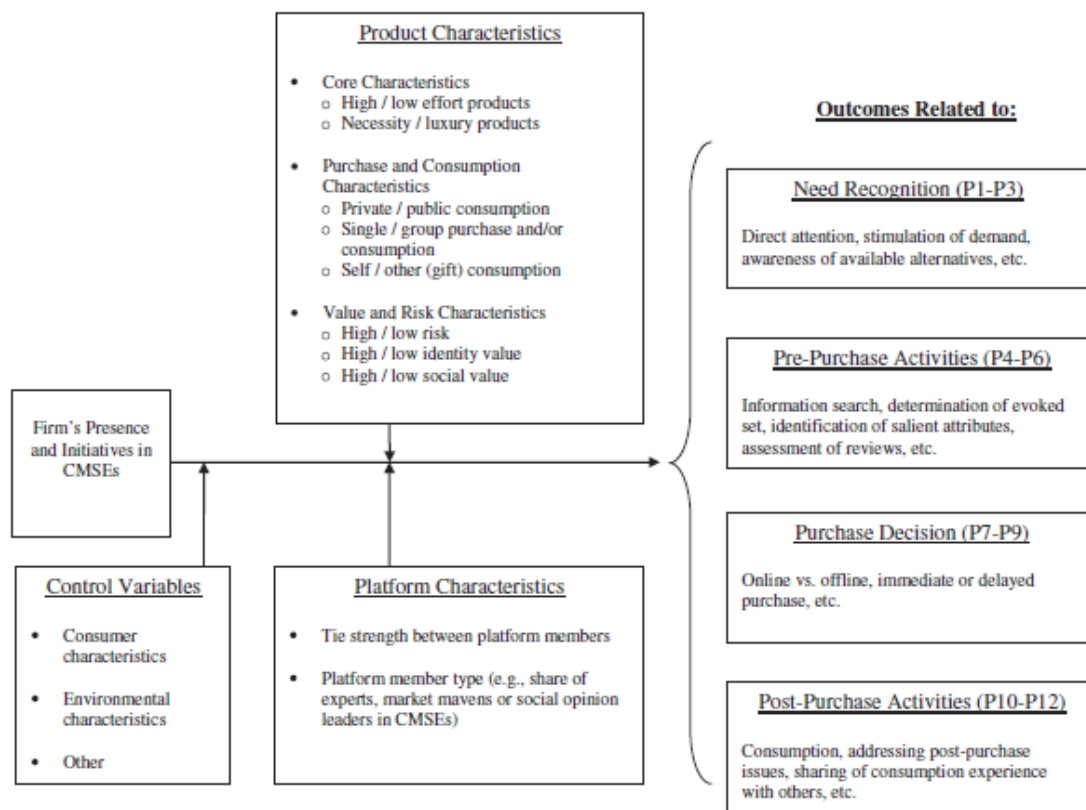


Figure 2.4 SCommerce: Contingency Framework for Assessing Marketing Potential (Yadav et al., 2013)

This proposed framework has several implications: the research offers a detailed analysis and examination of the idea of sCommerce in the following area— it provides a theoretical definition of sCommerce and eventuality framework that measures its ability to produce value in the marketplace (Yadav et al., 2013). Though the ideas of social platforms and social

networks have been attracting growing interest from marketing academics in the past few decades, research investigating the value of creating social platforms has concentrated primarily on its possible influences on client relationships and company brands (Yadav et al., 2013). However, only limited research is found about social platforms and social media's probable role in effecting sales or even helping as a vending platform (Yadav et al., 2013). In this regard, Yadav's proposed framework fills the research gap that persists despite the fact that social networking and sCommerce are considered to be current issues between practitioners who look forward to monetise their investments in the field of social networking and social media (Yadav et al., 2013).

SCommerce is a novel way of electronic business as is eCommerce in which old-style electronics commerce is enhanced by social networking and social media and services in order to encourage online shopping and transactions that are associated with information exchanges (Hajli, 2015b, Gonçalves Curty and Zhang, 2013, Wang and Zhang, 2012b). SCommerce uses services or features that support people's involvement in the selling, marketing, buying, comparing, sharing and curating of services and products in offline and online communities and marketplaces (Gonçalves Curty and Zhang, 2013). Gonçalves Curty and Zhang (2013), proposed a framework for website features that gave rise to sCommerce.

Zhang and Curty Framework

This framework was based on an historical examination and analysis of the real website layout and screen detentions for five high ranked electronics commerce business organisations (Gonçalves Curty and Zhang, 2013). Authors, were only able to classify and identify a total of 174 developing technical services and features (Gonçalves Curty and Zhang, 2013). The study's results indicate the following (Gonçalves Curty and Zhang, 2013): First, three different features were used in the companies' websites and they have been redesigning their marketing policies and business strategies over the decades (Gonçalves Curty and Zhang, 2013). Second, there was a clear flourishing of social services and features in 2007 (Gonçalves Curty and Zhang, 2013). Third, there has been a substantial determination to reinforce buyer and commercial ties by relational services and features (Gonçalves Curty and Zhang, 2013).

This research offers two key contributions. It proposed a conceptual framework to recognise the three strategic perspectives in the area of eCommerce, as well the communications between the three key actors, namely: clients, merchants and consumers (Gonçalves Curty

and Zhang, 2013). The study also provided a classification of social services and features to point out the sCommerce direction of the highly ranked five eCommerce websites (Gonçalves Curty and Zhang, 2013). Figure 2.5 depicts the framework that gave rise to sCommerce.

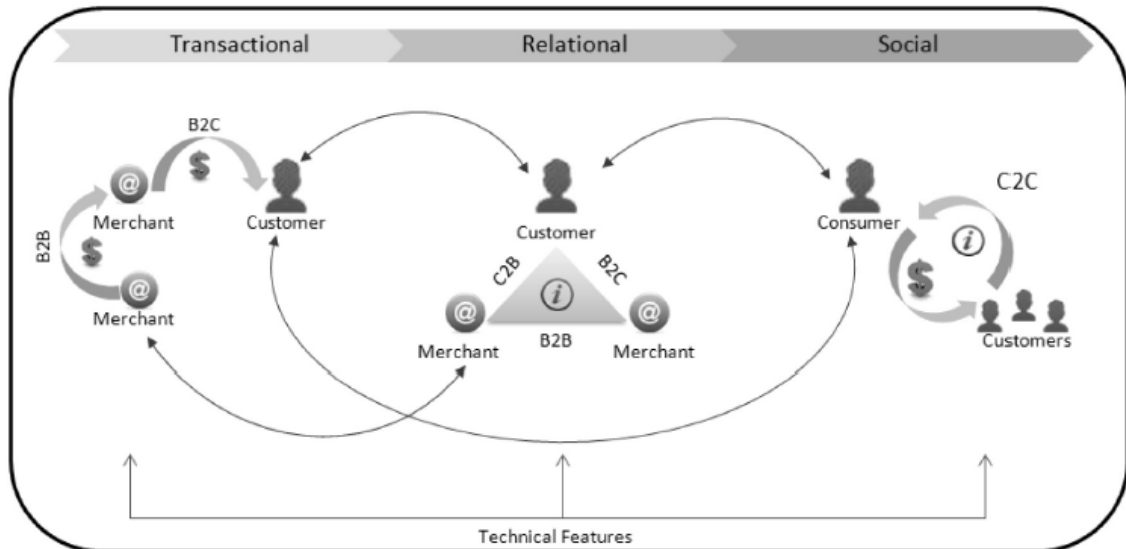


Figure 2.5 A Framework that Gave Rise to sCommerce (Gonçalves Curty and Zhang, 2013)

Wang and Zhang (2012a), proposed a theoretical framework to provide a first step to sCommerce development and research. In particular, they provide a logical examination of the development of sCommerce to exemplify both its depth, width and its longitudinal individuality. This assessment is structured with four dimensions: technology, people, management and information as shown in Figure 2.5.

Hajli's Model

Hajli (2013), introduces sCommerce with four points, these are: recommendations and appointments, forums and societies, ratings and evaluations. The basis of the model planned in this research is information technology adoption and to explore the area of intention to buy as is shown in Figure 2.6.

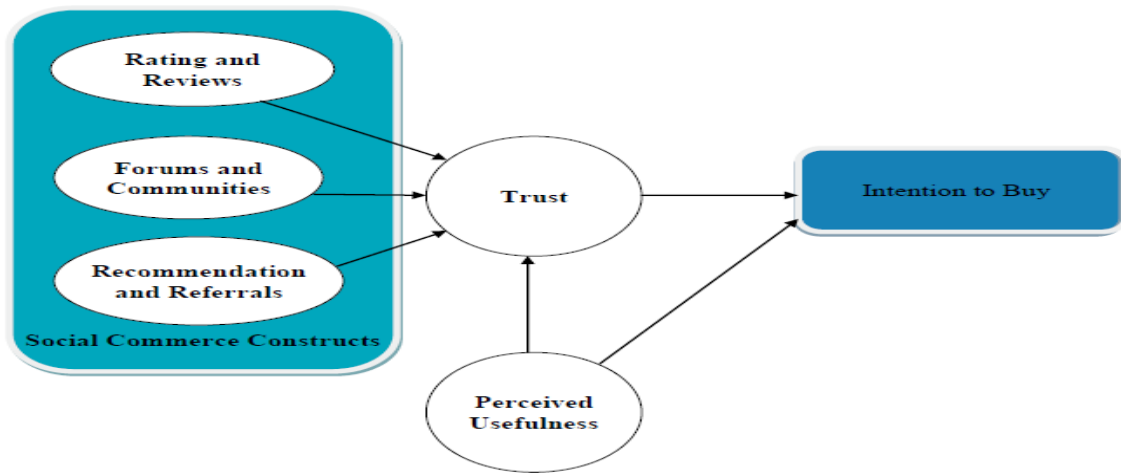


Figure 2.6 SCommerce Adoption Model. Source: (Hajli, 2013)

These emphasise the key role of IS and information technology in the behaviour of online clients. This can be an enhancement for eCommerce implementation models. Moreover, the results suggest that IS have a situation discipline for the behaviour of online clients.

Kim and Park Framework

Given the rising popularity and usage of sCommerce and its critical role in online commerce, it is significant to examine the key determinants of customer trust. Kim and Park (2013), proposed a study to develop a research model on sCommerce to investigate key constructs classified as having an optimistic effect on customers' trust as well as the relationship between trust and displaying trust (see Figure 2.7 below). This proposed research model integrates the sCommerce characteristics symbolised by six constructs—information quality, reputation, size, communication, transaction safety, referrals and economic feasibility—to examine the key determinants of clients' trust in sCommerce and to examine the relationship between trust, trust performance and particularly purchase. This study's approach to sCommerce is exceptional, in that the research model can be perceived as a new business model that can offer new insights into a variety of factors affecting the formation of trust in sCommerce.

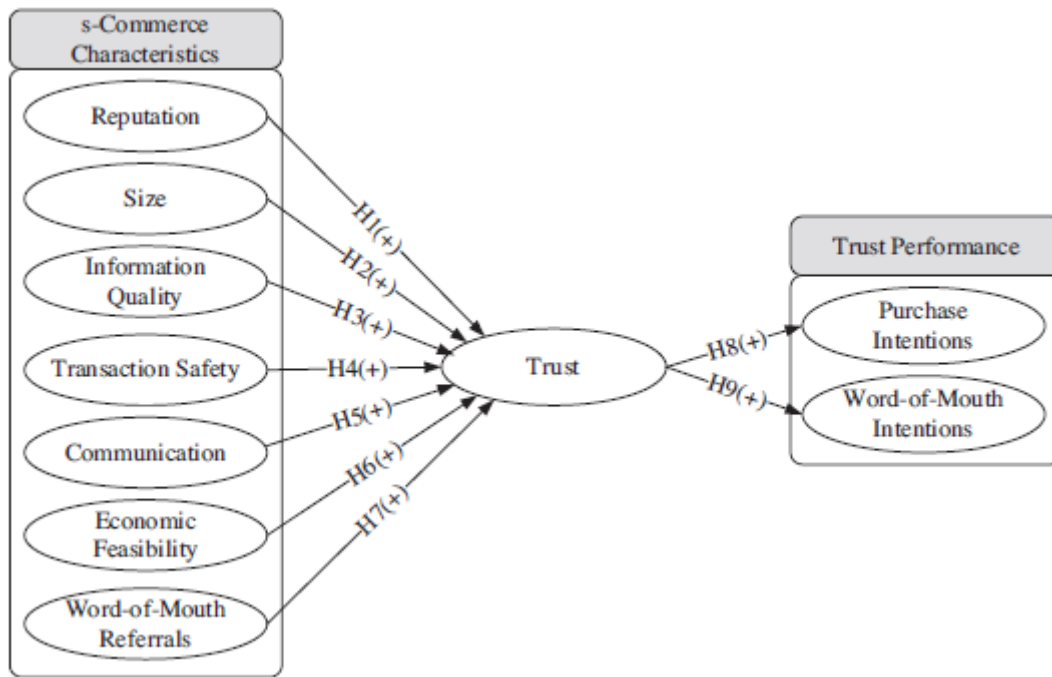


Figure 2.7 The Research Model. Source: (Kim and Park, 2013)

This sCommerce framework in the context of trust and trust performance, was proposed by Kim and Park (2013). Figure 2.7 shows the proposed sCommerce model, which is derived from the theoretical model and informal interviews with the sCommerce users and related research (Kim and Park, 2013). The authors applied the Theory of Reasoned Action (TRA) as an essential theory into the notion of sCommerce in the context of trust performance of social networking websites and customers' trust and behaviours (Kim and Park, 2013). This theory claims that, in the field of sCommerce, a user's beliefs are often voiced through the result of their behaviours, which can be used to manage and analyse sCommerce users' attitudes (Kim and Park, 2013). This study contends that the trust of an individual user's beliefs impact behaviour. Moreover, this proposed research model tries to examine the importance of numerous theories representing and considering the key characteristics of sCommerce (Kim and Park, 2013). The characteristics of sCommerce such as information quality, size, reputation, communication, transaction safety, WOM and economic feasibility in terms of their effect on customers in sCommerce in context of trust (Kim and Park, 2013, Kang and Johnson, 2013, Gatautis and Medziausiene, 2014).

After exploring the above sCommerce models, it is clear that sCommerce is still an evolving concept. Until today, not many sCommerce websites have yet worked out how to bring

communications directly to their platforms by integrating the social media features into their eCommerce websites. Online retailers are also constantly experimenting with new research models and marketing methods to permit for greater peer to peer and group-based communications, conscious that recommendations from associates can play an influential role in shopping. It follows then, that theories and definitions of sCommerce are still in flux and that the sCommerce research community has not yet come to a consensus on these issues.

2.1.1 Elements of SCommerce

According to Wang and Zhang (2012b), sCommerce has four elemental dimensions, namely: people, technology, information, and organisation and society as is shown in Figure 2.11 (Wang and Zhang, 2012b). The first dimension of sCommerce is the people dimension. While investigators and consultants have shown additional attention to buyers, the researchers have tried to investigate people as customers in the sCommerce context from a deep understanding of people's emotions. Such emotions from social crowds on various sCommerce platforms are studied to understand what factors work as incentive for sCommerce customers to pursue their endorsements and share their own shopping ideas with others customers (Wang and Zhang, 2012b, Jascanu et al., 2007). Studies reveal that the sCommerce practices and buying by the people are mainly influenced by their interests (Jascanu et al., 2007, Wang and Zhang, 2012b).

In relation to the technology dimension of sCommerce, the information technology platforms include the linkage among sites, blogs and the start-up of sCommerce shopping websites. This means people's point of view on eCommerce has changed from a commercial perspective to a more social perspective. On the other side of the debate, mobile phones technology has changed how people interact with the application of sCommerce by further integrating the physical retail business and online social networks with mobile phone applications (Wang and Zhang, 2012b, Huang and Benyoucef, 2013).

The information dimension is an important dimension, with an emphasis on consumer generated content (Wang and Zhang (2012b). In relation to the information dimension, literature shows that sCommerce develops from customer created contents online and then those contents get redeveloped among marketers and customers From this, sCommerce get customised with both localised and globalised crowd-sourced content (Wang and Zhang, 2012b). The information dimension of sCommerce is further enhanced from script based to

video and audio (Wang and Zhang, 2012b, Chen et al., 2016). It helps many sCommerce studies to focus on consumers especially where the business organisations use social media tools, techniques, functionalities or applications in their existing sCommerce websites. In the sCommerce business context, the consumer generated information helps to develop strategies for social shopping websites by analysing the information according to their structure, classification, category, and index order (Wang and Zhang (2012b).

The organisation and society dimension of sCommerce focuses on the management, strategies and operations related to sCommerce business (Wang and Zhang (2012b). In this regard, the management prospective focuses on the business practices based on the concept of 'company-controlled communities' by maintaining and increasing social interaction with customers (Wang and Zhang (2012b).

According to the literature, there are two other perspectives of sCommerce that have been discussed considerably in recent years (Liébana-Cabanillas et al., 2014, Chen et al., 2016). The first perspective is that, the popularity of mobile applications further influence the development of sCommerce (Wang and Zhang, 2012b). For example, Facebook user groups now conduct Customer to Customer (C2C) commercial events and activities (Wang and Zhang, 2012b, Chen et al., 2016). Mobile development and service, in recent years, have increased with the acceptance of mobile based applications, particularly with the introduction of iPads and smart phones (Liébana-Cabanillas et al., 2014, Wang and Zhang, 2012b).

Therefore, it is vital for sCommerce applications and websites to be alert of the importance of providing suitable sCommerce website applications and interfaces. The new concept and research trend of mobile sCommerce, refers to sCommerce on a small scale information technology platform as oppose to the large scale desktop computing generation (Wang and Zhang, 2012b, Liébana-Cabanillas et al., 2014). For example, conducting sCommerce on mobile technology platform by the initiation of WeChat in China. WeChat sCommerce is a mobile based voice messaging communication facility and instantaneous text created by Tencent, a top Chinese Internet company that has already become a significant sCommerce and social media platform in China (Lien and Cao, 2014, Liébana-Cabanillas et al., 2014, Wang and Zhang, 2012b). The operators and users of WeChat can share pictures of their products on an WeChat dashboard, manage customer orders and allows customers to communicate with other customers or sellers (Lien and Cao, 2014, Retail, 2014).

The second new perspective of sCommerce is social verification. This is an excellent way for manufacturers to increase their reputation, which is important to get clients (Guide, 2013). The social verification process ensures trust for manufacturers and facilitates the relationship's development with consumers (Zhang et al., 2014).

2.2 History of SCommerce

The rise of the electronic economy in the late '90s triggered the disappearance of many mediators between clients and vendors. A vendor could trade company products and services directly to a client without the need for an external broker (Wigand and Benjamin, 1995). An example of this is Dell Computers. Alongside this development, the advance in the evolution of digital low-cost technologies and novel categories of eCommerce were recognised, which created new value added technological services, attracting many new clients and vendors with additional services that enabled the required business organisation to make transactions (Chircu and Kauffman, 1999). The development of eCommerce has changed the way out-of-date business is performed, resulting in new organisational models, which were advanced in the late 1990s. ECommerce is the result of using advanced technology in organisational processes. In general, the deployment of eCommerce is associated with the eMarketplace's process of re-engineering, connecting IS applications with out-dated businesses (Bakos, 1991). Therefore, businesses required changes in their administration rules and policies, which are associated with IS applications and organisation processes.

The term sCommerce was first introduced by Yahoo in 2005. In academia, the phenomenon of sCommerce first appeared in 2007 (Lu et al., 2016, Huang and Benyoucef, 2013, Jascanu et al., 2007). SCommerce as a type of electronic business would utilise interpersonal interactions to aid the purchasing of items. Ever since the birth of sCommerce in 2005, its evolution—which continues to date—is considered to be extremely important. For this reason, during this literature review of sCommerce, critical turning points and the significant past events that have been discussed in different trade publications and website postings have shown in a chronological order as is depicted in Table 2.2.

SCommerce business uses client evaluations, referrals, online groups and social publicising to encourage web-based shopping. Therefore, sCommerce has been studied through several perspectives. According to scholars, cases of unsuccessful implementation of sCommerce, from both the clients' and vendors' side are recorded by the company (Pucihar, 2003). If the services of an sCommerce company do not provide any increased value to the vendor—in the

long run—they will choose that sCommerce is not the best way for them to do business. Lacking a sufficient mass of clients will ultimately lead to the shutdown of that sCommerce company. Likewise, an inadequate number of consumers in sCommerce will decrease the incentive for sellers to join sCommerce, as there will not be sufficient clients to whom they promote their products and services to (Pucihar and Podlogar, 2003, Turban et al., 2016b, Liang et al., 2011).

sCommerce has also been described in many dissimilar e-business models of sCommerce (Balocco et al., 2010). Today's sCommerce practices support numerous different processes between a client and a vendor. A number of sCommerce practices only support the accumulation of stock and demand, and the penetrating and matching of clients (Bakos, 1998). In addition, dissimilar sCommerce support dissimilar types of sales and negotiations. Heading off to the shopping centre is not tied in with purchasing products as much as it is tied in with getting together with other individuals in a place that encourages communication and gives excitement/escape—otherwise known as "retail therapy." What makes social trade diverse offline is the potential scale, reach, and simplicity of sharing/associating. However, it is also about habit and the ability to look, touch and try on a range of goods in a way that is not yet possible with online commerce. The social aspect is important but it is not the only reason face-to-face retail has survived (Shankar et al., 2003, Gilly and Wolfinbarger, 2000, Khalifa and Liu, 2007).

Moreover—in the context of sCommerce—when the birth of the Internet and its technologies developed, numerous applications and technologies, new concepts and theories were introduced and proposed from different part of the world (Lewis et al., 2012). Besides of all the new technology, theories and concepts, several online services and fresh applications emerged interminably as well. Literature shows that many years ago, people were using and enjoying surfing the Internet between the website portals—however, times have changed (Lewis et al., 2012).

The concept of sCommerce appeared from three key domains, namely: Web 2.0, SNS and eCommerce and from there the idea of sCommerce was developed (Rahimnia and Hassanzadeh, 2013, Lewis et al., 2012). The concept of Web 2.0 was presented by O'Reilly's vice president Dale Dougherty in international brainstorming conference (O'Reilly, 2005). According to Dale Dougherty, the uses of information technologies in the business environment changed day by day. Consequently, there were fears that the Internet would be

worn out—Dougherty said that it was the most critical time for the success of the Internet (O’Reilly, 2005). The fears stemmed from the fact that numerous exhilarating new website-based applications and information technology applications were developing constantly (Marsden, 2011, Shin et al., 2011, Lewis et al., 2012). This led Dougherty to believe that the Internet-based applications and its technologies were experiencing a further change. (Marsden, 2011, Shin et al., 2011, Lewis et al., 2012).

Table 2-3 Evolution of sCommerce (Wang and Zhang, 2012b)

Date	People	Management	Technology	Information
1995	Amazon.com first began letting customers post reviews of products	Letting consumers talk about products in public	eCommerce with comment and review input system Example: Amazon.com	People generated content where more than 5 million consumers have posted tens of millions of reviews
2005	User can share their shopping experience and can give advice to other users	Long-tail product strategy caters to small businesses.	sCommerce website, blog, forum Example: Yahoo.com	People generated content, source: customer
2006	Customers produce shopping ideas in the context of socialising and entertaining	Social experience strategy providing collaborative spaces); alliance strategy (aligns e-tailers and social networking sites).	Began with the social shopping websites, social networking via blogs and websites, eCommerce websites Example: Amazon.com	Content based eCommerce websites joining buying and research in a platform
2007	sCommerce websites shoppers are both fun and	Converging online and	sCommerce websites search engine	Type of information such as audio, text

	based and utility based	offline networks; crowdsomption (team buying) strategy.	social	functionality, sCommerce website networking functionality, blogs on sCommerce websites, upload own media. Example: YouTube.com	and video
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2008	sCommerce network customers are not approachable to online marketing	Social networks are good for branding, not for transactions; concrete content strategy		sCommerce websites, sCommerce based networking functionalities, shopping sCommerce	Crowdsourced based content, for example customer communities as an information via
				Example: Facebook.com	

2009	sCommerce customers are authorised through sCommerce networks of their own demand and choices, old-style sCommerce is male gender oriented, sCommerce shopping is female gender oriented.	Co-creating multichannel strategies	and	Smart phones, online marketing, event Example: eBay.com	Co-creating sCommerce content (customers, marketers as an information)
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2010	SCommerce is good for pugnacious with depression in context of economy point of view, sCommerce saving is more persistent in the Asia region and sCommerce as fun is more unescapable in western regions.	Cultural perspectives on sCommerce emerged; Chinese-style Tuangou converges online and offline retailers.		Many group purchasing applications in sCommerce. Example: Facebook.com	Worldwide crowdsourcing
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2011-2016	sCommerce customers have interests outside peer inspiration.	Online auction site + social networking site (eBay Facebook); Social business; Groupon copycats pervade in China.	Shopping vis Google +, Facebook, Instagram, Twitter etc. Example: Facebook.com	sCommerce content such as Niche, attention graph
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Thus, after investigating the current websites technologies and models, Tim O'Reilly and Dale Dougherty formed the idea of Web 2.0 (O'Reilly and Finnegan, 2010). With the presence of Web 2.0, many businesses—with information technology backgrounds—tried to define Web 2.0, though, it was problematic because Web 2.0 could be defined and understood from different perspectives (Brown, 2009, Marsden, 2011, Shin et al., 2011, Lewis et al., 2012). Furthermore, Web 2.0 helped to create a more user-centric Internet and due to this more and more users joined the Internet. This led businesses to the concept of how Internet traffic could be successfully controlled by the company (Lewis et al., 2012, Marsden, 2011, Shin et al., 2011).

The development of sCommerce helps to create the idea of sCommerce. The term sCommerce is defined as the idea of connecting and fostering and improving users' experiences—it includes blogs, forums, communities, ratings and user reviews (Pucihar and Podlogar, 2003, Marsden, 2011, Shin et al., 2011, Lewis et al., 2012). Today there are more brands selling products on sCommerce. For example, in 2006 eBay sold gifts; in 2008, Dell claimed \$1 million revenue that was generated via Twitter sales. Besides this, there are many advantages and scenarios for sCommerce (Pucihar and Podlogar, 2003). However, cases of the ineffective implementation of sCommerce, from both the clients' and vendors' side are recorded by companies (Pucihar, 2003). It is true that in case sCommerce services and their implementation are not progressing well, businesses will not spend or allocate enough resources. Lacking a satisfactory thoughtful mass of customers will also lead to the ultimate shutdown of that specific sCommerce. Moreover, modern literature on sCommerce designates many different e-business models that can be used in sCommerce (Balocco et al., 2010).

2.2.1 Definitions of eCommerce

At present, the issue of e-business employment and use remains one of the highest concerns of business and IS executives in a business organisation (Abid, 2013). There are numerous definitions of eCommerce in the current literature, Table 2.3 lists the most used definitions of eCommerce.

Usually speaking, the two key players in eCommerce are the customer and the seller, as is depicted in Figure 2.8. As shown in Figure 2.8, an eCommerce is measured as an inter-organisational IS in which clients and vendors interrelate to attain one or more of the following eCommerce activities: identifying possible trading associates, choosing an accurate partner, and executing the transaction.



Figure 2.8 The eCommerce as an Electronic Intermediate Among Company and Customer

In this thesis, the researcher agrees with O'Reilly and Finnegan (2010) and their definition of eCommerce, they define it as “an organisational intermediate that automatically provides value added communication, brokerage and incorporation services to buyers and vendors of direct and indirect products services in precise horizontal or vertical markets by subsidiary basic marketplace functions, meeting business organisational needs for information and procedure support, and/or operating the obligatory IS infrastructure”. This definition of eCommerce is appropriate for a number of reasons. First, it highlights all the factors involved in the eCommerce research area, demonstrating both ‘why’ and ‘what’. Second, it denotes to the purpose of these eCommerce factors, including their objectives. Lastly, the definition of eCommerce includes different important factors contributing in the operation of eCommerce together with the deliberation of its different ways of transactions.

Table 2-4 Definitions of eCommerce

Authors	eCommerce Definition	Explanations
(Hartley et al., 2004)	An eCommerce is an available portal that uses Internet technologies to enable online shopping and supply supervision.	This definition refers to the process of attaining products required and the importance of keeping costs stable in order to grow the organisation's profits.
(Soh et al., 2006)	An eMarketplace is an online intermediary that connects buying firms with selling firms.	The authors suggest that firms should connect with each other and share their information.
Chua et al. (2005),	An eCommerce is a "computer-generated space" which is employed by clients and sellers to exchange products and services to do business dealings.	The authors recommend the new term "computer-generated space" for the eCommerce.
(Datta and Chatterjee, 2008)	An eCommerce is an online gateway where venders and consumers join in order to conduct business transactions, whether on an individual or organisational level.	The writers recommend that consumers and sellers should emphasis on one domain for doing business. They also deliberated the different levels of business dealings.
(Koch and Schultze, 2011)	An eCommerce is an organisation for vending and buying goods online.	Both buyers and venders are comprised in this definition and the writer concludes that online industries are always seeking good associates to whom to trade their product.
(Wang et al., 2006)	An eCommerce is defined as an online interacted portal that relations organisations and enable transactions for online clients and sellers to interrelate effectively.	The authors recommend that organisations should be related through a domain which permits them to interchange information.
(Matook, 2013)	An eCommerce is an online website application that contributions the process of exchanging manufactured products between buying and venders.	This definition highlights the significance of the eCommerce website for the conversation of information among sellers and consumers.
(Matook and Vessey, 2008)	An eCommerce is a computer-generated trading portal that permits online customers to discussion product data, services and payments in a suitable manner.	The definition is incomplete to the exchange of data about invention and services.
(Hadaya, 2006)	An eCommerce is a place where an intermediary enables online customers and suppliers to interconnect on an online gateway which depends on the Internet structure for the sharing of data about products and services.	The author proposes consumers and dealers interrelate to conduct success connected business.
(Stockdale and Standing, 2004)	An eCommerce is an online gateway that joins nosiness organisations to permit many purchasers and sellers, and other stakeholders, to interconnect and	This definition of the eCommerce refers to the significance of the online gateway in the area of the eCommerce.

perform business dealings.

(Shih, 2004)	An eCommerce is an online platform that enables focussed communication of information between clients and companies.	The author determines the significance of interactive performance in relation to the efficiency of eCommerce.
(Kudělka et al., 2010)	An eCommerce is a web page that is shaped with an intention of vending goods online and meeting the high prospects of venders and buyers.	The significance of the functionality of eCommerce is the major factor in the achievement of eCommerce.
(Joo and Kim, 2004)	An eCommerce is an e-space that acts as an instrument for price offerings. For instance, auctions, assembly product information from dissimilar sellers for easy comparison or discussion and converse auctions.	The author emphasised three key factors of eCommerce, namely; the vender side eCommerce, the consumer side eCommerce and the third-party eCommerce.
(Azizi et al., 2012)	An eCommerce is an online platform that demonstrations goods from many dissimilar sellers and charges an instruction based on assured agreements.	The author recommends that the superiority of services should be given substantial attention while leading online business.
(Jiang et al., 2013)	An eCommerce is an online web platform that signifies a collection of dissimilar vendors or brands with the goal of increasing incomes for both eCommerce and business executives.	The authors recommend that the value of services must be measured as the key factor in the success of the eCommerce.
(Du et al., 2005)	An eCommerce is an advanced online intermediary that enables the process of trading information, goods, services, and associated payments.	The authors recommend that a description of the eCommerce should include structure that facilitates dealings, and it matches consumers with sellers.

From the definitions of eCommerce, it is evident that although some of the authors give emphasis on the information sharing on shopping experience, however, the social perspective is not incorporated in the definitions above of eCommerce. For example, in sCommerce business, the sales are managed through social media and the seller's website unlike the eCommerce business. Similarly, sCommerce businesses entail promoting their brand through customer participation and interaction, which is unlike eCommerce where it is not possible to know who the consumers are and how their experiences were. These perspectives are absent in the definitions of eCommerce.

2.2.2 Importance of eCommerce

According to an IMF report in February, although digital economy is still less than 10% in most economies, it is predicted that no business today will continue to be untouched by the appearance of the digital economy (Fund, 2018). The key role of eCommerce in today's quickly changing business atmosphere is to bring market actors together to complete real-time conversation transactions, such as cost, product conditions, and enabling teamwork and system synchronisation. The main idea is that a group of clients and sellers transact in an online-only platform, permitting member organisations to take benefit of better economies of scale and liquidity; and to acquire or sell easily, rapidly and cost efficiently. In addition, eCommerce can benefit companies by transcending physical barriers, and grow internationally to attain profits in evolving markets that were once unachievable (Bakos, 1998).

The statistics show (Figure 2.9) that the eCommerce worldwide sales reached 2.3 trillion USD in 2017 and is expected to grow up to 4.3 trillion USD in 2021 (Statista, 2018d). Almost, 100 billion USD went to the top eCommerce companies, amazon.com, apple.com and Walmart.com (Statista, 2017b). In Australia, the growth of eCommerce increased from 26.7 billion AUD in 2013 to 32.5 billion AUD in 2017 which indicates that Australia is becoming an important player in eCommerce globally (Transdirect, 2017).

Additionally, the capabilities of eCommerce include amassing, matching clients and sellers and providing inter-organisational market information (Bailey and Bakos, 1997). It achieves similar business dealings to conventional marketplaces, such as identical buyers and sellers, facilitating communication, providing recognised infrastructure and offering ability, but with augmented effectiveness and reduced deal expenditure.

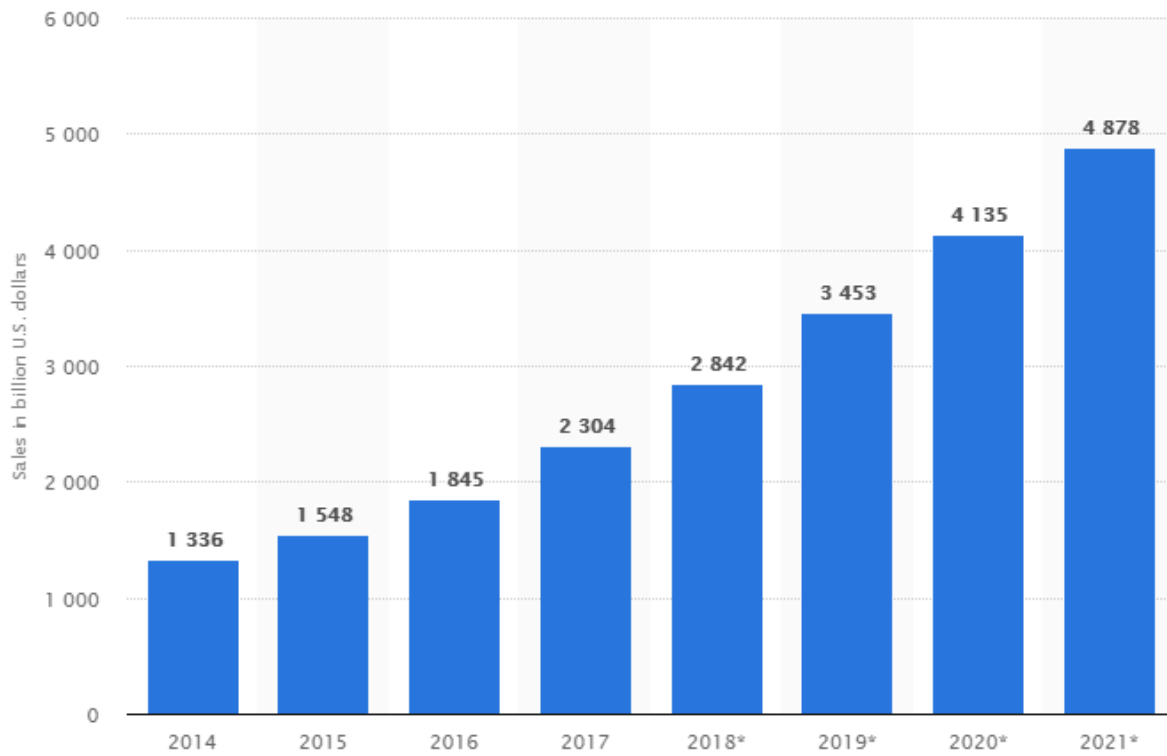


Figure 2.9 Retail ECommerce Sales Worldwide from 2014 to 2021 (in billion U.S. dollars)

There are numerous types of eCommerce (Matook and Vessey, 2008). The key function of B2B (business-to-business) eCommerce (e.g. IBM.com) is to permit information about the marketplace and transactions to flow more proficiently. Typically, a purchaser has to set up networks and relations with many suppliers, who regularly use different IS technologies, and vice versa. B2C (business-to-consumer) eCommerce is recognised as the foundation of electronic business connections between organisations and shoppers. C2C (consumer-to-consumer) eCommerce (e.g. Amazon.com) involves the exchange of merchandise or transaction of products or services between customers. By and large, these exchanges are directed through an outsider, however, the exchanges are done online. In C2B (consumer-to-business) eCommerce there is a total inversion of the customary feeling of trading products. For example, Upwork.com, as a C2B eCommerce lets the sellers to advertise their skills and experience to buyers who want to hire for contractual jobs. A substantial number of people make their administrations or items accessible for organisations looking specifically for these kinds of administrations or items (Matook and Vessey, 2008).

ECommerce offers a virtual space where customers and sellers can come together. The objective of eCommerce is to draw together as many buyers and sellers as possible. Purchasers bring buying requirements while venders offer goods or services. The eCommerce

will then match purchase requirements against vendors' offers, allowing the participants to undertake new interactions (Rosson, 2000, Schmid and Lindemann, 1998). In Figure 2.8, the arrows illustrate the electric trade inter-links among suppliers and clients. By assembly eCommerce—each participant, whether dealer or customer—can be coordinated with other applicants in order to increase transactions, share documents and data as well as involve business associations. Such associations can support customers and sellers to obtain more benefits from the digital economy.

2.3 Importance of SCommerce

SCommerce has recently begun to dominate the eCommerce industry (Liang and Turban, 2011). Social media—also known as a new media—now accounts for the majority of traffic on eCommerce platforms (Hennig-Thurau et al., 2010, Hajli, 2012a). Social media networks have been essential in popularising sCommerce platforms, of which eCommerce firms have quickly recognised as necessities for their business needs.

The worldwide sales of sCommerce has a large growth especially for the two dominant sCommerce websites eBay and Amazon. Statistics show that in 2017, eBay's revenue was 9.5 billion USD which increased by 900 million USD compared to 2016 (Statista, 2018b). On the other hand, Amazon is still one the greatest players in sCommerce market (Statista, 2018b). In 2016, Amazon's sales were 135.9 billion USD, which increased to 177.8 billion USD in 2017 (Statista, 2018c).

Figure 2.10 below, shows that the topics of sCommerce derived from eCommerce and commerce. Most SNSs on the Internet allow people to post music, recordings, photographs, and individual web journals on a profile page. However, the most critical component of online interpersonal organisations is the capacity to discover and make companions with other individuals (Hennig-Thurau et al., 2010). These companions show up as connections on a profile page so that users can peruse online companion networks. Each online SNS organisation has diverse principles and techniques for seeking out and reaching potential companions. MySpace is the most open. On MySpace, people are permitted to scan for and contact individuals over the whole system. However, users are only given access to the person's full profile data. In the event that they consent to be the user's companion the user will then join their system.

Facebook—which started as a school informal community application—is significantly more restrictive. On Facebook, people can communicate and interact with other individuals and their generated contents such as blogs and comments. Those systems can incorporate personal details, such as the organisations that individuals work for and the school individuals went to (even their secondary school). In any case, individuals can likewise join a few of the huge number of smaller systems or "gatherings" that have been made by Facebook clients, some are genuine associations and some exist only in the psyche of their authors (Chen et al., 2016). Twenty years ago customers' shopping used to be a result of mass messages provided via advertisements. However, at present, businesses are more dependent upon structuring relationships with their clients. In the area of social marketing, obtaining and convincing new clients has become less significant as businesses focus more on continuing engagement, associations and lifetime client value (Kim, 2006). The universal influence of this trend drove chairmen of the foremost global brands to speak about it, managing congresses in numerous countries. The Bazaar-voice sCommerce is one of the most vital of these meetings and it was shaped to share thoughts and trends that would form the future of client centrality (Bazaarvoice, 2018). This worldwide assembly has shone a light on social information that reveals the reason behind every purchase. For instance, the social information shows that views from peers is the most believed information for purchasing decisions. According to Social-nomics, 76% of clients now believe peer recommendations, whilst only 15% believe in advertising (Qualman, 2010).

In addition, the European Union is very interested in the influence of sCommerce on financial system. Forrester reports that in 2017, Europeans spent more than 191 billion Euro on online retail goods and that the online retail industry will grow to outpace the offline retail industry (Gill et al., 2012). This market trend has shifted towards websites; online trade will become a serious part of the economy of many European countries. Today, sCommerce advertising is one of the primary growth factors in eCommerce business (Technavio, 2017). Studies show that the compound annual growth rate of sCommerce market will be about 34% by 2021 (Reportsnreports, 2017).

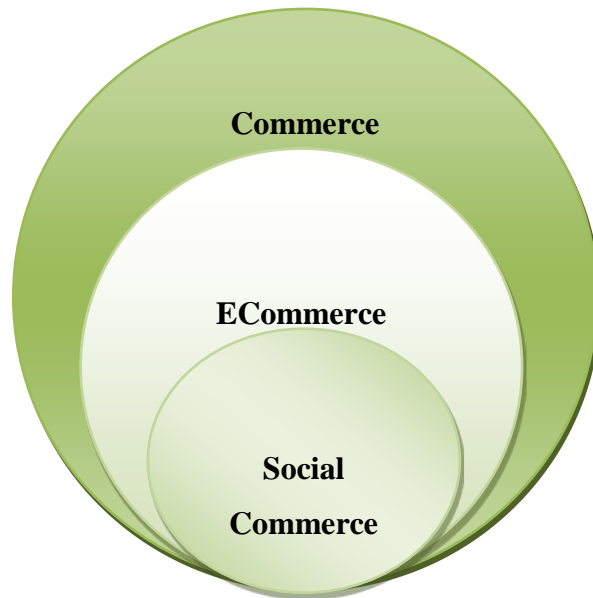


Figure 2.10 The Association Among sCommerce, eCommerce, and Commerce

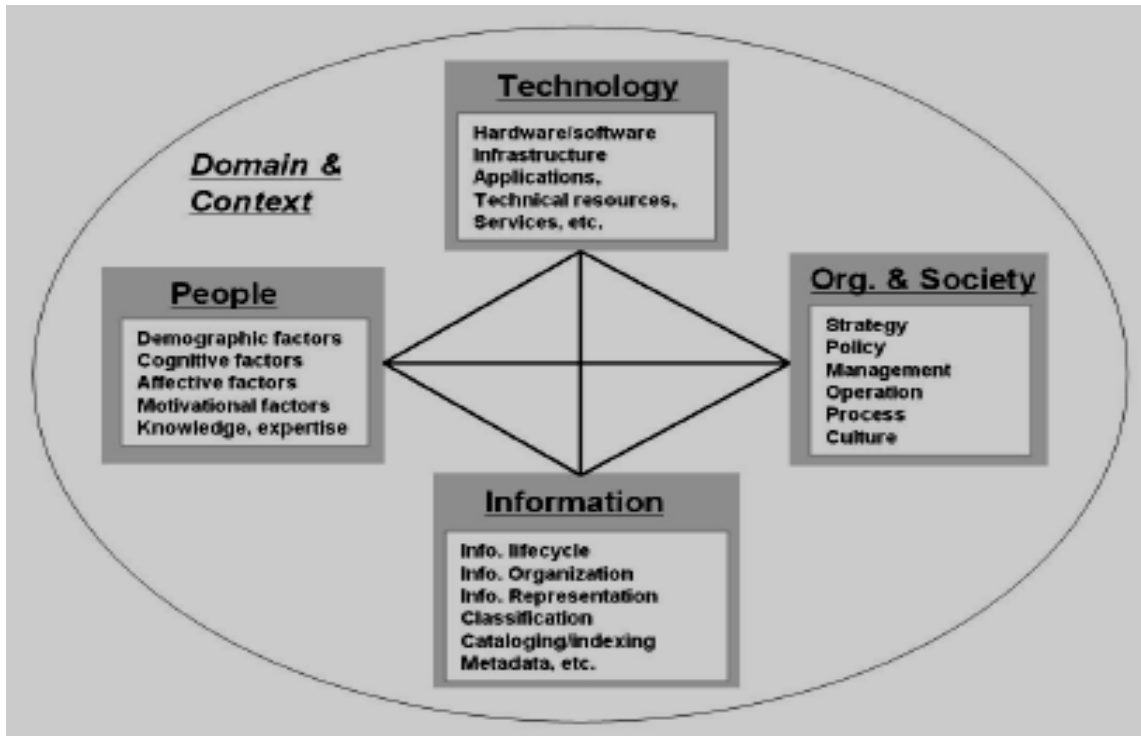


Figure 2.11 The I. Model. Source: (Wang and Zhang, 2012a)

Gartner Inc., a leading research company, has stated that by 2015 eCommerce companies would generate a higher percentage of their sales due to their social media presence, including web-based social media platforms and mobile applications (Gartner, 2011). This suggests that, in order to protect and enhance their eCommerce sales, companies will require increased knowledge as to the factors that impact sCommerce outcomes, such as customer loyalty (Liang and Turban, 2011). A study shows that 52% of marketers think that investment on sCommerce provides companies a very prospective future (Morrell, 2016). Moreover, the study estimates that a third of consumer spending may be influenced by sCommerce inputs. Therefore, it will be very important in the future for companies to understand the history leading up to the sCommerce era, including the processes by which sCommerce grew to increasing popularity. Moreover, it will also be important for them to understand how various social aspects of sCommerce can increase profits via eCommerce.

2.4 The Information Systems Success Model of DeLone and McLean

Literature shows that few decades ago, DeLone and McLean (1992) presented the IS success model as a framework for determining the complex dependent factors in IS research. The aim of this mode was to synthesise earlier research involving IS success into a more comprehensible form of knowledge and to offer guidance for future investigators. Based on the communications investigation according to Shannon and Weaver (1949) and the information effect theory of Mason (1978), as well as experiential management information systems (MIS) investigation studies from 1981 to 1987, an inclusive, multi-dimensional model of IS success was created. Shannon and Weaver (1949) demarcated the practical level of communications as the accurateness and effectiveness of the communication information system that produces information.

In Mason's model of communication, the semantic level is the success of the data in conveying the planned meaning. The efficiency level is the influence of the data on the receiver. In the DeLone and McLean (1992) IS success model, "information systems quality" deals with technical success; "information on system quality" deals with semantic success; and "use, worker approval, individual influences," and "administrative impacts" measure efficiency success. The Shannon and Weaver (1949) framework in 1949 was extended by Mason (1978) in 1978. Both models are still valid today as when they were developed a decades ago.

Moreover, based on the process and fundamental considerations, these six directions of success are proposed in the paper to be interconnected rather than self-determining. This has significant suggestions for the measurement, reporting and analysing of IS success in experiential studies. A progressive, process model recommends that an IS is primary created, comprising numerous features, which can be categorised as demonstrating numerous degrees of information system and quality of the system. In addition to this workers and managers experience these features by means of the system and are either fulfilled or dissatisfied with the information system or system information goods. The usage of the information system and its information goods then influences or effects the individual worker in the conduct of his or her effort, and these specific influences jointly result in business organisational impacts. The resultant DeLone and McLean (1992) IS success model is presented Figure 2.12.

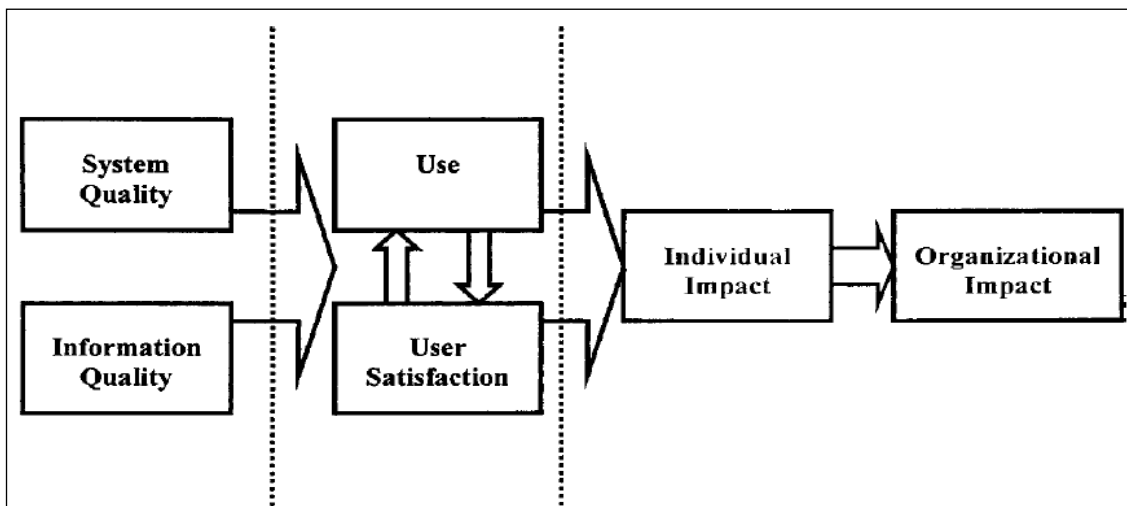


Figure 2.12 D&M IS Success Model (DeLone and McLean, 1992).

The desire for IS success has motivated several researchers to come up with models for the concept (DeLone and McLean, 1992, Shang and Seddon, 2002, Wixom and Todd, 2005, Stacie et al., 2008). IS success has been defined by Seddon (1997) as “a measure of the degree to which a person evaluating a system believes that the stakeholder (in whose interest the evaluation is being made) is better off” (Seddon, 1997). DeLone and McLean’s IS success model (DeLone and McLean, 1992, DeLone and McLean, 2003) is the most cited IS success model and represents a staple of IS success research.

In their original work, DeLone and McLean (1992) indicated that information quality and system quality impact satisfaction and user intention to use a system. Twelve years later, Delone and McLean (2003) updated their model to include service quality in addition to information quality and system quality as factors in the model. In this updated model, information quality, system quality, and service quality are conditions for success in IS. These constructs can increase user usage and satisfaction, which in turn is expected to increase net benefits. Delone and McLean (2003) argue that their success model can be effectively applied to measure success in eCommerce.

Drawing on the updated IS success model of DeLone and McLean, this study investigated the impact of information quality, system quality, and service quality on customer satisfaction, as well as the relationship between customer satisfaction and customer loyalty, in the context of sCommerce as an extension of eCommerce.

Authors state the following in the model: First, the multidimensional and inter-dependent nature of IS victory needs careful attention to the description and measurement of every feature of this dependent variable. It is significant to measure the probable interactions between the success directions in order to isolate the consequence of numerous self-determining variables with more than one variable of dependent success dimensions. Second, an assortment of success directions and measures should be conditional on the objectives and situation of the experiential investigation; but, where likely, tested and confirmed measures should be employed. Third, despite the multidimensional and conditional nature of IS success, an effort should be made to minimise the number of unlike measures employed to measure IS success so that investigation results can be associated and discoveries validated. Fourth, more field study investigation should examine and integrate business organisational impact measures.

2.5 Conceptualising Customer Loyalty

The concept of customer loyalty has been suffused through various industries in the last few decades (Kumar and Shah, 2004). While there are many definitions of customer loyalty, most of the definitions do not focus on the underlying motivation of repeated purchase (Dick and Basu, 1994). The most widely used definition is that of Oliver (1999): “a deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour”. In brief,

customer loyalty means repeated purchase frequency of a particular brand. In marketing literature, customer loyalty is defined in two different ways known as ‘attitudinal customer loyalty’ (which considers the degree of loyalty of an individual) and the ‘behavioural customer loyalty’ (which considers the frequency of repeated purchases) (Hallowell, 1996).

According to Shoemaker and Lewis (1999) without identifying the underlying attitudinal aspects of customers it is difficult to understand what determines customer loyalty. Earlier, customer loyalty was mostly conceptualised as a behavioural measure that includes the proportion of repurchase, probability of repurchase, and frequency of repurchase (Kumar and Shah, 2004). However, customer loyalty as a concept goes beyond the straightforward concept of repeated purchase frequency and includes the consideration of behaviour and attitude of customers (Beerli et al., 2004).

According to Dick and Basu (1994), customer loyalty entails an association between a customer’s relative attitude toward an entity or brand and their purchase behaviour. It is conceptualised as a customers’ favourable attitude in relation to the repurchase behaviour of that customer (Kim et al., 2004a). The customer’s attitude can vary—therefore, customer loyalty can also vary accordingly. According to Jacoby (1971), customer loyalty is a psychological process (Jacoby, 1971). In this regard, three antecedents, namely cognitive (i.e. informational factors), affective (i.e. emotional factors), and conative (i.e. natural characteristic tendency factors) determine the relative attitude towards an entity or brand, and hence play a role in higher or lower customer loyalty (Dick and Basu, 1994).

A customer’s loyalty can be also classified from three perspectives which are: (1) behavioural perspective; (2) attitudinal perspective; and (3) joint perspective based on both behavioural perspective and attitudinal perspective together (Zins, 2001). According to the behavioural perspective, a customer’s loyalty is measured based on a customer’s purchase history, (i.e. how often a customer purchases and the proportion, sequence and probability of his purchase) whereas, according to the attitudinal perspective, a customer’s loyalty is understood based on the customer’s mental, emotional and knowledge composition. Finally, according to the joint perspective, a customer’s loyalty is viewed based on both the behavioural perspective and the attitudinal perspective. For example, a customer might show a strong positive attitude towards a product or service purchase but may also exhibit low repeated purchasing behaviour.

After the emergence of eCommerce in the mid-1990s, customer loyalty became of interest within IS academic communities (Toufaily et al., 2013). Since then, customer loyalty in online environments has been referred to as online customer loyalty or “e-loyalty” (Toufaily et al., 2013). Scholars have been attracted to explore the issue of customer loyalty in many areas, such as social marketing (Liang et al., 2011, Toufaily et al., 2013), online environments (Kim et al., 2011, Cyr et al., 2008) and eCommerce (Kim et al., 2004b, Griffin, 1996, Jang et al., 2008). From a purchasing viewpoint, having loyal customers helps businesses to adapt to changing conditions in the eCommerce market (Brennan and Turnbull, 1999). For numerous companies, customer loyalty is one of the most important business concerns (Reinhold, 1996) and is often used as an indicator of business performance (Morgan and Rego, 2006, Rust et al., 2001). It is a critical factor for long-term profitability (Heskett and Schlesinger, 1994, Reinhold, 1996) and has a competitive business advantage (Rust et al., 2001). Therefore, in the eCommerce context, by recognising the increasing importance of customer loyalty, many companies have started to implement new functionalities on their websites and have developed new social shopping features to enhance their customer loyalty (Gonçalves Curty and Zhang, 2013).

2.5.1 Attitudinal and Behavioural Customer Loyalty

As was discussed above, according to the literature, there are two kinds of customer loyalty: behavioural customer loyalty and attitudinal customer loyalty. The former is past-focused (i.e., retrospective) and refers to loyalty obtained through repeated purchasing behaviours and engaging in recommendations over time, whereas the latter is future-focused (i.e., prospective) and refers to a loyalty of intention to engage in certain purchasing behaviours in the future (Allagui and Temessek, 2004, Jang et al., 2008, Kandampully and Suhartanto, 2003, Toufaily et al., 2013). While certain researchers have focused their studies on the behavioural dimension of customer loyalty (Huang, 2011, Eid and Al-Anazi, 2008), others have focused on its attitudinal dimension (Kwon and Lennon, 2009, Shankar et al., 2003). Others have focused on the composite dimension of customers’ loyalty (Hong and Cho, 2011, Chen et al., 2007, Rauyruen and Miller, 2007).

The composite dimension of customers’ loyalty entails both attitudinal and behavioural customer loyalties on the basis of which loyalty indexes are proposed (Dick and Basu, 1994). The loyalty indexes represent the relative Attitude-Behaviour Relationships. There are four

types of Attitude-Behaviour Relationships which are: No Loyalty, Spurious Loyalty, Latent Loyalty and Loyalty (Dick and Basu, 1994). Here No Loyalty means that an individual shows low relative attitude and low repeated purchase, whereas Loyalty means that an individual shows both high relative attitude and high repeated purchases. On the other hand, Spurious Loyalty means that an individual shows low relative attitude and high repeated purchases. For example, it happens when an individual perceives very low differentiation among different brands, however purchases repeatedly because of situational cues. Finally, Latent Loyalty implies that an individual shows high relative attitude with low repeated purchases. For example, it happens when an individual has high relative attitude toward a specific brand but the product of the brand may have low variety or be expensive.

The limitation of behavioural customer loyalty is that it does not take into account factors such as situational factors (e.g. whether a certain product is available or not), intrinsic factors (e.g. fortitude) and socio-cultural factors (e.g. social bonding) (Bandyopadhyay and Martell, 2007). Without taking into account these factors, behavioural customer loyalty alone cannot distinguish between repeated purchase and brand loyalty. Therefore, researchers have emphasised to take in to account the influence of attitudinal customer loyalty (Dick and Basu, 1994). However, an important limitation of attitudinal customer loyalty is that many attitudinal factors cannot distinguish between different brands. Also, attitudinal factors in customer loyalty are mostly brand specific instead of product specific (Day, 1976).

Zeithaml et al. (1996), mentioned in their studies that loyal clients forge bonds with the corporation and behave differently from non-loyal clients. Client loyalty influences behavioural outcomes and, eventually, the effectiveness of a corporation. While loyal clients focus both on the economic features of the transaction and the association with the company, less loyal clients focus mostly on the economic features (Jain et al., 1987). According to research by Reichheld and Sasser (1990) loyal customers have lower price elasticities than non-loyal customers and are enthusiastic to pay higher prices to continue doing business with their favoured retailers rather than incur extra search costs. According to Sambandam and Lord (1995), loyalty to a business decreases the consideration set size and the amount of exertion used in searching for replacements while maximising the individual's willingness to buying from that eCommerce in the future.

Numerous researchers have claimed that customer loyalty to a website cannot be measured simply by observing repeat purchases, which is the method of the behavioural approach

(Shankar et al., 2003, Currás-Pérez et al., 2013). Instead, an understanding of customer loyalty to sCommerce websites should take into consideration customers' intentions to continue using a website, which include their browsing, purchasing, and sharing of purchases with friends on a particular SNS, as well as recommending such sites to other users through various social media features, such as comments, recommendations, and rankings. Given this recognition, this study adopted an attitudinal approach to customer loyalty.

2.5.2 The Importance and Benefits of Customer Loyalty

Customer loyalty is important for the success of both traditional businesses (brick-and-mortar) and online businesses in today's global market. However, many researchers consider customer loyalty to be more important for online businesses because customers in online environments are more likely to become navigationally lost than in traditional environments (e.g., with just one click, a customer might accidentally end up at a different e-store's website) (Anderson and Srinivasan, 2003, Mäntymäki, 2009). Another factor of online customer loyalty is convenient access to website information and services (Jih et al., 2010). The retention of online shoppers is not easy, as customers commonly move quickly from one page to another and from one website to another (Eid and Al-Anazi, 2008). Griffin (1996) indicates that customer loyalty plays a significant role in the expansion of eCommerce as a means for companies to maintain competitiveness and bring high profits. Reichheld and Scheffer (2000a) have discovered that it is possible for profit to be increased in companies from 25% to 95% by increasing customer retention by 5%. In competitive markets such as eCommerce markets, this means that customer loyalty is integral in building competitive advantage and achieving greater profits (Sebastian, 2010). While customer loyalty has been discussed widely in eCommerce (Afsar et al., 2013, Yoo et al., 2013, Hong and Cho, 2011, Lu et al., 2013) and other research contexts, the issue of customer loyalty in the context of sCommerce currently represents a gap in the literature.

Customer loyalty is significant for the survival of eCommerce business (Pee et al., 2018). Literature shows several benefits of customer loyalty in the field of eCommerce. Customer loyalty is behaviourally indicated by retention and emotionally indicated by WOM (Kassim and Asiah Abdullah, 2010). In this context, WOM happens when a customer shares his experience and reviews over the Internet (Bhaskar and Kumar, 2016). Without adequate emphasis on customer loyalty, online businesses would face a dismal future of price-sensitive

customers in this age of eCommerce (Reichheld and Schefter, 2000b). According to Srinivasan, Andersona and Ponnayolu (Srinivasan et al., 2002), customer loyalty in eCommerce increases WOM promotion positively and thus customers are willing to pay more. In eCommerce, customer loyalty is necessary as it enhances customer acquisition and reduces marketing costs.

The benefit of loyalty is obvious, as loyal consumers visit an eCommerce website repeatedly to be informed on the new products and services offered—loyal consumers even tend to excuse the mistakes of sellers (Bhaskar and Kumar, 2016). Therefore, in eCommerce, customer loyalty has been identified as an important strategy for profitability considering the high cost of acquiring new customers (Srinivasan et al., 2002). For eCommerce businesses—as the cost of acquiring new customers can be 20% to 40% more than in traditional markets—customer loyalty is more profitable (Reichheld and Schefter, 2000b). A study by Martinsons (2008) showed that customer loyalty is necessary for the sustainability and survival for C2C eCommerce business in China.

Customer loyalty is indeed a major benefit for many well-known eCommerce websites, such as Amazon.com, which sells about 66% of its sales to its returning customers (Gefen, 2002). Because, having customer loyalty makes its users more inclined to recommend an eCommerce website to other customers, hence the cost of advertising reduces (Heskett et al., 1994). In the context of eCommerce, customer loyalty is more beneficial (e.g. significant increased interactivity by customers) if offered with customisation functionality (Srinivasan et al., 2002). Customer loyalty causes brand advocacy, which in turn reduces marketing costs while customer retention rates increase (Stokburger-Sauer et al., 2012). In this context, brand advocacy means supporting a brand by customers who have a strong loyalty to the company brand such that they encourage others to purchase from the company (Badrinarayanan and Laverie, 2011). According to one study, brand loyalty had a significant influence on purchase decisions as it was found to dictate consumers' behaviour in eCommerce (Pappas et al., 2017).

2.5.3 Customer Loyalty in SCommerce

SCommerce platforms expedite the growth of customer loyalty by enabling its users to share product opinions and ratings with various social groups and communities (Wu and Li, 2018). A study by Casaló et al. (2009) showed that because the scope of customers' interactive

participation on sCommerce platforms, customer loyalty is built significantly. SCommerce platforms help in maintaining relationship marketing, social norms and interactivity and as a result customer loyalty is established strongly (Zhang et al., 2016). Because of the presence of interactive responsiveness functions in the sCommerce website, customer loyalty increases (Lee et al., 2012). SCommerce websites enable sellers to track and continue real-time interactions and maintain social relations with customers, as a result, long-term customer loyalty is observed (Wu and Li, 2018). SCommerce websites help sellers to approach loyal customers and let them share products/services experiences and make recommendations for other interested customers, which in turn increases their customer loyalty even more.

The difference between traditional customer loyalty and e-loyalty is that the former represents a customer's attitudinal preference toward a particular product or service, whereas the latter refers to a customer's attitude or behaviour toward revisiting a particular website (Anderson and Srinivasan, 2003). For example, Cyr et al. (2008) define e-loyalty as the perceived intention to visit a website and purchase and repurchase from it in the future. Currás-Pérez et al. (2013) define customer loyalty to a SNS as “a favourable attitude towards that social networking site expressed by the intention to continue using it in the future and recommend that other users use it”. In line with this definition, and based on the sCommerce definitions of prior mention in this study (Afrasiabi Rad and Benyoucef, 2011, Zhong, 2012, Leitner et al., 2007, Wang, 2009a, Shen and Eder, 2009), the researcher defines customer loyalty toward sCommerce websites as a favourable attitude toward a particular sCommerce website expressed by the intention to continue using it. Here, usage includes the following:

- Browsing the site.
- Purchasing from the site.
- Creating content on the site or about the site.
- Sharing a purchase with other friends on a particular SNS.
- Recommending the site to other users through integrated social features, such as comments, recommendations, and rankings.

It has been proposed that recommendation is a sub-dimension of customer loyalty (Zeithaml et al., 1996). Usage is more complex in sCommerce than in eCommerce. On a traditional eCommerce website, there are only two possible actions: browsing and purchasing. On an sCommerce website, however, there are three additional possible actions: creating content, sharing and recommendations. It is also more complex as these three actions may take place

in locations other than the actual sCommerce website. These are major differences between customers' loyalty between the two kinds of websites.

In the following sections of this chapter, the differentiating factors will be explained. The influence of these factors on customer loyalty and on each other will be detailed in the hypothesis generation section in Chapter 3.

2.5.4 Trust

Trust is an elusive, important and pervasive concept. It is an important concept for various disciplines, such as, medicine, management and sociology (Hupcey et al., 2001). It is a special relationship between two individuals, or between two groups or organisations. Its definition is considerably diverse (Jones, 2002). A common definition of trust according to Moorman et al. (1992) is: "the willingness to rely on an exchange partner in whom one has confidence." According to Mayer et al. (1995), trust is: "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party". However, trust is the willingness to be vulnerable is a widely cited definition of trust (Costa, 2003). On the other hand, according to McKnight et al. (1998), trust is referred as the belief and the willingness to depend on another party. The phenomenon of trust occurs when a person perceives an unsure situation, the outcome of which can be either good or bad. According to knowledge-based theorists, trust grows over time between two persons when they accumulate trust-relevant knowledge about each other (McKnight et al., 1998).

In a social context, trust initiates group formation, which is an important step before working together with other people (Marsh, 1994). In societies, trust can be viewed as consisting of three parts: (1) an expected condition for the fulfilment of general social order; (2) an expected condition for performing a competent role on behalf the trustee; and (3) an expected condition that a trustee needs to fulfil as a fiduciary requirement (Barber, 1983). Therefore, in a relationship of trust, people rely on each other for something, which can be an object, an event or an individual, in a risky situation with the hope of achieving something (Giffin, 1967). According to Luhmann (1979b), without risk, trust is irrelevant, or in another words, it is a precondition before making trust. In a risky situation such as online shopping, where customers lack direct contact, trust becomes important (Ribbink et al., 2004b). Similarly,

trust is also fundamentally important for every security-related solution such as online payments on eCommerce websites (Ribbink et al., 2004b).

According to brand psychologists trust is a prerequisite in any close relationship, and, according to marketing literature, trust is significant in business relationships (Fung and Lee, 1999b). According to brand literature, trust enhances brand value and it is an important antecedent of customer loyalty (Ribbink et al., 2004b). According to business literature, trust is important for long-term relationships. According to the commitment-trust theory, trust development and management are significant to maintain long-term relationships (Delgado-Ballester and Luis Munuera-Alemán, 2001). As can be seen, the study of trust in brand literature is prevalent. However, there are various antecedents of trust formation. For example, according to social-psychology literature, trust is developed based on past experience and prior interaction, which enhances personal relationships (Delgado-Ballester and Luis Munuera-Alemán, 2001). However, in the context of eCommerce, trust can be developed based on information quality, web-interface design and a seller's reputation (Fung and Lee, 1999b).

Trust is pivotal in interpersonal and business relationships. It becomes a deciding factor when risk, uncertainty, or interdependence appear in a situation or system (McKnight and Chervany, 2000). It is significant when adopting technological systems, as much as it is significant for forming interpersonal relationships (Grabner-Kräuter and Faullant, 2008). In an enhanced complex online-mediated platform (e.g. eCommerce website), the formation of trust is needed even more (McKnight and Chervany, 2001). In the context of eCommerce, trust starts to develop in online marketplaces with information collection by its customers (Fung and Lee, 1999b). On the other hand, trust in the context of sCommerce is a central aspect in many economic transactions that can involve social uncertainty and risk (Dennison et al., 2009). It is regularly considered the basis of sCommerce and eCommerce and a vital influence for the success of both sCommerce and eCommerce. On sCommerce platforms, trust is constructed by social interactions, relations with other people and the surrounding atmosphere (Liang and Turban, 2011, Marsden, 2010). However, although the social context of trust is significant, it has been mostly absent from previous sCommerce research.

Trust theory concerns the computational and behavioural trust that exists between people, organisations, computers, and networks (Gligor and Wing, 2011, Liang and Turban, 2011). Expectations, willingness, beliefs, and attitudes are individual constructs that are related to

trust theory (Castaldo, 2002). It is important for a customer to build their trust based on these four constructs for the purpose of conforming to their behaviour.

Trust has been defined in many fields, such as psychology, sociology (Das and Bing-Sheng, 2004), and economics (Beldad et al., 2010). Therefore, there are different definitions of trust. For example, trust can be defined as a trustworthy partner that one can rely on (Moorman et al., 1992). Another definition of trust is the belief in an opponent's promise to exchange a reliable business relationship (Schurr and Ozanne, 1985). Two categories of trust have been defined by scholars: cognitive trust and emotional trust. Moorman et al. (1992) have defined the former as the willingness of customers to rely on the abilities of a service provider, whereas emotional trust is defined as a customer's feelings and impressions about a company in terms of its concern for its customers (Rempel et al., 1985). In the context of sCommerce, (Kim and Park, 2013) define trust as "the level of a consumer's confidence in an sCommerce firm's reliability based on his or her emotions formed by the level of sincere concern and care demonstrated by the firm". The term "online trust" has been used by several researchers to refer to customer trust in online environments (Corritore et al., 2003). Online trust can be built through different ways—through websites, individuals/customers, and organisations (Kuan and Bock, 2007, Flavián et al., 2006).

Several researchers have discussed the lack of trust in online environments (Pavlou, 2003, Mutz, 2005) due to the absence of face-to-face interactions between sellers and customers. Other researchers have been interested in studying the impact of trust in online business environments (Gefen, 2000, Doney and Cannon, 1997) and its effect on customer uncertainty in terms of choosing an eCommerce company to use (Kim and Park, 2013). In addition, another consequence of customer uncertainty is an increase of perceived risk (Mutz, 2005).

When it comes to the most important factors in eCommerce, trust is a major factor (Aljifri et al., 2003, Hajli, 2013). Morgan and Hunt (1994) consider trust to be a key mediating factor in online context research models, and several researchers have made efforts to explore the factors that generate trust in eCommerce. Gefen (2000) considers trust to be a barrier faced by eCommerce due to the unsocial nature of online environments and the potential ambiguity of their content. Trust facilitates business relationships between customers and sellers, which consequently supports transaction processes (Chang and Chen, 2008). Therefore, trust has a strong effect on the purchasing decisions of customers (Kim et al., 2008). In situations of uncertainty in online environments, social trust has been shown to be key in reducing

transaction costs (Hajli, 2013). Such trust has also been shown to enhance economic growth (Hajli, 2012b).

Trust is also considered as one of the most important factors in sCommerce (Hsu et al., 2014). Liang and Turban (2011) claim that trust theory can be used to study sCommerce research issues. It is critical to study trust in the context of sCommerce (Hajli, 2013), as it relates to the sharing of information between customers in sCommerce (Yadav et al., 2013). Trust may be a challenge for sCommerce as it is in eCommerce (Hajli, 2012b). Customer acceptance of sCommerce is determined by trust, ease of use, and social comparisons between websites (Shen, 2012b). Moreover, Kim and Park (2013) note that customer trust can be impacted by unique factors, such as participation, convergence, connectivity, intercommunication, lubrication, user segmentation (Weijun and Lin, 2011), website reputation, perceived institutional assurance, perceived quality (Hsiao et al., 2010), and the size of an sCommerce company (market shares) (Jarvenpaa et al., 2000). As trust theory has been used to interpret the social behaviour in social science, it is therefore appropriate for use in studying sCommerce (Caverlee et al., 2010).

Moreover, it is widely accepted that the good quality information and systems determine mobile application features and service provider's capability, truthfulness and compassion and consequently build sCommerce user trust. Mobile-based sCommerce service providers are required to invest extra on sCommerce platforms to provide sCommerce users with suitable, good quality system features and high-quality information (Lu et al., 2016, Zhang et al., 2014, Gatautis and Medziausiene, 2014, Huang and Benyoucef, 2015, Liébana-Cabanillas et al., 2014, Wixom and Todd, 2005).

2.5.5 Social Presence

Generally, SP connotes affective communication among people in a virtual medium (Swan and Shih, 2005). In the past, it was described as face-to-face encounters and radio or television presence (Tu and McIsaac, 2002). The minimal amount of SP occurs when people feel the presence of others as a sensory experience (e.g. gaze, facial expression etc.) (Tu and McIsaac, 2002). According to social presence theory, an individual's perception of SP varies according to the capability of different kinds of communication media (Swan and Shih, 2005, King and Xia, 1997). For example, a communication approach, such as a face-to-face meeting has more SP because of the presence of nonverbal and socio-psychological cues (e.g.

eye contact). On the other hand, a communication approach such as a written document does not involve any nonverbal and socio-psychological cues, hence it has low SP (King and Xia, 1997).

According to Olbrich and Holsing (2011), the term SP is defined as the salience of the other in a mediated connection or conversation, SP is regarded as an inherent value of a conversational medium. From a psychosomatic point of view, SP is also very similar to familiarity and psychological friendship (Olbrich and Holsing, 2011). In this viewpoint, SP is often examined as the perceived warmth, bringing a feeling of personal sociability, sensitivity and contact, embodied in a communication medium (Wang and Zhang, 2012b, Barnes, 2014).

According to Huang and Benyoucef (2013), the idea of SP explains the capability of a communication platform to transfer social signals. It can also connote as “a sense of being with another” in the mediated platform or environment (Biocca et al., 2003). It is an approach of combining the socio-psychological concept of intimacy (e.g. conversation, eye contact etc.) with immediacy (e.g. information transmission capacity of any medium) on communication mediums (Keil and Johnson, 2002). According to social presence theory, the greater the sense of intimacy and immediacy, the greater the SP (Short and Williams, 2001).

The concept of SP was first mentioned in the domain of social psychology and communication (So and Brush, 2008). In contrast to traditional voice mail and e-mail, SP entails both the verbal cues (voice) and non-verbal cues (e.g. facial expression). Today, it is an important factor of social communication where psychological distance is perceived because of physical distance. SP can occur in various ways such as exchanging opinions, information or goods, helping in making decisions, idea generation, real time social interaction, doing reconciliation or continuing friendly relationships (Biocca et al., 2003). Basically, SP is a form of interaction in a mediated platform or environment. Therefore, SP—where SP is mediated by telecommunication technology—is known as social telepresence.

According to Blumer (1986), the theory of SP is based on the social psychological theories of interpersonal communication. Conceptually, SP has three dimensions: (1) awareness and representation of others; (2) the communication medium’s capacity to convey information and induce interactions; and (3) the verbal and non-verbal cues (Biocca et al., 2003). While the original theory of SP emphasised understanding social and interpersonal communication in computer-mediated environments (CMC), it was later reconceptualised by focusing on

how people utilise communication media instead of the qualities of the communication media (Lowenthal and Dunlap, 2010). Therefore, today, SP is more commonly understood from the perspective of the capabilities of people.

Among online communities, such as online learning environments, SP is measured as the feeling of community (Tu and McIsaac, 2002). According to Rourke et al. (2007), there are three types of indicators in SP, namely: affective responses (e.g. emotion, feelings etc.), cohesive responses (e.g. commitment, greetings etc.), and interactive responses (e.g. agreement, approval etc.) (Swan and Shih, 2005). Such indicators are widely explored in online discussions.

From the viewpoint of SP, most of the sCommerce websites concentrate on the capability of the website as a communication medium to transmit a sense of human warmth and friendliness when the users interact (Kim and Park, 2013, Wang and Zhang, 2012b). However, this unidimensional perception of SP may not be appropriate for virtual societies, where people not only relate with the computer communication medium, but also connect with other members and plunge themselves into the atmosphere (Wang and Zhang, 2012b). Thus, a multidimensional conception of SP has been promoted (Shen and Khalifa, 2009). SCommerce can be seen as a mixture of eCommerce with an online society. Consequently, SP in sCommerce can also be conceptualised as a multidimensional paradigm. SP can be categorised into three dimensions: the SPW, the SPO, and the SP of communication with vendors (Huang and Benyoucef, 2013).

Various types of social interactions

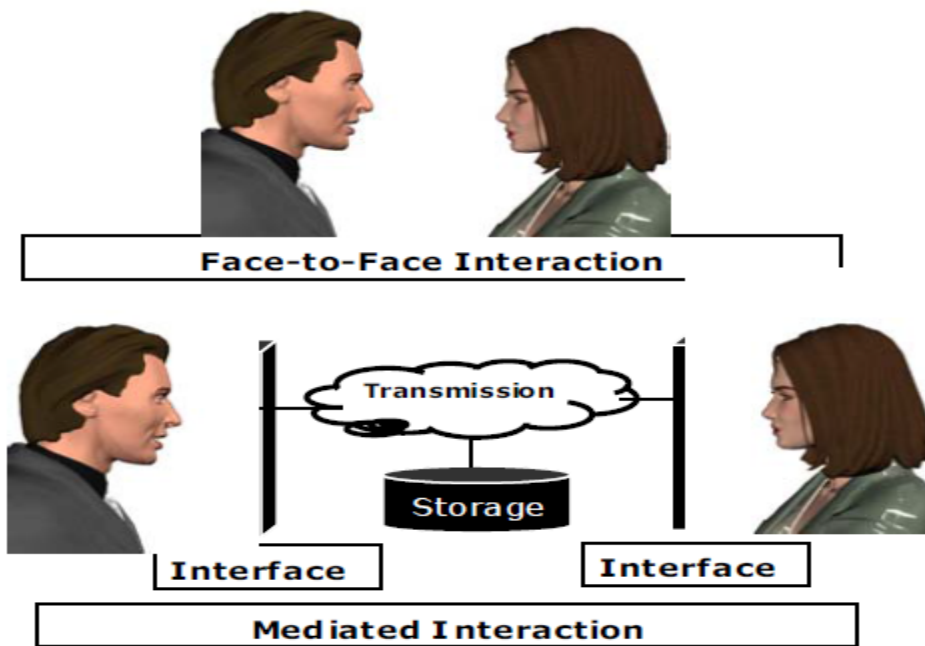


Figure 2.13 Various Ways of Communications.

Social presence theory (Short et al., 1976) focuses on how the use of a given medium is influenced by its social context. Short et al. (1976) indicate that social presence theory considers SP as a quality that is inherent to any communications medium. Social presence theory has been considered as having a close relationship to the information richness theory (Daft and Lengel, 1983, Straub, 1994), which argues that there are differences between media in terms of their ability to convey information and accomplish tasks due to varying degrees of content ambiguity and equivocality (Zhong, 2012). Social presence theory argues that a user fits the degree of SP of a medium required by the task therefore assessing how a communicator deals with other partners as being psychologically present (Short et al., 1976). Literature shows that today there are several social presence theories, where researchers exemplify the way that thinking about a method's effect on communication particularly social and interpersonal communication as is shown in Figure 2.13 above.

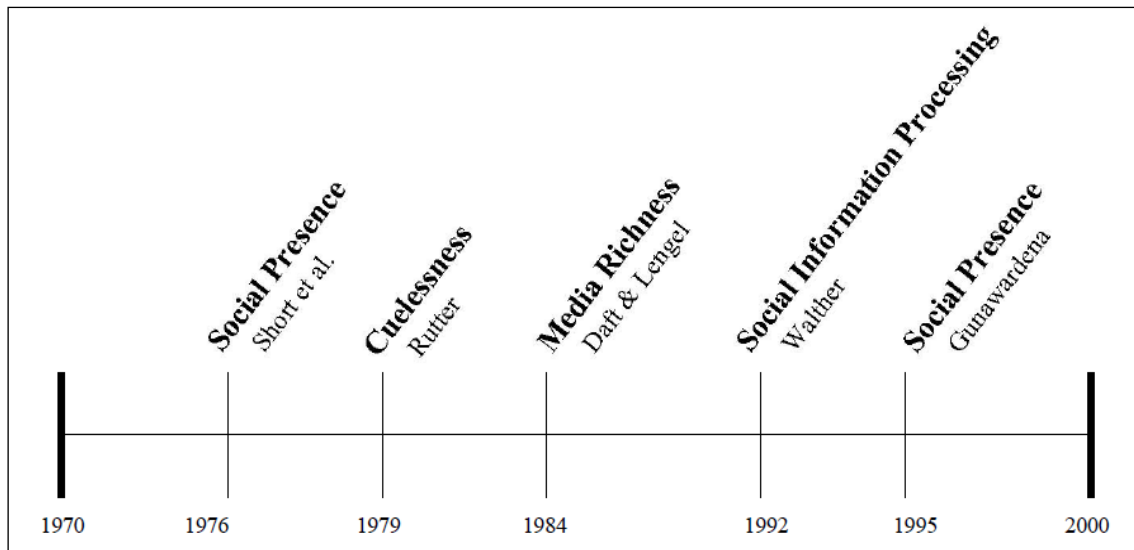


Figure 2.14 Timeline of Competing Theories of Social Presence. Source: (Dijk van Jan, 2006)

SP is one of the most important factors that differentiates sCommerce sites from other commercial websites. If consumers feel that an online shopping website is warm and sociable, this will increase their perception of SP, which will in turn increase their level of trust (Gefen and Straub, 2004) and loyalty (Mäntymäki and Salo, 2010) with the website. The SPO has been recognised to have a major impact on customers in online environments (Shen and Khalifa, 2009). Customers wish to have a sense of SP on sCommerce websites and perceive the existence of others for them to purchase and behave positively toward a given website. The latter comes from sources such as social cues and features that an sCommerce website offers to its customers, such as recommendations, reviews, rankings, and the ability to share purchase information with others through SNSs. In this current study, SP was included in the research model as a factor that impacts customer loyalty.

An investigation on SP and online-learning by Gunawardena (1995) and Gunawardena and Zittle (1997) considered the 3rd phase of SP examination as is shown in Table 2.4 below. The results were influenced by earlier research and theories, particularly that of Walther. Short et al. (1976) hypothesised the concept of SP. Archer and Yuan (2000) reconceptualised social presence theory, which meant moving away from a technical deterministic conceptualisation of intermediated communication. Figure 2.14 shows various ways of communication in social presence theory.

Table 2-5 Phases of Social Presence Research

Phase	Year	Authors	Research Focus
Phase 1	1970	Short et al.	Focused on Telecommunications
Phase 2	1980 to 1990	Kraut et al.	Focused on CMC
Phase 3	1990 to present	Gunawardena	Focused on Online Learning

2.5.6 Customer Satisfaction

Conceptually, customer satisfaction is an outcome, in relation to a customer's expectation, which results when a customer compares their perceived reward with the cost of purchase after purchasing any product or service (Churchill and Surprenant, 1982). In brief, customer satisfaction connotes a customer's evaluation and reaction to the level of fulfilment against their judgment of the fulfilled level (Herrmann et al., 2000). According to Herrmann et al. (2000), customer satisfaction is based on a complex information processing routine in which customers compare their actual experience with a purchased product or service with their expected benefits from a product or service regarding its particular intended use. On the other hand, according to Tse and Wilton (1988), customer satisfaction is a customer's response to the evaluation of the comparison of a customer's prior expectation with the actual performance perceived after purchasing and using a product or service. Here, the prior expectations are formed based on the anticipated performance of a product or service.

Customer satisfaction is a function of satisfaction with the components of the service concept (i.e. what matters to the customers) and customer characteristics (e.g. age) (Anderson et al., 2008). In customer satisfaction, a customer's individual perceived quality of a product or service determines customer satisfaction (Kim et al., 2004a). Here, perceived quality means the gap between the prior expectations of the customer about a product or service and the actual performance of a product or service (Ravald and Grönroos, 1996). Whether or not a

customer is satisfied depends on whether or not the expectations of the customer are confirmed by the actual perceived quality of the product or service (Herrmann et al., 2000). In customer satisfaction, the buyer's expectation acts as a yardstick to evaluate the level of quality the buyer hopes to get after purchasing a product or service. In general—customer satisfaction as a response—varies in intensity when the response is based on any particular focus (e.g. consumption) in a particular time or situation (Giese and Cote, 2000).

According to the service management literature, customer satisfaction means a customer's perceived value obtained after the purchase of a product or service where value is determined by the perceived service quality regarding the price and purchase cost of that product or service (Giese and Cote, 2000). Here, perceived value means the ratio between perceived benefits (e.g. service received because of use of any particular product) and perceived sacrifice (i.e. total purchase cost) (Ravald and Grönroos, 1996). According to Zeithaml (1988), perceived value is a consumer's overall evaluation of the service attribute of a product established on the perception of what is received and what is given in a product or service.

According to one study, customer satisfaction is related to customer loyalty, which again is related to profitability for a company (Giese and Cote, 2000). For this reason, the ratings of customer satisfaction are important for the success of a company (Herrmann et al., 2000). Furthermore, according to the marketing literature, customer satisfaction is an important antecedent of market shares, WOM, and customer retention (Anderson et al., 2008). Hence, it occupies a major focus in marketing theories and practice. According to Yi (1990), many studies show that customer satisfaction influences repurchase intention (Yi, 1990). Therefore, based on both the service management and the marketing literatures, customer satisfaction, customer loyalty, and profitability are interrelated (Giese and Cote, 2000). In eCommerce business, one of the major objectives is to maximise customer satisfaction (Keeney, 1999), as customer loyalty is strongly influenced by customer satisfaction (Eid, 2011). According to Lin (2003), in the eCommerce context, customer satisfaction connotes the perceived received value given by any eCommerce business. In the context of sCommerce, interest, attention and curiosity—resulting from the interaction on sCommerce websites—enhances customer satisfaction (Zhang et al., 2014). Additionally, a number of studies have indicated that customer satisfaction is significantly associated to sCommerce customer loyalty (Akbar and Parvez, 2009, Chiu et al., 2007, Pai and Tsai, 2011).

2.5.7 Service Quality

According to Zeithaml et al. (1990), service quality is specified as the differentiation of the actual perceived performance from the service expectations. It is a combination of various tangible (e.g. online ticket booking) and intangible (e.g. safety) attributes that are difficult to measure (Tsaur et al., 2002). There are five dimensions of service quality (Boulding et al., 1993) which are: (1) reliability (i.e. ability to deliver the promised service); (2) assurance (i.e. ability to create trust); (3) responsiveness (i.e. willingness to help customers); (4) empathy (i.e. ability to treat customers as individuals); and (5) tangibility (i.e. ability to focus on physical service attributes) (Bloemer et al., 1999). However, According to Gronroos (Grbnroos, 1982), there are two dimensions of service quality: functional quality and technical quality. The functional quality considers how a service is given and technical quality relates to the outcome of a given service. When conceptualising service quality, Dabholkar et al. (1996) propose three hierarchical levels which are: (1) customers' overall perceptions of service quality; (2) primary dimensions (i.e. interaction, environment, and outcome); and (3) sub-dimensions. According to them, there are a further nine sub-dimensions which are: (1) attitude; (2) behaviour; (3) expertise; (4) ambient condition; (5) design; (6) social factors; (7) waiting times; (8) tangible attributes; and (9) valence.

Service quality is measured based on the difference between customers' perceptions and expectations. However, according to Parasuraman et al. (1985), there are ten components of service quality: (1) reliability; (2) responsiveness; (3) competence; (4) access; (5) courtesy; (6) communication; (7) credibility; (8) security; (9) understanding the customers; and (10) tangibles. According to them, the comparison between perceived performance and expected performance—on the basis of these ten components—measures the perceived service quality. Therefore, service quality is the overall difference between expectation and performance that are related to these components.

According to Conrath and Mignen (1990), in the context of IS, service quality is a determining factor of user satisfaction. Service quality is an antecedent of customer satisfaction, which in turn influences customer loyalty (Lee et al., 2000, Fang et al., 2011). Therefore, service quality is the most researched topic in services marketing (Pitt et al., 1995). In the context of eCommerce, service quality can be termed as eService quality, which

is an antecedent of customer retention, stickiness, hit rate, and WOM (Santos, 2003). Therefore, it is suggested to allocate up to 75% of eCommerce budget to eService quality (Santos, 2003).

The primary issue for service quality of a website is the access of the client to the company's website. Consistent accessibility is critical for a website start-up. One study showed that 75% of customers that were reviewed—who had made purchases on an eCommerce website—referred to downloading delays (a service quality issue) as the reason for not making a purchase (Lin et al., 2016). Moreover, quality of service can be characterised as clients' discernment on quality of service or item information provided on the website (Park and Kim, 2003). In the context of sCommerce, service quality is evaluated based on the tangible supports, reliability, responsiveness, assurance, and empathy from the services provided by the sCommerce website as perceived by the users (Liang et al., 2011).

2.5.8 System Quality

In brief, system quality is defined as the system's performance in delivering information and service (Lee and Kozar, 2006). In the e-business context, system quality connotes the overall performance of any eCommerce website based on the customer's perceived level of user friendliness while shopping (Lin, 2007). According to Ahn et al. (2007), system quality means the system oriented performance characteristics (e.g. interface design, functionality, data accuracy, reliability, responsiveness, etc). For this reason, these system characteristics are considered when measuring system quality (Bai et al., 2008). In the eCommerce context, the desired characteristics of an eCommerce website, such as interface design, functionality, easy accessibility, usability, and reliability are components of system quality that are valued by users (Delone and McLean, 2003). According to Lin (2007), system quality can be conceptualised into two aspects—website design and interactivity. Here, system quality—based on the aspect of website design—means the user friendliness perceived by the customers based on the usability, accessibility, and reliability of an eCommerce website. On the other hand, system quality—based on the aspect of interactivity—means the level to which the customers are able to participate in an interactive multimedia-based environment offered by the eCommerce website.

The main objective of system quality is to provide a responsive and user-friendly interface while ensuring the simplicity and ease in design and features (Huang and Benyoucef, 2013). In the context of eLearning, system quality is measured based on the accessibility, navigability, response time, and learnability. Alternatively, in the context of Web 2.0, system quality can have three aspects, which are: interface features, openness and user control (Huang and Benyoucef, 2013). Website interface—in relation to system quality—is widely emphasised in sCommerce related businesses where the system quality is identified with the nature of the website pages and the services that are given to the end client (Chen et al., 2016). It is contended that the nature of web-based business frameworks is identified with four quality variables, which are reliability, functionality, efficiency and usability (Filieri et al., 2017, Chen et al., 2017). Each of these quality variables are discussed below.

Reliability

The quality factor called reliability means the degree to which a system is dependable (e.g. accessible) over time. It is the capacity of the system's technical availability measured by factors such as uptime, downtime, and execution level under expressed conditions. The sub-attributes of reliability quality are known as the development, adaptation to non-critical failure and recoverability (Luo and Chea, 2017). The reliability factor—where sCommerce is concerned—is identified with the consistency of the services such as the shopping cart, searching or the shopping list (Bakar et al., 2017). An sCommerce system is dependable when it can restore client actions, even in the event of system failure (Chen et al., 2016). A fundamental characteristic of sCommerce systems—in the context of reliability—is the security of online money-related transactions. In this regard, five aspects of security have been recognised where Internet transactions are concerned. These are confidentiality, access control, authentication, user's accountability and data integrity.

Functionality

The term functionality alludes to an arrangement of capacities and indicated properties that fulfil expressed or inferred needs. Its sub-attributes are accuracy, suitability, security and interoperability (Turban et al., 2016a). In view of the definition, the quality factor of usefulness can be identified with the essential attributes of sCommerce systems (Turban et al., 2016a). Some of these qualities are, for example, the time expected to access or connect with the webpage's pages, on-demand service, and safety and security on the website's pages

(Filiery et al., 2017). Also, the navigability, attractive interface, multi-linguality and arrangement of exact data also play an essential part of functionality quality.

Efficiency

The quality factor—in the context of efficiency—refers to a set of characteristics that interact between the software’s performance and the quantity of capital employed under stated circumstances. The sub-characteristics of system efficiency are time and asset behaviour. In light of the definition above it is contended that system efficiency is also essential to the nature of sCommerce systems (Filiery et al., 2017). An sCommerce system is considered to effective and efficient, if the client can get to the significant website pages speedily and effortlessly (Turban et al., 2016a). Also, navigation through the website pages must be completed in as short a period of time as possible, and access to the categories of items and information related to that (thumbnails and text or content) should be simple.

Usability

Usability, in regards to—sCommerce systems—is defined as an arrangement of qualities that bear on the exertion required for the utilisation (and on the individual evaluation) of such qualities used by clients. As indicated by ISO 9126, usability’s sub-characteristics are content clarity, learnability and operability (Turban et al., 2016a). In view of the definition, the quality factor of usability is identified with attributes of sCommerce systems. For example, arrangement of accurate messages about items and services offered and arrangement of thumbnails, photos and recordings exhibiting the items accessible. Another vital characteristic in the context of usability, is simple and easy access to the sCommerce website (Luo and Chea, 2017, Bakar et al., 2017).

2.5.9 Information quality

In brief, information quality means the level to which the content of a website is timely, accurate, and complete (Liang et al., 2011). It also means the perceived value of information that a source (e.g. website) provides to a user (Lee and Kozar, 2006). According to Bharati and Chaudhury (2004), a user’s perception of the value of the information provided by a system (e.g. website) determines the quality of information. Information quality can also be described as measurements of ‘content’ and ‘form’ of information, where the ‘content’ is

measured based on the accuracy, relevancy, adequacy, and clarity, and the 'form' of information is measured based on the format, timeliness and presentation of information (Ahn et al., 2007). The main components such as accuracy (i.e. the perceptions of the correctness of information), completeness (i.e. the degree to which all necessary information are provided), clarity (i.e. providing clear information), useful (i.e. providing relevant information), format (i.e. how effectively the information is presented) and updated (i.e. providing updated information) are the most important factors of information quality (Liang and Chen, 2009b, Lin, 2007, Lin, 2010). On the other hand, Prybutok et al. (2008), highlighted that accuracy, timeliness, conciseness, availability, and convenience are the major components of information quality.

The information quality of a system is the measurement of outputs of information by that system (Sharkey et al., 2010). In the eCommerce context, the main objective of maintaining information quality is providing content which matches the customers' desired attributes of the content (Kuan et al., 2008, Sharkey et al., 2010). Quality information based on quality content is vital for eCommerce. For this reason, "Content is king" is a well-known slogan in the eCommerce field (Cao et al., 2005). There are two aspects of information quality which are, informativeness and security. Here, informativeness means the ability to inform in a timely, accurate, useful and complete manner. On the other hand, security means the level of confidence that the customers have about any act on the website such as online payments. The main objectives of information quality are to provide relevant, accurate, updated, and complete information based on which information quality is measured.

There are a wide range of information quality measurements that have been used to address the issue of information quality in various organisations and the IS that they utilise (Zheng et al., 2017). For instance, some researchers characterise accuracy, (implies that the recorded value is in accordance with the real value), timelines (implies that the recorded value is not obsolete), fulfilment or completeness (implies that all estimates for a specific variable are recorded), and consistency (implies the portrayal of the information values is the same in all cases) as the principal information processing measurements (Hajli et al., 2017, Filieri et al., 2017, Zheng et al., 2017).

Information quality is a fundamental requirement when designing an eCommerce website. In the eCommerce context, it is a significant factor that influences user satisfaction and user loyalty (Huang and Benyoucef, 2013, Hsu et al., 2012). Therefore, information quality should

be adjusted in a way that empowers consumers to utilise their own particular measuring sticks to quantify the quality (Zheng et al., 2017). There have been various research efforts made to address information quality issues. Some researchers have attempted to determine this issue through actualising quality standards in applications (Hajli et al., 2017, Filieri et al., 2017, Zheng et al., 2017), while others have attempted to present data at databases (Lee et al., 2016).

2.5.10 Reputation

In a broad sense, reputation connotes the opinion of a person about something or someone (Sabater and Sierra, 2001a). It is a general estimation that an individual makes regarding the character or qualities of an entity (Sabater and Sierra, 2001b). According to Herbig et al. (1994), reputation is the measure of the continuation of the consistency of an attribute of an entity over a period of time. Reputation can also be defined as the level to which customers believe a vendor is professional, competent and honest (Teo and Liu, 2007). For an organisation, it takes time, effort, and long-term investment to build reputation. Reputation provides information about the past behaviour of an organisation. In the context of the corporate world, reputation takes into account a company's commitment to its stakeholders and the level of transparency that is built up based on the relationship (De la Sabaté and de Puente, 2003). Alternatively, according to Deephouse (2000), reputation is the process of receiving positive attention, which is considered as an intangible asset that gives a company competitive advantage from the strategic management point of view.

Reputation is a multidimensional concept and it can be manifested in different ways, such as 'business reputation' and 'social reputation' (De Castro et al., 2006). In the business context, it is a valuable intangible asset; whereas, in the marketing context, reputation is formed based on how the customers view a brand (Chun, 2005). In the social context, an individual possesses reputation by default, which is inherited from the group that the individual belongs to; whereas, in an organisational context, reputation is evaluated based on the stakeholders' perceptions about any organisation (Chun, 2005). In social networks, reputation might come from two sources: direct user interaction and information given by other users based on their previous experience (Sabater and Sierra, 2002). However, According to management literature, perceived quality and market prominence are the two dimensions of reputation (Boyd et al., 2010).

According to Morrison and Firmstone (2000), reputation functions as trust, which is established once a contract is made between two parties where performance is measured against the promises made earlier. According to Ganesan (1994), reputation is positively related to a customer's trust in the vendor. Therefore, reputation ensures that people have enough confidence to trust an entity about—which people do not have enough knowledge about—whether it is able to act or not according to expectations. In the context of eCommerce, reputation means the collective trustworthiness resulted from the collective rating by online community members (Li et al., 2013). Therefore, a vendor's reputation is a major concern for customers before making a decision to shop online with them (Wang and Lin, 2008).

For eCommerce websites (e.g. eBay, Yahoo! and Amazon), having a reputation-based system is highly significant (Lee et al., 2016, Lin et al., 2017, Xiong and Liu, 2003). For this reason, in the eCommerce context, reputation works as a social network based system (Sabater and Sierra, 2001b). However, if companies get negative reviews it can harm the company's reputation and that can be significantly bad for the company. The key channels of sCommerce reputation include forums, bloggers, customer reviews and industrial reviews (Lin et al., 2017). For instance, eBay uses a reputation management and information system known as the "Feedback Forum" which allows members in a deal to rate each other with positive comments "+1" or negative comments "-1" and in case of no comments or neutral a "0" is given. All ratings that an eBay consumer has acknowledged from other eBay consumers are summed up to shape a consumer "Feedback" rating number.

2.5.11 Online Shopping Experience

OSE is a function of the purchases that a customer has made previously (O. Pappas et al., 2014). While a good experience with online shopping influences the future purchasing intentions by bringing positive attitudes and self-efficacy to the shoppers, a bad experience with online shopping creates the opposite response. In OSE, both utilitarian value (e.g. usefulness) and hedonic value (e.g. enjoyment) are considered significantly. According to the marketing literature, OSE consists of both utilitarian value and hedonic value (Chiu et al., 2009a). While in the offline shopping experience context, shoppers are inspired by the process and enjoy the shopping experience itself, in the OSE context, shoppers may find it difficult to enjoy the shopping experience itself because of the absence of sensory effects

resulting from the product-trial experiences (Rohm and Swaminathan, 2004). The shopping experience can vary because of the social context, personal relationships and the products and services (Trevinal and Stenger, 2014). According to (Wolfenbarger and Gilly, 2001), OSEs can be different even when a customer purchases the same product.

As the online shopping is interactive in nature, shoppers mostly concentrate on the navigation experience, therefore, not enough attention is given to anything else related to shopping experience (Trevinal and Stenger, 2014). Because of the interactive nature of online shopping, the social dimension is significant as a social companion can influence the shopping emotions and create more hedonic experiences (e.g. enjoyment). According to Trevinal and Stenger (2014), there are four dimensions in OSE they are: (1) the physical dimension (e.g. web design); (2) the ideological dimension (e.g. privacy); (3) the pragmatic dimension (e.g. shopping practices and tools); and (4) the social dimension (e.g. online social interaction). According to Bauer et al. (2006), in the OSE, the offline factors such as fulfilment and delivery are important as well as the social and website interactions.

OSE is influenced by a customer's online purchasing behaviour (Doolin et al., 2005). Shoppers are increasingly getting choosier on the web. They have the power of choice and a world of enthusiastic online retailers available to them. In the event that one online store does not satisfy their requirements, they simply go to its competitors. Therefore, if a company's website pages load slowly or the company product details are not clear, a client can easily shop somewhere else (Bilgihan et al., 2016).

In the context of customer experience and online shopping habit, habit refers to the habit of spending on the sCommerce website over the Internet. The idea of customer habit is not new to the eCommerce literature and has been studied in the retailing context. Numerous experimental studies show that retention may be gained when a customer habit exists. Therefore, customer habit is considered as a vital factor in explanation or repeated customer purchases (Gan and Wang, 2017, Kawaf and Tagg, 2017). However, earlier investigations on customer habit focused on the historical dimension of the hypothesis only (for example, the frequency of the customer behaviour) with slight examination of the context in which a customer habit is practised (Liu et al., 2016).

The sCommerce channel signifies an advanced shopping situation with numerous unique characteristics, for instance, elasticity of navigation and interactivity. The innovation of online shopping suggests that some of the properties of the factors of online repurchase might

be dependent upon the growth of customer habit when using any online sCommerce channel (Bilgihan et al., 2016). According to a recent study on sCommerce and eCommerce, online stores consider the progress of customer online shopping habits to be a key influence on website sales (Gan and Wang, 2017). Thus, it is important to inspect the role of customer habit in changing OSEs and its impact on online repurchase in individuals.

2.5.12 Word of Mouth (WOM)

WOM is a marketing technique for new customer acquisition. It is an important social force (Kozinets et al., 2010) which is pervasive and intriguing (Goldenberg et al., 2001). According to Arndt (1967), WOM is defined as the face-to-face oral communication between receivers and communicators where the communicators are perceived as independent of any product or service regarding any brand. In the process of WOM, the receivers consider the communicators as impartial and independent of corporate influence. For this reason, WOM is especially useful when any product or service needs to be recognised by experience and trusted qualities (Zeithaml, 1981). WOM influences a consumer to consider a brand more than advertising does, even though the spending for advertising increases over time (Bughin et al., 2010).

In the marketing context, there are three forms of WOM which are: experiential, consequential and intentional. Experimental WOM results from a consumer's direct experience gathered from using any product or service. This WOM is also known as 'organic WOM' as the communicator is not influenced by any marketer (Kozinets et al., 2010). On the other hand, consequential WOM happens when a consumer gets exposed to traditional advertising and pass its message about it to others. And intentional WOM occurs when the marketers approach celebrities to seek their endorsements to promote a brand or product publicly.

There is an important dimension of WOM which is known as "WOM equity" (Bughin et al., 2010). Here, the equity dimension is used to measure a brand's power to create high-impact recommendations to influence the consumer's purchasing decision. Considering the equity dimension, a consumer is more likely to purchase a product if it is recommended by a family member or friend (i.e. high-impact recommendation) rather than by a stranger (i.e. low-impact recommendation). In WOM, the communicator's message can be analysed from three perspectives which are: (1) accordance of a communicator's view with others' views

regarding a brand; (2) consistency of a communicator’s view about a brand over time; and (3) distinctiveness of a communicator’s view about a brand in relation to other focal brands in a similar category (Laczniak et al., 2001).

Traditional WOM is the best way to making your item known (Ismagilova et al., 2017). However, in the context of eCommerce, WOM is also known as electronic WOM (eWOM), which involves both economic and social activities (Hennig-Thurau et al., 2004). In eWOM, there are several important components (see Figure 2.15), such as email, personal website blogs, tweets, a platform for sharing videos, social media, and reviews of online stores. Similarly, WOM is an important part in online consumer interactions among online communities in social networks (Brown et al., 2007).

Just as studying the impact of WOM in real life is important, it is also important in the context of sCommerce websites as there are many social cues, which are available in these websites to help customers to spread their WOM message anywhere on the Internet and anytime they wish.

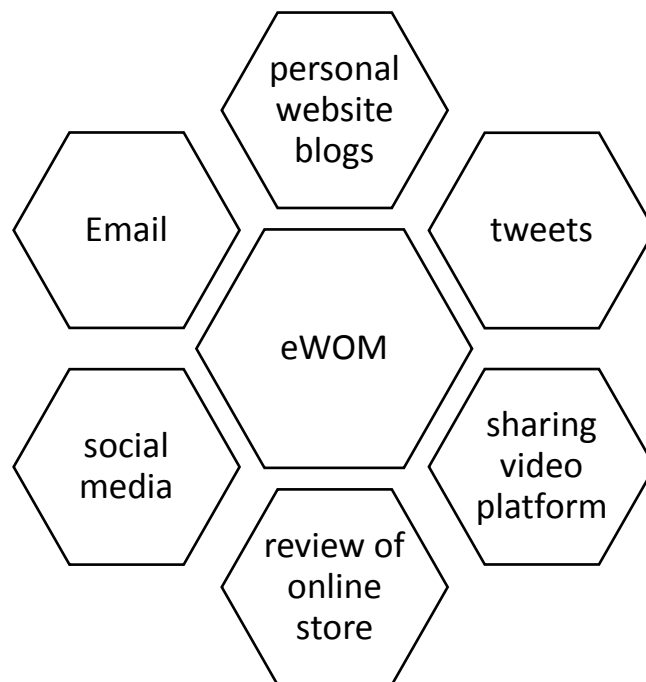


Figure 2.15 Factors of eWOM (Sharma and Pandey, 2011)

2.5.13 Communication

Communication is a method of engagement and it is central to human life. It can be defined as the verbal exchange and reciprocation of thoughts or ideas between people where information is transmitted (Littlejohn and Foss, 2010). Communication means the exchange and reciprocation of effects among individuals with various levels of social distance (Rogers, 1999). On the other hand, Berelson and Steiner (1964), indicated that, communication is a process in which information, ideas, thoughts, emotions, skills, are transmitted using symbols, voice, words, pictures, figures, and graphs (Dance, 1970). In the political context, the communication ability of a leader is a driving factor for engagement, whereas, in the organisational context, it is a critical factor for employee engagement (Welch, 2011). According to researchers from the field of psychology, sociology, or business, communication is a process, which is important for information transmission and it entails understanding various people's behaviours in reciprocating and interpreting messages (Littlejohn and Foss, 2010).

In the eCommerce context, electronic data exchange and information transmission occur through computer-to-computer communication (Molla and Licker, 2001). Companies use different channels of communication such as: (1) live chat to provide free and 24/7 support to their customers; (2) email, which support the after-hours feedback from the customer or which allows companies to send important information to their customers; (3) phone support, calling or receiving phone calls is also considered to the important element of communication; (4) advertisements, which are considered to be the most expensive mode of communication, but very effective; (5) blogs, which represents a suitable platform for companies to converse with their consumers; (6) customer generated—many companies provide a communication platform, where users can put their feedback and suggestions and are able to answer other customer's questions (i.e. forums) (Cheng et al., 2017, Munawar et al., 2017, He, 2017).

In sCommerce marketing, communication is essential for networking. Furthermore, sCommerce communication is significantly more than only a collection of words. Beyond any doubt what a company or its customers say is essential. Research suggested several trends of sCommerce communication in order to take full advantage of this factor (Zhou et al., 2013, Cheng et al., 2017, Munawar et al., 2017, Jacobsen and Barnes, 2017, He, 2017). Different strategies of communication in the sCommerce context are discussed below.

Providing Clients Reviews

Clients reviews—in the context of sCommerce—can have a huge effect on the way individuals buy things on the web. An examination by Hubspot demonstrates that individuals are 75% more likely to buy an item when referred by a friend on an sCommerce platform. More than 90% of individuals take proposals from friends and 70% trust customer audits more than promotions (Munawar et al., 2017, Cheng et al., 2017). Therefore, to guarantee that company clients refer their brand to their friends on various sCommerce networks, companies have to give them incentives, such as discounts, and must engage with them regularly.

Offers on Social Media

Another approach, which a few leading brands and business people have used, is to offer products or services directly on Twitter, Facebook, Pinterest and other sCommerce utilising web-based social networking store applications. This enables a company to let consumers to buy goods, while remaining on their preferred sCommerce website. Disposing of the extra step of directing clients from sCommerce to another online store enhances the client's experience and makes the purchasing procedure more helpful (He, 2017).

Displaying Targeted Ads

Targeted ads on social media, such as Facebook can promote the business. In 2017, Facebook reported that its revenue came from ads which represent 98% of the company (Fortune, 2017). In the context of communication in sCommerce, researchers have suggested that communication in the field of sCommerce is much more about the collection of different words, it is important what companies say to their customers (Cheng et al., 2017, Munawar et al., 2017); but more importantly is how they say it, when they say it, what the company emphasises and how consumers perceive it (Cheng et al., 2017).

Stop Ignoring Unpopular Social Channels

Most business organisations always target the world's leading social media (e.g. Facebook) channels to advertise and ignore the other channels. In this way, an organisation may lose customers, as every social media has a group of people or community. Therefore, organisations should advertise their business on every relevant social channel.

Thus, it is important to study the impact of communication in the sCommerce context, which is different than other contexts (eCommerce).

2.6 Summary

This chapter presented the literature reviewed on eCommerce, sCommerce, customers' loyalty and the factors that affects (both directly and indirectly) customers' loyalty to sCommerce websites. This chapter presented the customers' loyalty approaches and identified the appropriate approach for this study. The above literature review has helped in identifying the sCommerce related factors for use in a conceptual framework to continue this study from the perspective of the research gap mentioned earlier in the introduction. The next chapter will present the theoretical background, the research model and hypotheses as well.

Chapter 3 **The Theoretical Framework and Research Hypotheses**

SCommerce has rapidly appeared as a new area of investigation for both researchers and businesses (Lu et al., 2016, Zhang et al., 2014, Hajli, 2015a).

Literature shows that sCommerce is a type of eCommerce that uses social media and is a convergence between the offline and online environments (Wang and Zhang, 2012a). In a wider aspect, sCommerce employs Internet technology-based channels and media that allow people to contribute in the electronic marketing, buying, comparing, selling, curating and sharing of goods and online services in both offline and online eMarketplaces (Lu et al., 2016, Zhang et al., 2014, Hajli, 2015a).

First, this chapter provides the theoretical background. It then presents the theoretical concepts used in the research model and discusses their relevance to sCommerce and customer loyalty. Finally, it presents the research model as well as the research hypotheses and their justification.

3.1 Theoretical Background

This study draws on social presence and trust theories as well as the updated IS success model of Delone and McLean (2003) for the following reasons: first, these theoretical approaches and this model helps to investigate customer loyalty in sCommerce as other studies only focus on customers' intentions to use sCommerce websites. Second, many studies have utilised various theoretical approaches to study consumer attitudes in the eCommerce and e-service contexts (Gefen and Straub, 2004, Hassanein and Head, 2007, Cyr et al., 2007), yet social presence theory has yet to be used to study customer loyalty in the sCommerce context. It was anticipated that these theoretical approaches and this model would assist to identify the factors that influence customer loyalty in sCommerce. All three of these theories were detailed in Chapter 2. As was evidenced by the literature review, each of these three theories are clearly relevant to understanding how an sCommerce website can potentially influence the customer loyalty of the people using that website. The following three sections summarise that potential influence.

3.1.1 Social Presence Theory

As was discussed in the literature review, social presence theory examines the way that an sCommerce website can project feelings of human warmth and friendliness to the user so that the user feels as though they are part of a community and that they feel the presence of other users. As was seen in the literature review there has been a small amount of empirical research on whether SP can affect customer loyalty (Cyr et al., 2007, Mäntymäki, 2009). In addition, there is also theoretical reasoning as to why SP should influence customer loyalty on a sCommerce website. The combining of both the theoretical and empirical data to date indicates that it is worthwhile to examine the influence of SP on customer loyalty to sCommerce websites.

This study also contends that SP is important to the research question because that is what distinguishes sCommerce from eCommerce. sCommerce differs from eCommerce in terms of social features. It adds recommendations, reviews, ratings and other social features and it is exactly the influence of these social features, which distinguishes sCommerce from eCommerce.

3.1.2 Trust Theory

Trust theory concerns the computational and behavioural trust that exists between people, organisations, computers, and networks. Liang and Turban (2011) claim that trust theory can be used to study sCommerce research issues. It is critical to study trust in the context of sCommerce (Hajli, 2013), as it relates to the sharing of information between customers in sCommerce (Yadav et al., 2013). Trust may be a challenge for sCommerce as it is in eCommerce (Hajli, 2012b). As trust theory has been used to interpret social behaviour in social science, it should be appropriate for use in studying sCommerce (Caverlee et al., 2010).

Therefore, it is worthwhile to examine that if trust has an effect on customer loyalty in the sCommerce context.

3.1.3 Customer Satisfaction - The Information Systems Success Model

Delone and McLean's IS success model— is the most cited IS success model and represents a staple of IS success research (DeLone and McLean, 1992, Delone and McLean, 2003).

In their original work, DeLone and McLean (1992) indicated that information quality and system quality impact satisfaction and user intention to use a system. Delone and McLean at a later date Delone and McLean (2003) have updated their model to include service quality in addition to information quality and system quality as factors in the model. In this updated model, information quality, system quality, and service quality are conditions for success in IS. These constructs can increase user usage and satisfaction, which in turn is expected to increase net benefits. Delone and McLean (2003) argue that their success model can be effectively applied to measure success in eCommerce.

Drawing on the updated IS success model of DeLone and McLean, this study investigated the impact of information quality, system quality, and service quality on customer satisfaction as well as the relationship between customer satisfaction and customer loyalty, in the context of sCommerce as an extension of eCommerce.

3.2 Research Model and Development of Hypotheses

As was seen from the literature review, and the high-level analysis, there are three theoretical components that arise from the literature, these are customer satisfaction, trust and SP.

As the literature review has shown, customer satisfaction and trust have been researched in several studies but SP has not. This study accepts that SP is important because it is what distinguishes sCommerce from eCommerce. The issues of customer satisfaction and trust are just as important for traditional eCommerce websites as sCommerce websites.

People have to be satisfied with their user experience through service quality, system quality and information quality. This is true for sCommerce websites as it is for eCommerce websites. In terms of trust, the Dell website (an example of a traditional eCommerce website) should be trusted the same as eBay, Amazon or any other sCommerce website. Given their importance as factors for customer loyalty in traditional eCommerce websites, it was clear that they needed to be included in the research model.

In terms of SP, a traditional eCommerce website does not attempt to build a feeling of SP, instead it focuses on providing an efficient means of conducting transactions and providing information. However, sCommerce websites such as eBay or Amazon, present multiple avenues for the user to feel SP such as reviews, recommendation, rankings and the sharing of purchases on social networks. These social features (social cues) are very important for many users. Therefore, it is important for sCommerce websites to have SP because it influences

their customers' loyalty. Therefore, it was decided that SP should be included in the research model and subsequently tested by the survey.

SCommerce websites need to meet all the existing criteria of eCommerce websites and the literature indicated that the criteria that was related to trust and customer satisfaction were reputation, OSE, WOM, communication, service quality, system quality and information quality.

The literature did show some other factors, however, the overall strength from the literature of their importance to the eCommerce environment was not strong. These are the factors that came out from the literature that had a reasonable level of strength.

Based on the above discussion, the following constructs have been selected for this study's examination: service quality, systems quality, information quality, reputation, OSE, WOM, and communication as they relate to customer satisfaction, trust, SP, and customer loyalty in sCommerce. Liang et al. (2011) claim that studying the three dimensions of website quality (service quality, system quality, information quality) is important to any sCommerce study. According to Jarvenpaa et al. (2000), the reputation of a business is a critical factor that impacts on customer trust. OSEs have also been noted as one of the most important factors that influence customer trust in online shopping environments (Hajli, 2012a). Furthermore, WOM has been found to have a positive impact on customer trust (Kuan and Bock, 2007, Kim and Prabhakar, 2000), and communication and is considered to be an important construct in building customer trust in sCommerce (Park and Kang, 2003, Moorman et al., 1992). Two dimensions of SP were considered in this study: the SPW, and the SPO (Lu and Fan, 2014).

The research model is depicted in Figure 3.1. The hypotheses are listed and justified below.

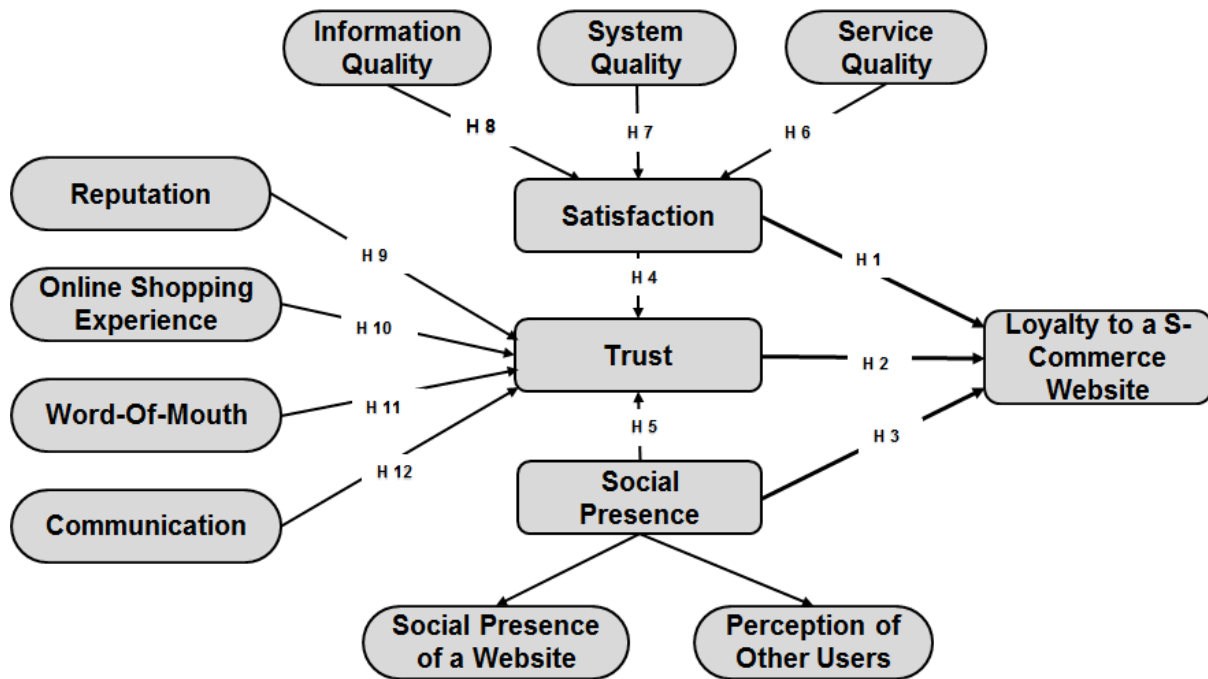


Figure 3.1 Research Model

3.3 Hypotheses

This section presents the twelve hypotheses that arose from the research model and that were tested by the structural equation model that was developed from the survey.

3.3.1 Hypothesis 1. The level of customer satisfaction positively influences customer loyalty to a sCommerce website.

Justification of Hypothesis

In this hypothesis, customer satisfaction was considered as key to retaining an sCommerce website customer. Customer satisfaction refers to the level of disappointment or pleasure experienced when comparing a product or service's perceived performance in relation to the sCommerce website user's expectations.

As was seen in Section 2.5.7, the literature shows a positive association between customers' levels of satisfaction and customer loyalty. A large number of empirical studies have shown customer satisfaction to lead to customer loyalty. For example, Ribbink et al. (2004a) propose customer satisfaction to be the most important factor in influencing customer loyalty. It has been suggested that there is a strong relationship between satisfaction and loyalty (Harris and

Goode, 2004). In their study conducted on eCommerce, Kim et al. (2011) found satisfaction to positively influence loyalty. Researchers have also investigated the relationship between satisfaction and loyalty in the B2C eCommerce context and found satisfaction to have a positive impact on loyalty (Chiu et al., 2009b, Gong-min, 2010, Akbar and Parvez, 2009, Pai and Tsai, 2011). Therefore, it is reasonable to expect a positive relationship to exist between customer satisfaction and customer loyalty in the context of sCommerce.

3.3.2 Hypothesis 2. The customer's level of trust positively influences customer loyalty to a sCommerce website.

Justification of Hypothesis

Trust, in terms of sCommerce, needs to be considered because trust is likely to induce customer loyalty. In this hypothesis trust was considered to be the degree of customer confidence in an sCommerce website. Several previous studies have examined the impact that trust has on eCommerce. Anderson and Srinivasan (2003) stated that if an online shopper's trust in a website is lost, then it is unlikely that they will return to the website even if they favour certain aspects of the website over those of other sites. It has been found that the result of gaining high customer trust is high customer loyalty (Markey and Hopton, 2000). Markey and Hopton (2000) found trust, not price, to be the most important factor leading to customer loyalty towards an online retailer. Therefore, trust should not be ignored in any examination of customer loyalty. Singh and Sirdeshmukh (2000) indicate that customers in an online environment prefer to use online retailers they trust due to the high risk of online transactions. In the context of sCommerce, the impact of trust has been investigated by several researchers (Hajli, 2012b, Kim and Park, 2013, Shin, 2013). Hence, the above hypothesis was proposed.

3.3.3 Hypothesis 3. The level of social presence positively influences customer loyalty to a sCommerce website.

Justification of Hypothesis

Social presence can be defined as the extent to which a medium allows a user to experience the presence of other human beings (Fulk et al., 1987). From the perspective of an online environment, it has been characterised as the ability of media to convey sociability and human warmth (Cyr et al., 2007). While researchers have studied SP in the context of

eCommerce, little research has been performed in the sCommerce context. Appendix XXX provides a summary of the research on SP relevant to electronic activities, which indicates a lack of research on the impact of SP on customer loyalty in the sCommerce context.

While there has been little direct examination of SP's influence on customer loyalty, there has been some work in related areas. Websites that include socially rich texts, pictures, personalised greetings, human audio and video, and intelligent agents have been shown to demonstrate increased interaction among users and therefore possess an increased sense of SP (Hassanein and Head, 2006). Moreover, it has been shown that website technologies such as recommendations and consumer reviews increase users' senses of social interaction (Kumar and Benbasat, 2006). It would therefore appear logical to assume that features of sCommerce websites, such as recommendations, reviews, rankings, and sharing purchasing information with other users through SNSs, can increase customer perceptions of SP.

Cyr et al. (2007) found the SPW to have a direct impact on e-loyalty to a B2C e-service website. Mäntymäki (2009) found that the SPW influenced the constituent factors of customer loyalty. In addition, Lu and Fan (2014) indicate that people can influence and be influenced by other people's—who are known and trusted— knowledge and experiences. Godes et al. (2005) suggest that social interaction with other users can affect the beliefs, attitudes, and behaviours of consumers. This is supported by Chen et al. (2011) who found that the observation of other users' online purchasing actions plays a major role in shaping customer beliefs and behaviours. Therefore, it is likely that SP—with its two dimensions— will impact customer loyalty positively. Hence, the above hypothesis was proposed.

3.3.4 Hypothesis 4. The level of customer satisfaction positively influences customer trust of a sCommerce website.

Justification of Hypothesis

It is proposed that a customer's level of satisfaction with an sCommerce website has a positive influence on the customer's trust of that sCommerce website. Customer satisfaction is one of the recognized antecedents of trust in the past literature (Garbarino and Johnson, 1999). A large-scale study (Ranaweera and Prabhu, 2003) found that while trust and customer satisfaction both had direct effects on customer loyalty, customer satisfaction had a significant interaction with trust. Liang and Chen (2009b) also found that customer satisfaction has a significant effect on trust in online transactions. A positive relationship

between satisfaction and trust in the e-tailing industry has been demonstrated (Pavlou, 2003). Moreover, in the mobile commerce context, trust is affected by satisfaction (Yeh and Li, 2009). Therefore, it is likely that satisfaction will have a similar impact in the sCommerce context. Hence, the above hypothesis was proposed.

3.3.5 Hypothesis 5. The level of social presence positively influences customer trust in a sCommerce website.

Justification of Hypothesis

It is proposed that the SPW increases a customer's trust in the sCommerce website. There is some literature that supports this hypothesis. A high perception of SP on an apparel website was found to positively impact customer trust (Hassanein and Head, 2006). Several studies on online experiences have suggested that a positive relationship exists between the perception of SP, user trust and intentions (Kumar and Benbasat, 2002, Karahanna and Straub, 1999).

On a more general level, Lu and Fan (2014) indicate that people can influence and be influenced by other people's knowledge and experiences, and Godes et al. (2005) suggest that social interaction with other users can affect the beliefs, attitudes, and behaviours of consumers. Hence, the above hypothesis was proposed.

3.3.6 Hypothesis 6. The level of service quality positively influences customer satisfaction with an sCommerce website.

Justification of Hypothesis

Service quality, has been defined as a combination of customers' perceived expectations of the quality of service and the actual quality of service that is delivered (Turel and Serenko, 2006). As was discussed in Section 2.5.7, service quality is a complex concept with several elements.

A number of studies have found a positive link between service quality and customer satisfaction. (Herrmann et al., 2000) found service quality to be an important influence on customer satisfaction, and several other researchers have also discovered a positive relationship between service quality and customer satisfaction (Brown and Chin, 2004, Zhu et

al., 2002). Service quality is considered to be very important in the eCommerce context (Pather et al., 2004). Molla and Licker (2001) postulate that support and service (or service quality) have a significant impact on customer satisfaction. In addition, (Delone and McLean, 2003) found the same relationship in their updated model of IS success. In an sCommerce study, Liu et al. (2011) found that service quality positively influenced the satisfaction of sCommerce users.

Based on the above information on service quality, it seems likely that service quality influences customer satisfaction in the sCommerce context. Hence, the above hypothesis was proposed.

3.3.7 Hypothesis 7. The level of system quality positively influences customer satisfaction with an sCommerce website.

Justification of Hypothesis

System quality refers to certain characteristics of a website, such as its availability, reliability and response time (Liang et al., 2011), which can overall be defined as the system's performance in delivering information and service. Using system quality as a measure of IS success in eCommerce, prior studies have indicated system quality to have a significant impact on individuals' perceptions of customer satisfaction (DeLone and McLean, 2004, McKinney et al., 2002). The positive impact of system quality on customer satisfaction in the social networking and eCommerce context has also been demonstrated in previous IS success studies (Delone and McLean, 2003, Rai et al., 2002, Ou et al., 2011b), and one study found the same relationship exists in the eCommerce context (Molla and Licker, 2001). Therefore, based on the above information on system quality in other contexts, it is logical to assume that system quality is likely to have a positive impact on customer satisfaction in the sCommerce context as well. Hence, the above hypothesis was proposed.

3.3.8 Hypothesis 8. The level of information quality positively influences customer satisfaction with an sCommerce website.

Justification of Hypothesis

Information quality refers to a customer's perception of the accuracy, completeness, and timeliness of the information on an sCommerce website in terms of product details, services, and transaction procedures (Kim et al., 2008, Fung and Lee, 1999a, Liao et al., 2006). The IS

success model of DeLone and McLean (1992) suggests that greater user satisfaction can be generated through high information quality. Molla and Licker (2001) also emphasised the importance of information quality for user satisfaction in eCommerce. The information quality/user satisfaction relationship suggested by (Molla and Licker, 2001) and (DeLone and McLean, 1992) has been validated by (Rai et al., 2002). Furthermore, Jaiswal et al. (2010) indicate that information quality plays an important role in influencing customer satisfaction in eCommerce. Therefore, based on the above information on information quality in other contexts, it is logical to assume that information quality will positively impact customer satisfaction in the sCommerce context. Hence, the above hypothesis was proposed.

3.3.9 Hypothesis 9. A firm's perceived level of reputation positively influences customer trust in an sCommerce website.

Justification of Hypothesis

Reputation refers to a customer's belief in the honesty and concern that a business has for its customers (Doney and Cannon, 1997). Evidence suggests that customer trust is generated by the perception of a good reputation (Kim and Park, 2013, Doney and Cannon, 1997). Park et al. (2012) state that online businesses should maintain a good reputation with their customers if they wish to maintain their trust. Customers have been shown to exchange information on the reputations of businesses, which serves to develop customer trust in any given business (Teo and Liu, 2007). Jarvenpaa et al. (2000) indicate that there is a positive relationship between customer trust and a business' level of perceived reputation in the online store context. Based on the above information on reputation in other contexts, it can thus be assumed that the reputation of sCommerce websites are likely to affect customer trust. Hence, the above hypothesis was proposed.

3.3.10 Hypothesis 10. Customers level of online shopping experience positively influences customer trust in an sCommerce website.

Justification of Hypothesis

There has only been a small amount of research looking at the relationship between online shopping experience and trust in the related website. Corbitt et al. (2003) was the only study found to directly examine the link. They found that sCommerce customers' website experience had a positive relationship with their trust of the sCommerce website. In related

work, Lee Rodgers and Nicewander (1988) argue that customer comfort with online purchasing in terms of risk is often high for customers who have had positive Internet experiences and this can imply that this is due to greater trust. In more general work, Hajli (2012a) argues that customer behaviours can be affected by their shopping experiences. Indeed, there is evidence that users of SNSs who have had good experiences have positive evaluations of such sites (Yap and Lee, 2014). Therefore, based on the above information on online shopping experiences of customers in other contexts, it is likely that customers' online shopping experiences will affect their levels of trust in the sCommerce context. Hence, the above hypothesis was proposed.

3.3.11 Hypothesis 11. Levels of positive word-of-mouth positively influences customer trust in an sCommerce website.

Justification of Hypothesis

WOM can be defined as the exchange of information and experiences between customers that helps them to make purchasing decisions (Park et al., 1998, Kim and Prabhakar, 2000). There has been little research examining the link between WOM and trust in either eCommerce or sCommerce environments. Kuan and Bock (2007) found that WOM plays a more critical role in building trust in online environments than offline environments in especially in the context of social networking. Lee and Kwon (2011) have argued that purchasing decisions based on the experiences of others result in high trust. Kim and Park (2013) have also argued that WOM can increase trust in sCommerce users.

Therefore, based on the above information on WOM in other contexts, it is logical to assume that customers of sCommerce websites are likely to trust the WOM of others, such as recommendations on SNSs. In addition, given the close relationship between many aspects of sCommerce (reviews, recommendations, social network sharing, all of which are forms of WOM) and WOM, this also reinforces the possible connection. Hence, the above hypothesis was proposed.

3.3.12 Hypothesis 12. Level of communication among customers positively influences customer trust in an sCommerce website.

Justification of Hypothesis

Communication refers to the creation and sharing of information between customers through formal and informal processes, and between sCommerce businesses and customers in order to reach a consensus on a decision (Moon and Lee, 2008). This is typically done through exchanges of information through the social features of sCommerce websites, such as reviews, recommendations, and ratings. While the existing research linking communication to customer trust is scant, it has been argued that communication may strengthen relationships between businesses and customers by increasing customer trust (Moorman et al., 1992). Furthermore, the sharing of experiences and information amongst customers has been shown to be a key factor for customer trust in online communities (Park and Kang, 2003). Therefore, based on the above information on communication between customers in other contexts and in the context of sCommerce, it appears logical to assume that effective communication is likely to be a factor for businesses to gain customer trust. Hence, the above hypothesis was proposed.

3.4 How this Study's Model is Different or Similar to Previous Studies' Models

There are some models in the sCommerce context that intersect or differ with this study's model. This section gives an attention to similarities and differences between the model evaluated in the thesis and existing studies that have used loyalty or closely related constructs such as continuance as a dependant variable DV and satisfaction, trust or social presence as independent variables IVs (Liang et al., 2011, Zang et al., 2014, Flavián et al., 2006, Pai and Tsai, 2011, Chiu et al., 2007, Kim and Park, 2013, Lu et al., 2016).

Liang et al. (2011) (see *Figure 2.2*) conducted an empirical study on a popular microblog to investigate how social factors such as social support and relationship quality affect the user's intention of future participation in sCommerce. They have two DVs, social commerce intention and continuance intention, however, this study have one DV. They study the direct effect between system quality and service quality, and continuance intention. The results indicate that social support and relationship quality affect the user's intention of future participation in social commerce.

Drawing upon the social presence theory, the study of Lu et al. (2016) (see *Figure 3.2*) theorizes the nature of social aspect in online sCommerce marketplace by proposing a set of three social presence variables, social presence of Web, perception of others, and social

presence of interaction with sellers. Their study has the same idea of studying social presence, however, this research studies SP from two dimensions only, SPW and SPO. Also, their findings suggest that social presence factors grounded in social technologies contribute significantly to the building of the trustworthy online exchanging relationships.

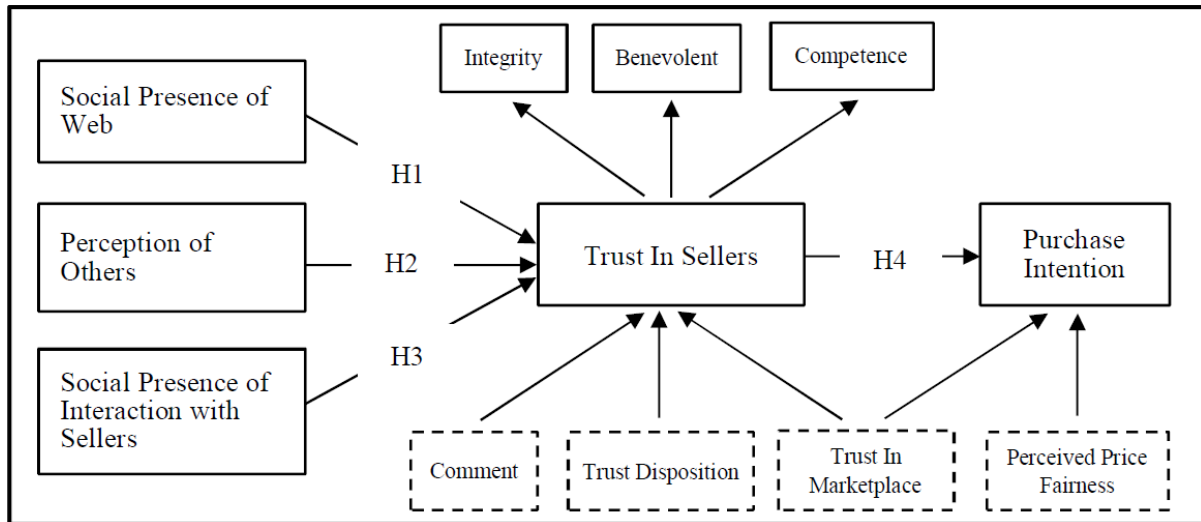


Figure 3.2 Research framework of the influence of SP, trust and sCommerce on purchase intention (Lu et al., 2016)

Zang et al. (2014) (see *Figure 3.3*) explored potential factors which contribute to customer loyalty in the online group-buying context. They proposed a research model included five factors which directly or indirectly affect customer loyalty of online group-buying. Their model is similar to this study's model in terms of DV, trust and customer loyalty relationship, customer satisfaction and customer loyalty, and service quality and customer satisfaction relationship. However, this study does not study the impact of switching cost on customer loyalty or structural assurances on trust.

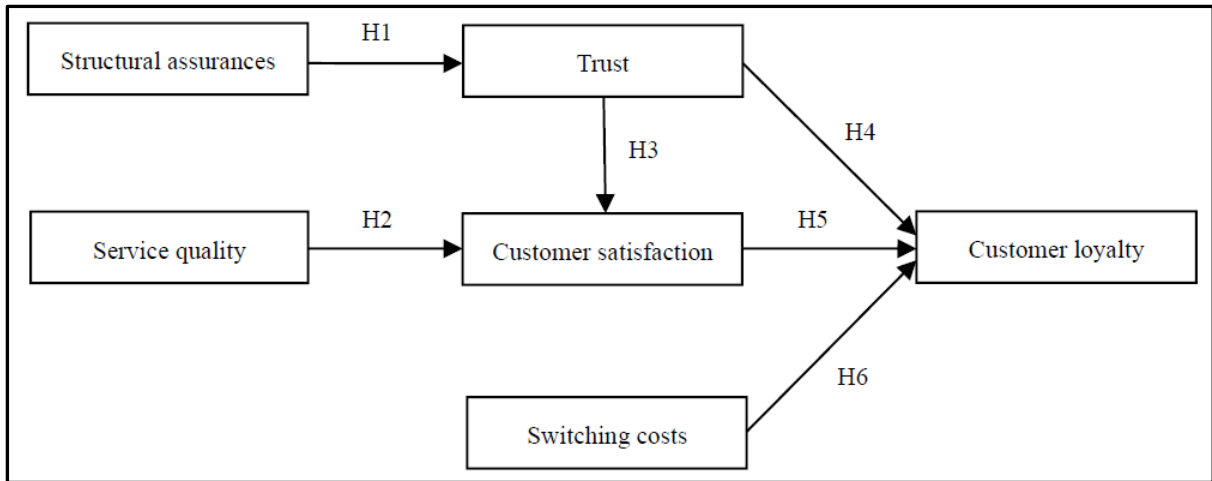


Figure 3.3 Research framework of antecedents of customer loyalty in online group-buying (Zang et al., 2014)

A study has been performed to determine the influence that perceived usability has on the user’s loyalty to websites that they visit (Flavián et al., 2006). The model of Flavián et al. (2006) (see Figure 3.4) similar to the current study’s model in terms of DV and trust and customer loyalty relationship, and satisfaction and loyalty relationship, satisfaction and trust. However, the usability relationships with other factors are not available in this study.

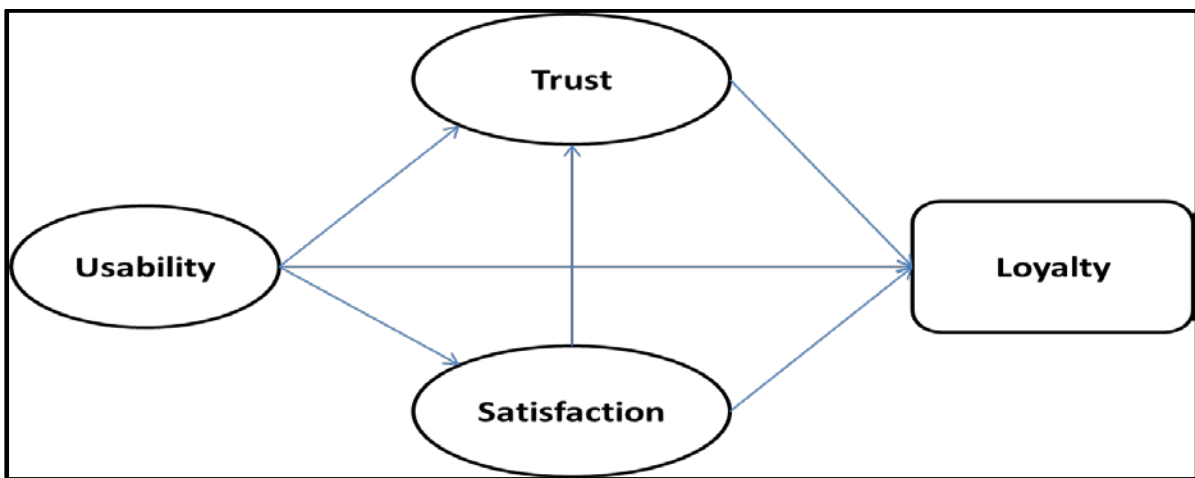


Figure 3.4 Research framework of the impact of perceived usability, satisfaction and trust on loyalty (Casaló et al., 2008)

Pai and Tsai (2011) investigated key mediating processes (via trust, satisfaction and identification) that underlie the relationship between virtual community participation and consumer loyalty intentions. Their study model (see Figure 3.5) is similar to this study’s model in terms of DV, and trust and loyalty relationship, and satisfaction and loyalty relationship. However, community participation and community identification factors relationships is not been investigated in the current study’s model.

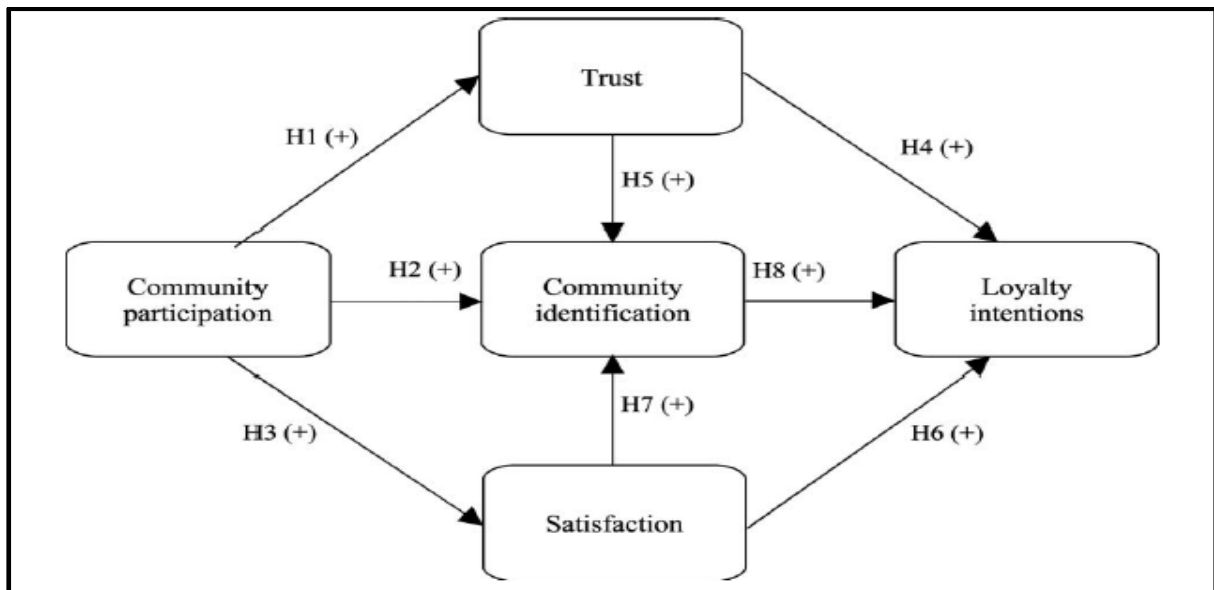


Figure 3.5 research framework of the influence of virtual community participation on consumer loyalty intentions (Pai and Tsai, 2011)

Finally, the research of Chiu et al. (2007) integrates the IS success model and fairness theory to construct a model for investigating the motivations behind learners' intentions to continue using Web-based learning. Their research model (see *Figure 3.6*) is similar to this study model in terms of DV, and the information quality, system quality, and service quality relationships with satisfaction, and satisfaction with continuance intention relationship. However, some relationships is not included in this research model such as system use relationship, distributive fairness and satisfaction relationship, procedural fairness and satisfaction relationship, and interactional fairness and satisfaction relationship.

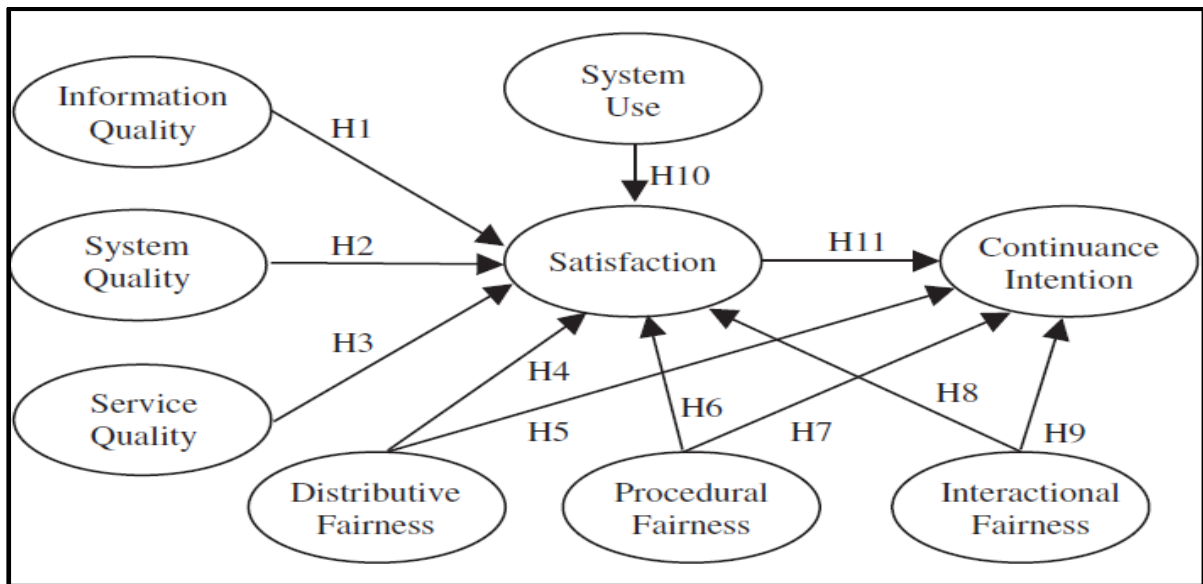


Figure 3.6 Research model for Web-based learning continuance intention (Chiu et al., 2007)

3.5 Summary

This chapter presented the study's theoretical background, the reasons behind using social presence and trust theories and the IS success model of DeLone and McLean (2003). It also presented the research model and the hypotheses arising from it. The next chapter will discuss the research methodology.

Chapter 4 **Research Methodology**

The previous chapters of this study have outlined the theoretical background and foundations of the study (Chapters 2 and 3) and built a research model (Chapter 3). This chapter will discuss the methodology that was followed in this study. This includes the research philosophy and paradigms that guided this study, the research method, the research design, sampling and population, instrument design process, online questionnaire design, and data collection.

This chapter is organised into nine sections. The research paradigm is explained in section 4.2. In addition to the research paradigm, the research approach is presented. Sections 4.3 and 4.4 explain research design, sampling, and population of the study. After that, the instrument design process is explained in section 4.5, which also includes an explanation of how the common method bias was avoided in this study. The online questionnaire design and data collection are explained in sections 4.6 and 4.7 respectively. The ethical approval process is described briefly in section 4.8. Finally, section 4.9 includes a summary.

4.1 Research Paradigm

The development of a research design entails the identification of an appropriate research philosophy (paradigm) that will help a researcher to study a given phenomenon. A research paradigm can be defined as a set of beliefs and assumptions that guide and instruct a researcher during his or her research project (Orlikowski and Baroudi, 1991, Krajewski and Ritzman, 2005). These beliefs and assumptions relate to the existence of reality (ontology). They refer to the perceived relationship with the studied object that is considered real (epistemology). They also refer to the procedures and tools for knowing that something should be considered real (methodology). These three fundamental principles (that is, ontology, epistemology, and methodology) that guide, inform, and shape a researcher's vision and action are collectively known as a research paradigm (Mertens, 2007, Guba and Lincoln, 2005, Guba and Lincoln, 1994).

In metaphysics, examining the nature or existence of reality is the main objective of ontology. Ontology's focus is on the question of what is real and how to determine if something is real (Guba and Lincoln, 2005, Orlikowski and Baroudi, 1991). An ontological assumption about reality is stating the type of evidence that is acceptable to assert that something is real.

Orlikowski and Baroudi (1991) stated that ontologically, a researcher can take the stance that the phenomenon being investigated has an objective reality, independent of the researcher's method of inquiry or that it has a subjective and malleable reality existing only through human action.

Epistemology refers to the way of acquiring knowledge about reality. In this context, the relationship between the researcher and the researched (that is, between the knower and the would-be known)—about what empirical data is being collected—is in focus (Mertens, 2007, Guba and Lincoln, 2005, Orlikowski and Baroudi, 1991). Researchers' interactions with what is being analysed is framed by their epistemological perspective and ontological viewpoint as well. Maintaining neutrality whilst working closely with the subject or topic that is being investigated, is the main issue of epistemology. That is, the question of objectivity in producing what is regarded as knowledge. Epistemologically, knowledge is considered constructed, either by following hypothetico-deductive reasoning (assumed to be non-value-laden) or by following non-hypothetico-deductive reasoning (value-laden).

Methodology is the third and final aspect of a research paradigm. It is the process researchers follow in conducting their research project to investigate a phenomenon (Guba and Lincoln, 2005, Orlikowski and Baroudi, 1991). One of its characteristics is its relationship with the strategic approach rather than specific techniques and methods employed for data collection and analysis. When conducting a research study, methodologically, there are three approaches: quantitative, qualitative, and mixed methods.

Although ontology, epistemology, and methodology are the main components of a research paradigm, there are other components. For example, axiology (the study of values and value judgments) and rhetoric (the art of speaking or writing effectively) (Creswell, 2009, Guba and Lincoln, 2005). However, Guba and Lincoln (2005) argued that these three components are the determinants of a paradigm based on the position of a researcher. In general, it can be said that there are three core paradigms: positivism, interpretivism, and critical realism. These paradigms help a researcher in addressing the research problem and guiding him or her to the appropriate methodology, data collection, and analysis. Moreover, the paradigms dictate the researcher's view of the world to conceptualise the problem in the first place (Sethi et al., 2001). The appropriate choice of paradigm will help in achieving a basic process for conducting a research study and avoiding errors in interpretation.

A researcher can be an independent observer or part of the subject being studied, and this can be determined by a research paradigm (positivist, interpretivist, or critical realist) (Carlsson, 2003, Guba and Lincoln, 1994, Orlikowski and Baroudi, 1991, Carlsson, 2005). Interpretivist and critical realist perspectives recognise the researcher as an essential element of the research study. However, a positivist approach necessitates the researcher to act as an independent observer. Based on the empirical findings, the positivist paradigm seeks to make reliable and valid generalisations about a theory (Myers, 1997, Myers, 2008, Guba and Lincoln, 1994, Carlsson, 2003, Carlsson, 2005). It poses research questions that refer to theory testing, extension, verification, or theory falsification.

Under the positivist paradigm, research questions begin with a testable hypothesis drawn from a theory. After that, this hypothesis must be either supported or rejected through data collection; this process is known as deductive reasoning (Orlikowski and Baroudi, 1991, Myers, 2008). Using the interpretivist paradigm, a researcher’s aim is to understand the phenomenon and to explain it. This study—which is often context-based—focuses on ‘how’ and ‘why’ questions that could be interpreted hermeneutically by qualitative data (Orlikowski and Baroudi, 1991, Walsham, 1993, Guba and Lincoln, 2005). Myers and Klein (2011) stated that this paradigm also subsumes contemporary critical social theory philosophy, which is a result of critical interpretivism. The critical realism paradigm, which combines the characteristics of both positivism and interpretivism, seeks to develop better understanding and comprehension of the mechanisms and structures used to investigate a phenomenon. Queries in this paradigm can be answered using the methods of positivism and interpretivism (Orlikowski and Baroudi, 1991, Creswell, 2009, Myers, 2008).

Table 4-1 Differences Between Research Paradigms

Factor	Positivism	Critical Realism	Interpretivism
Assumes objective reality	Yes	No	No
Testable Hypotheses	Yes	No	No
Focus on Quantitative data	Yes	No	No
Focus on qualitative data	No	Yes	Yes

Causal Mechanisms	Yes	Yes	No
External	Yes	Yes	No
Independent	Yes	Yes	No
Deductive approach	Yes	No	No
Inductive approach	No	No	Yes

4.1.1 Ontological and Epistemological Choice

The choice of ontology and epistemology among the three paradigms (positivism, interpretivism, and critical realism) is made regardless of which method or approach is better. In IS research, the research philosophy can offer deeply insightful perspectives on specific phenomena (Orlikowski and Baroudi, 1991). It is critical for researchers to understand the research paradigms and assumptions and execute their analysis in ways that reflect that knowledge.

This study (based on ontological, epistemological, and methodological perspectives of the three research paradigms) was guided by positivist ontological and epistemological perspectives for the following reasons: first, the purpose of this study is to develop a framework (theoretical model) that consists of testable hypotheses to evaluate the impact of multiple factors (customer satisfaction, trust, and SP) on customers' loyalty to sCommerce websites in order to help businesses using sCommerce to improve customer loyalty. IS research has been classified by Orlikowski and Baroudi (1991) as positivist when clear evidence is shown of formal propositions, quantifiably measured variables testing of hypotheses, and inference drawing about a specific phenomenon from the sample to population. This research is going to make inferences about the impact of customer satisfaction, trust, and SP on customers' loyalty to sCommerce websites in Australia, which is relevant to the classification above. As mentioned in Chapter 3, there are some theories and literature that the model is drawn from. This theoretical model is based on sCommerce and eCommerce literature and draws on SP and trust theories as well as the updated IS success model of Delone and McLean (2003).

Second, Creswell (2009) commented that results of a research study should be replicable and that the researcher and reality are separate regardless of who conducts the investigation. Therefore, in this study, the researcher followed these positivist assumptions as there were rigorous processes that followed (that is, literature survey, avoidance of common method bias, pre-test survey, and pilot study) to design and develop the survey instrument. After that, there was the process of building and establishing measurement and structural model validity through a rigorous validation procedure.

Third, the variable (phenomenon) being investigated in this study is customers' loyalty to sCommerce websites based on surveying sCommerce website customers in Australia. In order to quantify the measurement of variables, this study employs a questionnaire instrument. Moreover, this study uses statistical methods to test predetermined hypotheses and to assess the research constructs and variable relationships. Thus, model validation of the measurement and structural model requires assessment by using the structural equation modelling (SEM) technique. The ontological and epistemological assumptions of the positivist paradigm are in line with the above features.

Fourth, it has been argued that the degree of proof corresponding to the phenomenon that the research study results stand for, demonstrates a valid research (Hope and Waterman, 2003). This study is based on a positivist paradigm as it involves principles, beliefs, and knowledge that can be directly experienced and verified by independent observers (Hanson, 2008). Examining the relationship between factors (such as service, system, information quality, reputation, OSE, word-of-mouth, and communication) and customers' loyalty to sCommerce websites through hypothesis testing indicated that the positivist paradigm should be utilised.

The ontological and epistemological choices already made determines the research methodology selection (Hall and Howard, 2008). As mentioned above, positivist is the main paradigm of this study. Hypotheses derived from a theoretical model are tested and developed based on a literature review. Creswell (2009) stated that if the aim of a research study is to test a hypothesis through statistical methods, and generalising the findings based on numerical data, the quantitative method is the preferred option. Therefore, a quantitative survey approach was chosen for this study.

4.1.2 Quantitative Method

The development of a research design entails the identification of an appropriate research philosophy that will assist a researcher in studying a given phenomenon. The major approaches in the domain of research philosophy are positivism, realism, and interpretivism (Walsham, 1995). The core feature of positivism is its emphasis on the collection of objective data that is used to validate hypotheses and gain an understanding about a given area of study (Walsham, 1995). Wilson (2014) has pointed out that research design and research philosophy are interrelated concepts, and that the selection of a particular research philosophy necessitates the selection of a suitable research design. The selection of positivism as a research philosophy requires the adoption of a similar research design that corresponds with its focus on objectivity. The quantitative approach is based on the presumption that only those facts that can be empirically tested and analysed will be included. Given the objectivity of the data in this research, this approach was deemed appropriate for the current study.

The use of quantitative research offers various benefits for the researcher. The major advantages being in utilising only observable facts and the strong validity and reliability of a study's findings. Jayaratne (1983) argues that a quantitative method can provide bias-free results based on logical analysis and mathematical calculations. Moreover, quantitative research allows for a larger set of cases or respondents, allowing the researcher to gain access to various perceptions. In addition to this, the use of statistical methods to evaluate data illustrates a focus on objectivity and empirical inferences made from the collective information given by respondents. As far as the research reasoning decided upon for use in this study, deductive reasoning appeared to be an appropriate choice given the context. A quantitative research process involves the development of a theoretical construct that will be analysed through empirical means of investigation. The hypotheses constructed by the researcher are tested, and the findings suggest whether the researcher's assumptions are valid or not. This study aimed to involve as many sCommerce customers as possible. Therefore, the study's survey was web-based. The study employed a cross-sectional method for the survey, with a structured survey used to collect data.

4.2 Research Design

This study sought to develop a framework to assist businesses using sCommerce to improve customer loyalty to their websites through studying the impact of factors (service, system,

information quality, reputation, OSE, WOM, and communication) on customer loyalty to sCommerce websites in Australia. Figure 4.1 below reveals that this study is characterised by quantitative data collection and analysis. It employs a sequential exploratory design. Figure 4.1 shows the process that was followed, including the methods and related information for all the study's stages.

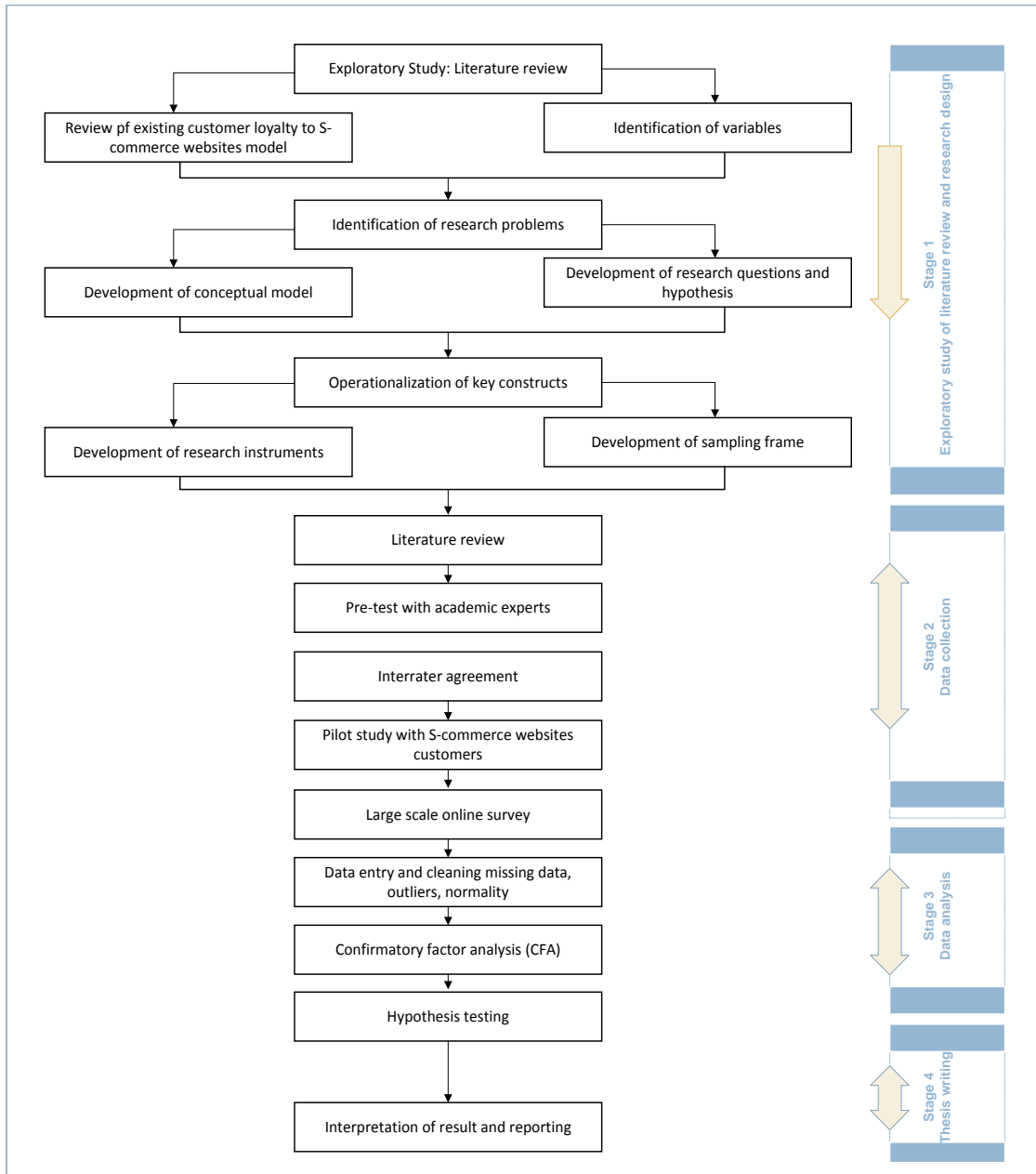


Figure 4.1 Research Process Diagram

An exploratory study occurred in the first stage, including an extensive review of the literature. The extensive literature review included all relevant information, such as existing models, existing theories, and the previous studies' information related to the sCommerce area, which is a relatively new and emerging area. The focus was primarily on the factors that impact customer loyalty to sCommerce websites. This included an investigation of the impact of satisfaction (which is impacted by service, system, and information quality), trust (which is impacted by reputation, OSE, WOM, and communication), and SP (which has two dimensions: SPW and SPO) on customers' loyalty to sCommerce websites. After this extensive literature review, the researcher was able to build the conceptual model, and to formulate the research objectives, questions, and hypothesis. After that, the researcher conducted the operationalisation of the chosen constructs in developing the study instrument. By the end of the first stage, the sampling frames were prepared for the next stage, which was the data collection stage.

In stage two, the instrument was developed and data was collected. In this stage, five activities were conducted to ensure correct research measures: a literature review, pre-test survey, interrater agreement, a pilot study, and a large-scale survey. The outcomes of these activities were used to refine the survey in terms of validity and reliability, and the survey was distributed to the identified respondents.

Stage three included using statistical methods for data analysis and processing. This involved a confirmatory factor analysis (CFA) and hypothesis testing.

4.3 Sampling and Population

There is an association between sampling units and research design. According to Tashakkori and Teddlie (2003), "sampling is the process of selecting a sample unit (a subset) from a larger population (a larger group) of interest to address the research questions". There are many types of sampling processes, such as probability sampling, purposive sampling, and convenience sampling. As this study employed the quantitative method as the primary approach, probability sampling was the most appropriate type.

There is also an association between probability sampling techniques and the quantitative method, and it includes randomly selecting a relatively large number of units from a population, or from subgroups of a population, where the probability of inclusion for each population member is determinable (Tashakkori and Teddlie, 2003). Guest et al. (2006)

stated that the objective of using probability sampling is to achieve representativeness (the degree to which the sample represents the population). There are different types of probability sampling, such as stratified, cluster, and random sampling. The random sampling technique was used in this study.

In this study, a quantitative method sampling approach was used by the researcher. The quantitative survey of online sCommerce customers' opinions regarding the measurement items was based on a probability sample of Australian customers of sCommerce websites. A stratified random sampling was used with all Australian states that constituted the strata of the population of Australia. The population of the study consisted of male and female customers of 15 sCommerce websites (Kogan, eBay, Amazon, Target, Booking.com, Big W, Harvey Norman, Dick Smith, Etsy, OO, Booktopia, Shopping.com Network, Deals Direct, Gumtree, and Harris Scarfe) who live in Australia. In order to reach these sCommerce websites, the researcher investigated about the most popular eCommerce websites in Australia as this study was also interested in traditional eCommerce websites that were enhanced with social features) (SmartCompany, 2015, EMarketer, 2015). After finding those eCommerce websites, each one of them was investigated. Any eCommerce website that had social features such as comments, reviews, and recommendations, was considered as an sCommerce website.

SEM was the main analytical method used in this study. When evaluated using a small sample size, covariance and correlations will be unstable (Tabachnick and Fidell, 2007). The Maximum Likelihood Estimation (MLE) method in SEM requires a sufficient sample size. It has been found that a sample size as small as 50 provides valid results, 100-150 ensures the stability of the MLE solution, and 150-400 is the preferred sample size (Hair et al., 2003).

Hair et al. (2010a) stated that the minimum sample size should be 500 if there are more than seven latent constructs in a study (the framework in this study had 11 latent constructs). However, Kline (2011) suggests that sample size should be determined by the rule of thumb, which is 10:1 or $N:q$, where N is the number of cases and q is the number of parameters. In this study, there were 12 constructs (including dependent constructs) and 58 items. The sample size of the ratio 10:58 would be 580 by multiplying 10 by 58. Based on the above two opinions, and in order to have sufficient sample size, the researcher decided on a sample size of 1000 sCommerce website users living in Australia.

4.4 Instrument Design

Based on the positivism paradigm choice, and in order to measure and quantify the research conceptual model, the research measurement steps had to be operationalised in the proper way. Consequently, rigorous research measurement steps minimise the potential for errors. One option that helps to minimise measurement error involves drawing from existing validated and developed instruments through a rigorous research plan. A well-known research plan was proposed by Churchill (1979). Churchill’s plan involves defining constructs, generating a sample of items for each construct, pre-testing the survey using a panel of experts (POE), and piloting the study. This process has to be done before commencing the data collection in order to create a valid instrument.

This rigorous process helped in operationalising the conceptual research model in Chapter 3. Moreover, by minimising the measurement error using these rigorous procedures for instrument development, the content validity of the instrument was increased. The four steps will be discussed in the following sections.

4.4.1 Step 1: Specify the Domain of Constructs

The purpose of specifying the domain is to provide a clear meaning and definition of the constructs through indicating their dimension or sub-elements (Lewis et al., 2005, Churchill, 1979). Domain and factors are specified through an extensive literature review and relying on the existing instrument when appropriate. The dominant domain in this study is sCommerce. Most of the factors were created through an extensive literature review on sCommerce. Table 4.1 below shows each construct and the related definition and references.

Table 4-2 Construct Definitions Under sCommerce Domain

Construct	Definition	References
Customer Loyalty	A favourable attitude towards a particular sCommerce website expressed by the intention to continue using it (this usage includes browsing it, purchasing from it, creating content, sharing the purchase with other friends in a particular SNS, and	(Liang et al., 2011), (Chao-sCommerce website expressed by the Min et al., 2007), (Zeithaml et al., 1996), (Rafiq et al., 2013), (Wang et al., 2011), (Guo and Liu, 2010), (Kim and Park, 2013)

	recommending that others use it through some integrated social features such as comments, recommendations, and ranking).	
Customer Satisfaction	A customer's feeling of either gratification or frustration produced from a comparison between the perceived expectation of a specific product/service of an sCommerce website and its perceived performance.	(Brockman, 1998), (Flavián et al., 2006), (Janda et al., 2002), (Severt, 2002), (Smith and Barclay, 1997)
Trust	Refers to customers' beliefs and willingness to rely on an sCommerce website for transactions.	(Hassanein and Head, 2007), (Brown and Jayakody, 2008), (Gefen and Straub, 2003), (Chiou and Pan, 2009)
Social Presence:	Refers to the combination of both the SPW and the SPO dimensions below.	
Social Presence of the Website	Refers to perceptions by the user that the website is sociable and warm, through realising the social cues (recommendations, reviews, rankings, and sharing the purchase with others through SNSs) that the customer sees on the sCommerce website.	(Gefen and Straub, 2003), (Cyr et al., 2007), (Kumar and Benbasat, 2006)
Social Presence of Other Users	Refers to perceptions by the user that there is a high SPO by realising the social cues (such as recommendations, reviews, rankings, and sharing the purchase with others through SNSs) that the customer sees on the sCommerce website.	(Lu and Fan, 2014), (Caspi and Blau, 2008)
Service Quality	Service quality is a customer's evaluation of overall superiority of the series of services encountered; it is a perceived, not objective, quality.	(Chen and Cheng, 2009), (Teo et al., 2008), (Pitt et al., 1995)
System Quality	Refers to desired characteristics that a website has, such as availability, reliability, and response time.	(Chao-Min et al., 2007), (Zhou et al., 2010), (Lin, 2008)

Information Quality	Refers to the customer's perception that the website is accurate, complete, up-to-date, and helpful in terms of product details, services, and transaction procedures.	(Teo et al., 2008), (Schaupp et al., 2009)
Reputation	A customer's belief in the honesty and concern that an sCommerce site shows to its customers.	(Kim and Park, 2013), (Kim et al., 2008), (Jarvenpaa et al., 2000)
Online Shopping Experience	Refers to consumers' past experience with online shopping, which reflects both their familiarity with the Internet shopping environment and the sCommerce website. It also reflects the consumers' knowledge of the sCommerce website and its relevant procedures, such as searching for products, information and ordering through the website's purchasing interface, as well as a familiarity with the social features of an sCommerce website.	(Hajli, 2012a, Corbitt et al., 2003), (Yoon et al., 2013)
Word-of-Mouth (WOM)	Refers to the exchange of information and experiences online between customers, which helps them make purchasing decisions.	(Kim and Park, 2013)
Communication	Refers to the provision of information by the website to the customer and to the level of interaction with the customer.	(Kim and Park, 2013)

4.4.2 Step 2: Generate Sample of Items

After defining the constructs, they were further explored through identifying items related to each construct and developing a pool of items that were the outcome of the exploration. When researchers draw from an existing instrument, this allows them to ensure that measurement error is minimised and pooling items further contributes to validity. The researcher in this study conducted an extensive literature review to identify factors. After that, useful items were extracted from these factors. Items for each construct were chosen based on criteria such as how well a researcher in a previous study benefitted from these

items. Moreover, another criterion was how relevant these items were to the current study. Initially, there were 84 pools of items for the defined constructs (see Appendix 4.1). The pooled items were drawn to measure the following factors (the factors were abbreviated on the survey in the following way): Customer Loyalty (CL), Customer Satisfaction (SAT), Trust (TR), Social Presence of the Website (SPW), Social Presence of other Users (SPO), Service, Quality (SEQ), System Quality (SQ), Information Quality (IQ), Reputation (REP), Online Shopping Experience (OSE), Word of Mouth (WOM), and Communication (COM).

Further modifications were made to the initial pooled items in order to make sure that there was relevance between items and constructs and also to check that there was precise wording for the items. For the actual survey questions, see Appendix 4.1.

The Customer Loyalty (CL) construct was initially operationalised with eight items. The eight items used to operationalise customer loyalty were based on studies conducted by Liang et al. (2011), Kim and Park (2013), Wang et al. (2011), Zeithaml et al. (1996), and Shin (2013). These consisted of the respondent's intention to: (1) continue using the sCommerce website; (2) purchase from the sCommerce website in the near future; (3) say positive things about this website to other people; (4) recommend this website to someone who seeks advice; (5) share purchases with relatives, friends, and others to encourage them to use this website; (6) consider this website to be their first choice for future online shopping for the chosen type of goods/services; (7) provide others with information on this website; and (8) recommend this website to others.

The Customer Satisfaction (SAT) construct was initially operationalised with seven items. These items were based on studies conducted by Casaló et al. (2008), Pai and Tsai (2011), and Liang and Chen (2009a). They consisted of: (1) the respondents' assessment of their decision to use the sCommerce website; (2) the respondents' assessment of their experience using this website; (3) the respondents' satisfaction with the way that this website carried out transactions; (4) the respondents' satisfaction with the service that they received from this website; (5) the respondents' happiness with their decision to purchase from this website; (6) the respondents' overall assessment that the website is a good one; and (7) the respondents' beliefs that the decision to purchase from this website was a wise one.

The Trust (TR) construct was operationalised with six initial items. Two items were based on work by Hassanein and Head (2007). Another two items were based on the work of Brown and Jayakody (2008). The rest of the items were based on the work of Kim et al. (2011), and

Hajli (2012b). Three items related to the respondent's perception that an sCommerce website that was frequently used by the respondent was: (1) trustworthy; (2) honest; and (3) reliable when it comes to keeping its promises and commitments. The other three items consisted of the respondents' beliefs that: (1) this website has their best interests in mind; (2) this website is reliable; and (3) this website considered the safety of their information.

The Social Presence construct (SP) was operationalised with 11 initial items measuring two dimensions: Social Presence of the Website (SPW) and Social Presence of Other Users (SPO). The five items used to operationalise them were based on studies conducted by Gefen and Straub (2003), (Cyr et al., 2007), and Kumar and Benbasat (2006). These involved customers' perceptions of: (1) human contact on this website; (2) personalness on this website; (3) sociability on this website; (4) human warmth on this website; and (5) human sensitivity on this website. The six items used to operationalise the SPO were based on the work by Lu and Fan (2014) and Caspi and Blau (2008). These related to whether the respondent could sense others who: (1) feel interested in the product; (2) provide information about the seller; (3) provide information about the product; (4) have browsed this website; (5) are disappointed about products or services; and (6) are satisfied with the products or services.

The Service Quality (SEQ) construct was operationalised with five initial items. The five items used to operationalise SEQ were based on the work of Chen and Cheng (2009). These consisted of measures related to the respondent's perception of whether the sCommerce website: (1) gives prompt service; (2) is responsive to its customers; (3) instils confidence and a sense of security when the respondent accesses their account, (4) understands the respondent's needs; and (5) delivers the service exactly as promised.

The System Quality (SQ) construct was operationalised with five initial items. Four of these items were based on the study conducted by Zhou et al. (2010). These consisted of measures related to the respondent's perception of whether the sCommerce website: (1) is reliable; (2) is easy to use; (3) provides good navigation functions; and (4) provides quick responses to the respondent's requests. One item was based on the work of Chao-Min et al. (2007). The item related to whether the respondent's frequently used sCommerce website functioned well all the time.

Six initial items were used to operationalise the Information Quality (IQ) construct. One of these items was based on the work done by Schaupp et al. (2009). It related to whether the

information provided by the sCommerce website met the respondent's needs. The other four items used to operationalise the information quality construct were based on a study conducted by Teo et al. (2008). These consisted of measures related to the respondent's perception of whether the sCommerce website was: (1) in a useful format; (2) complete; (3) accurate; (4) up-to-date; and (5) reliable.

The Reputation (REP) construct was operationalised with seven initial items. Four of these items were based on the work of Kim et al. (2008). These consisted of measures related to the respondent's perception of whether the sCommerce website: (1) is well known; (2) has a good reputation; (3) has a reputation for being honest; and (4) has a name that the respondent is familiar with. Three of these initial items were based on a study conducted by Casaló et al. (2008). These consisted of measures related to the respondent's perception of whether the sCommerce website had: (1) a good reputation compared to rival sCommerce websites; (2) a reputation for offering good products and services; and (3) a reputation for being fair in its relationships with its customers.

The Online Shopping Experience (OSE) construct was operationalised with seven initial items. Three of these items were based on the work of Hajli (2012a). Two of these items related to whether respondents perceive themselves to be experienced in using: (1) the computer; and (2) the Internet. The third item related to whether the respondent had been using the Internet for a long time. Two of the seven items were based on the work of Yoon et al. (2013). These related to whether respondents perceived themselves as being experienced in: (1) purchasing from the sCommerce website; and (2) shopping online. Two of the seven items were developed in this study. These two items related to whether (1) participants perceive themselves experienced in using eCommerce websites and (2) this website has relevant procedures such as searching for products and information and ordering through the website's purchasing interface.

The Word-of-Mouth (WOM) construct was operationalised with 12 initial items. Four of the items were based on the work of Kim and Park (2013). These related to whether the respondent had heard from others that the sCommerce website was: (1) useful; (2) easy to use; (3) reliable; or (4) not worth the effort. Eight of the 12 initial items were based on a study conducted by Ku (2012). These related to whether recommendations for respondents about shopping online: (1) are useful to them (2) will affect their choice when they shop online, (3) will provide them with different advisory opinions; (4) will change their

purchasing motivation; (5) will increase their interest in searching for a product, (6) will change their purchasing intention; (7) will let them make purchase decisions; and (8) will allow them to change the items that they intended to purchase.

Finally, the Communication (COM) construct was operationalised with 12 initial items. Four of these 12 initial items were based on the work done by Kim and Park (2013). These related to whether respondents frequently used sCommerce websites that: (1) proactively communicates new developments to them; (2) responds to their feedback on its service; (3) provides them with meaningful information; and (4) provides them with timely information (Kim and Park, 2013). The rest of the 12 initial items were developed in this study. These related to whether respondents' frequently used sCommerce websites: (1) responds to their complaints about its service; (2) communicates the activities of their friends to them; (3) sends them summaries of their recent activities on the website; (4) uses social media to communicate with them; (5) uses email to communicate with them (6) uses a phone number to communicate with them; (7) uses chat to communicate with them; and (8) provides them with interesting information whilst using the website (e.g., useful prompts or pop-ups).

4.4.3 Pre-Test Survey

In order to improve the validity of the instrument and the initial pool of items, a Panel of Experts (POE) survey was conducted (Lewis et al., 2005, Churchill, 1979, Straub et al., 2004). According to Churchill (1979), the POE should consist of people who are familiar with the topics covered in the study. Therefore, the POE consisted of academics who have expertise in IS at the school of Business Information Technology and Logistics (BITL) at RMIT University in Australia. A hard-copy survey was set up and the POE was asked to rate each item from 1 (Strongly Irrelevant) to 7 (Strongly Relevant) in order to measure the relevance between items and their associated factors. Moreover, each operational definition for each factor was provided in the POE survey using the same scale as above to measure whether each operational definition was appropriate or not.

The POE survey was conducted in two stages: the content and face validity stage, and the reliability stage (Litwin, 1995, Sekaran, 2003).

In the content and face validity stage, 27 surveys were distributed among the experts; 24 pre-test surveys were answered by the experts and three were not returned. One survey was excluded from the analysis process as the expert did not answer all of the questions. Although

there is no specific number of experts recommended for the POE in the literature, according to Olson (2010), the number could be between two and 20 experts. Therefore, 23 pre-test surveys (which is a sufficient number) were deemed eligible to be analysed.

The experts' comments included suggestions to reword some questions and to delete repeated items. Thus, nine questions were reworded. One question was deleted, and one question was split into two questions. Overall, the experts' opinions about the survey were clear, easy to answer, and understandable. Moreover, they indicated that the majority of the items were closely related to the variables. Appendix 4.2 shows the items before and after the pre-testing and the associated comments.

Interrater reliability is one of the reliability types used to assess a survey's instruments and scales. It reflects the level of agreement between two or more evaluators in their evaluation of a variable (Litwin, 1995, Sekaran, 2003). It was used in assessing the pre-test survey; at the pre-test stage, to make sure that there was overall agreement among the raters on the items for each construct. The internal consistency was good; Cronbach's Coefficient Alpha for this pre-test survey was 0.767, which is above the 0.70 that is considered by Litwin (1995) to be the minimum level that indicates good reliability. Tables 4.2 and 4.3, show the item statistics for inter-judge reliability and intraclass correlation coefficient, respectively.

Table 4-3 Item Statistics for Inter-Judge Reliability

	Mean	Std. Deviation	N
Rater1	5.9655	1.07236	87
Rater2	5.1609	.96296	87
Rater3	5.4138	.90928	87
Rater4	5.0000	.00000	87
Rater5	5.9655	1.01670	87
Rater6	5.5057	1.48538	87
Rater7	5.5862	1.65341	87
Rater8	5.6322	.59288	87
Rater9	6.3563	1.25732	87
Rater10	6.2069	1.05806	87
Rater11	5.2184	1.35908	87

Rater12	5.5172	1.00997	87
Rater13	6.1149	.95753	87
Rater14	6.0460	.84782	87
Rater15	5.6667	.92342	87
Rater16	6.5747	.84402	87
Rater17	5.2529	1.03675	87
Rater18	5.2184	1.29781	87
Rater19	6.4023	1.33347	87
Rater20	4.5402	1.25573	87
Rater21	5.5057	.93850	87
Rater22	5.4713	.84687	87
Rater23	5.0115	1.44266	87

Table 4-4 Intraclass Correlation Coefficient

	Intraclass Correlation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.125 ^a	.088	.178	4.292	86	1892	.000
Average Measures	.767	.690	.832	4.292	86	1892	.000

1.1.1.1 Addressing the Common Method Bias

One of the important recommendations of the academic experts was to address the issue of common method bias. Common method bias or common method variance refers to “the spurious variance that is attributable to the measurement method rather than to the constructs the measures are assumed to represent” (Podsakoff et al., 2003). Common method bias may cause measurement errors if it occurs (Williams and Brown, 1994). Straub et al. (2004) indicated that common method bias is a result of using one method when collecting data or at one point in time. As mentioned earlier, common method bias can cause errors in the measurement, which may negatively impact the validity of the research conclusions (Podsakoff et al., 2003).

According to the literature, several methods have been used to avoid or minimise common method bias. One of the strategies to control common method bias in the early design stage of the research is to use other sources in constructing the key measures, such as using information from sources in constructing the dependent variables that are different from the information sources used to construct independent variables (Chang et al., 2010). Another strategy is to follow procedural remedies in designing the survey, such as, mixing the questions in order to use different scale types, using reverse coding, and using semantic scaling (Podsakoff et al., 2003). There are some statistical remedies used to reduce common method bias but the most well-known is Harman’s single-factor analysis (Podsakoff et al., 2003, Chang et al., 2010).

These strategies were not appropriate for the first stage. However, it was difficult to use other sources in constructing the key measures because the sources had common links as they were from the same area (sCommerce). Therefore, the sources had common measurements for different constructs. Hence, the researcher did not use the strategies listed above to avoid common method bias.

As the study was unable to use the first strategy to avoid common method bias, use was made of the procedural remedies advocated by (Podsakoff et al., 2003). First, reverse coding was used by making some of the questions use a negative format. As (Podsakoff et al., 2003) indicated, this is done in order to keep the respondent’s attention on the questions and answering them carefully, not just answering them half-heartedly. This did lead to a problem with some of the surveys as will be explained in the data cleaning section.

Second, some sections of the survey used a semantic scale, while other sections used a more traditional Likert scale, as can be seen in the following tables. Table 4.4 shows a semantic scale question used in the survey whereas Table 4.5 shows an example of a Likert scale question that was used in the survey.

Table 4-5 Example Semantic Scale Question from Survey

6- Overall, this website is a good one.	SAT6 Overall, how would you rate this sCommerce site?								
		1	2	3	4	5	6	7	
	Very Poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good

Table 4-6 Example Likert Scale Question from Survey

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
CL1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

As can be seen, both methods measure the item with the same scale, but with different values. This prevented the respondents from answering the survey questions in a way that increased the chances of common method bias. In this way, respondents answer questions carefully by trying to follow the instructions (Podsakoff et al., 2003).

Third, instead of including all of the questions related to one construct in the same section of the survey, each section of the survey had questions relating to all of the constructs—for example, by including the first item from the first construct (Customer Loyalty), then, the first item from the second construct (Customer Satisfaction). As is indicated by Podsakoff et al. (2003), this reduces the chance of common method bias by keeping the respondents focused on the survey questions.

4.4.4 Pilot Study

After the POE survey, the researcher decided to strengthen the content validity of the instrument by piloting the study. Before commencing this step, the researcher converted the survey questions into a different format in order to avoid common method bias (see Appendix 4.2). Then, the pilot study was conducted using the same sample as the actual study (sCommerce website customers in Australia). The plan was to do the pilot study in three steps: distributing the online survey link and a hard copy of the survey and giving instructions to the potential respondents, interviewing respondents, and analysing the outcomes.

First, the researcher distributed the link to 40 people who considered themselves to be familiar with sCommerce websites; 14 people did not respond, but 26 people did respond. Previous studies considered 15 responses out of 20 surveys to be sufficient (Chwelos et al., 2001). However, this current study considered 26 responses to be enough to conduct the pilot study. At the same time, the researcher prepared a hard copy of the pilot study survey and a list of questions to be asked later in an in-person interview. The respondents were asked to go through the survey online and answer it; if they had difficulty answering the questions or found them to be ambiguous, they were instructed to explain their concerns on the hard copy of the survey. They could also include any other comments they might have had at the time. After that, the researcher provided the potential respondents with his email and asked them to send him an email in order to arrange a meeting appointment to collect the hard copy and answer the prepared interview questions.

Second, the researcher met with the respondents in person. He prepared four questions to be answered by the respondents (see Figure 4.2 below). Those questions were: (1) What do you think about the survey? Was it hard to do? (2) Do you think that there are any problems in the survey? If yes, what are they? (3) You have circled the following questions: What do you think about each of them? and (4) What did you think the purpose of the survey was?

Questions of the Pilot Testing Survey:

1. What do you think about the survey? Was it hard to do?
2. Do you think that there are any problems in the survey? If yes, what are these problems?
3. You have circled the following questions:
What do you think about each of them?
4. What did you think the purpose of the survey was?

Figure 4.2 Pilot Study Interview Questions

In general, the respondents' answers indicated that the survey was easy to answer, understandable, and that it was clear enough. The range of time they needed to answer the questions was between 22 and 30 minutes. Question four was used to determine whether the respondent had read the Participant Information and Consent Form (PICF) or not; 21 respondents answered this question correctly. After the analysis of the pilot study survey,

there were nine items that were modified and one item that was reworded. For more information about these items, see Appendix 4.4. After those changes, the final instrument was ready for the main study (see Appendix 4.5).

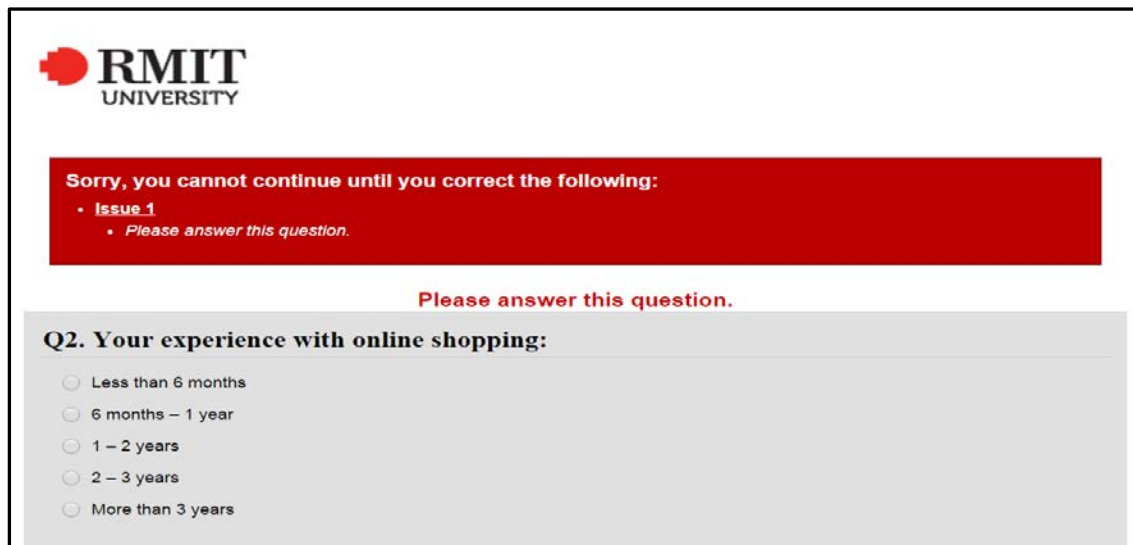
4.5 Online Questionnaire Design

The administration of a questionnaire can be achieved by different approaches. The increasing use of the Internet has motivated researchers to disseminate and collect information for their studies through the online environment, which allows questionnaires to be distributed to potential respondents by website or email. In addition to the low cost, online surveys give researchers more flexibility, speed, and functionality (Kwak and Radler, 2002, Bandilla et al., 2003). While some researchers have major concerns about sample validity in online surveys, they acknowledge the benefits of greater speed and functionality (Dillman, 2000). For this reason, the researcher employed a well-known organisation because it provided access to a well-qualified and extensive panel of potential respondents. The potential respondents' demographic data had been well-established by the organisation. The sample specification was as follows: anyone from the Australian population that used sCommerce websites to purchase product(s)/service(s). The respondents were selected randomly from the age of 18 and above. The quota was represented equally by age, state, and gender.

An additional advantage of using an online survey is that it can give respondents the ability to seek support from pop-up instructions (see Figure 4.3 below). Moreover, an online survey gives respondents the ability to know the items that they skipped by mistake, which will decrease the number of missing values or incomplete information (Lumsden and Morgan, 2005). Lazar and Preece (1998) indicated that online questionnaires can take different forms. Aligning with the nature of the questions and response categories designed for the study, interface features should be appropriately designed by the researcher. The researcher should know how to upload the questionnaire on the Internet and how to use the appropriate software (in this study the Qualtrics online questionnaire system was used).

This study used an online panel for the sample. After receiving ethical approval from the Human Research Ethics Committee at RMIT University (Ethical Approval No. 19074), the survey was conducted from 25 Nov 2015 to 22 Dec 2015 using the Qualtrics web-based system. The survey consisted of nine sections. The first and last sections covered the background and demographic information. The second through to the eighth sections

contained the measurement scales on customer loyalty, customer satisfaction, trust, SPW, SPO, service quality, system quality, information quality, reputation, OSE, WOM, and communication.



The image shows a screenshot of an online survey interface. At the top left is the RMIT University logo. Below it, a red banner contains the text: "Sorry, you cannot continue until you correct the following:" followed by a bulleted list: "• Issue 1" and "• Please answer this question." Below the banner, the text "Please answer this question." is centered. The main content area is a light gray box with the question "Q2. Your experience with online shopping:" and five radio button options: "Less than 6 months", "6 months – 1 year", "1 – 2 years", "2 – 3 years", and "More than 3 years".

Figure 4.3 Message Validation Checks to Avoid a Missed Response

4.6 Data Collection

Data collection has been defined by Clark and Creswell (2010) as a procedure for preparing and collecting useful data and information to answer research questions. The data collection process of this current study included the use of a questionnaire administered in the form of a survey. In order to reach the required number of sCommerce users, a professional market research company was used. The researcher hired the company to provide him with access to a group of Australian Internet users. Respondents from the study were members of an online panel maintained by Research Now, an international research company founded in 2001 that runs permission-based data collection across Europe, the Middle East, the Americas, and the Asia-Pacific region, with offices in 25 countries. Research Now complies with all industry standards set by the Australian Market and Social Research Society, as well as with a number of international standards. The panels of respondents are actively managed by the company, which uses a variety of recruitment methods via email and online methods. Potential panel members were screened to ensure their suitability to participate in the panels. All members of the panels joined of their own volition. Potential respondents in the panel were approached by Research Now as part of their role as a member of the company's research panels. Only Research Now had access to the names and contact details of the respondents. The researcher did not have access to either of these at any time. If a respondent wanted to participate in the

survey, he or she could click on a link to the RMIT Qualtrics website to answer the survey questions. Research Now did not have access to the survey data.

The researcher acquired (through his RMIT Qualtrics account) 1424 responses. Four hundred and twenty-seven surveys were excluded from the data preparation stage. Nine hundred and ninety-seven surveys were eligible to be analysed through the data preparation process.

4.7 Reflective and Formative Construct Specification

Structural equation modelling demonstrates two distinct ways to model constructs in a hypothetical model, one is reflective and the other is formative. In determining the model specification, a two-level test is suggested (Boxtor 2009). First, the model is tested specifying the indicators of the factors as reflective or formative. Second, the multidimensional model is tested with the relationship among the constructs. In the primary factor model, the causality of a factor goes from a construct to its items, whereas in the composite model the causality goes from constructs to constructs. It observes a high correlation among the reflective indicators for its relation with the latent variable. Reflective items can be changed with each other as the identity of construct does not vary even if an item is deleted. The reflective model is known as Model A (Chin, 2010).

However, the composite factor model is not same as the principle factor model. Here the causality directs from item to a construct. Moreover, the formative indicators cannot be changed with each other as the identity of the construct varies with the elimination of one indicator from the model. The formative model is also known as Model A (Chin, 2010). The distinct features of formative and reflective models are discussed in several studies (Hair et al., 2011, Chin, 2010, Coltman et al., 2008, Diamantopoulos and Winklhofer, 2001, Gefen et al., 2000, Hulland and Business, 1999). Figure 4.4 shows the reflective and formative model.

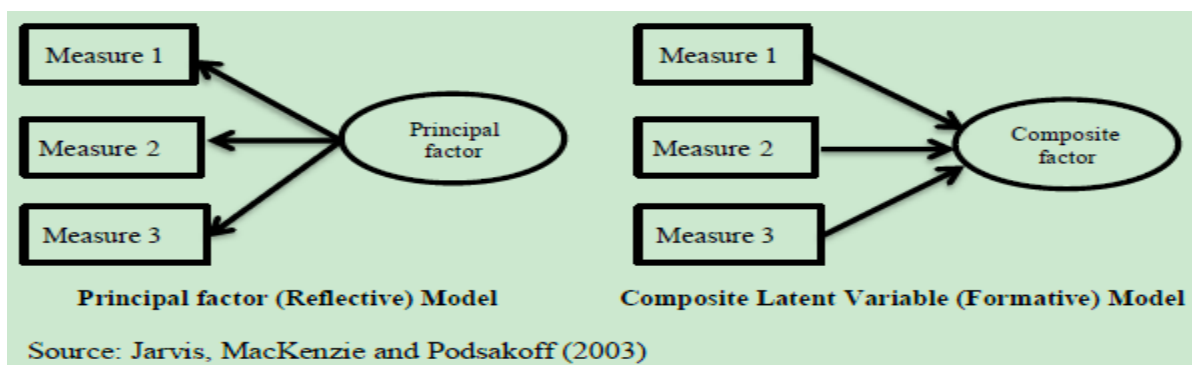


Figure 4.4 Reflective versus Formative Measurement Models. Source: (Jarvis et al., 2003).

Identification of the correct construct is essential in model development and measurement. As the application of a reflective model is very common in social sciences and technology-related studies (Diamantopoulos and Winklhofer, 2001), many models are misspecified with reflective replacing the formative nature of a model (Henseler et al., 2009, Jarvis et al., 2003). Lack of identification leads to a poor design of relationships among constructs and misleads the results and implications. Thus, due to bias estimation, the model fails to explain the theory and contribute to the existing knowledge (Baxter, 2009). The criteria of data analysis techniques including reliability and validity depend on the formative and reflective models chosen in the study (Diamantopoulos and Winklhofer, 2001).

As the distinction between the formative and reflective becomes clearer, the discussion on the linkage of one construct to other constructs that may be of formative or reflective form advances. A more common form of model is a multi-item factor where more than one item constitute a factor (Jarvis et al., 2003). Having more than one multidimensional constructs that are related to each other in one level of abstraction is called a hierarchical component model (Chin, 1998). Here, the hierarchical component models are simple in structure (Becker et al., 2012). Two common characteristics are attached to hierarchical component models. The first characteristic of hierarchical component models is that there are different levels of a model (Hair et al., 2016). In literature, the most common form is seen as the second-order models (Hair et al., 2016). The second characteristic is that the observed factors can be reflective or formative (Jarvis et al., 2003, Ringle et al., 2012, Wetzels et al., 2009).

Researchers also demonstrated a hierarchical component as two models on the basis of their construction (Chin and Gopal, 1995, Chin, 2010). These two models are known as molar and molecular. In a molar model, the arrows start from the first-order factor to the second-order factor. More specifically, the first-order factors' dimensions form the second-order factors, which are also known as indicators. However, the correlation among the first-order factors was not observed here. The first order constructs were not correlated with each other. In contrast, the opposite scenario is found in molecular models where the arrows are directed to the first-order factors.

Higher order models have four categories that are used to illustrate second-order models (Ringle et al., 2012, Jarvis et al., 2003). Moreover, Hair et al. (2016) identified these models as lower-order factors having the items that indicate the higher-order factors. The first type of

model describes the association of the first-order factor and observable indicators. whereas the other type of model describes the association of the second-order factors and the first-order factors. The following are the types of four different hierarchical component models:

- 1) Category I-Reflective-Reflective
- 2) Category II- Reflective-Formative
- 3) Category III- Formative-Reflective
- 4) Category IV- Formative-Formative

Although all types of models are not employed in most studies, Ringle et al. (2012) identified that Type II (Reflective-Formative) model appeared most frequently in MIS Quarterly from 1992 to 2011. Jarvis et al. (2003) included Type III (Formative- Reflective) model in their typology. However, this study emphasised Type II-Reflective-Formative, as the model and its constructs relationships were of this type.

Prior research in marketing, management, and IS frequently utilised hierarchical component models. It has been claimed that the hierarchical component model works best in second-order constructs (Wilden et al., 2013). The above discussion on formative, reflective, hierarchical component model seems appropriate for understanding the basics of a conceptual model.

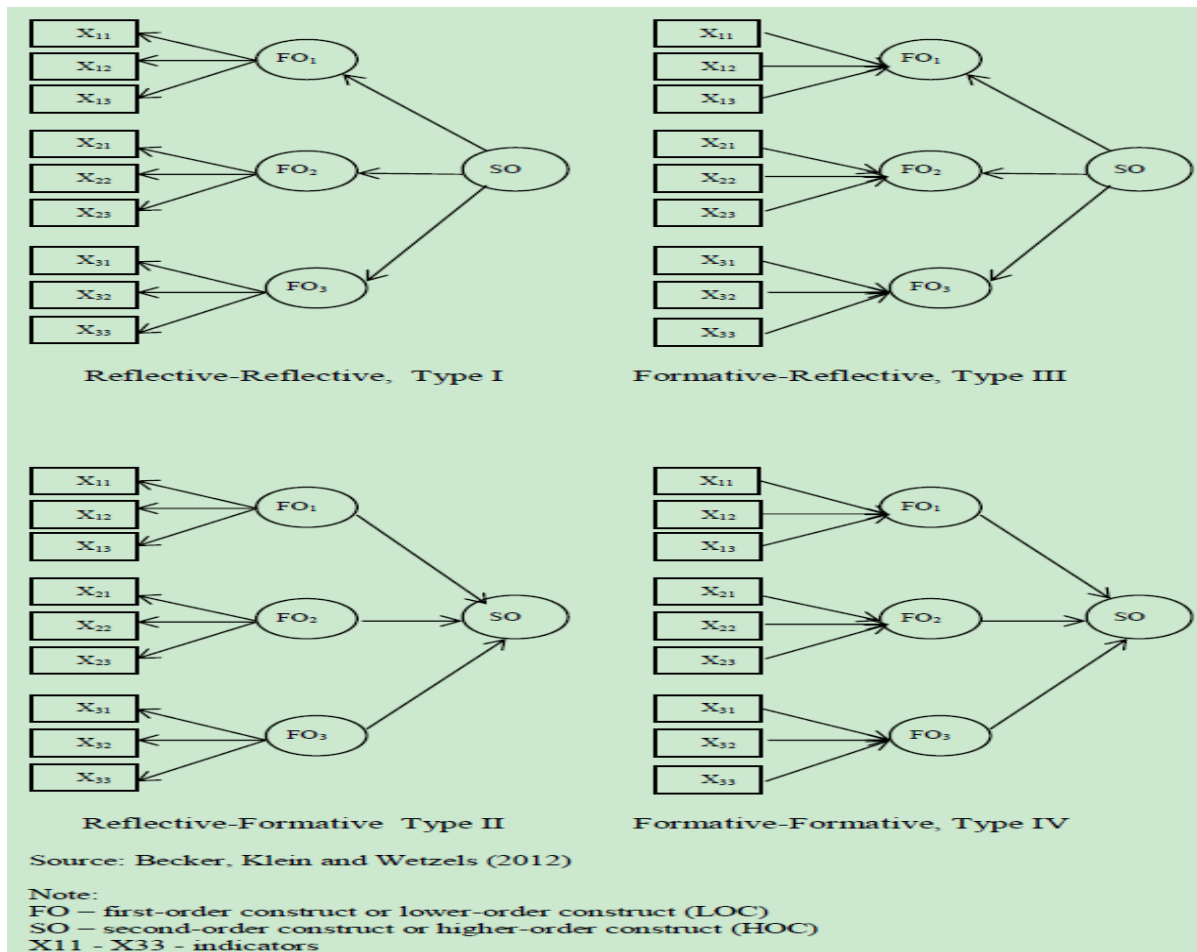


Figure 4.5 Hierarchical Component Models. Source: (Becker et al., 2012)

4.7.1 Construct Specification

This study applied the reflective and formative construct, the multidimensional construct and a hierarchical components model, which are shown in the conceptual framework. In the conceptual framework, SP is hypothesised as a Reflective-Formative Type II model, which is also known as a formative second-order construct. This construct contains two first-order items that are the SPW and the SPO, which are structured as reflective. According to the previous discussion in Section 4.7, these two constructs are distinct and non-substitutable. Although these two constructs are separate, the absence of one construct will misinterpret the higher-order construct. Therefore, it can be concluded that SP is included with two reflective first-order constructs.

This study uses all first-order factors as reflective. The formative structure is prevalent in second-order factors. This hierarchical component model is known as Reflective-Formative

model. The first-order factor is reflective such that the arrows indicate from constructs to items. The second-order factor is formative such that the arrows indicate from higher-order to lower-order factors. In this study, the first-order factors are information quality, system quality, service quality, satisfaction, reputation, OSE, WOM, communication, trust, SPW, SPO and customer loyalty. The endogenous construct is loyalty to sCommerce website. Satisfaction, trust, and SP are also endogenous constructs that are reflective in form and are directed to loyalty to an sCommerce website.

4.8 Ethics

This study was conducted based on the ethical guidelines of the Human Research Ethics Committee at RMIT University. Ethical approval No. 19074 was issued for the researcher to conduct the study in Australia.

4.9 Summary

This chapter discussed the methodology that was followed by this study. First, the selection of epistemological and ontological philosophies was discussed, as well as the selection of positivism as the paradigm. Second, the research design and sampling were discussed. Third, the instrument process was discussed, clarifying how measurement errors were minimised through following a well-known framework developed by Churchill (1979). Finally, the online survey and the data collection process were discussed. The next chapter will discuss the initial data analysis.

Chapter 5 **Descriptive Analysis**

This chapter presents a descriptive analysis of the sample data collected through the survey. Descriptive data and its analysis are important for the following reasons: First, the study data can be described in a way that is useful and meaningful. Second, to understand the respondents' behaviour about the importance of this study. Third, for this study's aim, it was vital to examine the respondents' gender, sCommerce experience, age and other factors. Moreover, in this study, the data was analysed descriptively in order to measure variability and central tendencies. In addition, a descriptive data analysis is compulsory to determine the normality of the distribution amongst the data sample.

5.1 Introduction

It is widely acknowledged that the emergence of the World Wide Web—also known as the web—has conveyed changes in the business world. These changes could be perceived as a pattern shift in the corporate sphere (Mueller et al., 2011). The development of the web has affected eCommerce and as a result, new ideas and concepts have emerged, such as sCommerce. SCommerce has led to changes within several business procedures in online marketing. In another words, sCommerce and social relationships on the Internet over the emergence of web technologies and applications have produced new opportunities and perspectives for businesses, due to the growth of social communication sites. The current enhancement in eCommerce opened new ideas and concepts, like sCommerce, which uses social applications and technologies to form an environment for creating social connections. This process aims to produce trust, which is one of the basic fundamentals of sCommerce.

This study contained several descriptive variables; therefore, it was important to identify and discover relationships between all selected factors. The main purpose of this chapter is to analyse the descriptive data, so that it can be summarised and estimated, uncertainty in the data can be identified and unexpected patterns in the data can be examined.

The descriptive variables examined were:

- Gender
- Age
- Level of Education
- Occupation
- Location (State of Australia)
- Income
- Most often used sCommerce website
- Online shopping experience
- Frequency of visits to sCommerce websites
- Frequency of purchases from sCommerce websites
- Types of products usually purchased

5.2 Descriptive Methods

A descriptive analysis is a technique that helps to analyse data so that data can be described, shown or summarised in a meaningful way so that patterns might emerge from the data. Descriptive statistics do not, however, allow us to make conclusions beyond the data that has been analysed or reach conclusions regarding any hypotheses that might have been made. They are simply a way to describe data (Ott and Longnecker, 2008). Once the data has been collected and grouped, several different statistical measures are used to analyse descriptive data. The following statistical measures were used in the current study: Measures of Central Tendency, Measures of Variability, Measures of Divergence from Normality and Measures of Probability (Ott and Longnecker, 2008). The descriptive statistics provide details of the context of social commerce in the Australian setting. This helps those interested in understanding social commerce in Australia.

5.3 Descriptive Data Analysis and Discussion

In this section, the descriptive data is presented on the respondents who completed the survey and whose data was used in the subsequent analysis. Relevant measures of central tendency are shown and comparisons between the survey respondent groups and relevant sections of the Australian population were made.

5.3.1 Respondents' Gender

Figure 5.1 *Gender Distribution* shows the breakdown of the survey's respondents by gender.

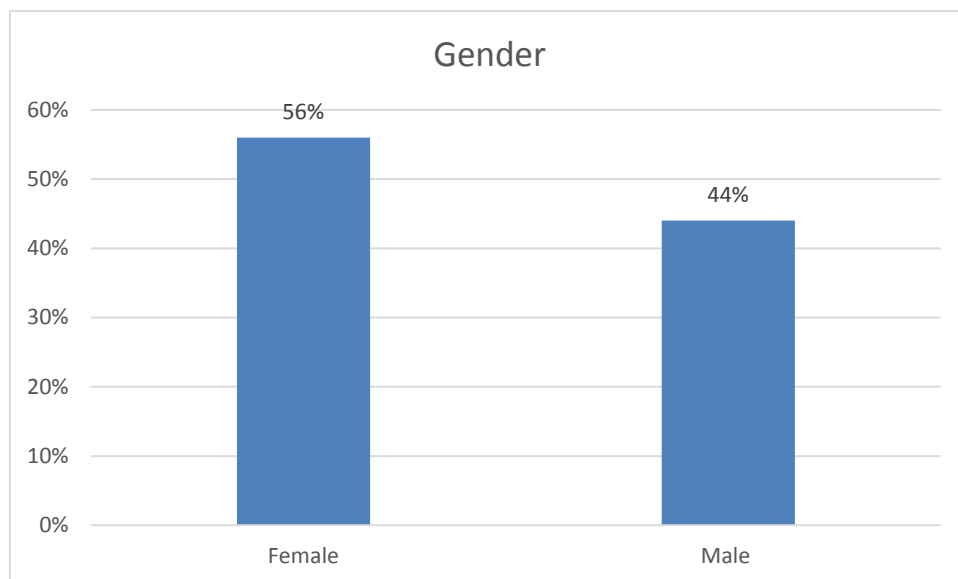


Figure 5.1 Gender Distribution

As can be seen in Figure 5.1, 56% of the respondents were female. While no data could be found on the gender distribution of sCommerce users in Australia, the results show a noticeable difference in comparison to eCommerce users. A survey conducted in 2017 found that eCommerce users in Australia were 50.6% male and 49.4% female (Statista, 2017a). This could indicate either a small issue with the sample or perhaps females are more attracted to sCommerce than eCommerce.

5.3.2 Respondents' Age

The age of the survey's respondents was recorded. This study only approached people over the age of 18. The results can be seen in Figure 5.2 *Age Distribution*.

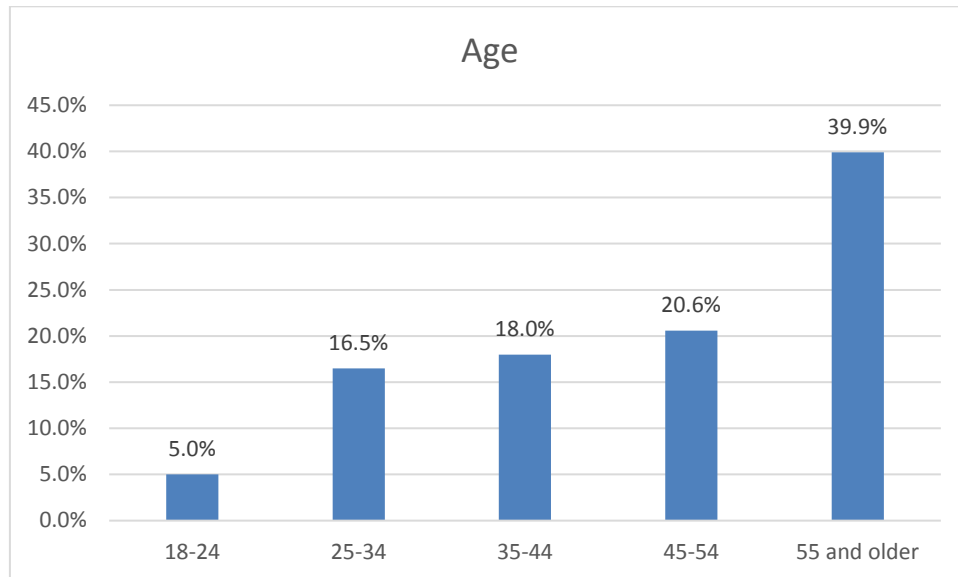


Figure 5.2 Age Distribution

The majority of the respondents belonged to the '55 and older' category. No previous information was found on the age distribution of sCommerce users in Australia, however data was found on the age distribution of eCommerce users in Australia in 2017.

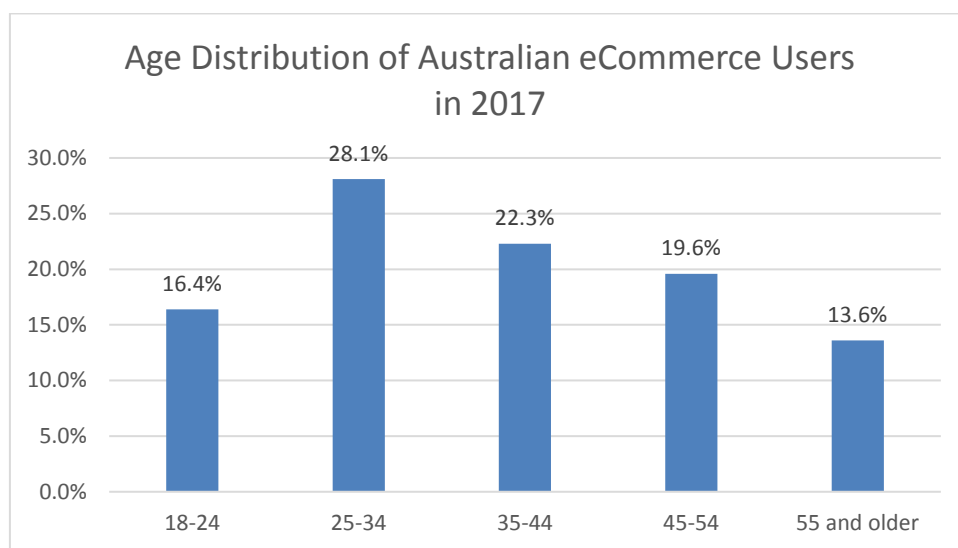


Figure 5.3 Age Distribution of Australian eCommerce Users in 2017

<https://www.statista.com/outlook/243/107/ecommerce/australia#market-arp>

As can be seen from the two charts, there are major differences in the two distributions. The '25-34' and the '35-44' groups are much more strongly represented in eCommerce as opposed to the '55 and older group'. This study had an opposite outcome. This could indicate either a variation in the survey population or possibly a variation in the use of sCommerce in comparison to eCommerce.

5.3.3 Level of Education

The level of education of the survey's respondents was recorded. Figure 5.4 shows the results. The 'Other' category was mainly comprised of technical and TAFE qualifications. The mode and the median were the 'Undergraduate Degree' category.

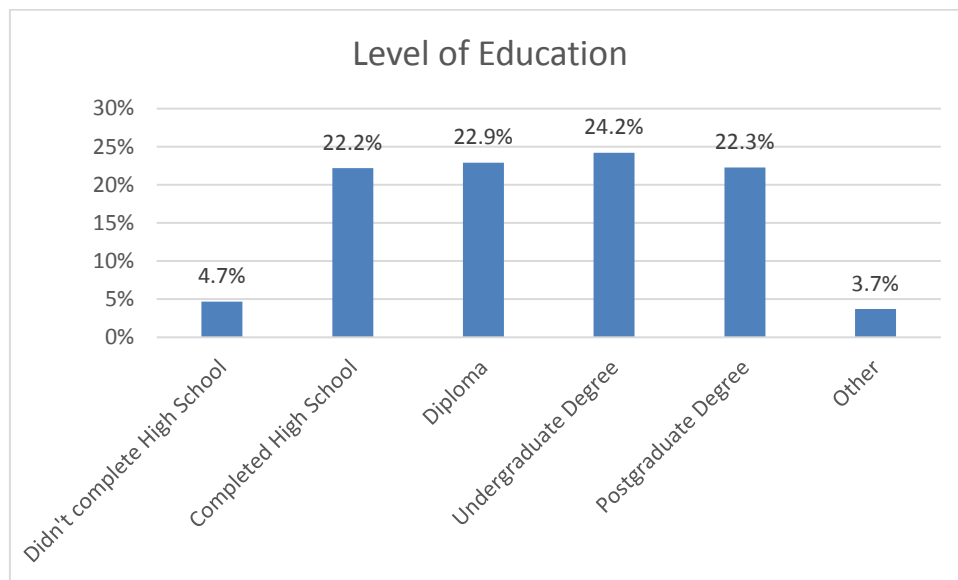


Figure 5.4 Level of Education

As can be seen the distribution of level of education is quite flat with the exception of those not completing high school, which was significantly lower. It was not possible to find comparable data in terms of level of education for sCommerce, eCommerce or Internet users in Australia. However, data was found for the general Australian population of 15-64 year olds from 2011 (Australian Bureau Statistics, 2011).

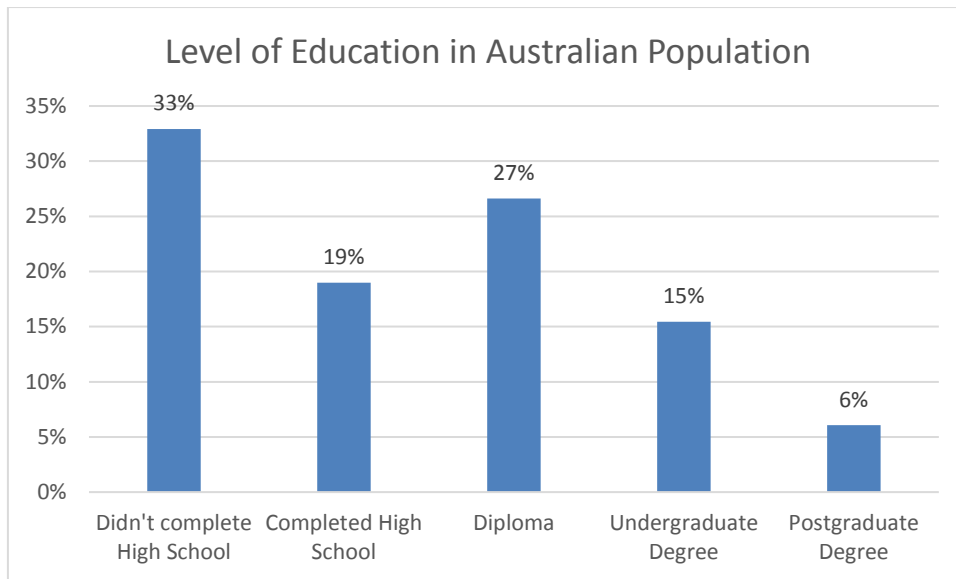


Figure 5.5 Level of Education in Australia. Source: (Australian Bureau Statistics, 2011)

As can be seen there are major differences in the distribution compared to the survey, but this could mean that Internet users and specifically sCommerce users may have—on average—a higher level of education than the general population.

5.3.4 Respondents' Occupation

The occupation of the survey's respondents was recorded. All 997 of the study's respondents answered this question and the majority were 'Professional'.

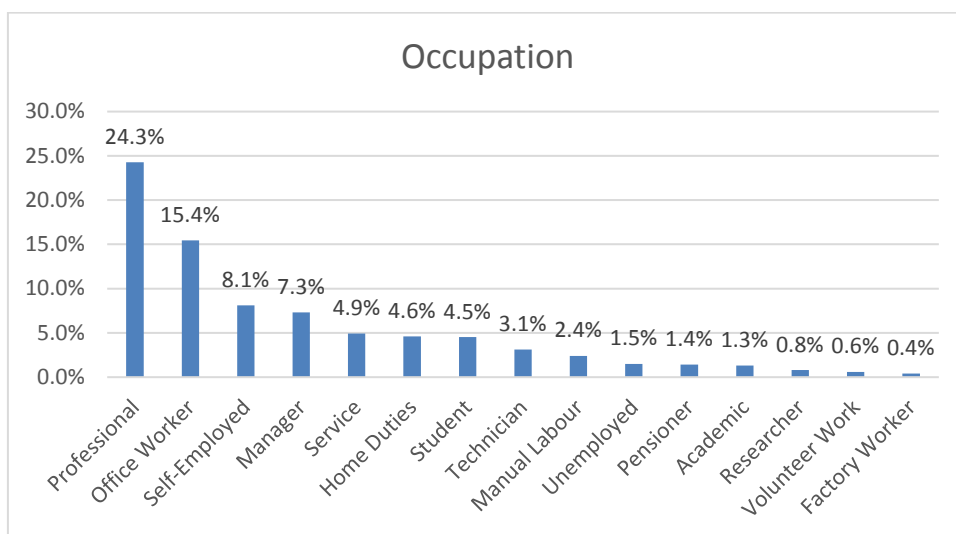


Figure 5.6 Occupation of Research Respondents

Figure 5.6 shows the occupation of the study’s respondents. It should be noted that it did not include people who categorised themselves as ‘Retired’—those people made up 19.3% of the respondents. They were omitted from the above chart as it was not possible to find comparative data that included retirement as an occupation. The percentage of retired people in Australia is approximately 15% (AIHW, 2017), which is comparable to the percentage in the survey, though somewhat lower. No comparative data was found to indicate the occupation of Internet users, eCommerce users or sCommerce users in Australia, therefore a comparison was made with the general Australian population which doesn’t include retired persons/pensioners (.Id, 2016b).

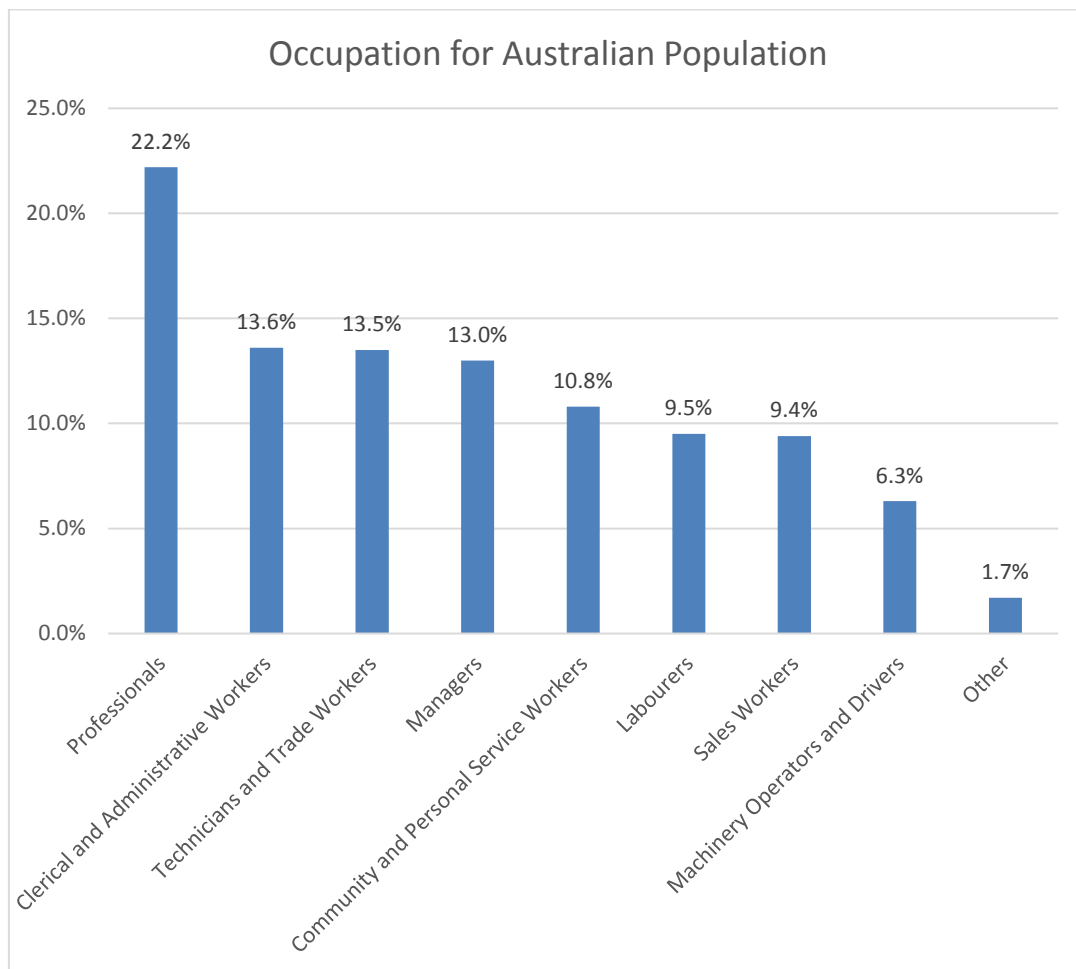


Figure 5.7 Occupations in the General Australian Population

As can be seen there is some correspondence between the percentages in the study and the general population. The major differences are that blue-collar workers appear to be under-represented in the study’s population as compared to the general population but this could be accounted for by a tendency to use the Internet less and therefore

sCommerce less. The other major difference is that the percentage of managers in the research population is less than in the general population.

5.3.5 Respondents' Location in Australia

The respondents were asked to provide their location by state in Australia. All 997 of them answered this question. The majority of the respondents came from New South Wales.

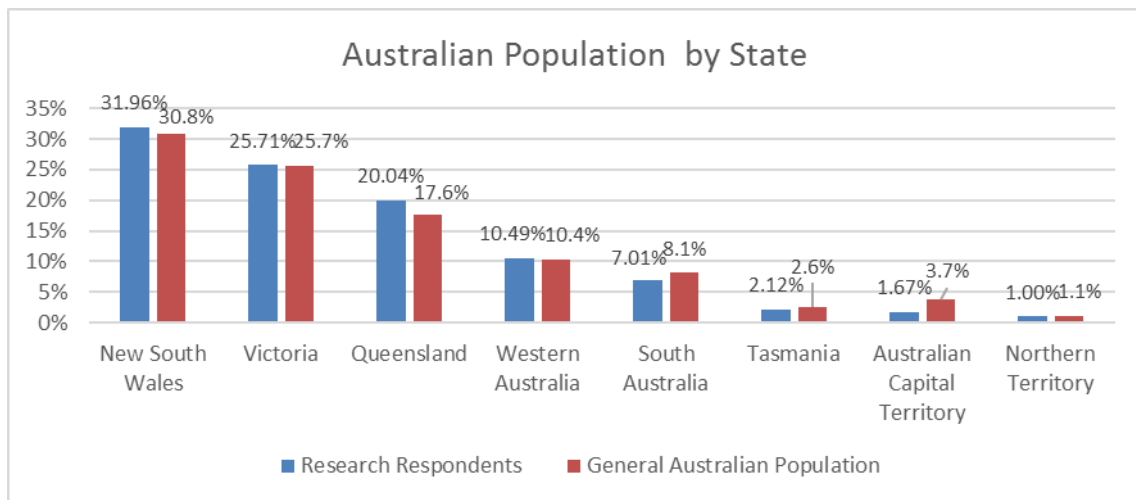


Figure 5.8 Location by State

It was not possible to obtain recent data on the percentage of Internet users by state, so a comparison was made with the general Australian population. As can be seen, the research population distribution by location closely matches the distribution of the Australian population by state.

5.3.6 Respondents Income

It is important to understand the annual income of research participants. Therefore, in this study respondents were asked to state their monthly income. The majority of the respondents indicated that their income was AU \$30,000 – AU \$49,999.

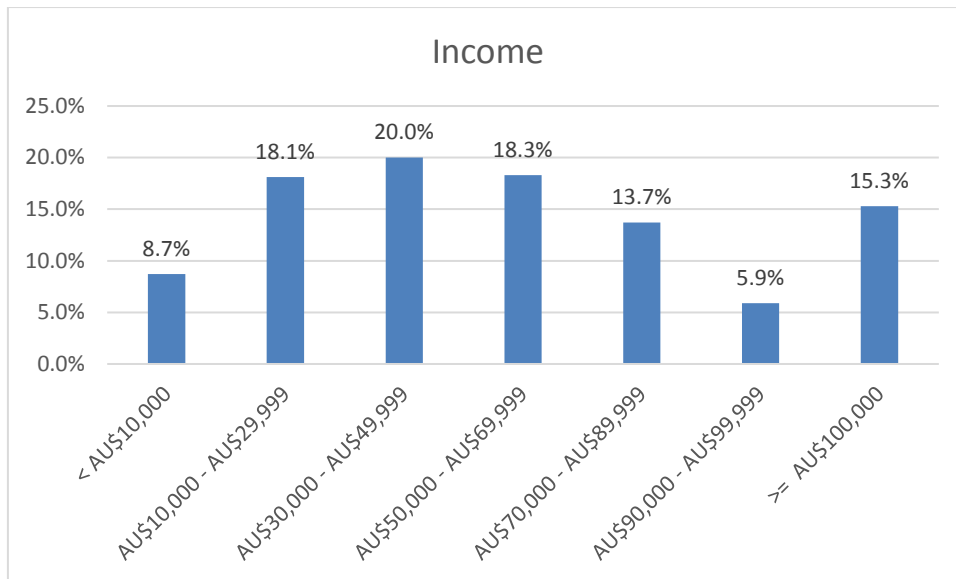


Figure 5.9 Income

It was not possible to find data on annual income levels for Internet users, eCommerce users or sCommerce users, so data on the general Australian population (.Id, 2016a) was used. As can be seen the income categories from the available data source—while close—do not exactly match the income categories in the survey, and this was taken into account.

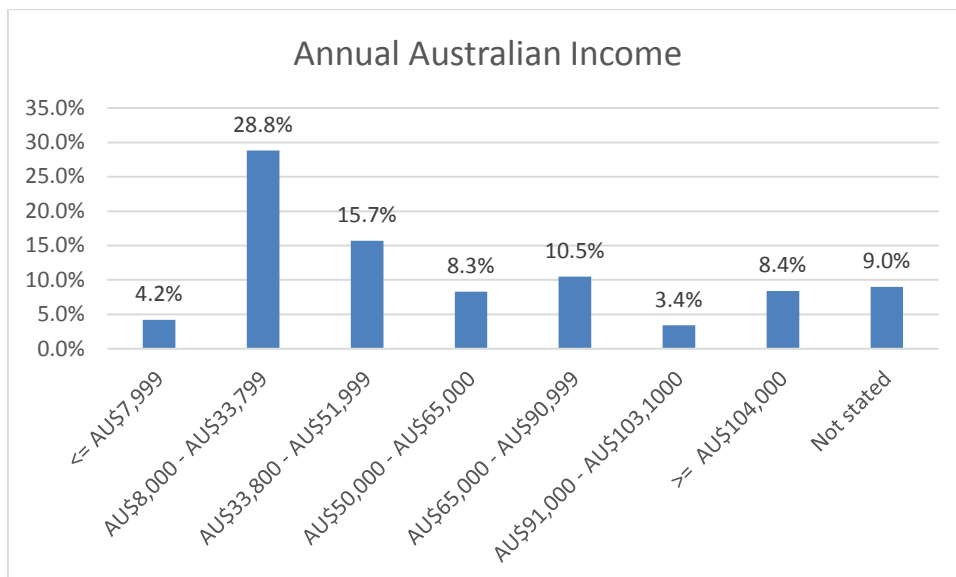


Figure 5.10 Annual Australian Income

As can be seen from the two charts, there is an approximate matching on the lower levels of income, but the top two levels of income are significantly higher for the

sCommerce users that were surveyed (3.4% to 5.9% and 8.4% to 15.3%). However, it should be noted that nearly half of the study’s respondents (46.8%) were below the median income category, so participation in sCommerce is common across all income levels, except possibly at the lowest level of income.

5.3.7 Most Often Used SCommerce Website

In this study, respondents were asked to identify the sCommerce website that they used the most. All 997 respondents answered this question and the majority used eBay. Respondents identified 61 different sCommerce websites in response to this question. Figure 5.11 shows the 15 sCommerce websites that had at least five responses. As can be seen eBay dominated the responses with 49.8% of the respondents nominating it as the sCommerce website that they used the most. An interesting aspect of the result is how dominant a small number of sCommerce websites were: the top four sites made up 79.8% of the responses. The second largest website—Deals Direct—only made up 2.4% of the responses.

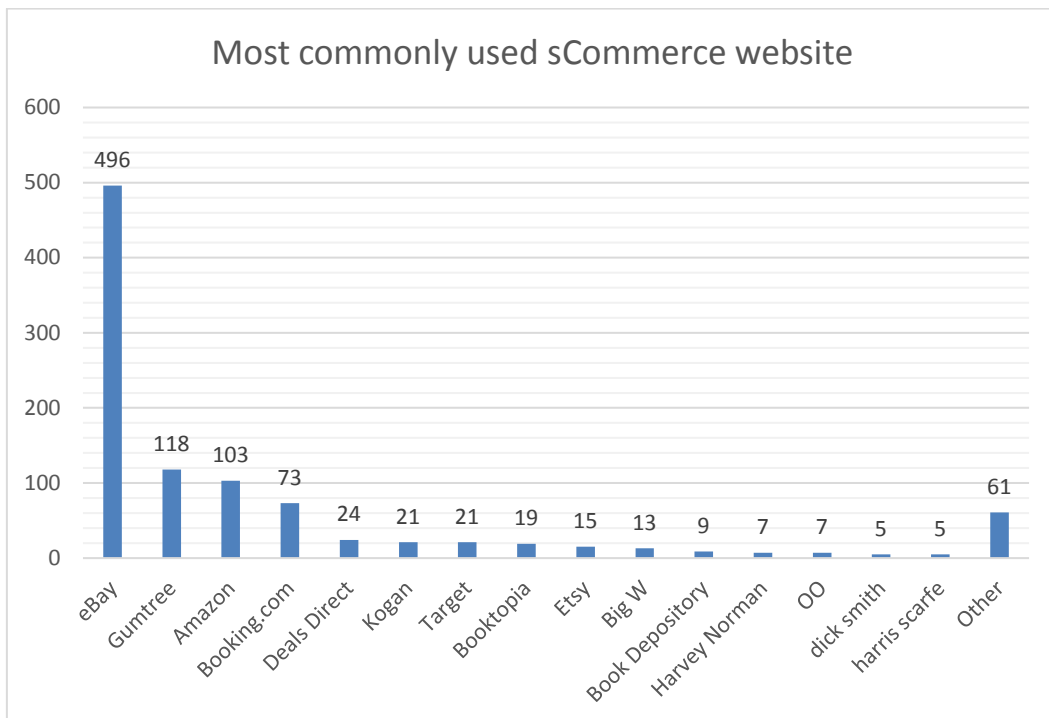


Figure 5.11 sCommerce Website used most often

No data ranking the most commonly used sCommerce websites in Australia was found, but Alexa (Alexa, 2018) ranks the top websites in Australia and on that list, eBay ranks number seven, Gumtree is 13, Amazon is at 22 and these are the only sCommerce/eCommerce websites up to that point. This indicates that it is likely that the study's respondents do not vary wildly from the general population.

5.3.8 Respondents' Online Shopping Experience

In this study, respondents were asked to indicate how long they had been shopping online. All 997 respondents answered this question. The majority indicated that they had 'More than 3 years' of experience. As can be seen most of the study's respondents had been using online shopping for a significant amount of time. An interesting result was that the 'Less than 6 months' category was the second largest indicating that a second wave of adoption by later adopters was possibly detected in the survey. About 72.2% of the population use in eCommerce (Alexa, 2018), which indicates that there is not a lot of room for growth in participation, which is in concurrence with the finding that most users have been shopping online for a long time.



Figure 5.12 Online Shopping Experience

5.3.9 Frequency of Visits to SCommerce Websites

Respondents were asked about how often they visited the sCommerce website. All 997 research respondents answered this question. The majority was ‘1-2 times per month’ and the average was ‘3-5 times per month’. This indicates that nearly a majority of sCommerce users (48%) can be viewed as casual visitors. It should also be noted that there was a significantly sized group that visited very often. It was not possible to find comparative data for this question for sCommerce website visits or eCommerce website visits.

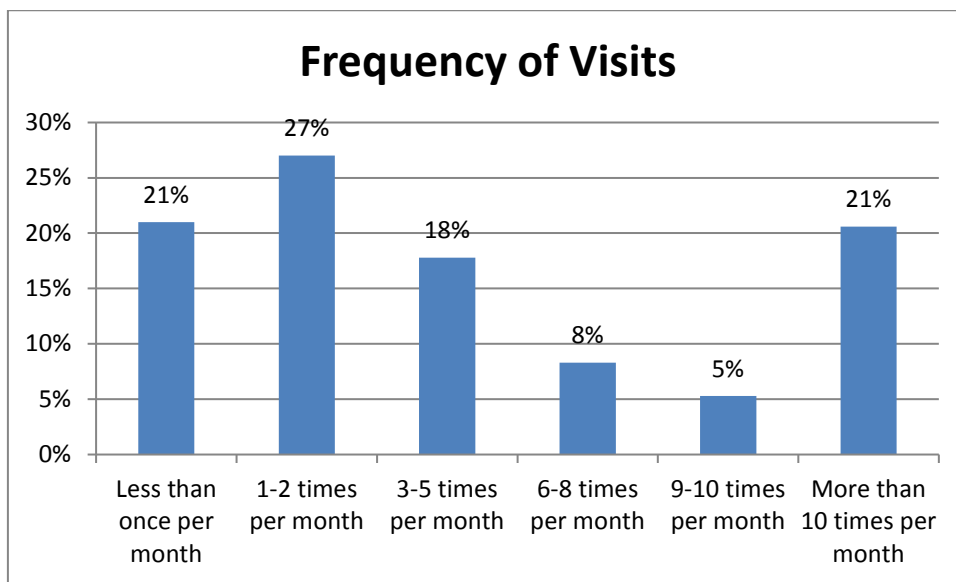


Figure 5.13 Frequency of Visits

5.3.10 How often Respondents Purchase Items from SCommerce Websites

Respondents were asked how often they purchased items from the sCommerce website. All 997 respondents answered this question. As can be seen from Figure 5.134, the majority (84.9%) (calculated from the first two data categories) were making 24 purchases per year. In the available data on eCommerce purchases, the average number of purchases is 16 per year in Australia (KPMG, 2017). If the fact that most of the respondents probably purchased from more than just one sCommerce website is taken into consideration, then this seems comparable to the findings from this question.

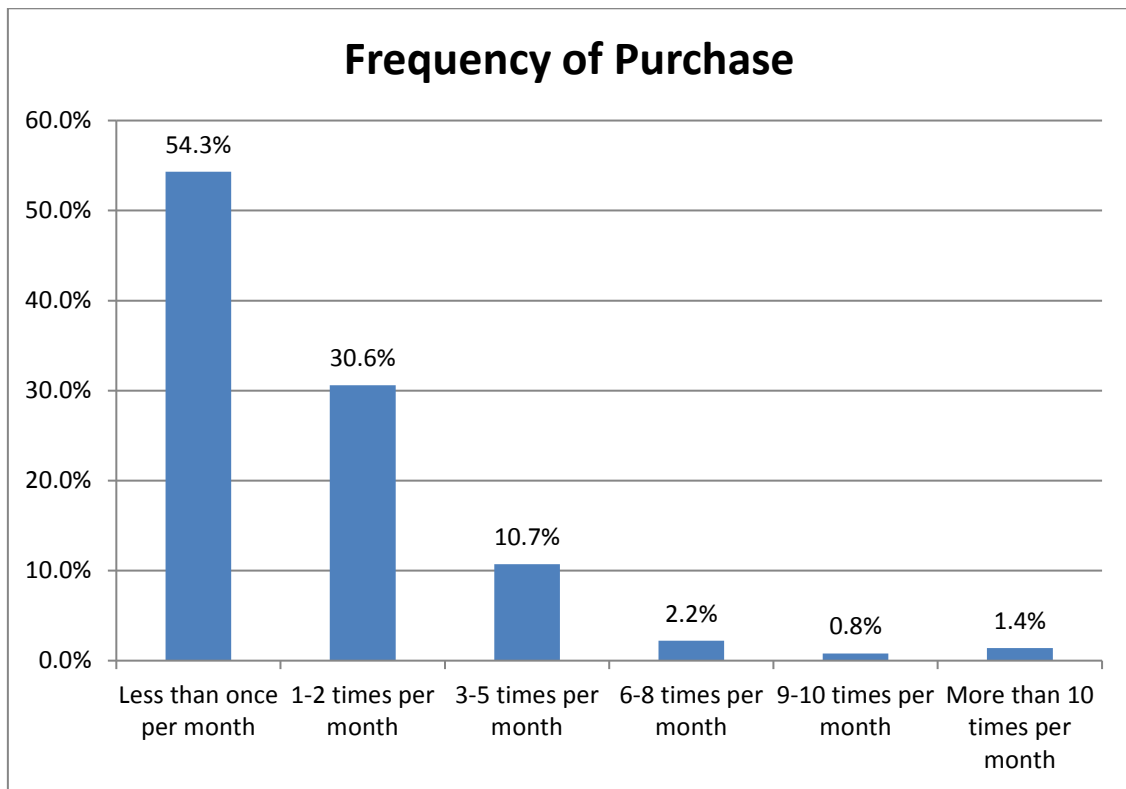


Figure 5.14 Frequency of purchases

5.3.11 What Respondents Purchase When Using sCommerce Websites

In this question the study’s respondents were asked about the types of products that they buy through sCommerce websites. All 997 of the respondents identified at least one product type that they purchased from a sCommerce website. As can be seen from Figure 5.15, the variety of product types purchased is large. Furthermore, 10.2% of respondents indicated that they had purchased another 41 other product types. The product ‘wine’ was omitted because only one person indicated that that they had purchased the product and it only made up 1% in terms of the number of respondents that had purchased it. A comparison with data on the top five purchased product types in 2016 (KPMG, 2017) through eCommerce were women’s clothing, books/music, men’s clothing, electronics and wine. Apart from wine, this aligns reasonably well with the results of the current survey.

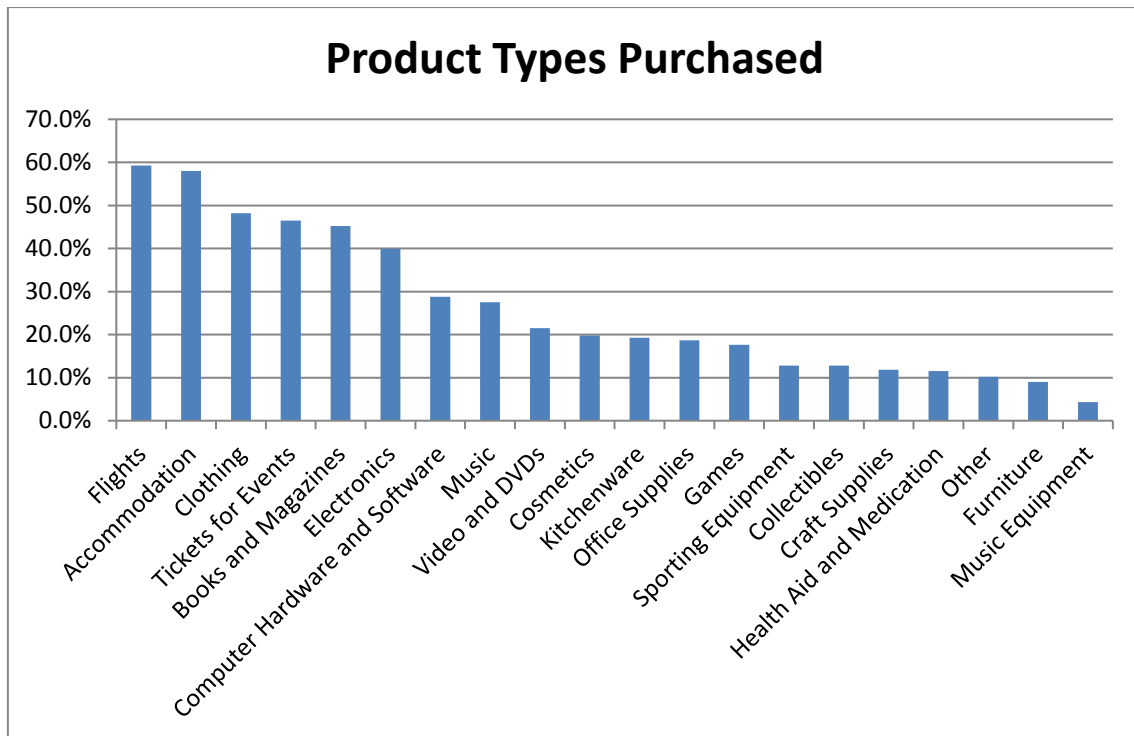


Figure 5.15 Product Types Purchased

5.4 Summary

This chapter summarised the descriptive data analysis of this study. There was a total of 11 items in the descriptive analysis:

- Gender
- Age
- Level of Education
- Occupation
- Location (State of Australia)
- Income
- Most often used sCommerce website
- Online shopping experience
- Frequency of visits to sCommerce websites
- Frequency of purchase from sCommerce websites
- Types of Products usually purchased

The chapter described the responses to each of the questions, provided relevant measures of central tendency and compared the results with the best available data from previous surveys.

Chapter 6 **Data Preparation**

This chapter will discuss the data preparation process, which includes four steps: (1) missing data analysis; (2) outliers' analysis; (3) the normality analysis; and (4) common method bias test. In addition, this chapter will also discuss the validity and reliability of the measurement model. Table 6.1 depicts a summary of the techniques that were used to prepare the data for the analysis stage.

Table 6-1 Techniques for Data Preparation

Purpose	Technique	Description
Missing Data Value	Missing Completely at Random (MCAR), Missing at random (MAR), Missing not at random (MNAR)	The idea of finding missing values in any type of data is important in order to successfully analyse and manage data. In this proposed study the researcher used the MCAR, MAR and MNAR techniques to identify missing values. However, our research questionnaire had a zero chance of skipping any information, as the data was collected using a web application. Therefore, respondents could not move to the next question until they had answered the current question.
Identification of Outliers	of Multivariate Outliers	Multivariate outliers are a likeness that looks to diverge from other opinions in the sample data in research. An outlier might designate bad data in a research plan. For instance, the research data might have been coded inaccurately or a trial might not have been executed correctly. If identifiers can be identified that an outlying opinion is in fact inaccurate, then the outlying value should be removed from the data analysis. In another words, identifying outliers as different to the rest of the research data in the data sample and therefore its values are likely to be prejudiced. While there are an insignificant number of standards for determining whether a value is an “outlier”, those standards are

arbitrarily chosen.

**Multivariate
Normality**

**ZSkewness,
ZKurtosis**

The term normality is mostly used to define data sets that are distributed through a normal distribution. Normality is used to analyse how possible it is for a random factor or variable primary of the research data set to be normally distributed. Moreover, multivariate normality identifies whether the research sample data is normally distributed crossways the populations sample. It also identifies high or low ranks from an insufficient number of respondents that can skew the overall research result. In this research ZSkewness and ZKurtosis normality test was used.

Common Method Bias CFA, EFA

Common method bias refers to the degree to which associations are altered due to the selected method's effect. In another words, it refers to a bias in the selected research dataset due to something external to the procedures or measures. For example, the bias can happen due to the way the research questions are designed or constructed. Moreover, the way in which research questions are asked, and the way in which respondents reply.

6.1 Missing Data Analysis

It is undeniable that today, most researchers have faced the difficulty of missing values at some point in their research. For instance, a respondent may decline to partake in a study or forget to answer a study question. Therefore, researchers find themselves left with the judgement of how to analyse data, in particular with missing values when they do not have the information from all the respondents (Allison, 1987, Schafer and Olsen, 1998).

Missing data have always been a challenge for researchers and practitioners and this is because empirical data analysis requires an appropriate handling of missing values in all statistical and mathematical analyses. In the case of inappropriate handling of missing values, it will cause bias because the researcher must assume that missing values vary in systematically vital ways from cases where values are existing. That is, the issue of

missing values is more of a concern than sample sizes due to its biased effect on the data. The acquisition of values where data is missing is a field of statistics that has been developed since the 1980s (Barnard, 2000).

Some researchers disparage accrediting values for a dependent variable on the basis that this diminishes the variance of the variable that is dependent, biases estimations, and integrates noise in the data into accredited dependent values. However, other statisticians such as Little and Rubin (2002), recommend that accusation of dependent variables is indispensable for obtaining unbiased appraisals of the regression coefficients (Allison, 1987). Statistical protestations can be made with any method, that might be employed for data acquisition. Missing values are a measurement fault. As such, missing values may both bias the sample data and decrease consequence sizes (Chen, 2010).

Missing values also refer to circumstances in which valid values on one or more variables are not accessible for analysis (Hair et al., 2010a). Missing values have three main types: First, missing completely at random (MCAR). It exists when missing values are randomly distributed across all observations. MCAR can be confirmed by distributing respondents into two groups (with and without missing values), then using T-Tests of mean variances on revenue, age, sex, and other key variables to find that the two sets do not vary on any variable in the method nor on any dependent variable. Second, missing at random (MAR), the term missing at random is ambiguous since MAR data imitates a methodical rather than missing values at random pattern. MAR data and missing values are not independent of the values of additional variables in the method but is anticipated by them. The third type is missing not at random (MNAR)—also called non-ignorable missing-ness—is the most difficult type. It happens when missing values are neither MAR nor MCAR (Brand et al., 2003, de Waal et al., 2011).

Literature shows that there are different statistical packages to control missing values analysis and data accusation in different ways. For example, statistical packages such as: SPSS, SAS, STATA. In this study SPSS was used for analysing missing data and values. This is because in the SPSS add-on module called "Missing Value Analysis" (MVA), has supported numerous accusation algorithms, the most common being expectation maximisation (EM) (Schafer and Olsen, 1998). MVA is also valuable for analysing and considering patterns of missing values in the data. Since SPSS 17 a

distinct module called "Multiple Imputation" (MI) has supported the fresher, preferred MI estimation model. The default MI model in SPSS is founded on the Markov Chain Monte Carlo methods developed by Little and Rubin (2002).

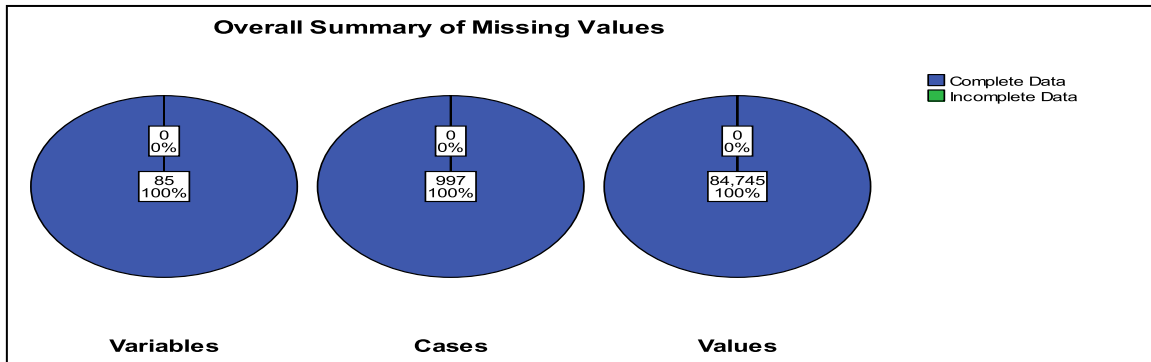


Figure 6.1 Missing Values Summary for all Variables

One strategy for accumulating the likelihood of an ignorable response instrument is to use more than one technique for collecting significant information. Sensitive examination items such as 'salary' may produce many missing values, but less complex, surrogate variables such as 'category of employment' or 'years of education' may be less subject to missing values. In this case the researcher used the MCAR, MAR and MNAR methods to identify the missing values. However, our survey had a zero chance of ignoring or leaving questions blank as the researcher collected the data using a web application and respondents could not jump to the next question prior to answering the current question. EM was also used to identify missing values. The EM and multiples imputation results revealed that the survey data was statistically significant as shown in Figure 6.1.

For the data collection stage, the researcher carefully attained as much information as possible, trying to obtain thorough data on all respondents by means of using more than one way to obtain essential variables in the questionnaires. The researcher looked at univariate data processing such as, the arithmetical mean, standard deviation, and occurrences to check the amount of missing values.

6.2 Identifying of Outliers

Outliers are values that contrast with the rest of the data in the data set, which leads to biased values. While there are a small number of benchmarks for deciding whether a

value is an “outlier”, those benchmarks are randomly chosen, akin to how “ $p < .05$ ” is also randomly chosen. The reason why outliers are checked is because outliers can deliver data as non-normal (Kline, 2011). As normality is one of the theories for many of the numerical tests one will conduct, finding and eradicating the control of outliers may provide your data normal, and thus make your data suitable for analysis by means of those numerical tests. However, literature shows that few researchers check for outliers. For instance, a value which is extreme compared to the rest of the data does not mean it is an irregularity, or unacceptable, or that it should be removed. The topic chooses to respond with that data, so eliminating that value is randomly throwing away value just because it does not align the hypothesis that data should be regular (Hair et al., 2010a).

Table 6-2 Outlier Test Results

Case	D2	D2/df	Case	D2	D2/df
439	6241	73	305	1939	23
897	3600	42	316	1878	22
412	3252	38	642	1855	22
804	2790	33	151	1852	22
164	2710	32	542	1827	21
735	2187	26	997	1731	20
100	2161	25	620	1705	20
211	2150	25	580	1665	20
667	2065	24	641	1644	19

Where $df=85$

In another words, outliers refer to annotations or cases with values for variables or mixtures of data variables that are considerably dissimilar from those in other cases (Hair et al., 2010a). Outliers are not an envoy of the population. Tests can disfigure numerical tests, and therefore work counter to the objectives and aims of a research study (Byrne, 2010). Outliers can be identified and checked from a bivariate, univariate and multivariate viewpoint. In this study, the researcher executed a multivariate test for

outliers, as this study employed a SEM based multivariate examination that considered for multivariate outliers that had extreme scores on two or more data variables. This is as opposed to an univariate outlier that has an extreme score on a single variable (Kline, 2010).

A key technique to the discovery of multivariate outliers is the multiplication of the squared distance known as D2 for every case (Hair et al., 2010a). This statistic identifies the distance in standard deviation components among a set of scores for one case and the example means for all data variables. D2 evaluates the degree of the dissimilarity of every examination across a set of data variables. An outlying case, (for example higher D2 values related to the other case in the sample) will have a D2 value that situates apart from all the other D2 data values. Hair et al. (2010a) recommended recognising any cases in which the $D2/df$ value surpasses three samples or four in large samples, where (sample $N \geq 200$) as an outlier. Following the suggestion of Hair et al. (2010a), for the existence of multivariate outliers the researcher used D2 as a determination of distance, and calculated $D2/df$. Table 6.2 depicts the top 20 outliers that were observed based on $D2/df$. Appendix 5.1 depicts the 202 $D2/df$ values of selected cases that exceeded three and four. Therefore, these cases were dropped from the sample.

6.3 Multivariate Normality

A normal distribution is a symmetric curve that is described by two things: the arithmetic mean value (average) and variance (variability). The key idea behind arithmetical deduction is that as sample data size rises, distributions will estimate normal. Most arithmetical tests rely upon the hypothesis that data sample is “normal” (Arbuckle, 2010). Statistical tests are based on the statistics or normality called parametric tests. Having studied the data for outliers and missing values, the sample data was further tested for any existence of important deviations from normality. This is vital as a required hypothesis of multivariate data analysis (Byrne, 2010).

Normality identifies whether the sample data is normally disseminated across the sample and that there are no extremely high or low scores from a few respondents that could twist the overall result (Hair et al., 2010a). Normality is accomplished by evaluating the shape of distribution of ranks across the sample data and the uniqueness of the statistics for a particular character metric variable that approximates the ordinary distribution. An important variation from the ordinary distribution delivers all resulting

numerical tests invalid, since quite a few of the statistics are implemented assuming normal data sample distribution. The evaluation of univariate normality for all variables is adequate in the majority of cases, particularly when the data sample size is large that is, greater than two hundred (Hair et al., 2006). A large data sample size diminishes the unfavourable effect of non-normality. As a result, this section evaluates the normality of all included individual variables.

Hair (2010) recommend using the normality test by investigative skewness and kurtosis data values. Arithmetical tests for normality are completed through experiential measures of a distribution's outline using skewness and kurtosis procedures for every metric variable. The experimental measures support in identifying the data variables with a deviance from normality. An optimistic skew symbolises a distribution skewed to the left and an unenthusiastic skew reproduces a distribution skewed to the right. An unconstructive kurtosis data value denotes a compliment distribution, whereas an optimistic kurtosis data value discloses a pointed distribution. ZSkewness and ZKurtosis has been suggested by (Hair et al., 2010a) as a critical value (+/- 2.58 as a significance level and +/- 1.96 as significance level) in order to help in finding the significance of both skewness and kurtosis. However, Kline (2010) suggested a more lenient measure of +/- 10 for kurtosis. Applying this to our data (85 Variables), the skewness and kurtosis at the critical values, showed that 42 variables were not normal and that 43 variables were within the normal range (Kline, 2010). In general, data was non-normal (see Appendix 5.2). Consequently, the researcher decided to transform the data (see Appendix 5.3).

Data transformation is a process used to modify variables either to correct the statistical assumptions violations or to improve the correlation between variables. This process gives the opportunity to correct and reduce non-normal data. If the data is non-normal and either has a flat distribution or a skewed distribution, it can be transformed through different ways. For flat distributions, the most common method is the inverse, which was used in this study. For skewed distributions, the square root or logarithms can be used (Hair et al., 2010b).

In this study, Partial Least Squares (PLS) was used as a SEM software. It has been indicated that when using PLS, a researcher should take kurtosis in consideration more than skewness (Henseler et al., 2009). Therefore, if the data is highly skewed, PLS can

handle this issue and PLS modelling can be used in this regard. Hence, the result of kurtosis is treated more significantly than the result of skewness.

Appendix 5.3 shows that among the 85 variables, six variables had kurtosis values more than +/- 2.58, however all of them were within range according to Kline (2010). One variable exceeded the Kline (2010) range. Kurtosis strictly affects tests of statistical variance and covariance, whilst skewness influences tests of statistical means. As kurtosis is considered as more of a concern than skewness (Byrne, 2010), therefore, none of the values suggested a non-normal variable. Moreover, due to large sample size of this study, a non-normality for one variable or several variables would not affect the data analysis stage. This is because large sample sizes reduces the opportunity for the data to be non-normal (Hair et al., 2006, Byrne, 2010).

In order to show further evidence for the normality of the data, the researcher checked the normality of multivariate normality (the combination of two or more variables) after transformation. Hair et al. (2010a) stated that “if a variable is multivariate normal, it is also univariate normal”. Appendix 5.4 shows the significance of both kurtosis and skewness for all the 13 composite variables. All composite variables were above 0.05. Therefore, all of them are normal. This supports the previous result that was mentioned in the previous paragraph.

6.4 Common Method Bias

Common method bias in statistics—also named common method of mathematical variance—denotes to a variance that could arise as the outcome of the measurement technique, due to the hypotheses that the measures characterise (Podsakoff et al., 2003). Data composed from the same individual for both the predicator and principle variables by means of a single technique and/or at one opinion of time may acquire part of the adjustment that the measurement objects share in common, due to the technique of data gathering, rather than due to the associations hypothesised in a given investigation model (Podsakoff et al., 2003).

Numerous methods have been anticipated in the literature to test and identify common method bias and is used in statistical tests know as Harman’s single-element (Podsakoff et al., 2003). This method recommends loading all the measurement items into the element investigation and the unrelated element solution of an exploratory factor

analysis (EFA) to define the number of elements accounting for the adjustment in the measurement items.

Harman's single-element shows that there are 14 factors that interpret around 64% of the model. First and greater factor explains 25% of variance (see Table 6.3). Therefore, it is less than 50% which is required to indicate that there is common method bias. Hence, it is unlikely that the study results will be affected by the common method bias.

Table 6-3 Common Method Bias Test-Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	21.206	24.949	24.949	21.206	24.949	24.949
2	8.306	9.772	34.721	8.306	9.772	34.721
3	5.143	6.050	40.771	5.143	6.050	40.771
4	3.314	3.899	44.670	3.314	3.899	44.670
5	2.998	3.527	48.197	2.998	3.527	48.197
6	2.634	3.099	51.296	2.634	3.099	51.296
7	1.850	2.176	53.472	1.850	2.176	53.472
8	1.659	1.952	55.424	1.659	1.952	55.424
9	1.512	1.778	57.202	1.512	1.778	57.202
10	1.445	1.700	58.903	1.445	1.700	58.903
11	1.179	1.387	60.289	1.179	1.387	60.289
12	1.123	1.321	61.610	1.123	1.321	61.610
13	1.075	1.265	62.875	1.075	1.265	62.875
14	1.008	1.185	64.061	1.008	1.185	64.061

6.5 Summary

Data preparation and arrangement (or information processing) in this setting implies the shaping of data into an appropriate form that is fit for examination. It is a procedure that includes various undertakings that cannot be completely computerised. A considerable lot of the data planning exercises are standard, dull, and tedious.

Data readiness is basic for effective information mining. Low quality data ordinarily results in inaccurate and questionable information mining. Data readiness enhances the nature of information and therefore enhances the nature of data mining. The notable saying "junk in rubbish out" is extremely pertinent to this space. This chapter presented the process of preparing and cleaning data. This process consisted of identifying missing data, outliers, testing the normality and the common method bias.

Chapter 7 **Data Analysis and Results**

This chapter describes the results of the analytical procedure conducted to investigate the factors that impact customer's loyalty to sCommerce websites in Australia. It describes the data analysis procedures, the PLS method, and the model type. It then presents the measurement model. At the end, the structural model of the hypothetical relationships is evaluated.

7.1 Data Analysis Procedures

The data was analysed through three processes that included data preparation, data validation using measurement model and data evaluation with a structural model (Hair et al., 2012c). At the very beginning, the data was prepared by identifying missing data, specifying and identifying violations of statistical assumptions such as outliers and testing for common method bias (Ott and Longnecker, 2015, Hair et al., 2007, Marcoulides and Saunders, 2006). For the data preparation, SPSS version 24 was used. The screening process did not find any missing data. The detailed results of data preparation were shown in the previous chapter. The variance-based structural equation modelling (SEM) tool using partial least square technique was used by applying SmartPLS 3 software (Lowry and Gaskin, 2014, Ringle et al., 2010). The justification of applying the variance-based structural equation modelling is described in the following paragraphs.

A pool of analytical techniques is used to produce various analyses of data in quantitative research. SEM generates some salient features of data such as correlation, reliability analysis, discriminant analysis, average variance extracted (AVE), multiple regression, and variance inflation factor (VIF) (Lowry and Gaskin, 2014, Bagozzi and Yi, 2012). Moreover, SEM analyses the reliability and validity of observed variables and evaluates the linkages among different observed variables concurrently (Hair et al., 2012c). Therefore, SEM incorporates both factor analysis and regression analysis in one analysis, and is a sound analytical tool for researchers (Gefen et al., 2000).

Two different approaches are used in SEM analysis such as covariance-based and component-based or variance-based, more commonly known as PLS (Hair et al., 2011, Reinartz et al., 2009). Although these two approaches are both applied to identify the

linkages in observed variables, some distinct features distinguish these two approaches, such as the objectives of the analysis, assumptions in the analysis, and model fit indices (Gefen et al., 2000). Covariance-based-SEM (CB-SEM) emphasises on the maximum likelihood estimation method to identify the fit index, such as Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Tucker–Lewis index (TLI), and Root Mean Square Error of Approximation (RMSEA) (Roldán and Sánchez-Franco, 2012). Variance-based SEM emphasises ordinary least squares estimation that calculates the statistical linkages among latent constructs (Gefen et al., 2000).

CB-SEM is rigid in some assumptions that are to be fulfilled in the data, theory and measurement of latent variables. It produces good results when the data follows the multivariate normality assumption (Götz et al., 2010). Moreover, CB-SEM focuses on a reflective model ignoring the formative nature of a model, which produces misspecification errors (Becker et al., 2012, Albers, 2010). Misspecification errors may be prevalent if the studied indicators are treated as reflective—replacing the suggested formative form (Albers, 2010). CB-SEM assumes all measurement models as reflective although the formative nature of a model might be desired (Chin, 2010). To overcome the shortcomings of CB-SEM, PLS is an appropriate approach that can show both formative and reflective observed constructs in a measurement model (Götz et al., 2010).

7.1.1 Partial Least Squares (PLS)

Over the last three decades, the usage of PLS in multivariate analyses has increased in business research (Hair et al., 2012c). From 1985 to 2010, the PLS method has appeared in most marketing journals, indicating the acceptance and wide usage of this technique (Hair et al. (2012c). Over the same era, Hair et al. (2012c) demonstrated the cumulative increase of PLS application in the strategic management field. Moreover, the acceptance of this technique has increased in other research fields such as IS (Urbach and Ahlemann, 2010a, Hair et al., 2014), marketing and learning orientation (Ross and Grace, 2012).

Wold (1974) founded nonlinear iterative partial least squares (NIPALS) by integrating PLS with the casual modelling technique. PLS emphasise the application and prediction of studied variables, de-emphasising the confirmation of predicted relationships (Hair et

al., 2011). Moreover, PLS is suitable for complex model estimations (Hair et al., 2016, Hair et al., 2012c, Henseler et al., 2009).

With the PLS method, the assumptions regarding the data distribution is relatively flexible compared to CB-SEM (Chin, 2010). In CB-SEM, the multivariate data is assumed to be normally distributed, which is not required in PLS (Hair et al., 2016, Henseler et al., 2009). The PLS represent non-parametric prediction-oriented measures such as the average variance extracted (AVE), R square (R^2) for dependent variables (Chin, 2010).

7.1.2 Reasons for Using PLS

The logic behind choosing the PLS method for data analyses in this study is three-fold. First, this study examined the influence of user satisfaction, trust and SP on loyalty within an sCommerce website. The PLS method is appropriate in order to identify causal-predictive relationships. Therefore, this study matches the capability of the PLS method. The PLS method is appropriate for identifying measurement and structural relationships among satisfaction, trust, SP, and loyalty to sCommerce, and the cause-effect relationships among the study constructs.

Second, the model specification in this research combines formative and reflective constructs. The PLS method can handle the cause-effect relationship models, which incorporate both formative and reflective measurement models (Henseler, Ringle & Sinkovics 2009). In contrast, CB-SEM assumes that all measures are reflective (Chin 2010).

Third, another important capability of the PLS method is the ability to measure difficult models that have more latent variables (Hair et al., 2014). As the framework of this study—with its 13 constructs including a hierarchical component model of the second factor and its two dimensions—is a complex model, the PLS method is appropriate to manage it. The PLS method undertakes the hierarchical component models to estimate the parameters using repetition of indicators (Hair et al., 2012c). First order constructs can produce the second order constructs with its manifested variables (Wetzels et al., 2009).

7.2.5. Model Evaluation

A structural equation model consists of two related models: the measurement model specifying the psychometric properties of the data and the structural model specifying the explained variance and R squared (Hair et al., 2011, Urbach and Ahlemann, 2010a). In the analytical process, the measurement model is first tested and then the structural relationship amongst the constructs is analysed.

Step One: Evaluating the psychometric properties of the measurement model.

This is done to determine whether the observed construct is reflected by its items (Hair et al., 2011, Henseler et al., 2012). Before checking the structural relationship among the constructs, the psychometric properties of the items of all factors are checked (Chin, 2010, Hair et al., 2011). All the reflective first-order factors are tested with their observed items by examining their validity and reliability. (Hair et al., 2011, Hair et al., 2012b, Urbach and Ahlemann, 2010a).

Step Two: Measuring the structural model.

Second, the structural relationships among the constructs are assessed. The effect size (f^2) was measured. The variance explained that the relationships were represented as R^2 for the endogenous latent constructs that were assessed. Another important indicator of the relationships was the significance of all path coefficients with the size.

7.2 Operationalisation of Constructs

The research model was presented in Chapter 3. Table 7.1 shows more information about the research constructs. The codes of each construct of the model and the corresponding indicator constructs are summarised as well.

Table 7-1 Operationalisation of Constructs

Construct	Operationalisation	Code of Constructs	Code of Indicators
Customer Loyalty	Reflective Construct	CUL	CUL1, CUL2, CUL3, CUL4, CUL5, CUL6, CUL7, CUL8

Satisfaction	First-Order Reflective	SAT	SAT1, SAT2, SAT3, SAT4, SAT5, SAT6, SAT7
Trust	First-Order Reflective	TRU	TRU1, TRU2, TRU3, TRU4, TRU5, TRU6.
Social Presence	Second-Order Formative	SP	SPW1, SPW2, SPW3, SPW4, SPW5, SPO1, SPO2, SPO3, SPO4, SPO5
Social Presence of Website	First-Order Reflective	SPW	SPW1, SPW2, SPW3, SPW4, SPW5
Social Presence of Other Users	First-Order Reflective	SPO	SPO1, SPO2, SPO3, SPO4, SPO5
Service Quality	First-Order Reflective	SEQ	SEQ1, SEQ2, SEQ3, SEQ4, SEQ5
System Quality	First-Order Reflective	SQU	SQU1, SQU2, SQU3, SQU4, SQU5
Information Quality	First-Order Reflective	IQU	IQU1, IQU2, IQU3, IQU4, IQU5, IQU6
Reputation	First-Order Reflective	REP	REP1, REP2, REP3, REP4, REP5, REP6, REP7
Online Shopping Experience	First-Order Reflective	OSE	OSE1, OSE2, OSE3, OSE4, OSE5, OSE6, OSE7, OSE8
Word of Mouth	First-Order Reflective	WOM	WOM1, WOM2, WOM3, WOM4, WOM5, WOM6, WOM7, WOM8, WOM9, WOM10, WOM11
Communication	First-Order	COM	COM1, COM2, COM3, COM4,

Reflective

COM5, COM6, COM7, COM8,
COM9, COM10, COM11,
COM12

7.3 Assessment of the Measurement Model

In this study, all the first-order factors are reflective in nature and the second-order factors are formative in nature. The SP construct has no items, rather SPW and SPO are formative to its indicators. As the second-order construct—SP—has no items, the repeated-indicator approach was used (Becker et al., 2012, Urbach and Ahlemann, 2010a). Moreover, Becker et al. (2012) recommended that second-order factors should be assigned the same indicators (measures) that have been assigned to the dimensions. To identify the psychometric properties of the items, validity and reliability are measured. The items of all constructs need to represent reliability and convergent and discriminant validity. First, the reliability of the items was checked to identify whether the items were stable and consistent. Second, the study further checked the validity of the items identifying whether the items reflected the concerned factor (Sekaran, 2006).

7.3.1 Indicator Reliability

At the beginning of analysis, the path weighting was determined using an inner weighting tool. To calculate the indicator reliability, this study specified 500 iterations. There are three weighting schemes, such as path weighting, factorial weighting, and centroid weighting. Among these three, the path weighting scheme allows for setting the mode of causality among the variables (Vinzi et al., 2010, Urbach and Ahlemann, 2010a). Specifying the direction, the factor loadings of measurement items were set. The cut-off value of the item loading and item reliability is 0.7 and 0.5 respectively (Hair et al. (2013). Item loading represents the correlation among the items, whereas the item reliability represents the squared loading. This current study excluded some items that did not support the threshold value 0.7 as a factor loading (Hair et al., 2014, Peng and Lai, 2012). The deleted items from the measurement model are shown in Appendix 5.1. The loadings of the items that satisfied the criteria were retained in the measurement model. The reliability and validity of the measurement items are depicted in Table 7.2. These results are based on CFA, as when the relationships among the

observed variables are well established through the literature (Hardin, 2002), it is wise to conduct a CFA. Moreover, compared to EFA, CFA is a more rigorous approach. Therefore, researchers use CFA to make factorial relationships among the measures, when the proposed theoretical model relies on established knowledge. Following previous research and theory, the measures in the theoretical model are generally checked using a CFA (Barney, 1986, Treiblmaier and Filzmoser, 2010). For conducting the CFA, SmartPLS software was used.

Table 7-2 Reliability and Validity of the First-Order Constructs

Constructs	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Communication		0.75	0.84	0.57
COM2	0.79			
COM3	0.76			
COM4	0.73			
COM5	0.74			
Loyalty to a SCommerce Website		0.84	0.88	0.60
CUL1	0.71			
CUL3	0.85			
CUL6	0.74			
CUL7	0.74			
CUL8	0.85			
Information Quality		0.83	0.89	0.66
IQU2	0.78			
IQU3	0.80			

Constructs	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
IQU4	0.84			
IQU6	0.84			
Online Shopping Experience		0.88	0.91	0.62
OSE1	0.74			
OSE2	0.75			
OSE3	0.81			
OSE5	0.85			
OSE6	0.79			
OSE7	0.80			
Reputation		0.82	0.89	0.73
REP2	0.86			
REP3	0.85			
REP6	0.86			
Satisfaction		0.85	0.90	0.69
SAT1	0.80			
SAT3	0.83			
SAT5	0.86			
SAT7	0.82			
Service Quality		0.86	0.91	0.71
SEQ1	0.86			
SEQ2	0.83			
SEQ3	0.83			

Constructs	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
SEQ5	0.85			
Social Presence of Others		0.77	0.85	0.59
SPO1	0.73			
SPO2	0.80			
SPO3	0.81			
SPO5	0.75			
Social Presence of Websites		0.67	0.82	0.60
SPW1	0.70			
SPW3	0.83			
SPW5	0.80			
System Quality		0.85	0.90	0.63
SQU1	0.80			
SQU2	0.79			
SQU3	0.82			
SQU4	0.76			
SQU5	0.80			
Trust		0.84	0.89	0.68
TRU1	0.78			
TRU2	0.86			

Constructs	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
TRU3	0.84			
TRU5	0.80			
Word-Of-Mouth		0.79	0.86	0.60
WOM4	0.76			
WOM5	0.82			
WOM6	0.76			
WOM7	0.75			

Table 7.2 shows that the range of the item loadings were between 0.70 and 0.86. From the above analysis, the results show that the study items are reliable.

7.3.2 Internal Consistency

The study followed the suggestion of Hair et al. (2011) to measure internal consistency. Internal consistency is measured identifying composite reliability (CR). It is performed to check whether the measurement items of each factor measure the concerned factor. Even though all factors have high values of Cronbach's alpha, and achieve the threshold of 0.7 (see Table 7.2), it has been argued that Cronbach's alpha is less preferred than composite reliability (Hair et al., 2012b). Cronbach's alpha produces low alpha values for multidimensional constructs (Götz et al., 2010). Moreover, compared to composite reliability, Cronbach's alpha shows poor estimation for reliability (Hair et al., 2012b). This study used composite reliability to check for internal consistency reliability. As shown in Table 7.2, the composite reliability achieved the cut-off value of 0.7 and lies between 0.82 and 0.91. Thus, the composite reliability shows good estimation.

7.3.3 Convergent Validity

Convergent and discriminant validity are the main tests in validity analysis. Convergent validity identifies the correlations between the measurement items and its hypothesised

constructs. To identify convergent validity, an average variance extract (AVE) is used (Fornell and Larcker (1981). AVE identifies the degree to which average shared variance is observed between a factor and its item (Chin, 2010, Hulland and Business, 1999). AVE is also measured when considering the measurement error. The minimum value of AVE of each factor is 0.5 (Fornell and Larcker, 1981), which shows the convergent validity as satisfactory. In this study, all factors satisfied the cut-off value of 0.5. Table 7.2 shows that the AVE of all constructs are within the range of 0.57 to 0.73.

7.3.4 Discriminant Validity

The second type of validity measure is discriminant validity. When the items of a construct are not correlated with the items of another construct, it is known as discriminant validity (Chin, 2010). Gefen and Straub (2005) suggested two criteria for it. First, the items need to be loaded highly with the respective theoretically intended constructs and must not exhibit high loadings on other constructs. Second, the greater value of square root of the AVE of each construct is expected in comparison to the values of inter-construct correlations. When a factor and its items produce larger shared variance in comparison to that of others, it represents discriminant validity (Compeau et al. 1999). This discriminant validity is depicted in a correlation matrix exhibited in Table 7.3. It shows that the square root of AVE is higher than the correlations of inter-constructs. Therefore, the requirements of the discriminant validity were achieved. Evaluating the above analysis, this study confirms the reliability and validity of the items and its concerned factors.

Table 7-3 Discriminant Validity of First-Order Constructs

	Communication	Information Quality	Loyalty to a SCommerce Website	Online Shopping Experience	Reputation	SPO	SPW	Satisfaction	Service Quality	System Quality	Trust	Word-Of-Mouth
Communication	0.757											
Information Quality	0.352	0.815										
Loyalty to a SCommerce Website	0.657	0.324	0.779									
Online Shopping Experience	0.438	0.226	0.531	0.789								
Reputation	0.694	0.340	0.706	0.400	0.855							
SPO	0.462	0.197	0.485	0.343	0.407	0.771						
SPW	0.447	0.187	0.375	0.233	0.345	0.576	0.776					
Satisfaction	0.615	0.306	0.753	0.555	0.658	0.325	0.282	0.829				
Service Quality	0.315	0.664	0.288	0.201	0.299	0.254	0.248	0.281	0.843			
System Quality	0.306	0.746	0.297	0.194	0.301	0.188	0.208	0.286	0.768	0.796		
Trust	0.284	0.644	0.311	0.207	0.302	0.264	0.221	0.284	0.739	0.654	0.823	
Word-Of-Mouth	0.303	0.654	0.283	0.198	0.252	0.245	0.247	0.209	0.532	0.636	0.474	0.773

Notes:

Highlighted values in diagonal are square root of AVE and correlation are off-diagonal

7.3.5 Heterotrait-Monotrait Ratio (HTMT)

Although Fornell-Larcker criterion and cross-loadings are the dominant methods for assessing discriminant validity in PLS-SEM, the alternative approach, such as the Heterotrait-monotrait (HTMT) ratio of correlations is now popular to assess discriminant validity (Henseler et al., 2015). Henseler et al. (2015) have shown that HTMT has superior performance in assessing discriminant validity. Voorhees et al. (2016) also supports the use of HTMT.

The Heterotrait-monotrait ratio of the correlations is a function which assesses discriminant validity. It can evaluate the average correlation among indicators across constructs or it can access relative to the average correlation among indicators within the same construct. HTMT values are generally interpreted as estimates of inter-construct correlations. Note that the HTMT matrix is calculated by the absolute values of the correlations (Longo, 2017). If the HTMT value is below 0.90, discriminant validity has been established between two reflective constructs. According to Table 7.4 the data has good discriminant validity. It shows that SPW and SPO have values above one, which is normal as the researcher used second-order constructs and the same items of SPW and SPO are assigned to SP—hence, the repeated-indicator approach was applied (Becker et al., 2012).

Table 7-4 Heterotrait-Monotrait Ratio (HTMT)

	Communi cation	Information Quality	Loyalty to a SCommerce Website	Online Shopping Experience	Reputation	SPO	SPW	Satisfaction	Service Quality	Social Presence	System Quality	Trust	Word- Of- Mouth
Communication													
Information Quality	0.433												
Loyalty to a SCommerce Website	0.823	0.382											
Online Shopping Experience	0.514	0.250	0.601										
Reputation	0.885	0.408	0.851	0.456									
SPO	0.598	0.245	0.601	0.408	0.509								
SPW	0.610	0.246	0.495	0.291	0.456	0.788							
Satisfaction	0.758	0.353	0.887	0.623	0.786	0.394	0.369						
Service Quality	0.389	0.792	0.336	0.221	0.358	0.312	0.320	0.318					
Social Presence	0.643	0.261	0.594	0.383	0.519	1.157	1.150	0.409	0.336				
System Quality	0.380	0.886	0.349	0.215	0.360	0.228	0.269	0.330	0.895	0.261			
Trust_	0.349	0.779	0.365	0.229	0.360	0.324	0.287	0.330	0.867	0.329	0.767		
Word-Of-Mouth	0.366	0.773	0.323	0.214	0.288	0.306	0.333	0.231	0.609	0.338	0.741	0.524	

7.3.6 Assessment of the Second Order Construct

The second-order components were assessed on the basis of conceptual characteristics of the constructs. The internal reliability and construct validity are not needed because the second-order constructs are formative (Henseler et al., 2009). The assessment of second-order components was derived from the association between second-order and first-order constructs, represented by path coefficients (Becker et al., 2012).

Indicator validity for the associations between the second-order and first-order constructs was determined by the significance of the path coefficient (Hair et al., 2012a, Götz et al., 2010). The t-value, β value and p-value are presented in Table 7.5.

Table 7-5 Second-Order Indicator Validity

Second-order Construct	Path	β	t-statistics	p-value	Significant
Social Presence	SPSPO----SP	0.615	40.324	0.000	Yes
	SPSPW---- SP	0.508	33.663	0.000	Yes

Table 7.5 presents the summary of indicator validity for the second-order constructs. The results indicate that path coefficients are significant. The significant paths are for the relationships between SPO and SP ($\beta=0.615$, $t=40.324$, $p=0.000$) and SPW and SP ($\beta=0.508$, $t=33.663$, $p=0.000$). These significant lower-order constructs were maintained in the model because they formed the higher-order constructs.

7.3.7 Multicollinearity

This study also measured multicollinearity. Multicollinearity shows the shared variance among the items of two or more constructs. It presents when correlations among constructs are high and when two factors represent a common aspect (Andreev et al., 2009, Bagozzi and Yi, 2012). Variance inflation factor (VIF) represents the extent of multicollinearity. The VIF shows the extent to which the explained variance is observed with the influence of one item to other items of a construct (Urbach and Ahlemann,

2010b). The VIF value of more than 10 indicates high collinearity (Henseler et al., 2009). Hair et al. (2014) suggests that a VIF value greater than 5.00 has high multicollinearity whereas a VIF value below 5.00 is acceptable and a value below 0.20 denotes no multicollinearity at all. Table 7.6 shows that the VIF values of all items are less than the cut-off value of 5.00 (Hair et al., 2014).

Table 7-6 VIF Value of All Items

Item	VIF	Item	VIF	Item	VIF	Item	VIF
COM2	1.592	OSE1	2.034	SEQ1	2.043	SPW1	1.275
COM3	1.391	OSE2	2.086	SEQ2	2.397	SPW3	1.410
COM4	1.464	OSE3	1.969	SEQ3	1.800	SPW3	1.563
COM5	1.428	OSE5	2.433	SEQ5	2.438	SPW5	1.513
CUL1	1.478	OSE6	1.980	SPO1	1.419	SPW5	1.324
CUL3	2.179	OSE7	1.924	SPO1	1.501	SQU1	2.003
CUL6	1.578	REP2	1.910	SPO2	1.629	SQU2	2.016
CUL7	1.771	REP3	1.702	SPO2	1.601	SQU3	2.124
CUL8	2.393	REP6	1.856	SPO3	1.613	SQU4	1.690
IQU2	1.757	SAT1	1.783	SPO3	1.687	SQU5	1.960
IQU3	1.631	SAT3	1.907	SPO5	1.432	TRU1	1.550
IQU4	1.814	SAT5	2.027	SPO5	1.554	TRU2	2.434
IQU6	2.068	SAT7	1.903	SPW1	1.240	TRU3	2.185
WOM4	1.210	WOM6	1.910			TRU5	1.834
WOM5	1.903	WOM7	1.875				

7.4 Assessment of the Structural Model

After satisfying the psychometric properties of the measurement items, the impact of independent variables on dependent variables was checked. In structural equation modelling, the dependent variable is termed as an endogenous variable and the

independent variable is termed as an exogenous variable. The endogenous variables are the variables that do not influence other variables and have the arrows directed to them. On the other hand, exogenous variables are the variables that influence other variables and have the arrows directed to other variables (Hair et al., 2011).

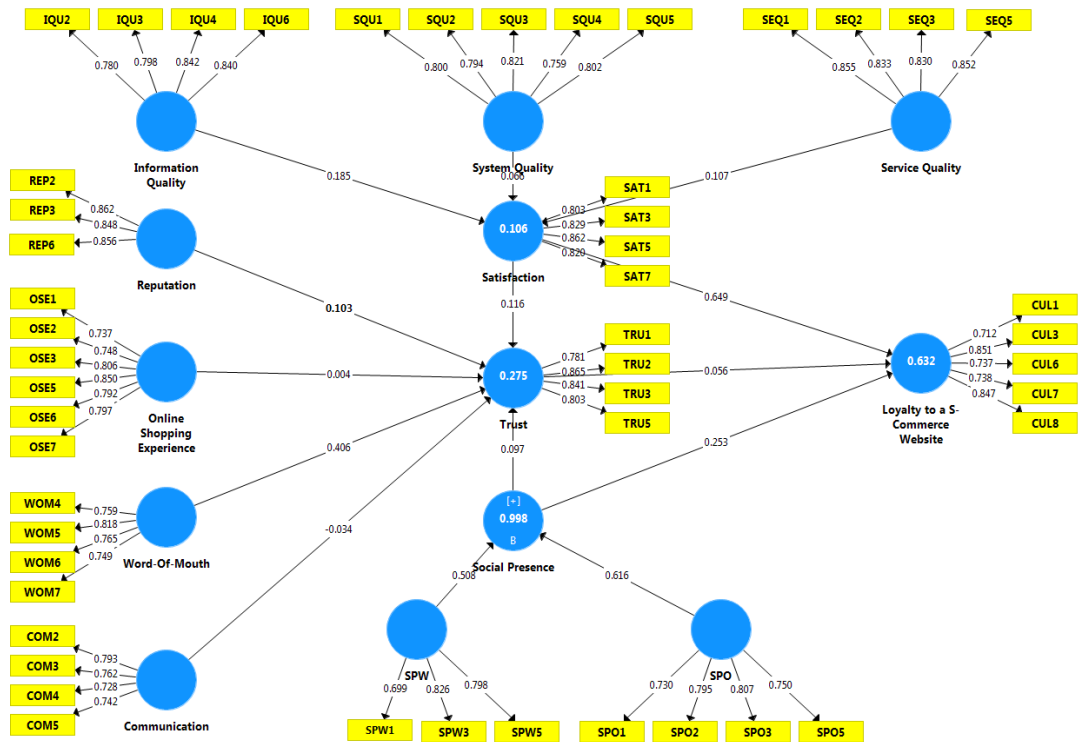


Figure 7.1 Structural Model

7.4.1 Assessment procedure

The suggestion of Hair et al. (2016) was followed to assess the structural model. Figure 7.1 shows the results of the structural relationships. The important steps to evaluate the structural model are given below:

- Step 1: Evaluating the collinearity
- Step 2: Evaluating the significance level in the relationships
- Step 3: Evaluating the coefficient of determination (R^2)
- Step 4: Assessment of f squared (f^2)
- Step 5: Assessment of Predictive Relevance Q^2

Step 1: Evaluating the Collinearity

This study used the VIF and cut-off values to check the collinearity exposed in the independent variables that represent the structural relationship. Table 7.6 shows that the results of the VIF are below the cut-off value of 5 and that all the values were greater than 0.20. From the results of the VIF, it can be concluded that no threat is prevalent in the independent variables (Hair et al., 2016).

The analysis is conducted using the following relationships:

1. Trust, SP, and satisfaction as predictors of loyalty to sCommerce websites.
2. Information quality, service quality, and system quality as predictors of satisfaction.
3. Communication, OSE, reputation, satisfaction, SP, and WOM as predictors of trust.

Table 7-7 Collinearity Values among Exogenous Constructs

Exogenous Constructs	Endogenous Constructs	VIF
Communication	Trust	2.409
Online Shopping Experience	Trust	1.508
Reputation	Trust	2.347
Satisfaction	Trust	2.257
Social Presence	Trust	1.437
Word-of-Mouth	Trust	1.131
Information Quality	Satisfaction	2.363
Service Quality	Satisfaction	2.556
System Quality	Satisfaction	3.227
Trust	Loyalty to a SCommerce Website	1.133
Social Presence	Loyalty to a SCommerce Website	1.186
Satisfaction	Loyalty to a SCommerce Website	1.190

Social Presence	SPO	1.496
Social Presence	SPW	1.496

Step 2: Evaluating the Significance level of the relationships

After satisfying the collinearity issue, the significance of the hypothesised relationships was evaluated. The PLS algorithm was conducted to evaluate the significance, the sign and the extent of influence. The PLS algorithm was run by conducting a non-parametric process to identify the t-values and the path coefficients that represent the significance of different path coefficients (Henseler et al., 2009, Peng and Lai, 2012). The significance level and critical values are 0.05 and 1.96 respectively (Hair et al. 2011). Table 7.7 shows the results for evaluating the statistical relationship between endogenous constructs and exogenous constructs.

It was found that Satisfaction ($t = 29.369, \beta = 0.649, p < 0.05$), Trust ($t = 2.567, \beta = 0.056, p < 0.05$), and SP ($t = 10.712, \beta = 0.254, p < 0.05$) had a strong influence on loyalty to sCommerce websites. Thus H1, H2 and H3 were supported. Service quality ($t = 2.093, \beta = 0.108, p < 0.05$) and Information quality ($t = 3.446, \beta = 0.186, p < 0.05$) had a significant effect on the satisfaction of an sCommerce website, while System quality ($t = 1.066, \beta = 0.068, p > 0.05$) had no significant impact on sCommerce website satisfaction. Thus, H6 and H8 were accepted and H7 was rejected.

The results also show that the relationships between Trust and Satisfaction ($t = 2.627, \beta = 0.112, p < 0.05$), Trust and SP ($t = 2.464, \beta = 0.096, p < 0.05$), Trust and Reputation ($t = 2.277, \beta = 0.103, p < 0.05$), Trust and Word-Of-Mouth ($t = 12.886, \beta = 0.408, p < 0.05$) were significant. Thus H4, H5, H9 and H11 were supported. However, the relationships between Trust and OSE ($t = 0.098, \beta = 0.008, p > 0.05$), Trust and Communication ($t = 0.682, \beta = -0.030, p > 0.05$) were insignificant and did not support H10 and H12 in the current study.

Table 7-8 Results of Structural Model Evaluation

Hypothesis	Exogenous Constructs	Endogenous Constructs	Beta Coefficient	T Statistics	P Values	Result
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<i>(β)</i>						
H1	Satisfaction	Loyalty to a SCommerce Website	0.649	29.369	0.000	Supported
H2	Trust	Loyalty to a SCommerce Website	0.056	2.567	0.010	Supported
H3	Social Presence	Loyalty to a SCommerce Website	0.254	10.712	0.000	Supported
H4	Satisfaction	Trust	0.112	2.627	0.009	Supported
H5	Social Presence	Trust	0.096	2.464	0.014	Supported
H9	Reputation	Trust	0.103	2.277	0.023	Supported
H10	Online Shopping Experience	Trust	0.008	0.098	0.922	Not Supported
H12	Communicati on	Trust	-0.030	0.682	0.495	Not Supported
H11	Word-Of- Mouth	Trust	0.408	12.886	0.000	Supported
H6	Service Quality	Satisfaction	0.108	2.093	0.036	Supported
H7	System Quality	Satisfaction	0.068	1.066	0.286	Not Supported
H8	Information Quality	Satisfaction	0.186	3.446	0.001	Supported

These results demonstrate that satisfaction, SP, reputation and WOM positively contribute to explaining the variance in trust. In contrast, communication and OSE did not influence trust. Evaluating the six independent variables of trust, the results reveal

that satisfaction, SP, reputation and WOM have similar weights but different magnitudes in the path coefficient. The results imply that satisfaction, SP, reputation and WOM are important factors to predict trust more than communication and OSE. Among the exogenous constructs as predictors of satisfaction, service quality and information quality influenced satisfaction most significantly, whereas system quality did not influence satisfaction significantly. Finally, satisfaction, trust and SP have a significant influence on loyalty to sCommerce websites.

Step 3: Evaluating the Coefficient of Determination (R²)

After examining the previous two steps, the coefficient of determination was evaluated. It was conducted to identify the level of strength of the structural model by using R² value (Hair et al., 2012c). R² value determines how much variance in endogenous variables is explained by the model (Chin, 2010). Table 7.8 shows that 63.4% (R²=0.634) of the variance in loyalty to sCommerce websites is explained by trust, satisfaction, and SP. The results show that service quality, system quality, and information quality explained 11% of the variance in satisfaction. Additionally, satisfaction, SP, reputation, OSE, communication, and WOM explained 28% of the variance in trust.

Table 7-9 Results of Coefficient of Determination (R²)

	R Square	R Square Adjusted
Loyalty to a SCommerce Website	0.634	0.633
Satisfaction	0.111	0.108
Trust	0.283	0.278

Step 4: Assessment of f squared (f²)

In the world of statistics, the effect size is generally described as a quantitative measure. It describes the strength of a phenomenon (Kelley and Preacher, 2012). The effect size is used to measure the strength of the relationship between two variables (Hair et al.,

2012a). Effect sizes can be described as a complement to the null hypothesis significance testing. This is said because it offers a measure of practical significance. It also describes it in terms of the gravity of the effect as well as the independence of sample size (Hair et al., 2017).

By using the statistic effect size, one can easily determine if the difference is real. This can also happen if it is due to a change of factors. In the hypothesis testing, many important factors are related to the effect size. (i.e. power, sample size, and critical significance) (Hair et al., 2012a).

“Cohen's f^2 ” is one of the effect sizes that is measured in the context of multiple regression or for ANOVA. It is appropriate for the calculation of the effect size (Cohen, 1988). Cohen's f^2 is generally measured for multiple regression in the following manner:

$$f^2 = \frac{R^2}{1 - R^2}$$

Here R^2 is the squared multiple correlation.

Table 7-10 The strength of effect size

	f^2
Loyalty to a SCommerce Website	1.70
Satisfaction	0.12
Trust	0.38

Table 7.10 shows the strength of effect size. By convention, f^2 effect sizes of 0.35, 0.15 and 0.02 are termed *large*, *medium* and *small* respectively (Ringle et al., 2012). Loyalty to an sCommerce website and trust have a large effect size, whereas satisfaction has a small effect size. SP was not included as it is second-order factor.

Step 5: Assessment of Predictive Relevance Q2

Besides evaluating the magnitude of the R^2 values, the Stone–Geisser's Q^2 was conducted to determine predictive relevance (Hair et al., 2014, Stone, 1974, Geisser, 1974). Predictive relevance predicts the data points of indicators. For a particular construct, A Q^2 value larger than zero for a certain endogenous latent variable is an

indication that the PLS path model has predictive relevance (Hair et al., 2017). The value of the Stone-Geisser's Q^2 can be obtained by the process of blindfolding. Blindfolding can be defined as a sample re-use technique that can calculate a predictive relevance criterion, which is cross-validated (Geisser, 1974, Stone, 1974). As a criterion of predictive accuracy, it is common among the scholars to evaluate the importance of R^2 values. In addition, researchers can also examine Stone-Geisser's Q^2 value as a criterion of predictive relevance (Hair et al., 2017). As mentioned above, the Q^2 value is obtained by the utilisation of the blindfolding procedure. The procedure of blindfolding is only applicable to latent constructs in special cases. The case is inherent in the meaning of the reflective measurement for the model specification (Hair et al., 2017).

As mentioned above, blindfolding is described as a sample re-use technique. It systematically deletes data points and provides a prognosis of their original values. For this purpose of blindfolding, the procedure needs an omission distance D . The omission distance can take separate values. But the omission distance between 5 to 12 is suggested in literature (Hair et al., 2017).

An omission distance of seven ($D=7$) implies that every fifth data point of a latent variable's indicators will be eliminated in a single blindfolding round. It is obvious that the blindfolding procedure has some predefined procedure. It is thus bound to omit as well as predict every data point of the indicators that are given. It must do it in such a way within the measurement model of the selected variables, which are latent. An omission distance of $D=7$ results in seven blindfolding rounds. Hence, the number of the blindfolding process is always proven to be the equal of the omission distance (Hair et al., 2017).

Table 7-11 Assessment of Predictive Relevance

	$Q^2 (=1-SSE/SSO)$
Loyalty to a SCommerce Website	0.358
Satisfaction	0.066
Social Presence	0.444
Trust	0.171

Table 7.11 shows the assessment of predictive relevance. A value of $Q^2 > 0$ confirms the presence of predictive relevance (Hair et al., 2014, Henseler et al., 2009). The results from the blindfolding process provides a Q^2 value above 0, confirming that the structural model exhibits predictive relevance.

7.5 Summary of Hypothesis Results

Table 7-12 Summary of Hypothesis Results

Hypothesis No.	Hypothesis	Result
H1	There is a positive association between customers' levels of satisfaction and customer loyalty to an sCommerce website.	Supported
H2	There is a positive association between customers' levels of trust and customer loyalty to an sCommerce website.	Supported
H3	There is a positive association between level of SP and customer loyalty to an sCommerce website.	Supported
H4	There is a positive association between customers' level of trust and customer satisfaction with an sCommerce website.	Supported
H5	There is a positive association between the level of SP and customer trust in an sCommerce website.	Supported
H6	There is a positive association between a website's level of service quality and customer satisfaction with an sCommerce website.	Supported

H7	There is a positive association between a website's level of system quality and customer satisfaction with an sCommerce website.	Not Supported
H8	There is a positive association between a website's level of information quality and customer satisfaction with an sCommerce website.	Supported
H9	There is a positive association between a firm's perceived level of reputation and customer trust in an sCommerce website.	Supported
H10	There is a positive association between customers' levels of online shopping experience and customer trust in an sCommerce website.	Not Supported
H11	There is a positive association between high levels of positive WOM and customer trust in an sCommerce website.	Supported
H12	There is a positive association between the level of communication among customers and customer trust in an sCommerce website.	Not Supported

7.6 Summary

Using SEM technique and the PLS path modelling approach, this chapter described the statistical and analytical evaluation for the conceptualised model that aimed to examine the influence of customers' loyalty to sCommerce websites in Australia. The measurement model was evaluated to check the psychometric properties and the

evaluation showed satisfactory levels of reliability and validity. After the evaluation and confirmation of the measurement model, the collinearity, significance level, and coefficient of determination (R^2) were evaluated and confirmed in the structural model. The following chapter will include a discussion of the data analysis results.

Chapter 8 Discussion

This chapter provides a discussion on the results in Chapter 7 in order to address the research question. The organisation of this chapter is outlined by reiterating the hypotheses followed by the discussion on the findings in comparison with the existing research. The findings are further explained by analysing the theoretical and practical implications. A summary of this chapter is accompanied at the end.

8.1 Social Presence Impact

This section outlines the findings of the hypotheses (H3 and H5) that were related to the impact of SP on trust and customer loyalty to an sCommerce website.

8.1.1 The Impact of SP on Trust

This section describes the discussion on the relationship between SP and trust. More specifically, the relationship was tested to explain whether there was a positive influence of SP on trust on an sCommerce website. The hypothesis was:

Hypothesis 5. Level of SP positively influences customer trust in a sCommerce website.

The results of the study showed that SP ($t = 2.464$, $\beta = 0.096$, $p < 0.014$) has an influence on trust in an sCommerce website. Thus, H5 was supported. The results suggest that if customers experience a high level of SPW, they show a high level of trust towards the sCommerce website. The SPW along with reputation, OSE, Word-of-mouth, and communication explained the significant variance ($R^2=0.283$) in trust towards an sCommerce website. The finding of this hypothesis is analogous with Hassanein and Head (2006) who identified that the SP on an apparel website positively influenced customer trust. Several other studies have articulated the positive relationship between the perception of SP and online user trust and intentions (Karahanna and Straub, 1999, Kumar and Benbasat, 2002). Using the sCommerce website, customers can interact with other customers and establish communication, which in turn, influence them to believe that the website is a trustworthy medium. Through the medium, customers may share information, suggest others to rely on the website, and to trust that the website keeps information confidential as part of their privacy policy. For customers, the sense of privacy can increase their SP, which subsequently increases the customers' trust. The sCommerce website provides the

platform for social networking among the users. In general, sCommerce websites face severe threat from other competitive websites in gaining and retaining the trust of users. Therefore, customer trust is becoming a crucial challenge for ensuring the success of an sCommerce website. In the context of sCommerce, users' purchase intentions are dependent on the trust in the website. In the sCommerce Adoption Model (SCAM), Hajli (2012b) suggested and tested the importance of trust in the sCommerce website.

The e-Service environments consist of virtual interactions in socio-technical systems, instead of face-to-face interactions. Such virtual interaction can lead to social interaction among the users through sharing images and descriptions of the items, which influence the users to express their attitudes toward the purchase. In this regard, Hassanein and Head (2006) studied the impact of manipulating online SP through imaginary interactions—especially the picture and text content—on an apparel website and found a positive impact of SP on customer trust. Customers are more likely to influence and to be influenced by other trusted friends' experiences and therefore to have trust in a website (Lu and Fan, 2014). Moreover, customer preference, beliefs, attitudes, and behaviours are influenced and guided by social interaction with the other users (Godes et al., 2005).

The practitioners and managers of the sCommerce website need to provide enough space for interaction and communication of messages to achieve customer trust. As with conventional purchases from a retail shop, customers are more likely to take advice based on the shopping experience of others. If an sCommerce website offers a trusted communication platform for the users, the website will be more likely to be accepted and trusted by the user. The user generally prefers to share their experience and suggests to future shoppers that they can trust the website. Thus, SP can also influence a customer's belief, attitudes and behaviour towards accepting the sCommerce website as a trusted one.

8.1.2 The Impact of SP on Customer Loyalty

One of the objectives of this study was to identify the influence of SP on customer loyalty to an sCommerce website. To justify the objective, this study postulated the hypothesis that the level of SP positively impacts customer loyalty to an sCommerce website. The hypothesis was:

Hypothesis 3. *Level of SP positively influences customer loyalty to a sCommerce website.*

The results of the study revealed that SP ($t = 10.712$, $\beta = 0.254$, $p < 0.05$) has a strong influence on loyalty to sCommerce websites. Thus, H3 received support. As SP is a second-order factor, the strength of the size effect was not determined. The finding is analogous with the work of Mäntymäki and Salo (2010) who identified that SPW significantly influenced customer loyalty. In addition, Cyr et al. (2007) also articulated the impact of SPW on customer e-loyalty. The SPW along with trust and satisfaction explained the significant variance ($R^2=0.634$) in loyalty to an sCommerce website.

The finding is significant in terms of the SPW. Although most research articulated the impact of SP on customer loyalty to the eCommerce website, this study revealed that SP—which consists of SPW and SPO—significantly influenced customer loyalty to an sCommerce website. In recent research, SP has received considerable attention in e-loyalty of the customer to the sCommerce website. SCommerce users influence others to become loyal to the sCommerce website. While the user experience of online and offline shopping is different, online shopping often avoids personal interaction and human warmth. To gain the loyalty from its users, sCommerce websites try to ensure that customer presence is present and provide virtual interaction. Cyr et al. (2007) proposed and tested an e-loyalty model in the context of sCommerce and found a significant impact of SP on customer loyalty. The loyalty might be caused from the customer trust in online services that might be a platform of social interaction such as an sCommerce website (Gefen and Straub, 2003). Even customers' trust in an sCommerce website influence the purchase intention of a customer as compared to Technology Acceptance Model (TAM) beliefs (Gefen and Straub, 2003). Although retaining current customers to a specific sCommerce website is crucial, SP plays a vital role by linking customers to one another and ensuring interaction through personal influence and communication. This current study is one of the few studies that reveal the influence of SP in retaining customers on sCommerce websites. In a study on 965 Canadian sCommerce and online users, Mäntymäki (2009) examined the purchase intention and continuous use intention in terms of loyalty. Mäntymäki (2009) found that the customer's perceived satisfaction influenced continuous use intentions.

SCommerce gives an interaction space to the customer. SP theory postulates that the workings of a given medium is influenced by its social context (Short et al., 1976). Therefore, the strength of SP is measured by evaluating the capability of a medium comprising of information and message transmission, and features of expressing non-verbal cues. It is important for sCommerce websites to incorporate social interaction, communication, and message transmission among its users. SP is featured with the capability of a medium to convey sociability, human warmth and sensitivity (Cyr et al., 2007, Yoo and Alavi, 2001).

The implication of the findings is important for sCommerce websites aiming to retain the loyalty of the customer. SCommerce websites' customers prefer SP attributes in its website where they can interact with each other and share their messages. This study found that the sCommerce website can retain customer loyalty through SP. Thus, customer loyalty to an sCommerce website is dependent on the presence of social interaction attributes of the website. Customers are more likely to prefer communicating through the sCommerce website and feel free to share suggestions, information to other customers and friends. The communications among the customers should be retained and displayed on the website so that new customers can get access and benefit from the website and eventually become loyal customers.

8.1.3 Social Presence of the website

SP was assessed as a second order construct, combining SPW and SPO. Thus, the second order construct was formative in nature rather than reflective.

The results support the hypothesis of SP as a second-order construct comprising of SPW and SPO that influence both trust in an sCommerce website and loyalty to an sCommerce website.

Grounded in social presence theory, this study investigated the nature of SP on an sCommerce website by hypothesising and testing two first-order constructs, such as SPW, and SPO. Both the constructs—SPW and SPO—, significantly influence SP. SP is a strong predictor of both trust and loyalty to an sCommerce website. The results suggest the important role of social atmosphere in building customer trust and loyalty.

SP reflects the ability of a communication medium to convey social cues (Short et al., 1976). Social cues that are embodied in sCommerce, include intimacy, perceived warmth, sociability, psychological connectedness and closeness. Previous research has mostly used a unidimensional model of SP, covering the several features of SP such as sociability, human warmth. The unidimensional construct might not be perfect for a virtual community, such as sCommerce, since it gives a platform for interaction and communication among customers towards making a purchasing decision.

Prior research has mainly focused on a multidimensional construct of SP. For example, a three dimensional SP was suggested by Shen and Khalifa (2009)—awareness, affective SP, and cognitive SP. In an online learning context, a three dimensional model of SP was used by Caspi and Blau (2008), that included perception of others, self-projection on the group, and social identification. Tu (2002) also proposed a three-dimensional SP, with social context, online communication, and interactivity.

Following prior research (Lu et al., 2016), this study adopted the multidimensional construct of SP, incorporating SPW and SPO. SPW signifies the human warmth and sociability features of a website that enables customer to have a sense of the personal (Gefen and Straub, 2004, Hassanein et al., 2009). This dimension represents the subjective quality of a website. Although conventional websites do not allow customers to interact with other customers, websites can generate SP through their salient features (Lu et al., 2016). For example, a website might have a multimedia support system and socially rich content and text, which embody personal, sociable human contact. The SPW includes the features, such as 3D videos, physically embodied agents, text-to-speech voice, recommendations and feedback sending features (Lee et al., 2006, Qiu and Benbasat, 2005, Kumar and Benbasat, 2006). The more features incorporated in a website, the more likely that the SPW will increase (Lu et al., 2016).

8.1.4 Social Presence of Other Users

Based on social presence theory, this study incorporated SPO—also known as awareness—as another dimension of SP. The perception of others indicates the degree to which virtual community users interact with each other (Shen and Khalifa, 2009). Awareness is depicted through the presence of the users on the website, which is represented through status updates, participation in online discussions, and personal

presentation. This might increase the awareness of the other buyers who intend to purchase the content (Lu et al., 2016). This helps prospective buyers to compare the comments of different buyers who have already purchased and used the product. The recommendation and review system provided by the buyers assists new buyers to make purchase decisions either positively or negatively (Lu et al., 2016). The volume of the recommendations and reviews also influence buyers' awareness. The observational learning information, such as the percentage of adoption, the like and share button, all reveal the real scenario of the existing buyers, which aids new buyers to evaluate their purchase decisions (Lu et al., 2016, Chen et al., 2011).

One of the contributions of this study was to introduce a new social predictor of both trust and loyalty in an sCommerce website. The study incorporated two first-order variables, i.e., SPW and SPO to represent the second-order factor, SP. Grounded in social presence theory, this study revealed the impact of SP in building customer e-trust and e-loyalty. Previous research has primarily focused on the influence of organisational and technological factors in predicting customer trust and loyalty in sCommerce settings (e.g., Fang et al. (2014), and paid less attention to the social context. SP can explain the influence a website has on customer trust and loyalty (Luhmann, 1979a). Thus, this study extends the existing trust and loyalty research by incorporating SP as an important antecedent. Based on social presence theory, this study identified and validated two SP dimensions, SPW and SPO, as predictors of SP. While most prior studies focused on a unidimensional construct of SP, this study adopted a multidimensional construct of SP. Furthermore, this study explained how prospective buyers interact with other buyers through the social aspects of an sCommerce website, to show their trust in the website, and therefore become loyal to the website.

The findings also suggest some practical implications. This study attempted to identify the effectiveness of an sCommerce website through the lens of SP. The results of the study showed that the SPW motivates its users to rely on the sellers by showing their trust and loyalty, which are a precursor of purchase intention. The sCommerce platform combines both eCommerce and social aspects under one umbrella. Thus, it can be said that the effectiveness of an sCommerce website is improved, when the social aspects of the website are utilised properly.

The results of the study encourage businesses to incorporate SP aspects into their eCommerce website and to evaluate the effectiveness of the included social aspects on a regular basis. The study focused on SPW (video, image, sound, text) and SPO (interaction, communication, sharing of information, recommendation, and review system) as the two important factors in explaining SP, that ultimately impacts on users' trust.

Businesses should invest in the SPW and SPO, in order to boost customer trust. The post-purchase information and feedback should be stored and displayed on the website, making it easier for new customers to trust the sellers. Thus, the website platform manager needs to check the effectiveness of the information displayed on the website and its impact on the other online buyers. The findings of the study suggest that both technological factors and social factors are important in influencing buyer trust. Online managers should concentrate in building both a social environment and an effective technological environment simultaneously. While an eCommerce-based website is equipped with IT technology, attempts should be made to extend the SP aspects in existing eCommerce websites to increase customer trust and loyalty.

8.2 Impact on Trust

This section outlined the findings of the hypotheses (H9, H10, H11, and H12) that are related to the impact of reputation, OSE, WOM, and communication on trust on an sCommerce website.

8.2.1 The Impact of Reputation on Trust

The study opted to identify the influence of reputation on customer trust towards an sCommerce website. To find out the relationship, this study assumed the hypothesis that reputation positively impacts customer trust towards an sCommerce website. The hypothesis was:

Hypothesis 9. *A firm's perceived level of reputation positively influences customer trust in an sCommerce website.*

The results of the study found that reputation ($t = 2.277$, $\beta = 0.103$, $p = 0.023$) has a strong influence on trust towards an sCommerce website. Thus, H9 was accepted. The finding is in accordance with Jarvenpaa et al. (2000) who identified the positive

relationship between the level of reputation of an online store and customer trust. Reputation along with WOM and SP explained significant variance ($R^2=0.283$) in customer trust of an sCommerce website.

The customer nearly always considers the reputation of the website in their purchase. The company can increase its reputation through its brand name, patents, good practices, and corporate social responsibility. Customers value websites that have goodwill in the market. The reputation of the sCommerce website comes from numerous features of the website, such as content, information access, and graphics. The sCommerce websites maintain their standard by providing contents and information that are relevant, accurate, timely and updated to increase their reputation, which in turn influences customers to trust the website.

Teo and Liu (2007) studied sCommerce trust in China, Singapore, and US and found the significant relationship between customer trust and reputation, as users have a tendency to share their perceived reputation of a company with other users. Teo and Liu (2007) suggested that customers' trust has a positive linkage with attitude and a negative linkage with risk. Several authors have suggested that customer trust is the product of a good reputation (Kim and Park, 2013, Doney and Cannon, 1997). Thus, customer trust is retained if the sCommerce website emphasises on increasing its reputation with its customers (Park et al. (2012). The information about the website's reputation is shared among the users to guide their beliefs and attitudes towards developing customer trust.

The practical implication of this finding is that customer trust is achieved through having a good reputation for the sCommerce website. Reputation is essential for attracting and retaining customers of the website. Reputation can be achieved through performing good practices. Although trust can be generated in numerous ways, this study found that customer trust in a sCommerce website is achieved through the reputation of the website to its users. Thus, a website should be designed and operated in such a way that the users can trust that website so that they become inclined to express and share aspects about the reputation of that website with other users. People often share their positive experiences with other people and this can convince others to trust a website. Reputation related messages are generally dispatched through different media. Thus, it is important to create the reputation of the sCommerce website and

disseminate the information through different channels so that people can be aware of the reputation and trust the website.

8.2.2 The Impact of Online Shopping Experience on Trust

This study determined to ascertain the influence of OSE on customer trust in an sCommerce website. To find out the relationship, this study assumed the hypothesis that the level of OSE positively impacts customer trust in an sCommerce website. The hypothesis was:

***Hypothesis 10.** Customers level of online shopping experience positively influences customer trust in an sCommerce website.*

The results of the study found that customers' OSE ($t = 0.098$, $\beta = 0.008$, $p = 0.922$) did not influence trust in an sCommerce website. Thus, H10 was not supported. However, according to Corbitt et al. (2003), if a user has good shopping experiences, the user is more likely to have a high degree of perceived business market orientation and technical trustworthiness toward that website, which subsequently leads to gaining trust of the user. The users of sCommerce are more likely to purchase online, if users have a strong degree of trust in an sCommerce website. Users also exhibit additional skill in using the sCommerce website from experience (Corbitt et al., 2003). Customer trust is dependent on the degree of apparent market orientation, technical honesty, sCommerce users' website experience and website quality.

It has been found in previous work that a customer's experience in online shopping influences their behaviour (Hajli (2012a)). Moreover, a customer that has good experiences with a SNS is more likely to rate the website positively (Yap and Lee, 2014). Customers with positive expectations in using sCommerce websites are more willing to solve any problems and difficulties that arise (Corbitt et al. (2003)). Customers that have positive shopping experiences consider online shopping as an easy task, which in turn influences them to keep trust in the sCommerce website (Hajli, 2012a). The possible reason behind the negative finding in this study is that the relationship between customers' positive shopping experience and customer trust may have a mediating factor. For example, Hajli (2012a) argues that perceived easiness in operating the website may influence customers' trust in an sCommerce website. Positive experiences

may be attributed to problem handling, risk minimisation and the process of making payments through online transactions. Over time, the usage of the sCommerce website becomes easy for customers. The procedure of fulfilling a transaction on an sCommerce website may become common in numerous sCommerce websites. In the Australian context, online customers might be familiar with the sCommerce website and might not even consider positive shopping experiences as a factor for explaining customers' trust. This would correspond with the results—65% of the survey respondents had been using online shopping for over three years yet it did not affect their trust levels (see section 5.3.8).

The implication of this finding is that customer's positive shopping experience does not impact on customer trust. Australian online customers might consider the shopping experience only on a surface level of trust, thus shopping experience does not impact on customer trust.

8.2.3 The Impact of Word-Of-Mouth on Trust

The study aimed to identify the influence of WOM on customer trust of an sCommerce website. To find out the relationship, this study presented the hypothesis that WOM positively impacts customer trust in an sCommerce website. The hypothesis was:

Hypothesis 11. WOM positively influences customer trust in an sCommerce website.

The results of the study found that customers' WOM ($t = 12.886, \beta = 0.408, p < 0.000$) influences trust in an sCommerce website. Thus, H11 was supported. The result is associated with the previous research findings. For example, in a social networking context, Kuan and Bock (2007) found that WOM-trust linkage performs better in the online environment than the offline environment. Lee and Kwon (2011) argued that customers like to hear others' experiences before purchasing and show high levels of trust in the information. WOM along with reputation, and SP explained the significant variance ($R^2=0.283$) in customer trust in an sCommerce website.

WOM focuses on sharing of information related to customers' experiences and satisfaction with a company such as sCommerce. Currently, WOM is treated as an effective marketing technique through which an organisation's brand is shared to all customers. WOM is presented at both the micro and macro levels of customers (Brown

and Reingen (1987). At the macro level, the information is dispatched for one sub-group who recommended to use the website to another sub-group. At the micro level, the information is shared from one individual to another individual. In addition to the online customer, (Kuan and Bock, 2007) suggested that for the offline customer, trust and predictable sanctioning power are crucial for developing online trust. WOM helps sCommerce websites to increase sales through customers' own communication, exchange of information and experiences with other customers. Thus, customers are eager to purchase a product or service that has been recommended by their peers and friends. WOM has a stronger influence on the customer buying decision than a conventional advertisement (Park et al. (1998). Moreover, customers are more likely to listen the WOM of others before making a purchase decision (Brown and Reingen, 1987).

In the Australian context, WOM plays a vital role in propelling information sharing and business reputation. People are more likely to share information through WOM. The customers usually check the recommendations and experiences of existing users of the products and services. Thus, sCommerce is a perfect tool through which WOM works. In an sCommerce context, people already communicate each other and share their positive and negative experiences with others. Based on the information, customers evaluate their purchase decision and are able to trust the sCommerce website. WOM is encouraged in sCommerce websites, so that customer can convince and be convinced by others in developing trust in the website.

8.2.4 The Impact of Communication on Trust

This study aimed to identify the influence of communication on customer trust in an sCommerce website. To find out the relationship, this study used the hypothesis that communication positively impacts customer trust in an sCommerce website. The hypothesis was:

***Hypothesis 12.** The level of communication among customers positively influences customer trust in an sCommerce website.*

The results of the study revealed that customers' communication ($t = 0.682$, $\beta = -0.030$, $p = 0.495$) did not influence the trust in an sCommerce website. Thus, H12 was not

supported. The possible reason might be intervening factors that influence the relationship between the communication among the customers and trust in an sCommerce website.

Through the formal and informal processes, the customers create and share information with other customers to make a decision regarding the purchase. In an sCommerce context, customers usually interact with others through the features of the website, such as reviews, recommendations and ratings. Moorman et al. (1992) suggested that communication might play an important role in building customer trust in the business. It is also likely to increase customer trust in the online business, if the customers share experiences and information with each other (Park and Kang, 2003). Communication between the business and customers is helpful to save customers' time in making purchase decisions (Kim and Joo (2001). Although it was estimated that effective communication among the customers might impact on trust, the study suggests that communication amongst customers barely influences purchase decisions, and does not increase customer trust. As Kim and Joo (2001) suggested that communication between the business and customer allows customers to save time, it can be argued that the customers' communication with the sCommerce website might influence the level of trust from customers on the website. The amount of information may be communicated to the customers such as, the number of clients served, the number of orders distributed and company service hours.

In the sCommerce context, it was assumed that communication amongst customers might impact on customer trust. The findings of the study found that there is no direct relationship between communication and trust. Although, sCommerce websites provide features to rate, recommend, and review the purchase, these communication channels may not be enough to influence customer trust. The business should consider incorporating other features of communication on the sCommerce website to influence the trust of the customer. Australian customers might treat the existing communication features as the basics or common for all sCommerce websites, thus overlook the existence of the features. As the customers acknowledge the convenience and swiftness of shopping through sCommerce, a customer might hesitate to purchase from an unaware website (Chui et al., 2012). Thus, depending on just the communication amongst customers would be detrimental for an sCommerce website. The findings of the study suggest that to gain the trust of the customer, an sCommerce website should

redesign the communication channels to meet the existing customers' demand and communicate via offline methods to catch unserved customers.

8.3 Impact on Satisfaction

This section outlines the findings of the hypotheses (H6, H7 and H8) that are related to the impact of information quality, system quality and service quality on satisfaction with an sCommerce website. In their IS success model, DeLone and McLean (2004) found that system quality, information quality, and service quality have strong association with usage and user satisfaction of an information system. DeLone and McLean (2004) also suggested the application of the IS success model in the context of eCommerce systems.

8.3.1 The Impact of Service Quality on Satisfaction

The study aimed to identify the influence of service quality on satisfaction with an sCommerce website. To find out the relationship, this study expected the hypothesis that service quality positively impacts satisfaction with an sCommerce website. The hypothesis was:

***Hypothesis 6.** A website's level of service quality positively influences customer satisfaction with an sCommerce website.*

The results of the study found that service quality ($t = 2.093$, $\beta = 0.108$, $p = 0.036$) had significant effect on satisfaction with an sCommerce website. Thus, H6 was supported. The result is associated with previous research findings (Liang and Chen, 2009b, Liu et al., 2011, Brown and Chin, 2004, Zhu et al., 2002, Herrmann et al., 2000). Service quality along with information quality and system quality explained the significant variance ($R^2=0.111$) in satisfaction with an sCommerce website.

The relationship between sCommerce service quality and sCommerce customer satisfaction was found significant in previous research (Liang and Chen, 2009b, Liu et al., 2011, Brown and Chin, 2004, Zhu et al., 2002, Herrmann et al., 2000). For example, Herrmann et al. (2000) found a positive influence of service quality on customer satisfaction. On a set of data from 311 mobile commerce users in Taiwan, Liu et al. (2011) also found a positive impact of service quality on customer satisfaction and trust. Service quality is considered to be an important component in the eCommerce context

(Pather et al., 2004). Molla and Licker (2001) postulate that support and service (or service quality) have a significant impact on customer satisfaction. In addition, in their updated model of IS success, Delone and McLean (2003) found that there is a relationship between service quality and satisfaction. Using survey data from 656 online customers of a Taiwanese securities corporation, Liang and Chen (2009b) identified that service quality of an online service provider had a positive influence on customer satisfaction.

Online customers consider service quality an important role in their purchase decision (Lin, 2007), and become satisfied customers with good levels of service quality (Liu et al., 2011). Common service quality features include steady accessibility and available data 24 hours a day, electronic payment systems, and the use of user-friendly software. The relationship is crucial for developing sCommerce and maintaining customer loyalty. Appealing to new customers is challenging for sCommerce websites than retaining the customer loyalty of existing customers (Liu et al., 2011). The service quality of a sCommerce website needs to be aligned to the demands of the customer to achieve customer satisfaction.

Managers of an sCommerce website should ensure service quality to the customer and keep in mind that a dissatisfied customer is more likely to assess the quality of products and services negatively (Lam et al., 2004, Cronin Jr et al., 2000). Thus, poor service quality is directly involved in reducing customer numbers and sales (DeLone and McLean, 2004). Managers should promote information generation and exchanges among their social networking customers. Managers should find ways to increase service quality, so that customers are pleased with the service. To increase service quality, managers may enhance the capabilities of an sCommerce website with features such as scope of inquiry through a user account and communicating with the customer service department through email or voice mail.

8.3.2 The Impact of System Quality on Satisfaction

This study aimed to identify the influence of system quality on customer satisfaction with an sCommerce website. To find out the relationship, this study presented the hypothesis that system quality positively impacts customer satisfaction with a sCommerce website. The hypothesis was:

Hypothesis 7. A website's level of system quality positively influences customer satisfaction with an sCommerce website.

The results of this study revealed that system quality ($t = 1.066$, $\beta = 0.068$, $p > 0.286$) had no significant impact on satisfaction with an sCommerce website. Thus, H7 was rejected. The possible reason might be intervening factors that influence the relationship between the system quality of a website and customer satisfaction with an sCommerce website.

System quality covers specific features of an sCommerce website such as availability, reliability, and response time (Liang et al., 2011). DeLone and McLean (1992) notified the system quality dimension in their MIS related work as the reliability of the system, system accuracy, flexibility, online response time and ease of use. These criteria are also applicable to eCommerce and sCommerce systems. Other researchers suggested the incorporation of other features such as visual appearance, system architecture, page loading speed, and stability of hardware and software.

Previous research has mostly supported the linkage between system quality and customer satisfaction (DeLone and McLean, 2004, McKinney et al., 2002). For example—in the eCommerce context—Molla and Licker (2001) found a positive relationship between system quality and satisfaction. Ou et al. (2011a) surveyed 139 Twitter users to justify the information system success model incorporating networking quality, tested system quality, service quality, information quality and networking quality on user satisfaction. They found a positive influence on user satisfaction from system quality and networking quality. Managers of sCommerce websites can ensure while designing the website that the system quality is not involved in satisfying customers. Although system quality is important to provide continuous service to the customer, the customer may see it as a standard feature of an sCommerce website.

8.3.3 The Impact of Information Quality on Satisfaction

This study aimed to identify the influence of information quality on customer satisfaction with an sCommerce website. To find out the relationship, this study presented the hypothesis that information quality positively influences customer satisfaction with an sCommerce website. The hypothesis was:

Hypothesis 8. *A website's level of information quality positively influences customer satisfaction with an sCommerce website.*

The results of the study show that information quality ($t = 3.446, \beta = 0.186, p < 0.05$) has a significant effect on satisfaction with an sCommerce website. Thus, H8 was accepted. The result is aligned with previous research (Molla and Licker, 2001, DeLone and McLean, 1992, Rai et al., 2002, Liang and Chen, 2009b, McKinney et al., 2002, Jaiswal et al., 2010). For example, Liang & Chen (2009) found a strong relationship between information quality and customer satisfaction on a sample of 656 online customers of a Taiwanese security corporation. McKinney et al. (2002) identified that customer satisfaction is dependent on the information quality as well as the system quality of an sCommerce website. Jaiswal et al. (2010) identified the impact of information quality on customer satisfaction with commerce and content sites.

The results suggest that managers need to concentrate on developing and updating information to retain competitive advantage in the sCommerce context. Information quality covers the quality of IS that represents several features including updated, understandable, dependable, relevant, complete, and accurate information (DeLone and McLean, 2003, Liao et al., 2006, Liang and Chen, 2009b, Shih, 2004, Li et al., 2002). Electronic transactions allow both customers and businesses to exchange and share information online (Liang and Chen, 2009b). Complete information on the website reduces the need for further searching by the customers related to their purchase decision (Liang and Chen, 2009b, Donthu and Garcia, 1999). The information quality of a website allows customers to be experienced in innovative, customised, and value-added products or services (Chiu et al., 2005). Thus, customer satisfaction and retention depend on the information quality of an eCommerce website (Honeycutt Jr et al., 1998, Liu and Arnett, 2000). Information quality is treated as an important dimension that has an influence on customers' preference and the success of the sCommerce website (Alshibly, 2014). Information delivery and quality are critical for eCommerce websites as well. The performance of a website is dependent on the ability to deliver appropriate and available information to users.

Managers can use these findings when designing a sCommerce website to ensure it provides information that is accurate, available, complete, and reliable. Managers of an sCommerce website need to assure the safety of customers' financial and other

information. Managers can also incorporate user-friendly information with simple words replacing technical information such as the encryption of data. Security-related pop-up messages prior to a transaction confirmation can minimise the risk in electronic financial transactions made by the customers.

8.4 The Impact of Satisfaction on Trust

The study aimed to identify the influence of satisfaction on trust of an sCommerce website. To find out the relationship, this study made the hypothesis that customer satisfaction positively impacts trust in an sCommerce website. The hypothesis was:

***Hypothesis 4.** Customer level of satisfaction positively influences customer trust in an sCommerce website.*

The results show that the relationship between trust and satisfaction ($t = 2.627$, $\beta = 0.112$, $p < 0.05$) was significant. Thus, H4 was supported. The result is associated with previous research findings (Ranaweera and Prabhu, 2003, Liang and Chen, 2009b). Customer satisfaction along with reputation, WOM, and SP explained the significant variance ($R^2=0.283$) in trust of an sCommerce website.

The findings of the study indicate that when a customer wants to purchase through an sCommerce website, satisfaction influences the customer to have an increased level of trust that is crucial in electronic purchases (Corbitt et al., 2003, Lanford, 2006). An online transaction is full of uncertainties for the customer (Ribbink et al., 2004a). Thus, trust becomes essential to rely on the online transaction. In an sCommerce context, trust signifies the extent to which the customer believes and is willing to rely on an sCommerce website for a transaction. Customer trust is treated as the essential factor for online success beyond customer satisfaction (Ranaweera and Prabhu, 2003). Managers should not only focus on the satisfaction of customers, but also the trust in an sCommerce website. Customers seek for information on the trustworthiness of the sCommerce website from different sources and want to be able to rely on the service of the website before conducting a transaction. Satisfied customers rely on the service quality and information quality provided by the sCommerce website, which in turn leads to high trust in a website. An online transaction is separated from a conventional face-to-face transaction. In an online transaction, the customer has to rely on the

information provided by the website. Once the customer is satisfied with an sCommerce website, they are more likely to trust in the website to conduct the transaction. Therefore, managers may take lessons from the findings that satisfied customers are more likely to have high trust in their sCommerce website.

8.5 The Impact of Satisfaction on Customer Loyalty

The study aimed to identify the influence of satisfaction on customer loyalty to an sCommerce website. To find out the relationship, this study made the hypothesis that the level of satisfaction positively impacts on the customer loyalty to an sCommerce website. The hypothesis was:

***Hypothesis 1.** Customers' level of satisfaction positively influences customer loyalty to an sCommerce website.*

The results of the study showed that customer satisfaction ($t = 29.369$, $\beta = 0.649$, $p < 0.05$) has a significant influence on loyalty to an sCommerce website. Thus, H1 was accepted. Previous research confirms the linkage between customer satisfaction and loyalty to an sCommerce website (Anderson and Srinivasan, 2003, Chiou and Pan, 2009, Chiu et al., 2007, Pai and Tsai, 2011, Harris and Goode, 2004, Kim et al., 2011, Ribbink et al., 2004a, Yoon et al., 2013, Hsu and Lu, 2004, Balabanis et al., 2006, Yang and Peterson, 2004). Customer satisfaction along with trust, and SP explained significant variance ($R^2=0.634$) in customer loyalty to an sCommerce website.

The sustained growth of an sCommerce website is dependent on the satisfaction and loyalty of the customer to the website. The managers of sCommerce websites should focus on retaining satisfied customers through providing an excellent service experience to customers. Chiu et al. (2007) found a linkage between satisfaction and loyalty in terms of continuance intention in a study on 289 Taiwanese learners of a Web-based learning site. In a sample of 537 Taiwanese customers of three online retailing stores, Pai and Tsai (2011) identified the impact of customer satisfaction on loyalty intention. In a study of 375 users of Internet bookstores in Taiwan, Chiou and Pan (2009) found a positive relationship between customer satisfaction and store loyalty. In the online shopping context, Harris and Goode (2004) showed the influence of customer satisfaction on loyalty in purchasing books. In the European eCommerce context,

Ribbink et al. (2004a) found the impact of online customer e-satisfaction on e-loyalty. In the Korean eCommerce context, Kim et al. (2011) investigated customer loyalty of 340 customers in online shopping for tourism products and services and found the influence of customer satisfaction on customer loyalty. In the sCommerce context, Yoon et al. (2013) examined the cognitive–affect–conative–action framework of customer loyalty and found that the customer satisfaction with a website had a direct impact on customer loyalty.

The results of this study provide practical implications for managers and businesses to develop strategies to retain customers of sCommerce websites. Managers should accept that customer loyalty depends on how effectively the sCommerce website fulfills customer demand over other competitors (Oliver, 1999). Satisfied customers are more likely to be a loyal customer in an sCommerce context. In order to increase customer trust in an sCommerce website, the managers of the sCommerce website should focus on customer satisfaction with the website. The manager should give priority to ensuring that the information and service quality of the sCommerce website are of high-quality in order to increase customer satisfaction, which in turn influences the loyalty of customers. In an sCommerce website, customers mostly rely on social networks to evaluate the purchase rather than on the online retailer. Therefore, the sCommerce website should endeavor to build strong communication with members in virtual communities so that information can be shared.

8.6 The Impact of Trust on Loyalty to a sCommerce website

The study aimed to ascertain the influence of customer trust on loyalty to an sCommerce website. To find out the relationship, this study posited the hypothesis that customers' level of trust positively impacts customer loyalty to an sCommerce website. The hypothesis was:

***Hypothesis 2.** Customers' level of trust positively influences customer loyalty to an sCommerce website.*

The results of the study found that customer trust had a significant influence ($t = 2.567$, $\beta = 0.056$, $p < 0.05$) on loyalty to an sCommerce website. Thus, H2 was supported by the data. The finding is supported by previous studies (Anderson and Srinivasan, 2003).

Customer trust along with customer satisfaction, and SP explained the significant variance ($R^2=0.634$) in customer loyalty to an sCommerce website.

In order for sCommerce websites to retain customers for a sustained period, customer trust becomes an important factor. Customers are more likely to purchase again from the same sCommerce website, if they have a high level of trust in the capability of the website. On the other hand, if customers experience any fraudulent incidences with an online purchase from an sCommerce website, customer trust in the website might be reduced. As a result, the customers will to withdraw from transactions and are more likely to search for another online shop for future purchases. The consequence of losing trust is crucial in an online environment. In the Korean eCommerce context, Kim et al. (2011) investigated customer loyalty of 340 customers in online shopping for tourism products and services and found the influence of customer trust on customer loyalty to be strong. In the eCommerce context in Europe, Ribbink et al. (2004a) found the relationship between online customer e-trust and e-loyalty. In a sample of 537 online shoppers, Pai and Tsai (2011) identified the impact of customer trust on loyalty intention. In the online shopping context, Harris and Goode (2004) showed the influence of customer trust on loyalty in purchasing books and flights. The logic behind the customer loyalty to a website is that customers pay less attention to the formal controls and monitoring mechanisms, once they have a high level of trust in a website.

The findings of the study provide implications for managers of sCommerce websites to maintain customer loyalty. For example, the finding suggests that trust is one of the predictors of customer loyalty in the Australian sCommerce context, and which is vital for sustained business. Thus, managers who run sCommerce websites should focus on retaining customer trust, which influences customer loyalty to the website. Many customers are reluctant to purchase through sCommerce websites, because the website seems less trustworthy to them. Thus, managers of an sCommerce website should endeavor to utilise all avenues of social networking, so that customers can interact and share their shopping experiences with other customers, which will enable new customers to eventually show trust in the website and become a loyal customer in the future. The managers of sCommerce websites can introduce a loyalty rewards program based on the frequent user program, usage levels of the site, and recommendations provided by the users. Such a program might increase customer trust in an sCommerce website.

8.7 Summary

This chapter has discussed on the hypotheses based on the statistical findings and has showed similarities and contrasts with the existing research. Nine out of 12 hypotheses were supported by the statistical findings. Implications from the discussion on both the supported and non-supported hypotheses are important for the managers of sCommerce in the Australian context. For example, the hypothesis that customers level of OSE positively influences customer trust in an sCommerce website is not supported, which implies that there could be a mediating factor that works between the relationship between OSE and trust. Managers of the sCommerce can further investigate to find if there is any factor (e.g. perceived easiness) that can mediate the relationship between OSE and trust. Also, unlike other studies, this study has found that communication among customers does positively influence customer trust. In this case, managers can think to add some other features of communication to influence the trust of customers. However, contrary to other existing studies, this study has found that the website's level of system quality does not positively influence customer satisfaction with an sCommerce website. It can imply that, in Australia, the website's level of system quality is already well enough and maintains all the standard features to satisfy their customers.

The following chapter will discuss how the supported and non-supported hypotheses answer the research questions and how the findings contribute to the theory and practice considering the context. Furthermore, both the managerial and business perspectives will be brought in the discussion based on the results from the hypotheses testing.

Chapter 9 **Conclusion**

This chapter summarises the discussion of the abovementioned research findings derived from the hypotheses testing using the conceptual framework in Chapter 3. The discussion includes the answers to the research question, the contribution to the theory and practice and the identified research limitations and suggestions for future study. In this process, this chapter is organised into five sections. Section 9.1 summarises the answer to the research question. Section 9.2 shows the contribution to theory made by this study. Section 9.3 discusses the practical contribution made by this study. It is followed by section 9.4, which discusses the limitations of this study and the scope of future research. Finally, section 9.5 presents a summary of the thesis, based on the overall findings of this study.

9.1 Answering the Research Question

This study has answered multiple research hypotheses arising from the research question.

- *What are the key factors that influence customer loyalty to sCommerce websites?*

The answers were based on the results of a series of hypothesis analyses, which are discussed below.

Answer: The key factors that have an effect on customer loyalty to sCommerce websites are as follows:

- 1) **Customer satisfaction and trust:** With regards to H1 and H2 respectively, customer satisfaction and customers' level of trust have a significant positive relation with the factor of customer loyalty to sCommerce websites. In addition, regarding H4, the results show that the relationship between trust and satisfaction is significantly positive.

H1: customer satisfaction → loyalty to sCommerce website.

H2: customers' level of trust → loyalty to sCommerce website.

H4: customer satisfaction → customers' level of trust.

- 2) **Social presence:** according to H3, the results show that an increase of SP increases customer loyalty to an sCommerce website. With regards to H5, the result shows that SP positively influences the trust of a customer in an sCommerce website, which in turn increases customer loyalty to an sCommerce website.

H3: SP → customer loyalty to sCommerce website.

H5: SP → customers' level of trust → customer loyalty to sCommerce website.

- 3) **Service quality and information quality:** according to H6 and H8 respectively, the results show that an increase of service quality and a website's level of information quality significantly increases customer satisfaction with an sCommerce website. However, with regards to H7, the results show that there was no significant relationship between a website's level of system quality and customer satisfaction with an sCommerce website.

H6: service quality → customer satisfaction.

H8: information quality → customer satisfaction.

H7: system quality → customer satisfaction (Not supported).

- 4) **Reputation and word-of-mouth:** according to H9, and H11, the results show that the factors of reputation and WOM positively influence customers' trust in a sCommerce website.

H9: reputation → customers' level of trust.

H11: WOM → customers' level of trust.

However, according to H10 and H12, customers' levels of OSE and communication among customers did not significantly influence the level of trust in an sCommerce website.

H9: shopping experience → customers' level of trust (Not supported).

H11: communication → customers' level of trust (Not supported).

Overall, this study has provided a model of the factors that influence customer loyalty to sCommerce websites. As discussed in earlier chapters, the model differs from previous work. This study has focused on eCommerce websites and incorporated social interaction factors that outline the differences between sCommerce and eCommerce.

9.2 Contribution to Theory

Based on the model proposed/developed by Delone and McLean (2003), whilst using the Social Presence Theory and Trust Theory, this study brings a major and multidimensional contribution by fulfilling a research gap in the area of sCommerce, and in the area of IS, which is cross-disciplinary in nature. This study has created a comprehensive understanding of the factors that influence customer loyalty in sCommerce, and how these factors, namely: information quality, system quality, service quality, customer satisfaction, reputation, OSE, WOM, communication, trust, SP, and customer loyalty are interrelated in the context of sCommerce.

It is the first in any study of sCommerce, that brings a substantial theoretical contribution through the integration of social presence theory into the conceptual framework based on the model by Delone and McLean (2003). Most of the previous studies have the limitation of not addressing the social interaction factors that are key to sCommerce. This study uniquely addresses the importance of integrating SP and trust into the study of sCommerce and validates the conceptual model. Section 8.1 discusses in detail how social presence influences customer loyalty, satisfaction and trust, which is a key difference from a traditional eCommerce website which has no social presence.

Finally, the contribution of this study can be briefly presented as:

1. In the Delone and McLean (2003) model there was no indication of such important factors as trust and social elements. Trust and Social Presence have been found in the survey analysis to be important factors influencing customer loyalty to social commerce websites. It therefore makes sense that the model should be extended in the context of social commerce websites

Based on the above discussion two important factors named trust and social presence were added to the original Delone and McLean's model.

2. Significant research within the domain of customer loyalty has used a single theory. There are evidence showing that the dependent variable can be better explained once it is investigated using two theories. Using a multi-lens approach this research has employed two important theories of trust theory and social presence theory to better explain customer loyalty. While previous research could explain around 29 percent of customer loyalty (Casaló et al., 2008, Flavián et al., 2006, Lai et al., 2009), this research could explain up to 63 percent of the customer loyalty.
3. Development of a validated conceptual model to examine the key factors affecting customer loyalty to sCommerce websites.
4. This study contributes to a detailed understanding of the effects of SP (especially SPO), satisfaction, and trust on the customers' loyalty in sCommerce and highlights the differences between sCommerce and eCommerce websites.

Therefore, considering the theoretical contribution and findings of this study, academics can analyse sCommerce from a new perspective and work in collaboration with industry personnel to support current and future research into customers' loyalty in sCommerce. Researchers can devise a system for collaborative studies to make an ongoing contribution in the area of sCommerce business in general – especially in terms of industry growth and sustainability.

9.3 Contribution to Practice

This research makes several contributions to the management of sCommerce websites. With growth of the sCommerce industry, online shopping is experiencing a paradigm shift. This study will help the sCommerce business to develop more effective plans to gain advantage for the business.

This study assists the managers of sCommerce businesses to evaluate the factors affecting their customers' loyalty to their sCommerce website. Australian sCommerce managers are a significant beneficiary of the findings of this study, and consequently users will experience better sCommerce service as soon as the managers take necessary steps to understand and implement the findings of this research. Considering the

findings of this study, managers will be able to achieve more trust for their sCommerce website by addressing the scope for adequate interaction and communication. Understanding the finding of this study, managers now have a better capacity for providing better quality of service and to increase the information quality to enhance customer satisfaction with their sCommerce website. A better understanding of this study will provide competitive advantages to managers who make use of the proposed framework. Furthermore, managers will become more aware that striving to increase trust among customers will help to make them future loyal customers.

As a result of this study a validated conceptual model of the factors influencing customer loyalty to a sCommerce website was developed. This model can act as a guideline to business operation and related new research. In this process, the sCommerce business should be aiming to increase their reputation and spread WOM about their service. In addition, they should enhance their customer's satisfaction with an sCommerce website by increasing their quality of service and their website's level of information quality. Furthermore—due to the sCommerce business' need for understanding the significance of SP—this study could potentially increase their awareness about what other factors (e.g. trust) are important to consider. Such factors are correlated to SP and are ultimately significant for customer loyalty in the context of sCommerce. This study could also lead the sCommerce business to future study to find how the external factors such as the government, regulators and industry shape service quality and system quality, which influence customer satisfaction and subsequently customer loyalty in sCommerce business.

9.4 Limitations and Future Research

There are several limitations in this study. First, this study only represents the point of view of sCommerce customers from Australia. Also, as Australia is a developed country, this study does not necessarily reflect the point of views of developing countries. However, the generalisation of the findings can be understood better if sCommerce customers from other countries, cultures and financial background were studied. Second, another limitation of this study is that the research is not exclusive in nature. This means this study has not distinguished between specific industrial sectors and cultures. The nature of SP might be different in other cultures and industries. Third,

this study has not tested the influence of the security factor of online payment methods, which in turn may have an influence on trust and customer satisfaction.

Considering the above limitations, a comparative cross-cultural and cross-nation study would provide a deeper understanding of the study's findings and the underlying strength of the findings. Future research should take these limitations into account by conducting a cross-cultural and cross-national study. Moreover, in future, the research may also consider interviewing respondents (e.g. managers and employees) from sCommerce companies to develop an alternative perspective. Another direction for future study might be to classify the influencing factors into two groups, such as SP from the company's perspective, users' satisfaction and trust from the user's perspective and conduct two comparative studies. Finally, a future study might comparatively study differences of the influence among the constructs between different types of users.

9.5 Summary of Thesis

This study started from the identification of a gap in literature in the area of sCommerce in the context of Australia, and has successfully come out with a validated conceptual framework. A quantitative method was followed to answer the research question to determine the factors that are related to customer loyalty to sCommerce websites and how they affect each other. The answers represent a point of view based on the data collected from sCommerce users in Australia through a survey. In the data analysis section, using Structural Equation Modelling (SEM), the research questions were studied through testing a set of hypotheses where nine out of twelve hypotheses were supported from the initial conceptual model.

The outcomes of this research align with the research objective of finding the influencing nature of independent variables on customer loyalty to sCommerce websites. The results confirm the importance of SP for connecting with users and improving their level of trust. This study shows that the independent variables i.e. the reputation, WOM, information quality, trust and SP are inter-connected in the ecosystem of sCommerce business. For this reason, while the managers should focus on the findings of this study to work on customer loyalty, they should also think inclusively about the influencing factors to effectively fulfil customer needs better than their competitors in the sCommerce business.

Managers should focus on how to increase customer loyalty through working on the abovementioned independent variables. They should prioritise the improvement of customer satisfaction, trust, and SP. It follows then that, they need to ensure that service quality as well as information quality increases over time to be competitive in the business. Managers also need to understand that SP alone will not enhance customer loyalty if trust is absent—as the results show that SP is correlated to trust, and trust in turn influences customer loyalty. All the findings and implications of this study conform to the individual findings of previous studies as discussed in the literature review section earlier. However, this study integrates many factors into its conceptual model.

Running an sCommerce business is not easy. However, the conceptual model used in this study can make this easier for managers. This study provides a better understanding of the influence of SP and trust along with customer satisfaction on customers' loyalty to sCommerce websites. Although this study has some limitations, if the recommendations drawn from the findings are followed properly, Australian managers of sCommerce websites could gain significant competitive advantage in their industry.

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Appendices

Appendix 1.1 A Summary of Previous Literature on SCommerce

Author/Year	Theory Used	Dependant Variable(s)/Outcome (s)	Key Contributions
(Gatautis and Medziausiene, 2014)	Technology Acceptance and Resistance Theories, SoLoMo Theory, Theory of Technology Acceptance	Behavioural Intention	The authors investigate the sCommerce acceptance between sCommerce users in Lithuania identifying factors that influence behavioural intention.
(Zhang et al., 2014)	Stimulus–Organism–Response Model	SCommerce Intention	The authors investigate the effects of technological features of sCommerce on customers’ virtual experiences and subsequently their participation intention.
(Shin, 2013)	Theory of Planned Behaviour (TPB) and Technology Acceptance Model (TAM)	Behaviour	This study validates the relationship between trust and the subject norm, attitude, social support, and intention in sCommerce.
(Hajli, 2013)	Social Support Theory, Theory of Planned Behaviour (TPB), and TAM	Purchase Intention	It uses social support theory and related theories to propose a sCommerce framework.
(Ng, 2013)	Social Influence Theory, and Social Impact Theory	Purchase Intention	Investigation of the impact of the culture on the relationship between social interaction and sCommerce purchasing intention, and trust; and the impact of trust

on the relationship between social interaction and sCommerce purchasing intention in a social network community.

(Kim and Park, 2013)	Theory of Reasoned Action (TRA)	Purchase Intention and Word-of-Mouth Intention	Identifying key factors in sCommerce and evaluating the impact of trust on purchase intention and Word-of-Mouth intention
(Mikalef et al., 2013)	TPB	Purchase Intention and Word-of-Mouth Intention	This study elucidates how specific aspects of social media websites foster user intention to browse products, and the effect that this has in shaping purchasing and information sharing intentions.
(Ng, 2012)	Trust Transference Theory, Social Interactions, and Hofstede's Cultural Dimensions	Purchase Intention	The author investigates in studying the moderating effects of the culture factor on the relationship between social interaction and sCommerce purchasing intention, and trust; and the mediating effect of trust on the relationship between social interaction and sCommerce purchasing intention.
(Hajli, 2012a)	TAM and SCommerce Adoption Model (SCAM)	Use Intention	Proposing and testing adoption model at the customer level of sCommerce.
(Shen, 2012a)	Social Comparison Theory, Social Presence	Behavioural Intention	This research examines the online shopper as a

	Theory, Flow Theory, and TAM		prospective user of an emerging sCommerce platform, the social shopping website, which are sites designed specifically to support social interactions while online consumers shop
(Hajli, 2012b)	TAM	Purchase Intention	Analysing the impact of trust and some constructs of sCommerce on intention to buy.
(Liang et al., 2011)	TRA, TAM and Social Support	Continuance Intention	An empirical study on a SNS to investigate how social factors such as social support and relationship quality affect the user's intention of future participation in sCommerce.

Appendix 4. 1 Initial Pool of Items

Construct	Item	References
Customer Loyalty	1- I intend to continue using this website	(Liang et al., 2011) (Chao-Min et al., 2007)
	2- I will purchase from this website in the near future.	(Kim and Park, 2013) (Zeithaml et al., 1996) (Rafiq et al., 2013) (Wang et al., 2011)
	3-I will say positive things about this website to other people.	(Wang et al., 2011) (Zeithaml et al., 1996) (Rafiq et al., 2013) (Guo and Liu, 2010)
	4- I will recommend this website to someone	(Wang et al., 2011)

- who seeks my advice. (Zeithaml et al., 1996) (Rafiq et al., 2013) (Guo and Liu, 2010)
- 5- I will share my purchases with my relatives, friends and others to encourage them to use this website. (Zeithaml et al., 1996) (Rafiq et al., 2013) (Guo and Liu, 2010) (Wang et al., 2011)
- 6- I will consider this website to be my first choice for future online shopping for this type of goods/services. (Wang et al., 2011) (Zeithaml et al., 1996) (Rafiq et al., 2013) (Guo and Liu, 2010)
- 7- I will provide others with information on this website. (Kim and Park, 2013)
- 8- I recommend others to use this website. (Shin, 2013)
(Davis, 1989)
(Shin, 2009)

Customer Satisfaction

- 1- I think that I made the correct decision to use this website. (Casaló et al., 2008) (Flavián et al., 2006, Brockman, 1998, Janda et al., 2002, Severt, 2002, Smith and Barclay, 1997)
- 2- The experience that I have had with this website has been satisfactory. (Casaló et al., 2008) (Flavián et al., 2006, Brockman, 1998, Janda et al., 2002, Severt, 2002, Smith and Barclay, 1997)
- 3- In general terms, I am satisfied with the way that this website has carried out transactions. (Casaló et al., 2008) (Flavián et al., 2006, Brockman, 1998, Janda et al., 2002, Severt, 2002, Smith and Barclay, 1997)
- 4- In general, I am satisfied with the service I have received from this website. (Casaló et al., 2008) (Pai and Tsai, 2011) (Flavián et al., 2006, Brockman, 1998, Janda et al., 2002, Severt, 2002, Smith and Barclay, 1997)

	5- I am happy with my decision to purchase from this website.	(Pai and Tsai, 2011)	
	6- Overall, this website is a good one.	(Liang and Chen, 2009a)	
	7- My choice to purchase from this website was a wise one.	(Pai and Tsai, 2011)	
Trust	1- I feel that this website is trustworthy.	(Hassanein and Head, 2007) (Brown and Jayakody, 2008) (Gefen and Straub, 2003)	
	2- I feel that this website is honest.	(Hassanein and Head, 2007) (Gefen and Straub, 2003) (Chiou and Pan, 2009)	
	3- I feel that this website keeps its promises and commitments.	(Brown and Jayakody, 2008)	
	4- I believe that this Website has my best interests in mind.	(Brown and Jayakody, 2008) (Gefen and Straub, 2003)	
	5- I believe that this website is reliable.	(Kim et al., 2011) (Rafiq et al., 2013) (Chiou and Pan, 2009)	
	6- I believe that this website have my information safety in mind.	(Hajli, 2012b), (Kim and Park, 2013)	
Social Presence: Social Presence of the Website	1- There is a sense of human contact in this website.	(Gefen and Straub, 2003) (Cyr et al., 2007) (Kumar and Benbasat, 2006)	
	2- There is a sense of personalness in this website.	(Gefen and Straub, 2003) (Cyr et al., 2007) (Kumar and Benbasat, 2006)	
	3- There is a sense of sociability in this website.	(Gefen and Straub, 2003)	

		(Cyr et al., 2007)
		(Kumar and Benbasat, 2006)
	4- There is a sense of human warmth in this website.	(Gefen and Straub, 2003) (Cyr et al., 2007) (Kumar and Benbasat, 2006)
	5- There is a sense of human sensitivity in this website.	(Gefen and Straub, 2003) (Cyr et al., 2007) (Kumar and Benbasat, 2006)
Social Presence of Other Users	1- I can sense others who feel interest with the product.	(Lu and Fan, 2014) (Caspi and Blau, 2008)
	2- I can sense others who provide information about the seller.	(Lu and Fan, 2014) (Caspi and Blau, 2008)
	3- I can sense others who provide information about the product.	(Lu and Fan, 2014) (Caspi and Blau, 2008)
	4- I can sense others who have browsed this website.	(Lu and Fan, 2014) (Caspi and Blau, 2008)
	5- I can sense others who are disappointed about products or services.	Developed in this study
	6- I can sense others who are satisfied with products or services.	Developed in this study
Service Quality	1- This website gives prompt service.	(Chen and Cheng, 2009) (Teo et al., 2008) (Pitt et al., 1995)
	2- This website is responsive to its customers.	(Chen and Cheng, 2009) (Teo et al., 2008) (Pitt et al., 1995)
	3- When I access my account I feel secure, this website instils confidence.	(Chen and Cheng, 2009) (Pitt et al., 1995)
	4- This website understands my needs.	(Chen and Cheng, 2009) (Teo et al., 2008) (Pitt et al., 1995)

	5- This website delivers the service exactly as promised.	(Chen and Cheng, 2009) (Teo et al., 2008) (Pitt et al., 1995)
System Quality	1- This website is reliable.	(Zhou et al., 2010) (Lin, 2008)
	2- This website is easy to use.	(Zhou et al., 2010) (Chao-Min et al., 2007) (Lin, 2008)
	3- This website provides good navigation functions.	(Zhou et al., 2010) (Chao-Min et al., 2007) (Lin, 2008)
	4- This website provides quick responses to my requests.	(Zhou et al., 2010) (Chao-Min et al., 2007) (Lin, 2008)
	5- This website functions well all the time.	(Chao-Min et al., 2007) (Ahn et al., 2007)
Information Quality	1- Information provided by this website meets my needs.	(Schaupp et al., 2009) (Teo et al., 2008)
	2- Information provided by this website is in a useful format.	(Teo et al., 2008) (Schaupp et al., 2009)
	3- Information provided by this website is complete.	(Teo et al., 2008) (Schaupp et al., 2009)
	4- Information provided by this website is accurate	(Teo et al., 2008) (Schaupp et al., 2009)
	5- Information provided by this website is up-to-date.	(Teo et al., 2008) (Schaupp et al., 2009)
	6- Information provided by this website is reliable.	(Teo et al., 2008) (Schaupp et al., 2009)
Reputation	1- This website is well known.	(Kim et al., 2008) (Jarvenpaa et al., 2000) (Kim and Park, 2013)
	2- This website has a good reputation.	(Kim et al., 2008) (Kim and

- Park, 2013)
- 3- This website has a reputation for being honest. (Kim et al., 2008) (Kim and Park, 2013) (Moorman et al., 1993)
- 4- I am familiar with the name of this website. (Kim et al., 2008) (Kim and Park, 2013) (Gefen, 2000)
- 5- This website has a good reputation compared to other rival sCommerce websites. (Casaló et al., 2008)
- 6- This website has a reputation for offering good products and services. (Casaló et al., 2008)
- 7- This website has a reputation for being fair in its relationship with its users. (Casaló et al., 2008)

Online Shopping Experience

- 1- I perceive myself pretty experienced in using the computer. (Hajli, 2012a) (Corbitt et al., 2003)
- 2- I perceive myself pretty experienced in using the Internet. (Hajli, 2012a) (Corbitt et al., 2003)
- 3- I perceive myself pretty experienced in using eCommerce websites. Developed in this study
- 4- I have been using the Internet for a long time. (Hajli, 2012a) (Corbitt et al., 2003)
- 5- I am experienced in purchasing from this website. (Yoon et al., 2013)
- 6- I am experienced in shopping online. (Yoon et al., 2013)
- 7- I am experienced in this website relevant procedures such as searching for products and information and ordering through the website's purchasing interface. Developed in this study

Word-Of-Mouth (WOM)

- 1- I have heard from others that this website is useful. (Kim and Park, 2013)
- 2- I have heard from others that this website is easy to use. (Kim and Park, 2013)
- 3- I have heard from others that this website is reliable. (Kim and Park, 2013)

- 4- I have heard from others that this website is not worth the effort. (Kim and Park, 2013)
- 5- Recommendations about shopping online are useful shopping information to me. (Ku, 2012) and Cheung et al. (2008)
- 6- Recommendations about shopping online will affect my choice when I shop online. (Ku, 2012) and Cheung et al. (2008)
- 7- Recommendations about shopping online will provide me with different advisory opinion. (Ku, 2012) and Cheung et al. (2008)
- 8- Recommendations about shopping online will change my purchasing motivation. (Ku, 2012) and Cheung et al. (2008)
- 9- Recommendations about shopping online will increase my interest to search for a product. (Ku, 2012) and Cheung et al. (2008)
- 10- Recommendations about shopping online will change my purchasing intention. (Ku, 2012) and Cheung et al. (2008)
- 11- I will make purchase decision by the recommendations from virtual environment. (Ku, 2012) and Cheung et al. (2008)
- 12- Recommendations about shopping online will change the items I intend to purchase. (Ku, 2012) and Cheung et al. (2008)

Communication

- 1- This website proactively communicates new developments to me. (Kim and Park, 2013)
- 2- This website responds to my feedback on its service. (Kim and Park, 2013)
- 3- This website provides me with meaningful information. (Kim and Park, 2013)
- 4- This website provides me with timely information. (Kim and Park, 2013)
- 5- This website responds to my complaints about its service. Developed in this study
- 6- The website communicates the activities of my friends to me. Developed in this study
- 7- The website sends me summaries of my recent activities on the website. Developed in this study
- 8- This website uses social media to communicate with me. Developed in this study

9- This website uses email to communicate with me	Developed in this study
10- This website uses phones to communicate with me	Developed in this study
11- This website uses chat to communicate with me	Developed in this study
12 This website provides me with interesting information as I use the website. E.g. useful prompts or pop-ups	Developed in this study

Appendix 4.2 Items before and after the Panel of Experts

Construct	Original Item	Source	Factor Loading	Comment	Item after the Response to the Comment
Customer Loyalty	1- I intend to continue using this website	(Liang et al., 2011)	0.90	No Comment	1- I intend to continue using this website
	2- I will purchase from this website in the near future.	(Kim and Park, 2013)	0.97	No Comment	2- I will purchase from this website in the near future.
	3- I will say positive things about this website to other people.	(Wang et al., 2011)	0.90	No Comment	3- I will say positive things about this website to other people.
	4- I will recommend this website to someone who seeks my advice.	(Wang et al., 2011)	0.93	No Comment	4- I will recommend this website to someone who seeks my advice.
	5- I will share my purchases with my relatives, friends and others to encourage them to use this website.	(Zeithaml et al., 1996)	0.96	Clarify	5- I will share my purchases with my relatives, friends and others through 'SHARE' feature to encourage them to use this website.
	6- I will consider this website to be my first choice for future online shopping for this type of goods/services.	(Wang et al., 2011)	0.94	What Type?	6- I will consider this website to be my first choice for future online shopping for the type of goods/services that I normally purchase.

	7- I will provide others with information on this website.	(Kim and Park, 2013)	0.95	No Comment	7- I will provide others with information on this website.
	8- I recommend others to use this website.	(Shin, 2013)	Not Reported	Rewording	8- I recommend others to use this sCommerce website.
Customer Satisfaction	1- I think that I made the correct decision to use this website.	(Casaló et al., 2008)	0.88	No Comment	1- I think that I made the correct decision to use this website.
	2- The experience that I have had with this website has been satisfactory.	(Casaló et al., 2008)	0.94	No Comment	2- The experience that I have had with this website has been satisfactory.
	3- In general terms, I am satisfied with the way that this website has carried out transactions.	(Casaló et al., 2008)	0.94	NO Comment	3- In general terms, I am satisfied with the way that this website has carried out transactions.
	4- In general, I am satisfied with the service I have received from this website.	(Casaló et al., 2008)	0.0.94	No Comment	4- In general, I am satisfied with the service I have received from this website.
	5- I am happy with my decision to purchase from this website.	(Pai and Tsai, 2011)	0.90	No Comment	5- I am happy with my decision to purchase from this website.
	6- Overall, this website is a good one.	(Liang and Chen, 2009a)	0.81	No Comment	6- Overall, this website is a good one.
	7- My choice to purchase from this website was a wise one.	(Pai and Tsai, 2011)	0.87	No Comment	7- My choice to purchase from this website was a wise one.
Trust	1- I feel that this website is trustworthy.	(Hassanein and Head, 2007)	0.90	No Comment	1- I feel that this website is trustworthy.
	2- I feel that this website is honest.	(Hassanein and Head, 2007)	0.82	No Comment	2- I feel that this website is honest.
	3- I feel that this website keeps its promises and commitments.	(Brown and Jayakody, 2008)	0.64	No Comment	3- I feel that this website keeps its promises and commitments.
	4- I believe that this Website has my best interests in mind.	(Brown and Jayakody, 2008)	0.61	No Comment	4- I believe that this Website has my best interests in mind.

	5- I believe that this website is reliable.	(Kim et al., 2011)	0.79	No Comment	5- I believe that this website is reliable.
	6- I believe that this website have my information safety in mind.	(Hajli, 2012b),	0.70	Rewording	6- I believe that this website has my information safety in mind.
Social Presence of Other Users	1- There is a sense of human contact in this website.	(Gefen and Straub, 2003)	0.78	No Comment	1- There is a sense of human contact in this website.
	2- There is a sense of personalness in this website.	(Gefen and Straub, 2003)	0.75	Personalness not clear for some of them	Changing this word has been delayed to see the participants opinion in the pilot study.
	3- There is a sense of sociability in this website.	(Gefen and Straub, 2003)	0.69	No Comment	3- There is a sense of sociability in this website.
	4- There is a sense of human warmth in this website.	(Gefen and Straub, 2003)	0.78	No Comment	4- There is a sense of human warmth in this website.
	5- There is a sense of human sensitivity in this website.	(Gefen and Straub, 2003)	0.74	No Comment	5- There is a sense of human sensitivity in this website.
	1- I can sense others who feel interest with the product.	(Lu and Fan, 2014)	0.87	Rewording	1- I can sense others who feel interest about the product.
	2- I can sense others who provide information about the seller.	(Lu and Fan, 2014)	0.87	No Comment	2- I can sense others who provide information about the seller.
	3- I can sense others who provide information about the product.	(Lu and Fan, 2014)	.087	No Comment	3- I can sense others who provide information about the product.
	4- I can sense others who have browsed this website.	(Lu and Fan, 2014)	Not Reported	No Comment	4- I can sense others who have browsed this website.
	5- I can sense others who are disappointed about	Developed in	Developed in this	No	5- I can sense others who are satisfied or disappointed about

	products or services.	this study	study	Comment	products or services.
	6- I can sense others who are satisfied with products or services.	Developed in this study	Developed in this study	Merge with SPO5	It has been merged with SPO5 above, therefore, SPO6 has been deleted.
Service Quality	1- This website gives prompt service.	(Chen and Cheng, 2009)	0.70	No Comment	1- This website gives prompt service.
	2- This website is responsive to its customers.	(Chen and Cheng, 2009)	0.70	No Comment	2- This website is responsive to its customers.
	3- When I access my account I feel secure, this website instils confidence.	(Chen and Cheng, 2009)	0.85	No Comment	3- When I access my account I feel secure, this website instils confidence.
	4- This website understands my needs.	(Chen and Cheng, 2009)	0.77	No Comment	4- This website understands my needs.
	5- This website delivers the service exactly as promised.	(Chen and Cheng, 2009)	0.75	No Comment	5- This website delivers the service exactly as promised.
System Quality	1- This website is reliable.	(Zhou et al., 2010)	0.87	No Comment	1- This website is reliable.
	2- This website is easy to use.	(Zhou et al., 2010)	0.87	No Comment	2- This website is easy to use.
	3- This website provides good navigation functions.	(Zhou et al., 2010)	0.86	No Comment	3- This website provides good navigation functions.
	4- This website provides quick responses to my requests.	(Zhou et al., 2010)	0.82	No Comment	4- This website provides quick responses to my requests.
	5- This website functions well all the time.	(Chao-Min et al., 2007)	0.77	No Comment	5- This website functions well all the time.
Information Quality	1- Information provided by this website meets my needs.	(Schaupp et al., 2009)	0.82	No Comment	1- Information provided by this website meets my needs.
	2- Information provided by this website is in a useful format.	(Teo et al., 2008)	0.69	No Comment	2- Information provided by this website is in a useful format.
	3- Information provided by this website is complete.	(Teo et al., 2008)	0.80	No Comment	3- Information provided by this website is complete.
	4- Information provided by this website is accurate	(Teo et al., 2008)	0.74	No Comment	4- Information provided by this website is accurate

	5- Information provided by this website is up-to-date.	(Teo et al., 2008)	0.72	No Comment	5- Information provided by this website is up-to-date.
	6- Information provided by this website is reliable.	(Teo et al., 2008)	0.67	No Comment	6- Information provided by this website is reliable.
Reputation	1- This website is well known.	(Kim et al., 2008)	0.88	No Comment	1- This website is well known.
	2- This website has a good reputation.	(Kim et al., 2008)	0.89	No Comment	2- This website has a good reputation.
	3- This website has a reputation for being honest.	(Kim et al., 2008)	0.77	No Comment	3- This website has a reputation for being honest.
	4- I am familiar with the name of this website.	(Kim et al., 2008)	0.81	No Comment	4- I am familiar with the name of this website.
	5- This website has a good reputation compared to other rival sCommerce websites.	(Casaló et al., 2008)	0.84	No Comment	5- This website has a good reputation compared to other rival sCommerce websites.
	6- This website has a reputation for offering good products and services.	(Casaló et al., 2008)	0.89	No Comment	6- This website has a reputation for offering good products and services.
	7- This website has a reputation for being fair in its relationship with its users.	(Casaló et al., 2008)	0.84	No Comment	7- This website has a reputation for being fair in its relationship with its users.
Online Shopping Experience	1- I perceive myself pretty experienced in using the computer.	(Hajli, 2012a)	0.88	Rewording	1- I perceive myself to be fairly experienced in using the computer.
	2- I perceive myself pretty experienced in using the Internet.	(Hajli, 2012a)	0.87	Rewording	2- I perceive myself to be pretty experienced in using the Internet.
	3- I perceive myself pretty experienced in using eCommerce websites.	Developed in this study		Rewording	3- I perceive myself to be pretty experienced in using eCommerce websites.
	4- I have been using the Internet for a long time.	(Hajli, 2012a)	0.86	No Comment	4- I have been using the Internet for a long time.
	5- I am experienced in purchasing from this website.	(Yoon et al., 2013)	0.85	No Comment	5- I am experienced in purchasing from this website.
	6- I am experienced in	(Yoon et al.,	0.84	No	6- I am experienced in shopping

shopping online. 2013) Comment online.

7- I am experienced in this website relevant procedures such as searching for products and information and ordering through the website's purchasing interface

Developed in this study

Developed in this study

2 separate questions

After Separating, 7- I am experienced in ordering through this website's purchasing interface.

Item 8 has been added below.

8- I am experienced in this website's social features such as reviews, ranking, and recommendations.

Word-Of-Mouth (WOM)

1- I have heard from others that this website is useful.	(Kim and Park, 2013)	0.83	No Comment	1- I have heard from others that this website is useful.
2- I have heard from others that this website is easy to use.	(Kim and Park, 2013)	0.87	No Comment	2- I have heard from others that this website is easy to use.
3- I have heard from others that this website is reliable.	(Kim and Park, 2013)	0.87	No Comment	3- I have heard from others that this website is reliable.
4- I have heard from others that this website is not worth the effort.	(Kim and Park, 2013)	0.82	No Comment	4- I have heard from others that this website is not worth the effort.
5- Recommendations about shopping online are useful shopping information to me.	(Ku, 2012) and Cheung et al. (2008)	0.88	No Comment	5- Recommendations about shopping online are useful shopping information to me.
6- Recommendations about shopping online will affect my choice when I shop online.	(Ku, 2012) and Cheung et al. (2008)	0.87	No Comment	6- Recommendations about shopping online will affect my choice when I shop online.
7- Recommendations about shopping online will provide me with different advisory opinion.	(Ku, 2012) and Cheung et al. (2008)	0.86	Modification	7- Recommendations about shopping online will provide me with different advisory opinion about products or services.
8- Recommendations about shopping online will change my purchasing motivation.	(Ku, 2012) and Cheung et al. (2008)	0.87	No Comment	8- Recommendations about shopping online will change my purchasing motivation.
9- Recommendations about shopping online will increase my interest to	(Ku, 2012) and Cheung et al. (2008)	0.87	No Comment	9- Recommendations about shopping online will increase my interest to search for a product.

	search for a product.					
	10- Recommendations about shopping online will change my purchasing intention.	(Ku, 2012) and Cheung et al. (2008)	0.85	No Comment		10- Recommendations about shopping online will change my purchasing intention.
	11- I will make purchase decision by the recommendations from virtual environment.	(Ku, 2012) and Cheung et al. (2008)	0.86	modification		11- I will make purchase decisions based on the recommendations from other customers of sCommerce websites.
	12- Recommendations about shopping online will change the items I intend to purchase.	(Ku, 2012) and Cheung et al. (2008)	0.87	Similar to WOM10		12- Deleted
Communication	1- This website proactively communicates new developments to me.	(Kim and Park, 2013)	0.86	No Comment		1- This website proactively communicates new developments to me.
	2- This website responds to my feedback on its service.	(Kim and Park, 2013)	0.81	No Comment		2- This website responds to my feedback on its service.
	3- This website provides me with meaningful information.	(Kim and Park, 2013)	0.89	No Comment		3- This website provides me with meaningful information.
	4- This website provides me with timely information.	(Kim and Park, 2013)	0.87	No Comment		4- This website provides me with timely information.
	5- This website responds to my complaints about its service.	Developed in this study	Developed in this study	No Comment		5- This website responds to my complaints about its service.
	6- The website communicates the activities of my friends to me.	Developed in this study	Developed in this study	No Comment		6- The website communicates the activities of my friends to me.
	7- The website sends me summaries of my recent activities on the website	Developed in this study	Developed in this study	No Comment		7- The website sends me summaries of my recent activities on the website
	8- This website uses social media to communicate with me	Developed in this study	Developed in this study	No Comment		8- This website uses social media to communicate with me
	9- This website uses email to communicate with me.	Developed in this study	Developed in this study	No Comment		9- This website uses email to communicate with me.

10- This website uses phones to communicate with me	Developed in this study	Developed in this study	Rewording	10- This website uses phone to communicate with me
11- This website uses chat to communicate with me.	Developed in this study	Developed in this study	No Comment	11- This website uses chat to communicate with me.
12 This website provides me with interesting information as I use the website. E.g. useful prompts or pop-ups.	Developed in this study	Developed in this study	No Comment	12 This website provides me with interesting information as I use the website. E.g. useful prompts or pop-ups.

Appendix 4.3 Transforming Items to Address Common Method Bias

Construct	Items Transformed to in Order to Address the Common Method Bias																			
	Item after Pre-Test Survey																			
Customer Loyalty	1- I intend to continue using this website	CL1: I intend to continue using this sCommerce website																		
	2- I will purchase from this website in the near future.	CL2: How would you rate your intention to purchase from this sCommerce website?																		
		<table border="1"> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td></td> </tr> <tr> <td>Very Unlikely</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td>Very Likely</td> </tr> </table>		1	2	3	4	5	6	7		Very Unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely
		1	2	3	4	5	6	7												
	Very Unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely											
	3- I will say positive things about this website to other people.	CL3: I will say positive things about this sCommerce website to other people.																		
	4- I will recommend this website to someone who seeks my advice.	CL4 How likely are you to recommend this site to someone who seeks your advice about this sCommerce website?																		
		<table border="1"> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td></td> </tr> <tr> <td>Very likely</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td>Very Unlikely</td> </tr> </table>		1	2	3	4	5	6	7		Very likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unlikely
	1	2	3	4	5	6	7													
Very likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unlikely												
5- I will share my purchases with my relatives, friends and others through 'SHARE' feature to encourage them to use this website.	CL5: I WILL NOT share my purchases with my relatives, friends and others through a 'SHARE' feature to encourage them to use this sCommerce website.																			
6- I will consider this website to be my first choice for future online shopping for the type of goods/services that I normally purchase.	CL6 How likely is this sCommerce website to be your first choice for future online shopping for the type of goods/services that you normally purchase?																			
	<table border="1"> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td></td> </tr> <tr> <td>Very Unlikely</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td>Very Likely</td> </tr> </table>		1	2	3	4	5	6	7		Very Unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely	
	1	2	3	4	5	6	7													
Very Unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely												
7- I will provide others with information on this website.	CL7: I will provide others with information on this sCommerce website.																			
8- I recommend others to use this sCommerce	CL8: I recommend others to use this sCommerce website.																			

website.

Customer Satisfaction

1- I think that I made the correct decision to use this website.

SAT1: I think that I made the WRONG decision to use this sCommerce website.

2- The experience that I have had with this website has been satisfactory.

SAT2: How would you rate your experience with this sCommerce website.

	1	2	3	4	5	6	7	
Very Unsatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Satisfied

3- In general terms, I am satisfied with the way that this website has carried out transactions.

SAT3: In general terms, I am UNSATISFIED with the way that this sCommerce website has carried out transactions.

4- In general, I am satisfied with the service I have received from this website.

SAT4 In general, to what extent are you satisfied with the service that you have received from this sCommerce website?

	1	2	3	4	5	6	7	
Very Satisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unsatisfied

5- I am happy with my decision to purchase from this website.

SAT5: I am happy with my decision to purchase from this sCommerce website.

6- Overall, this website is a good one.

SAT6 Overall, how would you rate this sCommerce site?

	1	2	3	4	5	6	7	
Very Poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good

7- My choice to purchase from this website was a wise one.

SAT7: My choice to purchase from this sCommerce website was a FOOLISH one.

Trust

1- I feel that this website is trustworthy.

TR1: I feel that this sCommerce website is trustworthy.

2- I feel that this website is honest.

TR2 How honest is this sCommerce website.

	1	2	3	4	5	6	7	
Very Dishonest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Honest

3- I feel that this website keeps its promises and commitments.

TR3: I feel that this sCommerce website keeps its promises and commitments.

4- I believe that this

TR4 To what extent do you believe that this sCommerce website has

Website has my best interests in mind?
 your best interests in mind?
 interests in mind.

	1	2	3	4	5	6	7	
Strongly Believe	o	o	o	o	o	o	o	Strongly Disbelieve

5- I believe that this website is reliable.

TR5: I believe that this sCommerce website is NOT reliable.

6- I believe that this website has my information safety in mind.

TR6: To what extent do you believe that this sCommerce website has the safety of your information in mind?

	1	2	3	4	5	6	7	
Strongly Disbelieve	o	o	o	o	o	o	o	Strongly Believe

Social Presence of the Website

1- There is a sense of human contact in this website.

SPW1: There is NO sense of human contact in this sCommerce website.

Changing this word has been delayed to see the participants opinion in the pilot study.

SPW2: How well do you get a sense that this sCommerce website recognize you?

	1	2	3	4	5	6	7	
Very Poorly	o	o	o	o	o	o	o	Very Well

3- There is a sense of sociability in this website.

SPW3: There is NO sense of sociability in this sCommerce website.

4- There is a sense of human warmth in this website.

SPW4: How strongly do you get a sense of human warmth from this sCommerce website?

	1	2	3	4	5	6	7	
Very Strongly	o	o	o	o	o	o	o	Very Poorly

5- There is a sense of human sensitivity in this website.

SPW5: There is a sense of human sensitivity in this sCommerce website.

Social Presence:

Social Presence of Other Users

1- I can sense others who feel interest about the product.

SPO1: I can sense other customers who feel interest about a product.

2- I can sense others who provide information about the seller.

SPO2: How well can you sense other customers who provide information about sellers on this sCommerce website?

	1	2	3	4	5	6	7	
Very Poorly	o	o	o	o	o	o	o	Very Well

Service Quality

3- I can sense others who provide information about the product.

SPO3: I can sense that other customers have provided information about the product.

4- I can sense others who have browsed this website.

SPO4: How well can you sense other customers browsing this sCommerce website?

	1	2	3	4	5	6	7	
Very Well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Poorly

5- I can sense others who are satisfied or disappointed about products or services.

SPO5: I CAN NOT sense other customers who are satisfied or disappointed about products/services.

1- This website gives prompt service.

SEQ1: This sCommerce website DOES NOT give prompt service.

2- This website is responsive to its customers.

SEQ2: How responsive is this sCommerce website to its customers?

	1	2	3	4	5	6	7	
Very Unresponsive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Responsive

3- When I access my account I feel secure, this website instils confidence.

SEQ3: When I access my account I DO NOT feel secure, this sCommerce website DOES NOT instil confidence.

4- This website understands my needs.

SEQ4: How would you rate this sCommerce website in understanding your needs?

	1	2	3	4	5	6	7	
Very Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Bad

5- This website delivers the service exactly as promised.

SEQ5: This sCommerce website delivers the service exactly as promised.

System Quality

1- This website is reliable.

SQ1: This sCommerce website is reliable.

2- This website is easy to use.

SQ2: How easy is this sCommerce website to use?

	1	2	3	4	5	6	7	
Very Difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Easy

3- This website provides good navigation functions.

SQ3: This sCommerce website provides good navigation functions.

4- This website provides quick responses to my

SQ4: How would you rate this sCommerce website in responding to your requests?

Information Quality

requests.

	1	2	3	4	5	6	7	
Very Quick	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Slow

5- This website functions well all the time.

SQ5: This sCommerce website functions POORLY all the time.

1- Information provided by this website meets my needs.

IQ1: Information provided by this sCommerce website DOES NOT meets my needs.

2- Information provided by this website is in a useful format.

IQ2: How good is this sCommerce website in providing information in a useful format?

	1	2	3	4	5	6	7	
Very Bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good

3- Information provided by this website is complete.

IQ3: Information provided by this sCommerce website is INCOMPLETE.

4- Information provided by this website is accurate

IQ4: How good is this sCommerce website in providing accurate information?

	1	2	3	4	5	6	7	
Very Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Bad

5- Information provided by this website is up-to-date.

IQ5: Information provided by this sCommerce website is up-to-date.

6- Information provided by this website is reliable.

IQ6: How reliable is this sCommerce website?

	1	2	3	4	5	6	7	
Very Unreliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Reliable

1- This website is well known.

REP1: This sCommerce website is well known.

2- This website has a good reputation.

REP2: How good is the reputation of this sCommerce website?

	1	2	3	4	5	6	7	
Very Bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good

3- This website has a reputation for being honest.

REP3: This sCommerce website has a reputation for being honest.

4- I am familiar with the name of this website.

REP4: How do you describe your familiarity with this sCommerce website?

	1	2	3	4	5	6	7	
--	---	---	---	---	---	---	---	--

Reputation

Very Familiar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unfamiliar
---------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------

5- This website has a good reputation compared to other rival sCommerce websites.

REP5: This sCommerce website has a BAD reputation compared to other rival sCommerce websites.

6- This website has a reputation for offering good products and services.

REP6: How would you rate the reputation of this sCommerce website for offering good products and services?

	1	2	3	4	5	6	7	
Very Bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good

7- This website has a reputation for being fair in its relationship with its users.

REP7: This sCommerce website has a reputation for being fair in its relationship with its users..

1- I perceive myself to be fairly experienced in using the computer.

OSE1: I DO NOT perceive myself to be fairly experienced in using the computer.

2- I perceive myself to be pretty experienced in using the Internet.

OSE2: How experienced are you in using the Internet?

	1	2	3	4	5	6	7	
Very Inexperienced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Experienced

3- I perceive myself to be pretty experienced in using eCommerce websites.

OSE3: I perceive myself to be INEXPERIENCED in using eCommerce websites.

4- I have been using the Internet for a long time.

OSE4: How experienced are you in purchasing from this sCommerce website?

	1	2	3	4	5	6	7	
Very Experienced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unexperienced

5- I am experienced in purchasing from this website.

OSE5: I am experienced in shopping online.

6- I am experienced in shopping online.

OSE6: How experienced are you in searching through this sCommerce websites for products and information?

	1	2	3	4	5	6	7	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very

Inexperienced									experienced
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7- I am experienced in ordering through this website's purchasing interface.

OSE7: I am NOT experienced in ordering through this sCommerce website's purchasing interface.

8- I am experienced in this website's social features such as reviews, ranking, and recommendations.

OSE8: I am NOT experienced in this sCommerce website's social features such as reviews, ranking, and recommendations.

Word-Of-Mouth (WOM)

1- I have heard from others that this website is useful.

WOM1: I have heard from others that this sCommerce website is useful.

2- I have heard from others that this website is easy to use.

WOM2: What have others told you about how easy this sCommerce website is to use?

	1	2	3	4	5	6	7	
Very Difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Easy

3- I have heard from others that this website is reliable.

WOM3: I have heard from others that this sCommerce website is reliable.

4- I have heard from others that this website is not worth the effort.

WOM4: What have others told you about whether this sCommerce website is worth the effort?

	1	2	3	4	5	6	7	
Well Worth the Effort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not Worth the Effort

5- Recommendations about shopping online are useful shopping information to me.

WOM5: Recommendations about shopping online are USELESS information to me.

6- Recommendations about shopping online will affect my choice when I shop online.

WOM6: How likely is shopping information provided to you through recommendations to affect your choices?

	1	2	3	4	5	6	7	
Very Unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely

7- Recommendations about shopping online will provide me with different advisory opinion about products or services.

WOM7: Recommendations about shopping online will provide me with different advisory opinions about products/services.

8- Recommendations about shopping online will change

WOM8: Recommendations about shopping online will change my purchasing motivation.

my purchasing motivation.

9- Recommendations about shopping online will increase my interest to search for a product.

WOM9: Recommendations about shopping online will increase my interest to search for a product.

10- Recommendations about shopping online will change my purchasing intention.

WOM10: Recommendations about shopping online will change my purchasing intention.

11- I will make purchase decisions based on the recommendations from other customers of sCommerce websites.

WOM11: I will make purchase decisions based on by the recommendations from other customers of sCommerce.

1- This website proactively communicates new developments to me.

COM1: This sCommerce website DOES NOT communicate new developments to me without asking.

2- This website responds to my feedback on its service.

COM2: How well does this sCommerce website respond to your feedback on its service?

	1	2	3	4	5	6	7	
Very Poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Well

3- This website provides me with meaningful information.

COM3: This sCommerce website DOES NOT provide me with meaningful information.

4- This website provides me with timely information.

COM4: How well does this sCommerce website provide you with timely information?

	1	2	3	4	5	6	7	
Very Well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Poorly

5- This website responds to my complaints about its service.

COM5: This sCommerce website responds to my complaints about its service.

6- The website communicates the activities of my friends to me.

COM6: How well does this sCommerce website communicate the activities of your friends to you?

	1	2	3	4	5	6	7	
Very Poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Well

7- The website sends me summaries of my recent activities on the website	COM7: This sCommerce website DOES NOT send me summaries of my recent activities on the website
8- This website uses social media to communicate with me	COM8: This sCommerce website DOES NOT use social media to communicate with me
9- This website uses email to communicate with me.	COM9: This sCommerce website DOES NOT use email to communicate with me.
10- This website uses phone to communicate with me	COM10: This sCommerce website DOES NOT use phone to communicate with me
11- This website uses chat to communicate with me.	COM11: This sCommerce website DOES NOT use chat to communicate with me
12 This website provides me with interesting information as I use the website. E.g. useful prompts or pop-ups.	COM12: This sCommerce website provides me with interesting information as I use the website. E.g. useful prompts or pop-ups.

Appendix 4.5 Final Survey



College of Business | School of Business IT and Logistics

INVITATION TO PARTICIPATE IN A RESEARCH PROJECT

PROJECT INFORMATION STATEMENT

Project Title:

An Investigation of Customers' Loyalty to Social-Commerce Websites.

Investigators:

Mr. Hilal Alhulail (PhD Candidate, xxxx@rmit.edu.au, +613 xxxx xxxx)

Dr. Martin Dick (Senior Supervisor, xxxx@rmit.edu.au, +613 xxxx xxxx)

Dr. Ahmad Abareshi (Co-Supervisor, xxxx@rmit.edu.au, +613 xxxx xxxx)

Dear Participant,

You are cordially invited to participate in a research project being conducted by RMIT University. This survey will take approximately 25 minutes. This letter provides you with an overview of the proposed research. Please read these pages carefully and be confident that you understand its contents before deciding whether to participate. Because of the nature of data collection, we are not obtaining written informed consent from you. Instead, we assume that you have given implied consent by completion and submission of the questionnaire. If you have any questions about the project, please ask any of the investigators identified above.

Who is involved in this research project?

I am Hilal Alhulail, currently a research student in the school of Business IT and Logistics at RMIT University, Melbourne, Australia. This project is conducted as a part of my PhD degree. My senior supervisor for this project is Dr. Martin Dick and the associate supervisor is Dr. Ahmad Abareshi. This project has been approved by the RMIT Business Human Resource Ethics Committee under Reference Number 19074.

Why is it being conducted?

The aim of the project is to understand the factors that impact customer loyalty to social-commerce enhanced websites.

What is the project about? What are the questions being addressed?

The project aim to determine the factors that underlie customer loyalty in Social Commerce (sCommerce) website. There are few studies that investigated issues related to SCommerce, however, there is a lack in addressing the loyalty issue in this context.

The questions will measure some variables that are likely to impact customer loyalty in SCommerce website such as social presence, trust, satisfaction, service quality, information quality, system quality, reputation, online shopping experience, word of mouth and communication.

Why have you been approached?

You have been approached to complete this survey as you are a member of a Research Now panel and have identified to them that you are a user of social commerce .The researchers have arranged with Research Now to administer the sourcing of respondents. The researchers will have no knowledge of your name or contact details at any time.

If I agree to participate, what will I be required to do?

If you agree to participate, you will be required to spend approximately 25 minutes to complete this questionnaire. After answering the questions related to the variable that are likely to impact customer loyalty, you will need to answer a few basic demographic questions.

What are the possible risks or disadvantages?

There is no risk associated with participating in this survey. However, if you are unduly concerned about your responses to any of the questionnaire items or if you find participation in the project distressing, you should contact Dr. Martin Dick as soon as convenient. Martin will discuss your concerns with you confidentially and suggest appropriate follow-up, if necessary.

What will happen to the information I provide?

Your privacy and confidentiality will be strictly maintained in such a manner that you will not be identified in the thesis report or any related publication. Any information that you provide can be disclosed only if (1) it is to protect you or others from harm, (2) if specifically required or allowed by law, or (3) you provide the researchers with written permission. Data will be only seen by my supervisors and examiners who will also protect you from any risk.

To ensure that data collected is protected; data will be saved on the university network system where only the researcher/s will have access to the data. Findings of this study will be disseminated in a PhD thesis, presented at conferences and published in journals. The final thesis and published research papers will remain in RMIT online repository as an Appropriate Durable Record (ADR).

What are my rights as a participant?

As a participant you have the right to withdraw from participation at any time and have the right to have any questions answered at any time. The unprocessed data can be withdrawn and destroyed, provided it can be reliably identified and provided that does not increase the risk for the participant.

I am assuring you that responses will remain confidential and anonymous.

Whom should I contact if I have any questions?

If you have any queries regarding this project please contact me at (+613) xxxx xxxx or email me at xxxx@rmit.edu.au, Dr.Martin Dick at (+613) xxxx xxxx or email him at xxxx@rmit.edu.au, or Dr. Ahmad Abareshi at (+613) xxxx xxxx or email him at xxxx@rmit.edu.au.

An Investigation of Customers' Loyalty to Social-Commerce Enhanced Websites.

This questionnaire is the key part of this study on understanding the factors that impact customer loyalty to social-commerce enhanced websites.

ALL INFORMATION WILL REMAIN STRICTLY CONFIDENTIAL

As this is an anonymous survey conducted via the Internet, the information will remain strictly confidential. However, if you would like a summary of results, please contact Hilal Alhulail by phone or email as per contact details provided in the email.

Please note that:

- It is important that you PLEASE ANSWER ALL QUESTIONS to the best of your knowledge, even if some may appear to be similar. Your answers to all sections of this questionnaire are vital to the success of this study. Unfortunately, partly answered surveys will not useable. Therefore, please do not leave questions unanswered.
 - There are no right or wrong answers.
 - The findings of this study will be reported in an aggregated form, so no personal or organizational information can be identified.
 - If you have any queries or comments about this questionnaire, please do not hesitate to contact Hilal Alhulail at xxxx xxxxxx, or via email: xxxx@rmit.edu.au
- We appreciate highly your time and effort to participate in this research project. If you would like a copy of the findings sent to you, please phone or email Hilal Alhulail. The answers to the survey will be kept in strict confidence.*

Thank you very much for your contribution to this research.

Yours Sincerely,

Hilal Alhulail

PhD Candidate

School of Business IT and Logistics

RMIT University

Bld 80 Level 9

445 Swanson Street

Melbourne 3000

AUSTRALIA

You are welcome to start the survey by clicking on **Next** below.

SECTION 1 out of 9:

Social commerce (sCommerce) websites are traditional electronic commerce websites that have social features (such as reviews, comments, recommendations, ranking, and sharing through either email or social networking sites “e.g. Facebook and Twitter”) to encourage people to connect where they usually buy. Examples for sCommerce websites are eBay and Amazon.

Q1. Which sCommerce website do you use the most?

- Kogan
- eBay
- Amazon
- Target
- Booking.com
- Big W
- Harvey Norman
- dick smith
- Etsy
- OO
- Booktopia
- Shopping.com Network
- Deals Direct
- Gumtree
- harris scarfe
- Other (**Please specify. Must be sCommerce website**):_____.
- Never.

Q2. Your experience with online shopping:

- Less than 6 months
- 6 months – 1 year
- 1 – 2 years
- 2 – 3 years
- More than 3 years

Q3. What type(s) of products do you usually buy online?:

- Furniture.
- Games.

- Clothing.
- Health aids and medication.
- Electronics.
- Music.
- Books and magazines.
- Computer hardware and software.
- Office supplies.
- Sporting equipment.
- Video - DVDs
- Tickets for events
- Flights
- Accommodation booking
- Cosmetics
- Collectibles
- Kitchen ware
- Craft supplies
- Music equipment
- Other. Please Specify _____

Q4. How often do you visit this sCommerce website?

- Less than once per month
- 1 to 2 times a month
- 3 to 5 times a month
- 6 to 8 times a month
- 9 to 10 times a month
- More than 10 times a month

Q5. How often do you purchase items from this sCommerce website?

- Less than once per month
- 1 to 2 times a month
- 3 to 5 times a month
- 6 to 8 times a month

- 9 to 10 times a month
- More than 10 times a month

Q6. What would be the typical amount you would spend when you purchase an item from this sCommerce website?

- 0 - \$15
- \$16 – \$25
- \$26 – \$50
- \$51 – \$75
- \$76 - \$100
- \$101 - \$200
- \$201 - \$500
- More than \$500.00

SECTION 2 out of 9:

Please note that questions are framed in the negative and positive, so that it is important to read each question carefully before answering.

In general, based on the sCommerce website you have just chosen as the site you use the most, to what extent do you agree or disagree with the following statements.

		Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
cul1	I intend to continue using this sCommerce website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SAT1:	I think that I made the WRONG decision to use this sCommerce website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TRU1:	I feel that this sCommerce website is trustworthy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SPW1:	There is NO sense of human contact in this sCommerce website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SPO1:	I can sense other customers who feel interest about a product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SEQ1:	This sCommerce website DOES NOT give prompt service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SQU1: This sCommerce website is reliable.

IQU1: Information provided by this sCommerce website DOES NOT meets my needs.

REP1: This sCommerce website is well known.

OSE1: I DO NOT perceive myself to be fairly experienced in using the computer.

WOM1 : I have heard from others that this sCommerce website is useful.

COM1: This sCommerce website DOES NOT communicate new developments to me without asking.

SECTION 3 out of 9:

Based on the sCommerce site that you frequently use:

CUL2 How would you rate your intention to purchase from this sCommerce website.

	1	2	3	4	5	6	7	
Very Unlikely	o	o	o	o	o	o	o	Very Likely

SAT2 How would you rate your experience with this sCommerce website.

	1	2	3	4	5	6	7	
Very Unsatisfied	o	o	o	o	o	o	o	Very Satisfied

TRU2 How honest is this sCommerce website.

	1	2	3	4	5	6	7	
Very Dishonest	o	o	o	o	o	o	o	Very Honest

SPW2 How well do you get a sense that this sCommerce website recognize you?

	1	2	3	4	5	6	7	
Very Poorly	o	o	o	o	o	o	o	Very Well

SPO2 How well can you sense other customers who provide information about sellers on this sCommerce website?

	1	2	3	4	5	6	7	
Very Poorly	○	○	○	○	○	○	○	Very Well

SEQ2 How responsive is this sCommerce website to its customers

	1	2	3	4	5	6	7	
Very Unresponsive	○	○	○	○	○	○	○	Very Responsive

SQU2 How easy is this sCommerce website to use?

	1	2	3	4	5	6	7	
Very Difficult	○	○	○	○	○	○	○	Very Easy

IQU2 How good is this sCommerce website in providing information in a useful format?

	1	2	3	4	5	6	7	
Very BAd	○	○	○	○	○	○	○	Very Good

REP2 How good is the reputation of this sCommerce website?

	1	2	3	4	5	6	7	
--	---	---	---	---	---	---	---	--

Very Bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good
-----------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	------------------

OSE2 How experienced are you in using the Internet?

	1	2	3	4	5	6	7	
Very Inexperienced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Experienced

WOM2 What have others told you about how easy this sCommerce website is to use?

	1	2	3	4	5	6	7	
Very Difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Easy

COM2 How well does this sCommerce website respond to your feedback on its service?

	1	2	3	4	5	6	7	
Very Poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Well

SECTION 4 out of 9:

Please note that questions are framed in the negative and positive, so that it is important to read each question carefully before answering.

In general, based on the sCommerce website you have just chosen as the site you use the most, to what extent do you agree or disagree with the following statements.

		Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
CUL3:	I will say positive things about this sCommerce website to other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SAT3:	In general terms, I am UNSATISFIED with the way that this sCommerce website has carried out transactions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TRU3:	I feel that this sCommerce website keeps its promises and commitments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SPW3:	There is NO sense of sociability in this sCommerce website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SPO3:	I can sense that other customers have provided information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

about the product.

SEQ3: When I access my account I DO NOT feel secure, this sCommerce website DOES NOT instil confidence.

SQU3: This sCommerce website provides good navigation functions.

IQU3: Information provided by this sCommerce website is INCOMPLETE.

REP3: This sCommerce website has a reputation for being honest.

OSE3: I perceive myself to be INEXPERIENCED in using eCommerce websites.

WOM3 : I have heard from others that this sCommerce website is reliable.

COM3: This sCommerce

website DOES NOT
 provide me with
 meaningful
 information.

SECTION 5 out of 9:

Please note that questions in this section **ONLY** are framed in the positive (**LEFT SIDE**) and negative (**RIGHT SIDE**), so that it is important to read each question carefully before answering.

Based on the sCommerce site that you frequently use:

CUL4 How likely are you to recommend this site to someone who seeks your advice about this sCommerce website?

	1	2	3	4	5	6	7	
Very likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unlikely

SAT4 In general, to what extent are you satisfied with the service that you have received from this sCommerce website?

	1	2	3	4	5	6	7	
Very Satisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unsatisfied

TRU4 To what extent do you believe that this sCommerce website has your best interests in mind?

	1	2	3	4	5	6	7	
--	---	---	---	---	---	---	---	--

Strongly Believe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Disbelieve

SPW4 How strongly do you get a sense of human warmth from this sCommerce website?

	1	2	3	4	5	6	7	
Very Strongly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Poorly

SPO4 How well can you sense other customers browsing this sCommerce website?

	1	2	3	4	5	6	7	
Very Well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Poorly

SEQ4 How would you rate this sCommerce website in understanding your needs?

	1	2	3	4	5	6	7	
Very Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Bad

SQU4 How would you rate this sCommerce website in responding to your requests?

	1	2	3	4	5	6	7	
Very Quick	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Slow

IQU4 How good is this sCommerce website in providing accurate information?

	1	2	3	4	5	6	7	
Very Good	o	o	o	o	o	o	o	Very Bad

REP4 How do you describe your familiarity with this sCommerce website?

	1	2	3	4	5	6	7	
Very Familiar	o	o	o	o	o	o	o	Very Unfamiliar

OSE4 How experienced are you in purchasing from this sCommerce website?

	1	2	3	4	5	6	7	
Very Experienced	o	o	o	o	o	o	o	Very Unexperienced

WOM4 What have others told you about whether this sCommerce website is worth the effort?

	1	2	3	4	5	6	7	
Well Worth the Effort	o	o	o	o	o	o	o	Not Worth the Effort

COM4 How well does this sCommerce website provide you with timely information?

	1	2	3	4	5	6	7	
Very Well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Poorly

SECTION 6 out of 9:

Please note that questions are framed in the negative and positive, so that it is important to read each question carefully before answering.

In general, based on the sCommerce website you have just chosen as the site you use the most, to what extent do you agree or disagree with the following statements.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
CUL5: I WILL NOT share my purchases with my relatives, friends and others through a 'SHARE' feature to encourage them to use this sCommerce website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SAT5: I am happy with my decision to purchase from this sCommerce website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TRU5: I believe that this sCommerce website is NOT reliable.

SPW5: There is a sense of human sensitivity in this sCommerce website.

SPO5: I CAN NOT sense other customers who are satisfied or disappointed about products/services.

SEQ5: This sCommerce website delivers the service exactly as promised.

SQU5: This sCommerce website functions POORLY all the time.

IQU5: Information provided by this sCommerce website is up-to-date.

REP5: This sCommerce website has a BAD reputation compared to other rival sCommerce websites.

OSE5: I am experienced in shopping online.

WOM5 Recommendations

: about shopping online are USELESS information to me.

COM5: This sCommerce

website responds to my complaints about its service.

SECTION 7 out of 9:

Based on the sCommerce site that you frequently use:

CUL6 How likely is this sCommerce website to be your first choice for future online shopping for the type of goods/services that you normally purchase?

	1	2	3	4	5	6	7	
Very Unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely

SAT6 Overall, how would you rate this sCommerce site?

	1	2	3	4	5	6	7	
Very Poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good

TRU6 To what extent do you believe that this sCommerce website has the safety of your information in mind?

	1	2	3	4	5	6	7	
Strongly Disbelieve	○	○	○	○	○	○	○	Strongly Believe

IQU6 How reliable is this sCommerce website?

	1	2	3	4	5	6	7	
Very Unreliable	○	○	○	○	○	○	○	Very Reliable

REP6 How would you rate the reputation of this sCommerce website for offering good products and services?

	1	2	3	4	5	6	7	
Very Bad	○	○	○	○	○	○	○	Very Good

OSE6 How experienced are you in searching through this sCommerce websites for products and information?

	1	2	3	4	5	6	7	
Very Inexperienced	○	○	○	○	○	○	○	Very experienced

WOM6 How likely is shopping information provided to you through recommendations to affect your choices?

	1	2	3	4	5	6	7	
Very Unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely

COM6 How well does this sCommerce website communicate the activities of your friends to you?

	1	2	3	4	5	6	7	
Very Poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Well

SECTION 8 out of 9:

Please note that questions are framed in the negative and positive, so that it is important to read each question carefully before answering.

In general, based on the sCommerce website you have just chosen as the site you use the most, to what extent do you agree or disagree with the following statements.

		Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
CUL7:	I will provide others with information on this sCommerce website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SAT7:	My choice to purchase from this sCommerce website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

was a FOOLISH one.

REP7: This sCommerce website has a reputation for being fair in its relationship with its users.

OSE7: I am NOT experienced in ordering through this sCommerce website's purchasing interface.

WOM7: Recommendations about shopping online will provide me with different advisory opinions about products/services.

COM7: This sCommerce website DOES NOT send me summaries of my recent activities on the website.

CUL8: I recommend others to use this sCommerce website.

OSE8: I am NOT

experienced in this sCommerce website's social features such as reviews, ranking, and recommendations.

WOM8 : Recommendations

about shopping online will change my purchasing motivation.

COM8: This sCommerce website DOES NOT use social media to communicate with me

WOM9 : Recommendations

about shopping online will increase my interest to search for a product.

COM9: This sCommerce website DOES NOT use email to communicate with me

WOM1
0: Recommendations about shopping online will change my purchasing intention.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

COM1
0: This sCommerce website DOES NOT use phone to communicate with me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

WOM1
1: I will make purchase decisions based on by the recommendations from other customers of sCommerce.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

COM1
1: This sCommerce website DOES NOT use chat to communicate with me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

COM1
2: This sCommerce website provides me with interesting information as I use the website. E.g. useful prompts or pop-ups.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

SECTION 9 out of 9:

Please provide the following background information:

1. Your gender:

- Male
- Female

2. Your age:

- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 and older.

3. What is the highest level of education you have completed:

- Didn't Complete high school
- Completed high school.
- Diploma.
- Undergraduate degree.
- Postgraduate degree.
- Other (Please specify):_____.

4. Your occupation:

- Student
- Office Worker
- Factory Worker

- Manual Labour
- Service
- Technician
- Professional
- Self-Employed
- Manager
- Researcher
- Academic
- Other (Please specify):_____.

5. Which state of Australia do you live in?

- Australian Capital Territory
- New South Wales
- Northern Territory
- Queensland
- South Australia
- Tasmania
- Victoria
- Western Australia

6. Please indicate your personal average annual income:

- Less than AU\$10,000
- AU\$10,000 – AU\$29,999

- AU\$30,000 – AU\$49,999
- AU\$50,000 – AU\$69,999
- AU\$70,000 – AU\$ 89,999
- AU\$90,000 – AU\$ 99,999
- More than AU\$100,000

Thank you

Appendix 5.1 Outlier Test Results (Multivariate)

Case	D2	D2/df	Case	D2	D2/df
439	6400	75.29	862	484	5.69
897	3721	43.78	88	484	5.69
412	3249	38.22	310	441	5.19
804	2809	33.05	732	441	5.19
164	2704	31.81	799	441	5.19
735	2209	25.99	691	441	5.19
100	2116	24.89	841	441	5.19
211	2116	24.89	332	441	5.19
667	2025	23.82	866	441	5.19
159	1936	22.78	797	441	5.19
305	1936	22.78	223	441	5.19
316	1849	21.75	821	441	5.19
642	1849	21.75	153	441	5.19
151	1849	21.75	931	441	5.19

542	1849	21.75	148	441	5.19
997	1764	20.75	390	441	5.19
620	1681	19.78	267	441	5.19
580	1681	19.78	944	400	4.71
641	1681	19.78	590	400	4.71
454	1521	17.89	130	400	4.71
216	1521	17.89	117	400	4.71
426	1521	17.89	565	400	4.71
35	1521	17.89	731	400	4.71
195	1444	16.99	251	400	4.71
525	1444	16.99	163	400	4.71
488	1369	16.11	448	400	4.71
963	1296	15.25	509	400	4.71
180	1296	15.25	308	400	4.71
329	1225	14.41	323	400	4.71
13	1225	14.41	917	400	4.71
896	1156	13.60	292	400	4.71
585	1089	12.81	536	400	4.71
828	1024	12.05	53	400	4.71
598	1024	12.05	279	400	4.71
809	1024	12.05	586	361	4.25
196	1024	12.05	763	361	4.25
470	1024	12.05	498	361	4.25
337	1024	12.05	49	361	4.25
140	1024	12.05	75	361	4.25

610	961	11.31	420	361	4.25
747	900	10.59	450	361	4.25
364	900	10.59	255	361	4.25
168	900	10.59	92	361	4.25
342	900	10.59	986	361	4.25
185	900	10.59	863	361	4.25
713	841	9.89	722	361	4.25
886	841	9.89	980	324	3.81
137	841	9.89	188	324	3.81
859	841	9.89	860	324	3.81
152	841	9.89	434	324	3.81
923	841	9.89	973	324	3.81
939	784	9.22	710	324	3.81
476	784	9.22	849	324	3.81
160	729	8.58	466	324	3.81
178	729	8.58	404	324	3.81
579	729	8.58	182	324	3.81
197	676	7.95	206	324	3.81
297	676	7.95	84	324	3.81
170	625	7.35	374	324	3.81
556	625	7.35	20	324	3.81
242	625	7.35	392	324	3.81
463	625	7.35	768	324	3.81
328	625	7.35	621	324	3.81
21	625	7.35	558	324	3.81

932	576	6.78	25	324	3.81
811	576	6.78	724	324	3.81
119	576	6.78	734	324	3.81
839	576	6.78	177	324	3.81
428	576	6.78	10	289	3.40
107	576	6.78	372	289	3.40
357	529	6.22	32	289	3.40
705	529	6.22	904	289	3.40
143	529	6.22	417	289	3.40
955	529	6.22	853	289	3.40
468	529	6.22	238	289	3.40
662	529	6.22	557	289	3.40
356	529	6.22	686	289	3.40
201	529	6.22	112	289	3.40
770	529	6.22	347	289	3.40
850	529	6.22	597	289	3.40
926	529	6.22	343	289	3.40
943	529	6.22	947	289	3.40
589	529	6.22	533	289	3.40
511	529	6.22	723	289	3.40
884	529	6.22	987	289	3.40
737	484	5.69	331	289	3.40
775	484	5.69	70	289	3.40
824	484	5.69	230	289	3.40
205	484	5.69	94	289	3.40

996	484	5.69	898	289	3.40
228	484	5.69	887	289	3.40
307	484	5.69	678	289	3.40
512	484	5.69	787	289	3.40
539	484	5.69	48	289	3.40
28	484	5.69	145	289	3.40
6	484	5.69	158	289	3.40
241	484	5.69	90	289	3.40
479	484	5.69	3	289	3.40
183	484	5.69	618	289	3.40

Where df=85

Appendix 5.2 Normality Test

Variable	Skewness	Kurtosis	Variable	Skewness	Kurtosis
CUL1	-14.67	15.38	IQU3	-9.24	3.27
CUL2	-12.81	6.70	IQU4	-12.94	7.01
CUL3	-7.64	3.04	IQU5	-10.52	9.42
CUL4	-14.92	2.67	IQU6	-6.28	-0.49
CUL5	-7.31	-0.84	REP1	-24.26	38.40
CUL6	-11.87	8.59	REP2	-8.83	3.25
CUL7	-9.22	3.66	REP3	-5.98	0.08
CUL8	-7.73	3.35	REP4	-16.78	10.78
SAT1	-15.45	12.56	REP5	-15.17	12.08
SAT2	-10.48	12.62	REP6	-7.48	3.00
SAT3	-17.20	24.33	REP7	-7.28	2.87
SAT4	-17.13	7.62	OSE1	-11.58	1.97

SAT5	-14.84	25.80	OSE2	-11.95	5.52
SAT6	-9.14	5.92	OSE3	-11.76	1.80
SAT7	-18.71	23.24	OSE4	-16.85	10.41
TRU1	-18.14	21.47	OSE5	-11.31	3.67
TRU2	-6.43	-0.82	OSE6	-10.88	8.09
TRU3	-6.90	0.76	OSE7	-16.74	14.22
TRU4	-5.10	-0.94	OSE8	-9.01	-0.65
TRU5	-12.28	12.22	WOM1	-8.48	1.90
TRU6	-5.67	-1.07	WOM2	-3.66	-3.56
SPW1	0.47	-4.15	WOM3	-5.51	-1.14
SPW2	-3.94	-1.76	WOM4	-7.69	0.80
SPW3	0.53	-3.05	WOM5	-6.02	-1.85
SPW4	0.40	0.23	WOM6	-7.79	2.59
SPW5	2.65	1.62	WOM7	-0.64	0.63
SPO1	-4.79	-0.55	WOM8	-2.33	-0.40
SPO2	-3.70	1.36	WOM9	-4.85	0.28
SPO3	-3.29	-1.57	WOM10	-2.60	-0.30
SPO4	-3.09	-1.91	WOM11	-4.01	-2.29
SPO5	-3.58	-2.74	COM1	-0.31	-2.74
SEQ1	-8.59	1.76	COM2	-2.26	-4.59
SEQ2	-4.98	-0.02	COM3	-9.80	3.36
SEQ3	-12.83	9.43	COM4	-12.48	6.75
SEQ4	-8.06	1.32	COM5	1.19	-4.44
SEQ5	-8.29	7.41	COM6	-1.02	-2.19
SQU1	-12.07	14.19	COM7	-8.69	-2.24

SQU2	-10.20	4.16	COM8	2.17	-5.77
SQU3	-8.78	6.97	COM9	-16.59	9.14
SQU4	-10.86	3.49	COM10	12.26	0.03
SQU5	-14.50	15.58	COM11	7.09	-4.39
IQU1	-13.03	11.48	COM12	-3.57	0.30
IQU2	-7.03	3.16			

Standard error of skewness = 0.087 and standard error of kurtosis = 0.173. the critical values can be obtained by dividing the skewness value by standard error of skewness and the kurtosis value standard error of kurtosis respectively.

Appendix 5.3 Normality Test After Transformation Process

Variable	Skewness	Kurtosis	Variable	Skewness	Kurtosis
CUL1	-1.74	-1.61	IQU4	-3.78	-2.19
CUL2	0.63	-1.96	IQU5	-3.51	-0.88
CUL3	-0.77	-1.39	IQU6	-4.56	-2.71
CUL4	-10.47	-0.24	REP1	-11.47	-0.25
CUL5	-5.13	-2.16	REP2	-5.82	-2.20
CUL6	-2.48	-1.72	REP3	-2.65	-2.08
CUL7	-5.30	-2.54	REP4	-5.82	-2.88
CUL8	-6.55	-1.28	REP5	-7.41	-1.46
SAT1	-4.20	-1.73	REP6	-4.66	-1.89
SAT2	-1.87	-1.48	REP7	-2.02	-1.74
SAT3	-5.70	-3.05	OSE1	-6.42	-3.40
SAT4	-6.95	-2.46	OSE2	-8.18	-2.31
SAT5	-5.28	-2.97	OSE3	-5.96	-3.24
SAT6	-5.47	-2.76	OSE4	-6.30	-3.08

SAT7	-4.63	-2.62	OSE5	-5.32	-3.27
TRU1	-5.11	-2.02	OSE6	-6.03	-2.01
TRU2	-7.33	-1.67	OSE7	-8.26	-1.88
TRU3	-3.52	-3.01	OSE8	-3.82	-3.55
TRU4	-2.53	-1.61	WOM1	-2.83	-1.92
TRU5	-1.63	-3.29	WOM2	-2.06	-3.14
TRU6	-1.72	-1.43	WOM3	-2.08	-1.40
SPW1	-0.80	-0.61	WOM4	-3.38	-2.66
SPW2	-1.36	-1.12	WOM5	-2.60	-2.43
SPW3	-1.00	-0.92	WOM6	-1.81	-2.08
SPW4	-1.32	-1.83	WOM7	-0.58	-0.66
SPW5	-3.62	-3.11	WOM8	-0.17	-1.71
SPO1	-0.60	-1.63	WOM9	-0.75	-1.97
SPO2	-0.08	-1.37	WOM10	0.03	-1.86
SPO3	-0.05	-1.91	WOM11	0.07	-2.36
SPO4	-0.89	-1.89	COM1	-0.92	-2.10
SPO5	-2.08	-2.93	COM2	-2.72	-2.71
SEQ1	-3.86	-1.83	COM3	-4.21	-2.16
SEQ2	-3.33	-1.87	COM4	-3.60	-2.07
SEQ3	0.29	-1.42	COM5	0.01	-1.33
SEQ4	0.71	-2.37	COM6	1.11	-2.78
SEQ5	-3.61	-3.51	COM7	-4.02	-3.64
SQU1	0.79	-3.69	COM8	1.07	-4.26
SQU2	-6.53	-2.68	COM9	-7.22	-3.01
SQU3	5.07	-4.29	COM10	5.61	-4.76

SQU4	2.70	-4.38	COM11	3.30	-4.83
SQU5	-0.64	-1.20	COM12	-0.65	-1.51
IQU1	-0.20	-1.60			
IQU2	0.13	-0.82			
IQU3	-2.38	-2.62			

Standard error of skewness = 0.087 and standard error of kurtosis = 0.173. the critical values can be obtained by dividing the skewness value by standard error of skewness and the kurtosis value standard error of kurtosis respectively.

Appendix 5.4 Normality For Composite Variables After Transformation Process.

Variable	Skewness	Kurtosis
Customer Loyalty	-0.333	-1.173
Customer Satisfaction	-2.241	-2.555
Trust	-0.161	-0.948
Social Presence	0.862	0.486
Social Presence of Website	0.126	-0.543
Social Presence of Other Users	0.092	-0.699
Service Quality	-0.253	-1.116
System Quality	-0.920	-1.763
Information Quality	-0.184	-0.821
Reputation	-1.310	-2.017
Online Shopping Experience	-1.494	-2.133
Word of Mouth	0.310	-0.341

Communication	0.195	-0.480
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Appendix 7.1: 32 Items Removed During the Stage of CFA.

Item Code	Item
CUL2	How would you rate your intention to purchase from this sCommerce website?
CUL4	How likely are you to recommend this site to someone who seeks your advice about this sCommerce website?
CUL5	I WILL NOT share my purchases with my relatives, friends and others through a 'SHARE' feature to encourage them to use this sCommerce website.
SAT2	How would you rate your experience with this sCommerce website?
SAT4	In general, to what extent are you satisfied with the service that you have received from this sCommerce website?
SAT6	Overall, how would you rate this sCommerce site?
TRU4	To what extent do you believe that this sCommerce website has your best interests in mind?
TRU6	To what extent do you believe that this sCommerce website has the safety of your information in mind?
SEQ4	How would you rate this sCommerce website in understanding your needs?
IQU1	Information provided by this sCommerce website DOES NOT meets my needs.
IQU5	Information provided by this sCommerce website is up-to-date.
REP1	This sCommerce website is well known.
REP4	How do you describe your familiarity with this sCommerce website?
REP5	This sCommerce website has a BAD reputation compared to other rival

sCommerce websites.

- REP7 This sCommerce website has a reputation for being fair in its relationship with its users.
- OSE4 How experienced are you in purchasing from this sCommerce website?
- OSE8 I am NOT experienced in this sCommerce website's social features such as reviews, ranking, and recommendations.
- WOM1 I have heard from others that this sCommerce website is useful.
- WOM2 What have others told you about how easy this sCommerce website is to use?
- WOM3 I have heard from others that this sCommerce website is reliable.
- WOM8 Recommendations about shopping online will change my purchasing motivation.
- WOM9 Recommendations about shopping online will increase my interest to search for a product.
- WOM10 Recommendations about shopping online will change my purchasing intention.
- WOM11 I will make purchase decisions based on by the recommendations from other customers of sCommerce.
- COM1 This sCommerce website DOES NOT communicate new developments to me without asking.
- COM6 How well does this sCommerce website communicate the activities of your friends to you?
- COM7 This sCommerce website DOES NOT send me summaries of my recent activities on the website
- COM8 This sCommerce website DOES NOT use social media to communicate with me
- COM9 This sCommerce website DOES NOT use email to communicate with me

COM10 his sCommerce website DOES NOT use phone to communicate with
me

COM11 This sCommerce website DOES NOT use chat to communicate with
me

COM12 This sCommerce website provides me with interesting information as I
use the website. E.g. useful prompts or pop-ups.
