FACTORS THAT DETERMINE THE CONTINUANCE INTENTION OF PEOPLE TO USE ONLINE SOCIAL NETWORKS FOR BUSINESS TRANSACTIONS

by

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DECLARATION

I, Akwesi Assensoh-Kodua declare that this dissertation is a representation of my own work both in conception and execution. This work has not been submitted in any form for another degree at any university or institution of higher learning. All information cited from published or unpublished works have been acknowledged.

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Submission approved for examination

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I also feel deeply indebted to all the commentaries and other sources I have used in this work not forgetting individuals who made the minutest contribution, in various ways.

My supervisor and I will feel amply rewarded, if those who use this work as a reference kit, channel their comments to mannie1111@yahoo.com for future attention.

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DEDICATION

To my dear daughter Ama Nkazimulo Assensoh

(The sacrificial lamb)

PUBLICATION FROM THIS STUDY

Assensoh-Kodua, A., Olugbara, O. O. and Nepal, T. 2013. Psychosocial factors influencing continuance intention of people using online social networking for business transactions (Pending journal publication)

ABSTRACT

Social computing researchers are devoting efforts to understand the complex social behaviour of people using social networking platforms, such as Twitter, LinkedIn and Facebook, so as to inform the design of human-centered and socially aware systems. This research study investigates the factors of perceived trust, user satisfaction, social norm and perceived behavioural control, to develop a model for predicting the continuance intention of people to use online social networking for business transactions. In order to validate the predictive capability of the model developed, an online survey was used to collect 300 useable responses from people who have used LinkedIn and Twitter social networking platforms for business transactions at least once. The Partial Least Square (PLS) mathematical analysis tool was thereafter used to perform confirmatory factor analysis, analysis of measurement and structural models.

The study results provide significant evidence in support of the factors of perceived trust, social norm and user satisfaction, as determinants of the continuance intention of people using online social networking platforms for business transactions. Perceived trust was found to exhibit a strong relationship with social norm and explains a variance of (R^2=0.47). In addition, social norm explains a variance of (R^2=0.44) and user satisfaction explains a variance of (R^2=0.42), resulting in the model predicting (R^2=0.56) continuance intention.

In addition, the research model was tested for the moderating effects of usage habit, which were found to significantly moderate relationships between continuance intention and perceived trust, PBCand social norm, resulting in an improved predictive capability of (R^2=0.89). The moderating result indicates that a higher level of habit increases the effect of perceived trust, Perceived Behavioural Control (PBC) and social norm on continuance intention. This result confirms the theoretical argument that the strength of user satisfaction to predict continuance, is strengthened by usage habit.

The results of this research study generally have practical implications for individuals who desire to offer commercial services on online social networking technologies, to seriously consider building trust and maintaining user satisfaction to sustain their businesses. They should also think of strategies embedded in peer pressure, to attract, retain and establish trustworthy relationships with customers.

CHAPTER 1: INTRODUCTION

1.1 Background

The study of factors that determine the continuance intention of people to use online social networking technologies for business transactions can be classified into the category of behavioural science research in the information systems discipline. The behavioural science research is a hotbed of information systems, which is concerned with the underlying theories providing insight that informs researchers about interactions among people, technology and organization. The behavioural science research complements the design science research to address the fundamental problems facing the productive application of information technology (Hevner et al. 2004, March and Storey 2008, Venable et al. 2011). In the current information and knowledge society, the prospects of gaining competitive advantages have prompted the revolutionizing of adopting information and communication technology (ICT) to improve organizational efficiency.

As a result, many companies have built high performance systems relying on internet applications, such as search engines, e-business and social networks, to improve business performance. The explosion of business activities on online social networking technologies continues to surge higher, providing opportunities and perils for a variety of businesses. Social networking features have given rise to social media, Web 2.0 and more recently cloud based social applications whereby consumer can ubiquitously access the services that are provided by vendors. The growth of online social networking in terms of membership and usage is significant over the last few years. This growth presents huge business opportunities for the information age, which, if properly managed could address many of the socioeconomic problems experienced in recent times.

In particular, business transactions conducted over the Internet have offered new opportunuties, which have resulted in the folowing:

- changing human perception of traditional business practices,
- enabled corporate presence on the Internet,
- improved customer support,
- made business information easily available, at the fingertips of customers,

- reduced costs of business transactions,
- facilitated low start up costs, and
- provided the capability to do business 24 hours a day, 7 days a week.

Internet-based business transactions are rapidly growing and becoming highly competitive. The most prevalent being those business transactions, using online social networks (OSNs), which has become a $1.8 billion industry, with 246 social media sites/networks, currently up and running (Engeldinger 2011). However, privacy and trust, perceived usefulness and social impacts are some of the challenges identified by researchers, that are faced by this new model of business transaction (McCole et al. 2010, Pallis et al. 2010, Shakimov et al. 2011).

Similarly, other concepts, such as loyalty, usability and continuation intention by participants, are acquiring a particular interest, because of the important roles they play in the provision of services through the Internet. Another interesting finding is that overall, OSN websites are said to be the most popularly ranked by the average time spent per usage (NielsenWire 2010).

The LinkedIn OSN is reported to host over 100 million users (Qualman 2011), while Twitter, a micro blogging OSN site, hosts 106 million users (DigitalSurgeons 2010). In addition, 845 million active users, representing eight percent of the world`s population, are said to be involved in Facebook OSN (Facebook 2012).

These statistics suggest that OSN have become a fundamental part of the online experience throughout the world, providing a base and much needed source for business and economic development. Online social networks (OSNs) are virtual communities for users to create public profiles, build social collaborations, interact with friends and meet people based on shared interests (Boyd and Ellison 2008, Kuss and Griffiths 2011). Historically, OSNs are not meant for business purposes, but to establish and maintain relationships with people. Only recently, have OSNs attracted business professionals, to the extent that LinkedIn and Twitter could be pointed out to be among the OSNs that have intriguing business models for their customers.

The growth of OSNs, in terms of membership and usage, is significant over the last few years. For instance, it is reported that 39% of adults (30 years and older) using the Internet, currently use OSNs and one out of such adults (39%), on a typical day, visit OSNs (Hampton et al. 2011). It therefore comes as no surprise that, OSN is undergoing intense research to establish usage patterns, motivating factors, user personality and to learn about emerging lifestyles that may affect traditional business models (Cachia et al. 2007, Kuss and Griffiths 2011, Lee et al. 2011, Al-Hawari and Mouakket 2012).

However, the current literature has primarily focused on the general issues surrounding online trading, architecture of social networking services applied to business, trends of OSNs and identification of key users of OSNs (Gopi and Ramayah 2007, Wolcott et al. 2008, Fortino and Nayak 2010, Kaplan and Haenlein 2010, Ostrom et al. 2010, Pallis et al. 2010, Shiau and Luo 2013). Based on the systematic review of literature conducted by this study, not much has been written to understand the influence of factors that determine the continuance intention of people using OSNs for business transactions.

With this gap in mind, this research will investigate the influence of the factors of user satisfaction, perceived trust, social norm and perceived behavioural control, on the continuance intention of people using OSNs to transact business activities in international markets. In the context of this study, business transaction is the interaction between customers, vendors and network providers, with respect to business conducted on OSNs. The researcher is not aware of extant studies that have researched the relationship between these factors and how they influence continuance intention.

1.2 Problem Statement

There are several problems facing online business implementation, some of these mainly revolve around the issues of trust, privacy, security and satisfaction. The absence of standardised technologies for secure payment, shortage of profitable business models, consumer fears of divulging personal data, and a lack of faith between business and consumer satisfaction, are among the factors inhibiting the continuing usage of online service models (Pearson and Benameur 2010, Teece 2010, Zott et al. 2011).

In addition, not having specific policies and regulatory frameworks, in relation to online commercial activities is problematic, notwithstanding the fact that the virtual environment represents a very recent phenomenon (Wolcott et al. 2008, Shakimov et al. 2011). Moreover, overlay networking security of distributed systems and social network analysis, privacy, trust, knowledge discovery, business and social impact, are serious issues to be considered before online systems can be adequate for business transactions (Pallis et al. 2010, Shakimov et al. 2011).

The technological challenges, such as issues of navigation and usage of sites, have received much attention and have been measured for ease of use of the referent information system (Davis. 1989, Bhattacherjee 2001, Liao et al. 2009). These problems are faced by the business world, whose main concern is to transact business with the most convenient means.

Further to the above mentioned problems facing online business implementations, privacy, information disclosure, and uncertainty matters are among the top issues discussed in resent OSN studies (Debatin, et al. 2009, Weiss, 2009, Antheunis, et al. 2010, Humphreys 2011, Kim 2011, Men and Tsai 2011, Stutzman et al. 2011, Tokunaga 2011, Waters and Ackerman 2011).

Social networking has introduced novel, collaboration paradigms between users (Fortino and Nayak 2010). However, one of the most prominent research challenges, is how to use social networking for external communications, customer support and for business activities (Zhang et al. 2010).

Whenever users find OSN platform that better serves their personal needs, they may be inclined to switch. Therefore, recent studies have started to investigate why users switch between OSNs or online service platforms, as well as how online service providers can retain their users (Hsieh et al. 2012, Zhang et al. 2012, Choi et al. 2013, Haj-Salem and Chebat 2013)

1.3 Research Questions

This study is guided by the following research questions, arising from the problem statement on OSN:

(i) What are the factors that determine the continuance intention of people to use OSN for business transactions?

(ii) To what extent do these factors predict the continuance intention of people using OSN for business transactions?

(iii) What are the influences of moderating factors (if any) on the continuance intention of people using OSN for business transactions?

1.4 Research Aim and Objectives

The aim of this research is to discover, empirically, factors that determine the continuance intention of people to use OSN for business transactions. This will help online vendors to develop a coherent methodology for determining what blend of services, products and processes complement their core business and technology strategy to make people continue to use their social network for business transactions.

The objectives to realise the aim of this study are enunciated as follows:

(i) To discover the factors that determine the continuance intention of people to use OSN for their business transactions.

(ii) To determine the extent that these factors predict the continuance intention of people using OSN for business transactions.

(iii) To examine the influences of moderating factors (if any) on the continuance intention of people using OSN for business transactions.

1.5 Theoretical Frameworks

This study applies the expectation-confirmation theory (ECT) (Bhattacherjee 2001), theory of planned behaviour (TPB) (Ajzen 1991) and theory of social-cognitive trust (TST) (Castelfranchi and Falcone 2010), to investigate the factors that determine the continuance intention of people to use OSN for business transactions. The selected factors from these theories, which form the theoretical frameworks of the OSN model proposed in this study, are shown to converge to OSN continuance intention.

1.6 Study Contributions

This research study contributes substantially to the body of knowledge in information systems literature.

One important contribution of this research study is the discovery of factors of customer satisfaction, perceived trust, social norm and perceived behavioural control, as determinants of continuance intention of people to use OSN for business transaction.

The second important contribution of this study is the development of a model to predict OSN continuance intention.

Lastly but not least, the study makes a contribution to the information system continuance model, by confirming the theoretical argument that the strength of user satisfaction to predict continuance, is reinforced by usage habit.

In practice, by understanding the factors that have an impact on behavioural intentions, individual vendors can develop operational and marketing strategies that foster positive intentions, such as purchase intent or customer loyalty. This research study can therefore be seen to offer practical and theoretical contributions to knowledge.

1.7 Synopsis

This dissertation is succinctly outlined as follows:

Chapter 1 introduces the study reported, by providing the problem statement, stating the research questions, followed by the aim and objectives of the research, then the theoretical framework, and a summary of research.
Chapter 2 discusses the related literature and covers important issues around OSN.
Chapter 3 develops research hypotheses from the theoretical framework and demonstrates how they interconnect with each other to form the research model.
Chapter 4 presents the methodology of the research, design process, the kind of respondents used and sampling procedures, including methods followed to collect data, the rationale for selected statistical methods, ethical and confidentiality issues and how data collected were validated to minimize biases.

Chapter 5 deals with data analysis and the interpretation thereof. It also summarizes the themes and the findings of the study, before discussing contributions from the study.

Chapter 6 concludes the dissertation, by summarising the work done, making recommendations and drawing conclusions.

CHAPTER 2: LITERATURE REVIEW

The methodology followed, as set out in this chapter, to conduct an empirical study is that of a systematic literature review. An analytical review scheme is necessary for systematically evaluating the contribution of a given body of literature (Ginsberg and Venkatraman 1985 Tranfield et al. 2003, Maritz et al. 2014, Roth and Wilks 2014). This provides a model for identifying, summarizing and critiquing past studies that are found to be related to the study at hand. The systematic literature review of academic papers, published over 30 years, should reveal sufficient evidence towards a maturing research methodology (Fiegen 2010, Crossan and Apaydin 2010, Zhang et al. 2012).

The main steps for carrying out a systematic review (Higgins and Green 2009, Hidalgo et al. 2011, Odunaike et al. 2014), are drawn from the following:

- Define the search parameters to use to initiate web search.
- Identify scholastic databases and search engines to use for literature searches.
- Decide on filters for inclusion of relevant papers and exclusion of irrelevant papers.
- Ensure the resulting articles are representative enough by repeating the filtering process.

2.1 Search engines and Search parameters

The literature review was conducted using search engines of IEEE, PubMed and Science Direct. Free web service search engines such as Google, Google Scholar and Bing were also used to discover relevant online resources. Some academic databases and search engines (Google and Bing) provided XML interfaces for automatic querying, which prompted further investigation. The majority of research material downloaded used information systems or technology (IS/IT) continuance intention as endogenous constructs in their models and are published in English.

All conference proceedings and journal articles that were collected had to meet the following critical criteria for inclusion as relevant (Hidalgo et al. 2011):

- Are the supporting evidences shown and complete?
- Are there (unacceptable) conflicts of or vested interests?
- Is it repeatable, that is, rigorous?

Collected papers dealing more with technology diffusion than technology continuance were dropped because they were judged as divergent from the context of this study. Moreover, papers that discussed the main issues, such as the technology adoption model expectation-conformation theory and the theory of planned behaviour, were put into one folder for further refinement. The researcher scanned through this folder for items, to identify a total of 211 research papers that were found to be more appropriate for the study at hand. Table 2.1 shows the search parameters used to initiate the search mechanism to discover relevant research papers for this study.

Table 2.1: Search parameters

Search Parameter	**Synonym**
Online continuance intention	Internet continuance intention
Repurchase intention	-
Website loyalty	Online loyalty
Website stickiness	Online stickiness
Continue to shop online	Online shopping
Customer's intention to return	Client's intention to return
Technology continuance intention	Information system continuance intention

Most of the articles used in this study were peer reviewed papers in information system (IS) and electronic commerce (e-commerce) studies. More than half of the studies investigated user satisfaction as an important determinant of continuance intention and some studies suggested cloud computing, Web 2.0 and OSN as emerging technology for business transactions. This demonstrates the keen interest researchers are showing in Web 2.0 or OSN research. The Google scholar sample of papers on IS continuance intention (398), were authored or co-authored by Asians (76 percent), North Americans (14 percent) and Europeans (10 percent).

2.2 Evaluation and synthesis

In order to align the research articles in the fields of study, to the study at hand, in order to determine gaps for the research questions investigated, a sequence of steps was followed. A table (Table 2.2) of similar studies in the field illustrates sample sizes, considered adequate for the generalisation of results.

Table 2.2: Similar studies with sample sizes less than 300

Author	Year	No. of Responses
Bhattacherjee	2001	122
Bhattacherjee	2001	179
Lynch, et al	2001	299
Koufaris	2002	280
Shankar et al.	2003	144, 190
Devaraj et al.	2003	134
Bhattacherjee and Sanford	2009	81
Kassim and Ismail	2009	103
Kim,	2010	207
Fand et al.	2010	142
Kuss et al.	2011	131, 187
Kim et al.	2012	241
Chen et al.	2012	226
Blanchi et al.	2012	176
Dabholkar and Sheng	2012	116

2.3 Online social networking

Online social networking (OSN) is the act of connecting and building relationships with others online, which is a subset of social media. It can take place via Facebook, Twitter, LinkedIn, MySpace and other OSN, but it simply describes the act of engaging in a dialogue in a web-based forum. A good point to start analyzing OSN continuance intention literature, is to identify the current trends across some of the most popular OSNs.

During this exercise, the following statistics came to light: 201 billion videos were found to be viewed per month on Google sites, 350 million Facebook users log-in via mobile phone, 2.1 billion Internet users, 555 million websites, 1 trillion video playbacks on YouTube, 5.9 billion mobile subscriptions, 100 billion photos on Flickr, 71 percent of email traffic is spam, Apple`s iPad share of global tablet web traffic is 88 percent. (royal pingdom.com 2012: internet). This certainly presents a business opportunity for the strong hearted entrepreneur and the knowledgeable business man who cares to stay on top of his game. Being knowledgeable demands a swift understanding of the compelling factors that drive people to the OSN phenomenonl and how to manipulate these factors to the best interest of participating agents.

Millions of people all over the world have been lured into this recent phenomenon of interaction defined as "web-based services" (Boyd and Ellison 2008) that allow individuals to:

- Construct a public or a semi-public profile within a bounded system,
- Articulate a list of other users with whom they share a connection and
- Traverse their list of connections within the system.

The names used to describe these connections may vary from one website to another, depending on the level of sophistication. Nevertheless, they all serve almost the same purpose. Participation in OSNs consists of joining as a member and interacting with other network members by, for instance sharing audio-visual content (e.g. Flickr, MySpace and YouTube), contributing to forum discussions, exchanging views and ideas within communities of practice (e.g. Orkut4 and Yahoo groups), sharing sources of information (such as bookmarks in del.icio.us and Digg), collaborating towards a common goal (such as the online encyclopedia, Wikipedia) and searching for and socializing with members with similar interests (most OSNs) (Cachia et. al. 2007).

The growth of OSNs is impressive, with some of these networks reported to have tens of millions of members from across the world (Cachia et. al. 2007). It is worth noting that this phenomenon is currently undergoing intense research in e-commerce and information systems (Huang and Yen 2003, Ridings and Gefen 2004). The private sector companies are also attempting to investigate OSNs, in order to learn about emerging lifestyles that may affect traditional business models (Cachia et. al. 2007).

Among academics, higher education faculty members have also adopted OSNs in growing numbers (Moran et al. 2011). In an example, Moran et al. (2011) found that between 1 921 higher education faculties surveyed, over 90 percent were at least aware of the major OSNs, such as Facebook and Twitter and more than 50 percent of all surveyed had visited Facebook in the previous month, with over 40 percent posting something to Facebook at that time. Additionally, 45 percent of reporting faculties use Facebook for both professional and non-classroom purposes, with 11 percent using OSN on a daily basis to pursue professional goals (Moran et al. 2011). All these attest to the fact that OSNs have assumed the centre stage of our social life, consequently requiring critical research.

2.4 Web 2.0 for Business

Web 2.0 is a new approach to web design and content creation that encourages dynamic interaction. It allows dynamic participation through social networking, social media sites and a wide variety of user-generated content. Social media facilitates the act of social networking, although social media sites have capabilities that go well beyond social networking, and are subsets of Web 2.0.

For example, YouTube is mainly a video sharing site, however, the comments section is a form of social networking. Web 2.0 is a technology that enhances interaction on the internet. O'Reilly (2007) posits that: "Web 2.0 is the business revolution in the computer industry, caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform. Chief among those rules, in the view of O'Reilly, is this: "Build applications that harness network effects to get better the more people use them" (O'Reilly 2007).

Further to this definition, O'Reilly (2007) stipulates the following:-

- Don't treat software as an artifact, but as a process of engagement with users ("The perpetual beta")
- Open these data and services for re-use by others, and re-use the data and services of others whenever possible.("Small pieces loosely joined")
- Don't think of applications that reside on either client or server, but build applications that reside in the space between the devices. ("software above the level of single device")
- Remember that in a network environment, open application programming interfaces and standard protocol win, but this doesn't mean that the idea of competitive advantage goes away ("the law of conservation of attractive profits").
- Chief among the future sources of lock in and competitive advantage will be data, whether through increasing return from user-generated data, through owning name space, or through proprietary file formats.

From the above synopsis, it can be seen that, O'Reilly is trying to move OSN as part of Web 2.0 and cloud 1.0 computing to cloud 2.0 computing, where computing is done in the cloud anytime, anywhere, without the sky posing as the limit this time around. O'Reilly sought to

better clarify the Web 2.0 concept in light of many other discussions on the subject and it was evident that, by evaluating definitions provided by several academics, one can conclude that Web 2.0 is a collaborative development, with higher participation expectations from users, to generate content and continue to use such contents (Olson et al. 2010**,** Bettinger et al. 2014, Wu et al. 2014).

The concept of Web 2.0 relies heavily on its users to participate and contribute. It is, specifically, important to be on the internet, to be able to share knowledge and to link people (DiLoreto 2007). Aguiton and Cardon (2007) describe the concept of Web 2.0 in more of a functional manner, stating that "Web 2.0 services can be characterized by the astonishing rise of the interpersonal relations in mediated communities, the extension of the number of contacts and the growth of a new form of weak friendship".

Accordingly, services on Web 2.0 are offered in three different forms (Hoegg et al. 2006):

- Platforms, which offer the means for users to express themselves,
- Online collaboration tools, which aim to improve processes by making information accessible from every location, and
- Community services: unifying users through a common objective.

2.4.1 Doing business on Web 2.0

Organisations are beginning to recognise and utilize the power of Web 2.0, allowing them to interactively communicate and engage with their supplier chain and provide their customers with a sense of empowerment (Bughin and Chui 2010, Oliver 2010, Baxter and Connolly 2014, Wirtz et al. 2014). Innovapost is one of such organizations that have started developing strategies to make the most of the opportunities in this new environment (Xarchos and Charland 2008). Innovapost used Web 2.0 technologies to develop a new portal that allowed its employees to seek new opportunities within the companies, while allowing managers to post opportunities. The continuous practices of such actions have the potential of giving rise to a business model, especially if other technologies are developed to further exploit the capabilities of Web 2.0.

LinkedIn and Twitter are the two of the numerous OSNs that have made remarkable efforts in using this OSN for business purposes (Pallis et al. 2011, Murphy et al. 2014).

Accessing and interacting with Web 2.0 is provided by the principle of facilitating interaction between users and computer, using an application programming interface and software middleware that are used to gather geographically dispersed resources (Odunaike et al. 2014). This makes the phenomenon attractive and easy to use and OSNs, such as LinkedIn and Twitter, have played a leading role in this regard.

This study, therefore, sampled people using Twitter and LinkedIn for business transactions because of growing popularity of these platforms, for business models (Pallis et al 2011). Twitter is a microblogging service that grew rapidly within three years of its existence. In that period, it commanded more than 41 million users, over 41.7 million user profiles, 1.47 billion social relations, 4 262 trending topics, and 106 million tweets (Kwak et al. 2010). In addition, if an OSN is to be used as a facility geared toward career management or business goals, an OSN with a more serious corporate image, such as LinkedIn is preferred (Cutillo et al. 2009).

2.4.2 Business models of LinkedIn

LinkedIn, often considered the business world's version of Facebook (Murphy et al. 2014, Wu et al. 2014), was founded in 2003 by Reid Hoffman. It is an interconnected network of experienced professionals from around the world, representing 150 industries and 200 countries. In December 2009, LinkedIn had more than 55 million registered users. The scope of LinkedIn is mainly for business, allowing users to maintain a list of contact details of people they know and trust in business. Through this network people can find jobs and business opportunities, whereas employers can post and distribute job listings for potential candidates.

LinkedIn is a user-oriented OSN site, where registered users create networks by sending personal invitations. A key feature of LinkedIn is that registered users can be recommended by someone in one's contact network. Figure 2.1 shows a screen shot of the LinkedIn home page (www.linkedin.com).

Figure 2.1: A snapshot of the LinkedIn home page (www.linkedin.com)

LinkedIn is a free to join platform and it offers a premium version, providing more tools for finding and reaching the 'right' people. Premium account users can send messages directly to people and search for profiles that do not belong in their network. An indicative success story, is when LinkedIn drove a high number of users to the MAZDA6 site and delivered some of the highest Key Performance Indicator (KPI) ratings of all lifestyle sites on the plan (Qualman 2011).

The full power of the LinkedIn framework lies within the JavaScript Application Programming Interface (API). This API is the bridge between the user's browser and LinkedIn. The REpresentational State Transfer (REST) endpoint allows developers to use a simple, consistent JavaScript interface, to interact with the fundamental LinkedIn data types (profiles, connections, people and search). Under the hood, LinkedIn translates users' requests into a REST call, made on behalf of users via Ajax. Users simply invoke a method and receive JavaScript Object Notation (JSON) in return.

2.4.3 Business model of Twitter

Twitter was founded by Jack Dorsey, Biz Stone and Evan Williams in March 2006 and launched publicly in July 2006. It is a social networking and micro-blogging service that allows users to post their latest updates. An update is limited to 140 characters (called tweets) and can be posted through a Web form, a text message, or an instant message. Tweets are delivered to the author's subscribers, who are known as ’followers’. Senders can restrict their posts to specific friends or, by default, allow open access. Registered users can also follow lists of authors, instead of merely following individual authors.

The scope of Twitter is twofold: business and entertainment. For instance, Twitter has been used for campaigning (2008 US Presidential campaign), educational purposes, and public relations. The service is a content-oriented OSN site, since a user’s network is determined by the underlying social relationships; users create their networks by becoming ’followers’.

Social networking sites have rapidly gained popularity, with Twitter posting growth rates exceeding 1 300 percent (Seeking 2009). Figure 2.2 shows a screen shot of the Twitter home page (www.twitter.com).

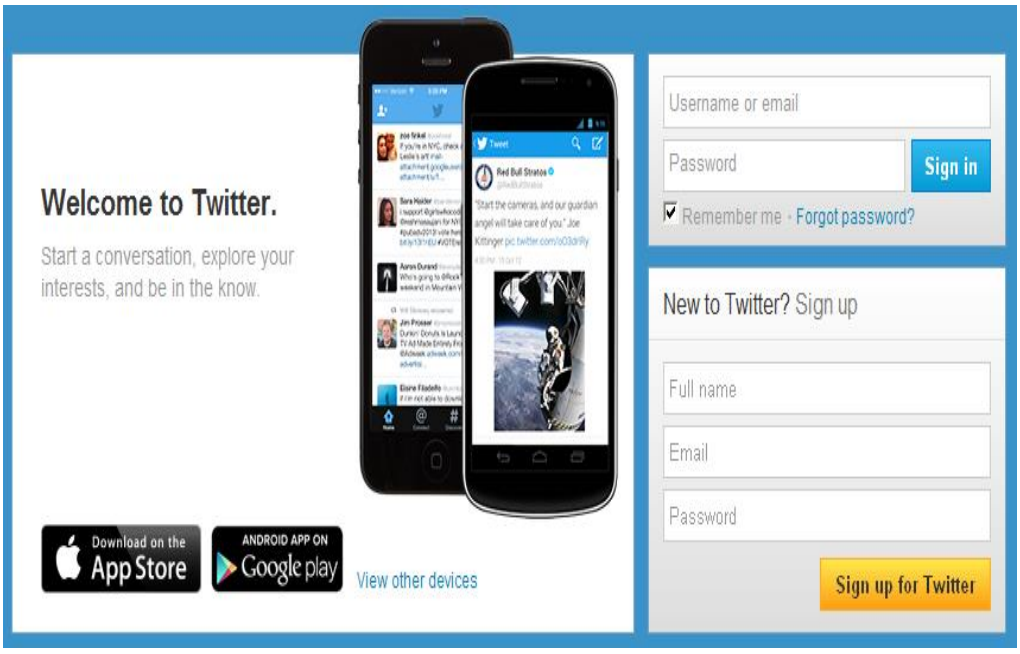


Figure 2.2: A snapshot of the Twitter home page (www.twitter.com)

As a free platform for all registered users, Twitter is hosted on Github, which welcomes users to submit pull requests for bug fixes or parsing improvements. Contrary to most OSN sites,

Twitter does not provide any advertising policy. In addition, it does not support any premium accounts. Nowadays, Twitter is in beta test, providing enterprise subscriptions that are able to target corporate customers.

The idea to provide enterprise subscriptions is based on the assumption that the more that businesses use Twitter, the more ways the company will find to monetize their traffic. From the above review, it can be seen that OSN is a business model that intends to serve a community and falls into both commercial and non-commercial communities.

2.5 Selecting an OSN Vendor for Business

Today, with literally hundreds of OSNs, which seem to have some kind of business models for their participants, probably the most challenging issue faced by customers is the selection of an appropriate vendor. There are many reasons for limiting the number of preferred vendors on OSN platform. These include, the pressure to purchase locally, environmental concerns, product availability and other factors, which may influence the decisions of customers in selecting a vendor, regardless of the degree of product, performance or interpersonal satisfaction derived from that vendor (Vermeir and Verbeke 2008).

The reliance on codified knowledge stresses formal analysis and rationality in decision making (Foss and Klein 2013). Analogously, product satisfaction and performance satisfaction rely on rational analysis, while interpersonal satisfaction relies on tacit knowledge. Such tacit knowledge may be developed through years of experience, is subjective, and is highly individualized (Dalkir 2013). It may also be influenced, especially with the advent of e-commerce these days, and may include knowledge regarding efficient ways of approaching vendors online.

Participants of OSN may succumb to pressure from peers to buy products online and may not be aware that they are applying tacit knowledge in their decisions (Dalkir 2013). It is proposed, in this study, that decision makers use satisfaction, trustworthiness and especially interpersonal satisfaction, as a form of tacit knowledge in the decision making process for continuance purchases, as a driving force for choosing among otherwise acceptable alternatives.

Since overall customer satisfaction is comprised of satisfaction, with multiple aspects of the acquisition and use of a product or service, the model shows that the component parts of overall satisfaction play a major role in the decision of whether or not to repurchase from particular suppliers due to the OSN that he or she operates on. The component of overall satisfaction that is examined in this research study, is user satisfaction with OSN performance, including on-time performance and billing accuracy (performance satisfaction) enabled by choice of OSN.

2.6 Expectation-Confirmation Theory (ECT)

In continuance intentions studies, such as that of expectation-confirmation theory (ECT) in information system, the object is to find consumer satisfaction and repeat behaviour for transactions. The basic logic of the ECT is stated by Oliver (1999), Bhattacherjee (2001), Kim et al. (2009), Venkatesh et al. (2011) and Brown et al. (2012). They postulate the following: first, a consumer shapes an expectation of the special goods or services form to a contract. After a time of use, the consumer shapes the senses about his/her transaction behaviour. Second, the consumer calculates his/her perceived deed, compared to initial expectation, and decides the measure to which the expectation is met.

Consequently, the consumer accumulates the satisfaction decision, based on the degree of validation and expectation on which that validation was built. In the end, the consumer forms the repeat purchase or continuance intention and behaviour, built on the degree of satisfaction. Figure 2.3 shows the ECT model for Information Technology (IT) continuance intention, with the main constructs of perceived usefulness and user satisfaction determining IT continuance intention.

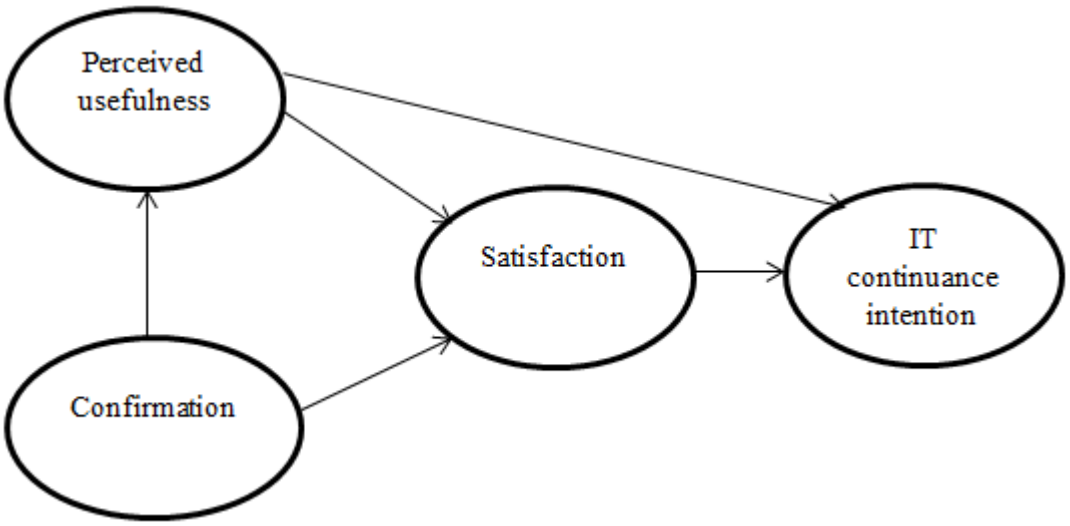


Figure 2.3: An ECT-based Model for Information Technology continuance

All constructs in ECT, other than expectation, are repurchase variables (Limayem et al. 2007) and the evaluation is found in the consumer's actual experiences with an online vendor. In as much as this research study agrees with Limayem et al. (2007), it contends that consumers' perceived trust in a particular OSN is another important factor that will act as the 'rock of ages' in their life, whenever consumers think of repurchase, while behavioural control of the OSN can also not be taken for granted.

Following this line of conviction, this study adopts such factors as perceived trust, satisfaction, social norm, and behavioural control of OSN, to explain the continuance intention of people using OSN for business transaction. In addition, past e-commerce studies have found that online shopping behaviour has been studied using constructs such as users' continuance, acceptance decisions, online shopping intention and purchase behaviour (Gefen et al. 2003, Hsu et al. 2006). This leads to the conclusion that the online consumer-vendor relationship becomes stronger when the initial trust in the OSN is confirmed. Then both the vendor's 'before-and-after' performance, is felt to be trustworthy.

Past authors have made substantial contributions in using ECT to study user satisfaction and continuance behaviour (Bhattacherjee 2001, Bhattacherjee and Premkumar 2004). Bhattacherjee (2001) theorizes a model of Information System (IS) continuance, with five hypotheses, employing perceived usefulness to represent the pre-acceptance and post-acceptance behaviour of users. This IS continuance model was empirically validated, using a

field survey of online banking users and the results show that IS continuance intention is determined by user satisfaction and the perceived usefulness of continued IS (OSN) usage.

User satisfaction is, in turn, influenced by confirmation of expectation from prior IS use and perceived usefulness. Moreover, Bhattacherjee (2001) conducted a similar work by proposing and validating an electronic commerce service continuance model and subsequently proposed a temporal model of belief and attitudinal change (Bhattacherjee and Premkumar 2004), by drawing on ECT and the extant usage literature. Bhattacherjee and Premkumar (2004) conducted research for this hypothesized model and the results show the emergent constructs, such as disconfirmation and customer satisfaction, as being critical in understanding changes in IT users` beliefs and attitudes.

2.6.1 Customer satisfaction

The ECT states that customer satisfaction develops from a customer's comparison of post-purchase evaluation of a product or a service, with pre-purchase expectations. Satisfaction has been discussed extensively as a central concept and is a hot topic of interest throughout e-commerce and information systems literature (Oliver 1999**,** Brown et al. 2012, Bhattacherjee and Lin 2014, Hsu et al. 2014, Fan and Suh 2014) and has been found to have a direct impact on continuity of IS services and products (Bhattacherjee et al. 2008, Roca et al. 2009, Liao et al. 2009).

For example, Bhattacherjee and Lin 2014, Gao and Bai 2014, Hsu et al. 2014) propose that satisfaction plays a key role in building and retaining a consumer's repurchase decisions and IS continuance behaviour. Customer satisfaction is a post-purchase attitude, formed through a mental comparison of the service and product quality that a customer is expected to receive from an exchange, and the level of service and product quality the customer perceives from the exchange.

Different customer satisfaction models and theories have been developed in order to define and explain the concept. Satisfaction is generally referred to as the state resulting from a consumer's assessment of a vendor's past performance. It is an attitude, formed through a mental comparison of service or product quality, that a customer expects to receive from an exchange, with the level of quality the consumer perceives after actually having received the service or product (Kim et al. 2009). Again, Oliver (1981) summarizes satisfaction as a

"summary of psychological" state, resulting when the emotion, surrounding disconfirmed expectations, is coupled with the consumer's prior feelings about the consumption experience. These satisfaction judgments are based on perceived performance and not on actual performance.

When the perceived performance of a product is close to the expected level of performance, it is said to fall into the zone of indifference. Only when perceived performance is outside the zone of indifference does disconfirmation occur. If the performance is higher/lower than expected and falls into a zone of disconfirmation, expectations are positively/negatively disconfirmed. If expectations are positively/negatively disconfirmed, (dis)satisfaction occurs (Oliver 1981). In Internet contexts, many studies have indicated the relationship between overall satisfaction levels and repurchase intention to be critical and worth the attention of investors (Limayem et al. 2007).

2.6.2 Continuance Intention

Current research (e.g. Choi et al. 2011, Zhou 2011) argues that studies on continuance behaviour are becoming increasingly important, particularly for firms seeking to achieve profitability and sustainable, competitive advantage, through online business activities. The understanding of the factors that influence continuance behaviour, at this stage of the Internet's diffusion as a business avenue, is important.

Online participant retention will ensure OSN continuity. No wonder this subject of continuity has become current research issue in both the IS and e-commerce areas whereby researchers have studied online customer retention in different contexts, (Venkatesh and Zhang 2010, Venkatesh et al. 2011, Brown et al 2012, Gao and Bai 2014, Al-Debei et al. 2013, Zheng et al. 2013, Sun and Jeyaraj 2013, Shiau and Luo 2014, Lehto and Oinas-Kukkonena 2014, Ajjan et al. 2014, Hsu et al. 2014, Lankton et al. 2014).

Both IS continuance intention and repurchase intention are influenced by the initial use or purchase experience through the medium of technology. As noted earlier on, technology switching is not completely new phenomenon in IS research (Fun and Suh 2014) because users are in constant search to find OSN platform that better serves their personal needs. They may be inclined to switch or at worst become members of multiple platforms when such new ones are discovered. Therefore, recent studies have started to investigate why users switch

between OSNs or online service platforms, as well as how online service providers can retain their users (Hsieh et al. 2012, Zhang et al. 2012, Choi et al. 2013, Haj-Salem and Chebat 2013)

It has been examined variously as a post-adoption behaviour, where users consider changing to another service provider or product after they evaluate theie experience. Nevertheless, IS continuance intention in an OSN context is slightly different from the online repurchase intention. IS continuance emphasizes the continued usage of e-commerce sites, such as OSN, for business, instead of the use of physical stores, while online repurchase underlines consumer behaviour (Wen et al. 2011).

Online repurchase intention is a construct combining IS theory and marketing theory. Given OSNs successful acceptance rate and popularity, retention and continuity of the systems become crucial. Such a continuance intention is not only needed for literature's sake, but for business and investment purposes. Bhattacherjee 2001, Gao and Bai 2014, Hsu et al. 2014, Ajjan et al. 2014) defines IS continuance intention in the ECT as an individual's intention to continue using an information system (in contrast to initial use or acceptance).

Continuance intention has been shown to have correlation with actual IS continuance (Venkatesh and Zhang 2010, Venkatesh et al. 2011, Brown et al 2012) and is used as the endogenous construct in many models, including this study. The phenomenon becomes more important for OSN systems because, such systems, being a Web 2.0 system of cloud computing, typically have some benefits that could only be realized in the long run.

For instance, the issue of trust in OSN can build up because of familiarity and the continuance visit of a particular OSN. Furthermore, Limayem et al. (2007) suggest that IS continuance behaviour or IS continuous usage described behavioural patterns, reflect the continued use of a particular IS. Over the years, a number of constructs have been proposed in connection with the continuance intention in IS (Hsu and Chiu 2004**,** Bhattacherjee and Lin 2014, Hsu et al. 2014)

In light of the fact that attracting and retaining online participants are the keys to the success of OSN, many scholars have studied continuance intention from a number of perspectives. Notably, the technology acceptance model (TAM), to predict continuance intention based on

perceived usefulness (Bhattacherjee 2001, Premkumar and Bhattacherjee 2008) and perception of utility (Premkumar and Bhattacherjee 2008). Likewise, continuous online service usage behaviour was examined, with the extending expectation-confirmation model (ECM) accompanied with self-image congruity and regret. The result supports the salient of self-image congruity and regret on continuous behaviour in the context of a social network service (Kang et al. 2009).

Moreover, a synthesised model of ECT, the TAM, the theory of planned behaviour (TPB) and the flow theory, explain and predict the users' intentions to continue using a Web-based learning program (which is good news for OSN continuance). How to enforce the habitual behaviour and participation in Web 2.0 systems, therefore, contributes greatly to an OSN's continued existence. This is an area worthy of pursuit because of the business value of OSN as a tool of both leisure and convenience, a way of communication and a new business venture (Wirtz 2010, Wirtz et al. 2014, Wu et al. 2014, Baxter and Connally 2014).

2.6.3 Habit

Prior research in IS usage indicates that habit determines much of IS continued usage (Limayem et al. 2007) and using it to investigate the possible roles of moderation is common in this domain of study. A study, of the roles of habit and website quality in e-commerce, found that habit has a significantly positive effect on trust, perceived usefulness and continuance intention (Liao et al. 2006, Shiau and Luo 2013). Guinea et al. (2009) define habit as "a well –learned action sequence, originally intent that may be repeated as it was learned without conscious intention, when triggered by environmental cues in a table context" (Guinea et al. 2009).

When IS use is habitual, it ceases to be guided by conscious planning and is instead triggered by specific environmental cues in an unthinking or automatic manner (Bhattacherjee and Barfar 2011). Guinea et al. (2009) maintain that the mere presence of IS, or a specific task that a user is confronted with, for instance, to communicate with a colleague about writing a report, are important cues that may trigger habitual IS usage.

Previous research has found a strong relationship between habit and continuance behaviour in IS and many efforts have been made by different researchers in showing how habit influences IT usage. The conclusion is almost invariable the same. For instance, habit refers to "the

extent to which people tend to use IS automatically, as a result of prior learning" (Limayem et al. 2007, Venkatesh et al. 2012, Bhattacherjee and Lin 2014), it is automatic behaviour, from known practice.

Understanding the IS feature that develops habitual behaviour among OSN participants, in addition to showing how it moderates these feature(s), is crucial in promoting habitual use of OSN in the long run. Past research reports that habit is a major driver of affect (Nayak 2014) and an 'emotional response to the thought of the behaviour' (Nayak 2014). By giving rise to a favorable feeling towards behaviour, habit can affect trust, behavioural control and social norm directly. In other words, this study believes that a customer is likely to be more trusting and more influenced by behavioural factors of OSNs stores, when the habit of shopping online has been acquired.

In summary**,** the logic of the expectation-confirmation theory (ECT) posits user satisfaction to be the most important determinant of an individual's continuance intention (Oliver 1999, Bhattacherjee 2001, Zhao and Lu 2012, Akter et al. 2013, Ajjan and 2014, Al-Debai et al. 2014). The parsimonious nature of the theory allows it to be used as a guideline to develop a successful information system (Venkatesh and Davis 2000, Venkatesh et al. 2011, Brown et al. 2012). However, attention on IS acceptance has shifted to a continuance model (Bhattacherjee 2001, Liao et al. 2009, Akter et al. 2013, Shiau and Luo 2013). ECT was adapted from the customer satisfaction/dissatisfaction model (CS/D) (Oliver 1981, Churchill and Suprenant 1982, Oliver and Burke 1999), which was originally designed in marketing research to model customer repurchase behaviour.

It is worth mentioning that CS/D is not dedicated to modeling IS continuance per se, but is a general model for describing a person's reiterative behaviour, in performing certain tasks (Oliver 1980).

2.7 Theory of Socio-Cognitive Trust

Despite the massive studies into customer perceived trust, to make them feel at ease when doing business on OSN, it appears that consumers continue to perceive that using the Internet for purchasing, is risky (McCole et al. 2010). Therefore, the issue of trust may be even more important in OSN than traditional commerce because OSN is based on the consumer's trust

in the processes. This is in contrast with that of traditional business, where trust is based on personal relationships and on interactions between the consumer and the merchant.

The theory of socio-cognitive trust (TST) defines trust as a notion that is appraised by agents, in terms of cognitive ingredients (Castelfranchi and Falcone 2010). TST treats cognitive trust as a relational factor between a trustor (trust giver) and a trustee (trust receivers).

This relationship can be established in a given environment or context and most importantly, about a defined activity or task to be fulfilled. Individuals choose who they will trust and base this decision on what they believe are 'good reasons' (McAllister 1995). The choice to trust and the search for 'good reasons' suggest a process, by which one determines that an individual, group or organization is trustworthy (McAllister 1995).

Trust is a significant psychological factor of electronic loyalty and is crucial for users to embrace risk that comes with online transactions (McCole et al. 2010, Xu and Liu 2010). According to Deng et al. (2010) and Constanza and Lynda (2012), trust makes customers comfortable when sharing personal information, making purchases, creating relationships and acting on advice which is behavioural and essential to the widespread adoption of electronic commerce. The issue of trust is particularly relevant when it comes to business, let alone conducting such business in an environment, such as OSN, where users do not see each other physically. The lack of trust therefore could impact negatively on users (Zhang 2012, Zhou 2012).

Trust is considered a multidimensional concept categorising it into several referents in an oline settings (Hsu et al. 2014). For instance, Teo et al. (2008-2009) classified trust into trust in government, trust in technology, and trust in e-government web site whiles Lu et al. (2010) and (Shu and Chuang 2011) classified trust in the vendor (Lu et al. 2010), trust in the auction's initiator (Kauffman et al. 2010) and trust in group members (Lu et al. 2010, Shu and Chuang, 2011). Trust in technology and group members are of interest to this study.

Based on the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), beliefs directly affect attitudes, and the higher the level of trust, the more favourable the attitude (Hsu et al. 2014). Chen and Dibb (2010) find that trust in a web site (OSN) is significantly associated with shoppers' attitudes toward the site whereas Keen et al. (2004) found that the choice of

the internet (OSN) over other business models is conditioned by an individuals` subjective norms and the amount of control perceived during the purchasing process.

This again lends support to Bart et al. (2005), who on the determinants of trust in different types of websites discloses that electronic vendors whose websites have easy-to-use features and have the capability to direct their customers to their destinations quickly can easily gain the trust of their customers (Bartet al. 2005) due to the efficacy of the site. Chau, Hu, Lee, and Au (2007) claim that the ease of using and navigating a website significantly influenced customers' trust in the electronic vendor, especially during the initial encounter, when customers were still searching for information.

It therefor comes with no surprise that, experts believe the lack of trust between transacting parties and the system facilitating the exchange (OSN) is impeding the rate at which this potential has yet to be realised (e.g. Dinev et al. 2006, McCole et al. 2010).

It has been noted that trust in e-business also incorporates the notion of trust in the infrastructure and the underlying control mechanism (technology trust) which deals with transaction integrity, authentication, confidentiality, and non-repudiation (Ratnasingam et al. 2002, McCole et al. 2010). Lee and Turban (2001) state that "human trust in an automated or computerised system depends on three factors: (1) the perceived technical competence of the system, (2) the perceived performance level of the system, and (3) the human operator's understanding of the underlying characteristics and processes governing the system's behaviour." These factors, in the opinion of this study are related to the perceived ability of the OSN to perform the task it is expected to, as well as the speed, reliability and availability of the system. To draw an anology to explain the above statements, a user who uses MTN as a network to communicate with friends will be frustrated and distrust the network if most of his efforts to reach these friends are thwarted most of the day by the non availability of the network. He might even not trust his peers who uses the same network and tries to convince him into using it to transact business online.

As already hinted above (especially in the section of Social Norm), trust can also occur at both the interpersonal and group level, with individuals trusting members of their own group more than members of other groups (Foddy et al. 2009, Saeri et al 2014) and this is known as a depersonalized ingroup trust.

In summary, the investigation of trustworthiness of technology has been given some attention in the recent past (Jarvenpaa et al. 1999, McCole et al. 2010, Kim et al. 2009, Luo et al. 2010, Lin 2011, Zhou 2012) and the examination of the extent to which consumers place their trust in online vendors (Jarvenpaa et al. 1999). The result has shown that, trust is a critical factor for OSN providers to create within their site in order to attract participants.

McCole et al. (2010) find that this factor positively influences attitude towards online purchasing, while existing evidence suggests that familiarity with an online store (OSN) also has a positive influence (Stranahan and Kosiel 2007).

2.8 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) discusses how one possesses the salient factors needed to perform an act, being it an IT system or behaviour decision-making.

2.8.1 Perceived Behavioural Control

One well known and applied model, used extensively to explain the extent of the impact of the behavioural decision-making process, by identifying the important predictors of individual behaviour, is the TPB by Ajzen (1985,1991). The TPB posits that individuals' intentions are the closest determinants of their behaviour, with intention as a concept, to capture the individuals' motivation to perform a given behaviour (Ajzen 1991).

Ajzen`s TPB was recently applied to social networking by Baker and White (2010) to predict adolescents` use of social networking. The study confirmed the TPBs components of attitude, perceived behavioural control, and group norms, in predicting intentions to use social networking sites, finding support that intention predicts behaviour.

One`s ability to use OSN for business transactions depends by and large, on the availability and accessibility of IT equipment needed to carry out the function, such as computers and other mobile computing devices. When these are perceived to be within reach, it impacts on behavioural intention to use OSN continually. Accordingly, PBC reflects one's perceptions of the availability of resources or opportunities necessary for performing the behaviour (Ajzen and Madden 1986).

According to the standard TPB model, intention is determined by three constructs:

1) attitude
2) subjective norm and
3) perceived behavioural control.

Firstly, attitude is conceptualized as referring to individuals' overall evaluations, either positive or negative, towards performing a given behaviour, and is posited to comprise affective (e.g., pleasant/unpleasant) and instrumental (e.g., easy/difficult) evaluations towards the behaviour. Secondly, social norm refers to individuals' perceptions of social pressure from important referents to perform or not to perform the behaviour, and thirdly, perceived behavioural control refers to the amount of control individuals perceive they have over performing the behaviour.

Thus, when people are confident in their ability to perform a behaviour, engaging in the behaviour is thought to be achievable, which in turn, increases their likelihood of forming a stronger behavioural intention (Ajzen and Madden 1986). In other words, the more participants of OSN for business transactions perceive control over IT equipment needed to carry out a transaction, the more the chances of continuing using them to carry out their business and thus achieving the objectives of IS continuous usage.
The TPB provides such a model, to predict the factors that lead to purchase intentions and is a respected framework applied by academics to a wide variety of behaviours. For instance, Pelling and White (2009) used the TPB to investigate predictive factors of high-level SNS use among a sample of young people. Figure 2.4 shows the TPB model for Information Technology (IT) usage behaviour with the main constructs of perceived behavioural control and intention to use, determining IT Usage behaviour.

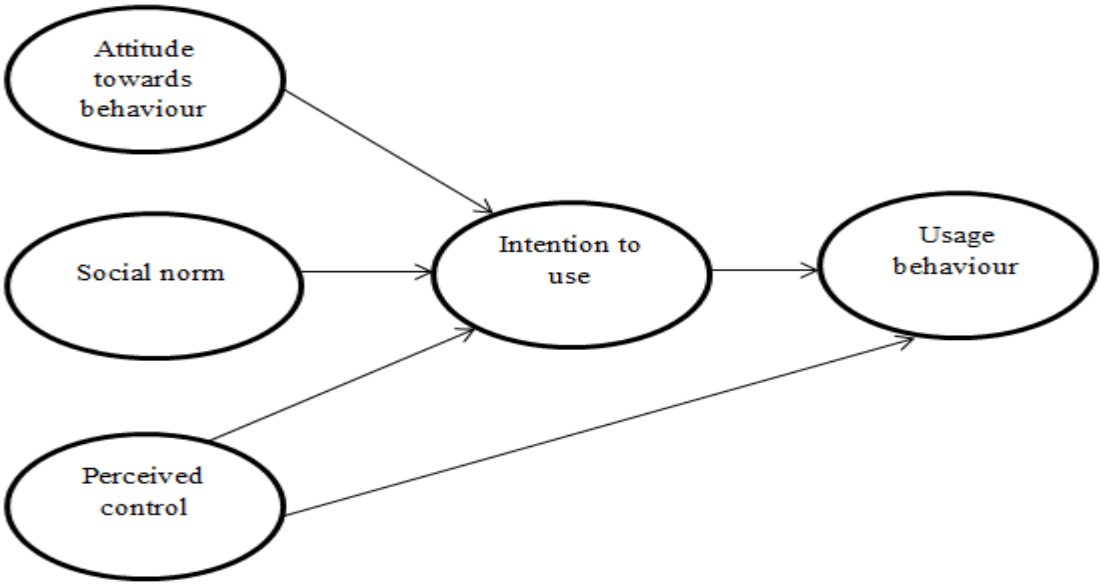


Figure 2.4: The Theory of planned behaviour (TPB)

2.8.2 Social (subjective) norm

Subjective or social norms refer to an individual's perception of whether people who are important to the individual, think that the behaviour in question should or should not be performed (i.e., the continuous use of OSN for business transactions) (Ajzen and Fishbein 1980). They are the function of how a participant of OSN in a business transaction referent others' view (e.g., respected relatives, friends or colleagues), regarding behaviour and how the participant is pressured to comply with those beliefs.

Research has identified three main types of norms as descriptive, injunctive and subjective norms (Cialdini et al. 1990, Ajzen 1991). Descriptive norm pertains to individuals` beliefs about how prevalent a particular behaviour is among the referent others. This norm gives information about the strength of the norm and how often it is observed among others (Cialdini et al. 1990, Paek 2009). Injunctive norms are those norms that indicate the extend to which individuals believe the society would disapprove of certain behaviours (Schultz et 2007). Subjective norm refers to the perceptions regarding the degree to which members from individuals` referent groups, for instance friends and family members would expect them to behave regarding a certain action (Ajzen 1991).

Injunctive and subjective norms seeks to measure the perceptions of others` beliefs. However, subjective norms concentrates more on perceptions of pressure from particular referent

groups whereas injunctive norms focuses on the perceptions of the society as a whole on the individual (Rimal and Real 2003, Ho et al. 2014).

Bearman`s idea of peer proximity, positing that peer effects task at proximal (For instance, close peers) and distal (For instance, groups of friends) levels, add to explain the differences between subjective and injunctive norm. In other words referent groups in subjective norm are closer in terms of social distance than the referent groups in injunctive norm (Ho et al. 2014) and therefore are more influencial in subjective norm than injunctive norm.

The above authors (Ho et al. 2014), contend that, perceived norms at the personal level have a larger effect on behavioural intention than perceived norms at the societal level in most cases. Their studies also revealed that, adolescents non-drinkers consider pro-drinking advertisement messages to be considerable convincing to their peers than anti-drinking messages. This outcome was found to be consistent with previous studies by Gunther et al. (2006). Among the drinkers, peers` attention to pro-and anti-drinking messages affected social norm (Ho et al. 2014). In effect, the proximal referent groups are likely to exert stronger and more immediate effects on adolescents` intentions to drink than general perceptions of societal approval.

This assertion is no different from what is anticipated from this study as people tend to regard close peers as an in-group with a common identity more than distance peers (Tajfel 1982, Ho et al. 2014). For instance, before actual usage, users who perceive that many of their peers have registered with a particular social network website perceive a higher level of usefulness and value in registering with the same social networking website (Kim 2011). This influence could be extended into group purchases to attract bulk discount thus establishing business among peers on the same OSN. In short, people have a greater tendency to be influenced by perceptions of in-group behaviour than that of out-groups because they always base their behaviour on social comparisons of important peers (Yanovitzky et al. 2006).

Nickerson et al. (2008) found that, processes of peer pressure and the desire to be accepted by peers can urge bystanders to join in bullying in OSN whiles Pozzoli and Gini (2010) revealed that positive peer pressure for intervention positively predicted defending behaviour in OSN. Further more, Paek and Gunt (2007) found in a study that adolescents tent to have positive attitudes towards smoking if they perceive that smoking is prevalent among their peers.

Again, the power of peer pressure is known in a study, where adolescents who believe that peer norms had been influenced by sexual content report more favourable attitudes toward risky sexual behaviours and greater likelihood to engage in sexual activities (Chia 2006). Given these highlights, it is in the interest of the current studies to focus on how subjective norm influences OSN for business intentions through peer pressure.

The effects of social norms on individuals have been investigated extensively, and there exist evidence that young people as a section of social grouping influences themselves more than the older segments through peer pressure. For instance, Thorbjornsen et al. (2007) and Kwong and Park (2008), indicate that peer pressure apply more to young people. Wang et al. (2009) confirm that in conforming to the SNs of groupings, the effect of group behaviour apply to young peer groups, when it comes to illegally downloading music from the Internet. One reason given for these findings, was the susceptibility of young users in the social development and learning stage, to peer influence (Shiau and Luo 2013).

Peer influence can arise in settings where social norms and observed peer behaviour pressure the individual toward expected choices (Mas and Morretti 2009, Bettinger et al. 2014). It could occur in social settings (Fullerton and West 2009) and as already mentioned, a growing literature documents how peers affect performance, friendships and college students behaviour and attitudes (Zimmerman 2003, Kremer and Levy 2008, Olson et al. 2010, Bettinger et al. 2014, Wu et al. 2014).

Bettinger et al. (2014) hints that, technology has made many old peers interactions virtual and enabled new ones online. An understanding of OSN peer effect may therefore improve productivity in OSNs relying on such networking for business. What is more, information availability on peer interactions and influence allows researchers to view the effect on individual characteristics and particular behaviours that such individuals affects their peer with. This understanding can enable policy implementations on OSNs to alter peer behaviour (Correll et al. 2011) for business transactions.

In relation to Bettinger et al`s (2014) study, it was made known that peer effects matter even in online settings. The study elucidated that, peers may establish norms of behaviour through the timing and concentration of their posts.

A similar study on Wikipedia also found that active participants can substantially increase the participation of otherwise passive participants (Olson et al. 2010, Bettinger et al. 2014). The study posit that increase on Wikipedia`s network is driven by active participants catching the attention of passive ones. OSN for business is a classic two-sided market where complimentary goods and services are provided for a collection of customer groups including user group, content provider proup, solution provider group and advertiser group (Kim et al. 2014). OSN users perceive that as the size of the OSN user network to which they are members become bigger, they can build a relationship with more people and share more information (Kim et al. 2014). Such sharing impact peers behaviour towards continuance usage as evinced by Lin and Lu (2011). They proved that the number of peers influence continuance intention to use OSN.

Drawing on the above expositions expecially that of Wang et al. (2009), it could be stated that, if peers were able to influence their mates into the downloading of music ilegagally on a social network (thus selling that particular site to them indirectly), they could as well lure them into the payment of other items that the group cherishs, hence enabling business transactions. The current study builds on the above by testing the extent to which peers influence themselves through the medium of social norm to continue using OSN for business.

In conclusion, the TPB (Ajzen 1991) is an extension of the theory of reasoned action, which is the result of some limitations found in the original model (Fishbein and Ajzen 1975). TPB posits that intentions of individuals are the closest determinants of their behaviour, with intention as a concept to capture the motivation of an individual to perform a given behaviour (Ajzen 1991). TPB is a well-grounded framework for conceptualizing, measuring and empirically identifying factors that determine behavioural intention, which is an immediate originator of behaviour (Ajzen 2008, Vermeir and Verbeke 2008).

According to TPB, behavioural intention depends on three major factors of A towards performing behaviour, SN and PBC. These factors represent the subjective probability that an individual will engage in a behaviour (Wu 2006). The stronger the intention of an individual to perform a particular behaviour, the greater the likelihood of that individual engaging in the behaviour (Ajzen 2008). TPB was recently applied to confirm factors of A, SN and PBC, as predicting intentions to use social networking sites (Baker and White 2010).

2.9. Summary of literature findings

Throughout the systematic review of literature, and as verified above, to discover what has been done regarding conducting business on OSN, little or no work was found in looking at the specificities of business on OSN, other than a semblance of concepts and modalities. Studies that made mention of OSN for business, never made an attempt to discover factors that determine this phenomenon and any moderating factors.

Nonetheless, little or no research exists that considers the continuance intention of people using Web 2.0 or OSN for business transactions, to be determined by factors of perceived trust, user satisfaction, social norm and perceived behavioural control. Table 2.3 presents a summary of the related studies by author, research purpose, method used and findings.

Table 2.3: Summary of work done on OSN for business activities

Author(s) and titles	Purpose	Method/design/approach	Findings
Wolcott et al. (2008)	To investigate the adoption of ICTs in 11 micro-enterprises in an underserved community of Omaha, Nebraska.	Action research study, that provides insight into the key challenges and opportunities facing micro-enterprises in their use of ICTs to create value for their businesses.	The process of "IT therapy" provides individualised, technology-related assistance, with an emphasis on relationship-building, customized training, context sensitivity, and solutions that target strongly-perceived needs of the businesses studied.
Fortino and Nayak (2010)	To develop an architecture of social networking services applied to business purposes, as well as develop a process of analysis to help CIOs understand how to engineer the application of these technologies to their business environments in a	Architecture of the social networking space applied to business needs, consists of categorising business communication modes, based on the distinct characteristics of communication needs. (i.e professional networking, professional communication, professional knowledge bases and professional collaboration).	**Professional Knowledge Base** Document Repository Shared knowledge Creation. Expert knowledge base **Professional Collaboration** Distance learning Virtual Work. Problem Solving, Product development **Professional Networking**

	rational manner, and in a way that produces economic value, while safeguarding security.		Credentialing Resume, Mentoring search for Staff **Professional Communication** E-mail, Internet Messaging, Texting, Twittering.
Kaplan and Haenlein (2010)	To show what "Social Media" exactly means and how it differs from related concepts, such as Web 2.0 and User Generated Content.	Describing the concept of Social Media, and how it differs from related concepts.	Classification of Social Media by characteristic, collaborative projects, blogs, content communities, social networking sites, virtual game worlds, and virtual social worlds.
Ostrom et al., (2010)	To spearhead an effort to develop a set of global, interdisciplinary research priorities in and around service science and service innovation.	Service research priorities framework. Identifying fundamental themes that cut across priorities, including the need for interdisciplinary work, recognition of global challenges within each priority, the need for more work in B2B contexts across priorities	Service issues affect both firms and their customers, and countries and their citizens, worldwide. Also noteworthy, is the growing interest and consensus that these priorities are important to a diverse set of academics and business-people around the world.
Pallis et al., (2010)	To show Status and Trends of OSN through a Taxonomy.	Presenting the current status of OSNs through a taxonomy of literature reviews.	The key added ingredient of OSN platforms is their social dimension, with the aim of linking users together to facilitate their interaction and make it richer and more productive.
Zhang et al., (2010)	Proposes a method for identifying key users, based on mining of OSN. .	We represent a social network as a directed graph of potential customers, which incorporates a "web of trust" and a "review rating network" on Epinions, and moreover, it has a weight associated with each edge, to represent the	Experimental results showed that if the social network was properly built and associated with sufficient related information, a relatively simple measure was as goodas

		influence of one user on another.	more complex algorithms
Shakimov et al., (2011)	To present Vis-a-Vis, a decentralized framework for OSNs based on the privacy-preserving notion of a Virtual Individual Server (VIS). (A VIS is a personal virtual machine running in a paid compute utility).	Implemented the Vis-a-Vis group abstraction using a centralized approach. The centralized service is a con-ventional, multitiered architecture, consisting of a front-end web application server (Tomcat server) and a back-end database server (MySQL server). A micro benchmark studied the effect of geographic distribution of VISs and measured end-to-end latencies using aGroup Finder application	Results demonstrate that Vis-a-Vis represents an attractive complement to today's centralized OSNs

2.10. Chapter summary

Chapter 2 presented a literature review of the theories used in this study and a summary of work done so far in the domain of the study. Conflicting research findings of continuance intentions were pointed out and a case is made for supporting the dynamic view of OSN continuance intention. This is followed by an extensive hypotheses developments in the next chapter and a proposed research framework that will guide the rest of the empirical investigations of this study.

CHAPTER 3: HYPOTHESIS DEVELOPMENTS

In this chapter, the study will develop a set of hypotheses to create a research model that enables the researcher to realise the study objectives. The hypotheses will be logically developed, on the basis of the factors of user satisfaction, perceived trust and social norm, and perceived behavioural control. User satisfaction and continuance intention are selected from ECT because of their strong relationship. Social norm and perceived behavioural controls are selected from TPB because of their influence on behavioural intention. Finally, perceived trust is selected from TST because trust plays important roles in business transactions.

3.1 User satisfaction

Past electronic commerce studies have investigated online shopping intention, using factors such as user continuance, acceptance decisions and purchase behaviour (Gefen et al. 2003, Hsu et al. 2006). In particular, Bhattacherjee and Premkumar (2004) made a substantial contribution in using ECT to study user satisfaction and continuance behaviour. User satisfaction is posited as a linear function that is proportional to disconfirmation, which defines the discrepancy between a user pre-adoption expectation and perceived performance (Oliver 1980, Churchill and Suprenant 1982). The relationship between user satisfaction and continuance intention is well supported by several research findings (Bhattacherjee 2001, Liao et al. 2009, Yusliza and Ramayah 2011, Akter et al. 2013, Shiau and Luo 2013).

This premise leads us to the following hypothesis of OSN continuance intention:

H1: Users' satisfaction with OSNs will positively influence their continuance intention to use OSNs for business transactions.

Since user satisfaction is an important determinant of continuance intention, it could be implied that a dissatisfied user will not only discontinue with the use of OSN, but may influence other users that are deemed important to him/her. This behaviour, of users influencing others or being influenced by others, is often called social norm, subjective norm, peer influence or bandwagon effect (Kassim and Abdullah 2008, Ifinedo 2011). From TPB, social norm refers to the perceived peer pressure to perform or not to perform a behaviour or the perception of an individual that important people would approve/ disapprove of his/her

performing a given behaviour (Ajzen 2008). Extant studies on customer satisfaction scarcely address the influence of satisfaction on social norm, creating a strong justification for further investigation (Hsu and Chiu 2004).

This important premise leads us to the following hypothesis:

H2. Users' satisfaction with OSNs will positively influence their ability to succumb to pressure or to put pressure on others to use OSNs for business transactions.

Customer satisfaction is an overall customer attitude towards a service provider or an emotional reaction to the difference between what customers expect and what they receive, regarding the fulfillment of some need, goal or desire (Hansemark and Albinson 2004, Danesh et al. 2012). Ultimately, customers will be expected to raise satisfaction with services that are offered by an OSN when they trust the OSN (Kassim and Abdullah 2008). The trust would develop when customers have confidence in the integrity of service providers (Wu et al. 2010) and would decide to do business with OSN of their choice, because they are satisfied with that platform (Stranahan and Kosiel 2007). Previous studies have suggested that customer satisfaction has influence on perceived trust and vice versa (Kassim and Abdullah 2008, Kim et al. 2009, Deng et al. 2010, Suki 2011, Danesh et al. 2012).

Consequently, the following research hypothesis is stated:

H3: Users' satisfaction with OSNs will positively influence their perceived trust in OSNs for business transactions.

3.2 Perceived trust

Several studies have focused on various issues of trust in electronic business (Bhattacherjee 2000, Awad and Ragowsky 2008, Choudhury and Karahanna 2008, Kim et al. 2008, Vance et al. 2008, Urban et al. 2009, Lu et al. 2010, Beatty et al. 2011). Trust is found on personal correlations and interactions between customers and vendors, it affects customer confidence in vendor's performance and can grow the customer's positive feeling to repeat visits to the website (Xu and Liu 2010).

Trust is what we do; it is a calculation of the likelihood of future cooperation and the manifestation of one's belief in thoughts and actions. For example, trust says the Twitter

OSN can be used for business transactions and I will use it to transact business. Moreover, TST appears to suggest that perceived trust for OSN has a relationship with continuance intention. Since perceived trust influences user satisfaction (Kassim and Abdullah 2008, Kim et al. 2009, Deng et al. 2010) and user satisfaction influences continuance intention (Bhattacherjee 2001, Liao et al. 2009, Yusliza and Ramayah 2011, Akter et al. 2013, Shiau and Luo 2013), one could then say that, by transitivity, perceived trust will influence continuance intention.

Consequently, the following hypothesis is stated:

H4: Perceived trust in OSNs will positively influence continuance intention of users to use OSNs for business transactions.

If customers do not trust an OSN, they will possibly be dissatisfied with the services provided by the OSN and their intentions for continued patronage could be negatively affected. This negative radiance of user satisfaction can potentially be communicated to seven to 15 important persons. This statement is supported by a popular saying that "every satisfied customer goes to tell one to three persons, but an unsatisfied customer tells seven to 15 others". The greater the perceived trust among people, the more favourable will be the social norm, with respect to knowledge sharing (Chow and Chan 2008).

Consequently, the following hypothesis is put forward:

H5: Perceived trust in OSNs will positively influence the ability of users to succumb to pressure or to put pressure on others, to use OSNs for business transactions.

3.3 Social norm

Previous technology acceptance studies have provided evidence for the relationship between social norm (SN) and adoption intention (Taylor and Todd 1995, Venkatesh and Davis 2000, Anderson and Agarwal 2010). Their measure of social norm is similar to interpersonal influence, in which interpersonal and external influences are two components, explaining social norm as an important predictor of intention to use electronic brokerage services (Bhattacherjee 2000).

In other words, social norm is related to normative belief about the expectation from another person. This could be formed as the normative belief of an individual, concerning a reference

that is influenced by the motivation to comply with the referent under discussion (Liao, et al. 2006). There are research findings, which provide strong justification for the relationship between social norm and continuance intention (Kwong and Park 2008, Anderson and Agarwal 2010, Lee 2010).

The following hypothesis is therefore proposed:

H6: The ability of users to succumb to pressure or to put pressure on others to use OSNs, will positively influence their continuance intention to use OSNs for business transactions.

3.4 Perceived behavioural control

The TPB is widely applied to explain the impact of the behavioural decision-making process, of which perceived behavioural control (PBC) is a predictor of behaviour (Taylor and Todd 1995, Ajzen 2008). PBC is the extent to which one believes to have adequate control over his or her behaviour (Ajzen 1991). In essence, the inclusion of PBC into this OSN model allows us to generalize the model. Many researchers have performed numerous empirical evaluations of TPB in psychology literature, to discover that PBC is a combination of two distinct, but related components of self-efficacy and controllability (Sparks et al. 1997, Armitage and Connor 1999, Ajzen 2002, Bhattacherjee et al. 2008).

Self-efficacy reflects one's conviction in his or her ability to independently perform an intended behaviour, while controllability refers to one's perceived control over external resources needed to perform that behaviour (Ajzen 2002). These two components have been shown to be associated with user satisfaction and continuance intention (Manstaed and Eekelen 1998, Armitage and Connor 1999, Joo et al. 2000, Eastin 2002, Trafimow et al. 2002, Hsu and Chiu 2004).

The below hypotheses are therefore stated:

H7: PBC over OSNs will positively influence users' satisfaction with OSNs for business transactions.

H8: PBC over OSNs will positively influence continuance intention of users to use OSNs for business transactions.

Following from H1 to H8, Figure 3.1 is derived as a research model, based on a combination of the selected factors from ECT, TPB and TST.

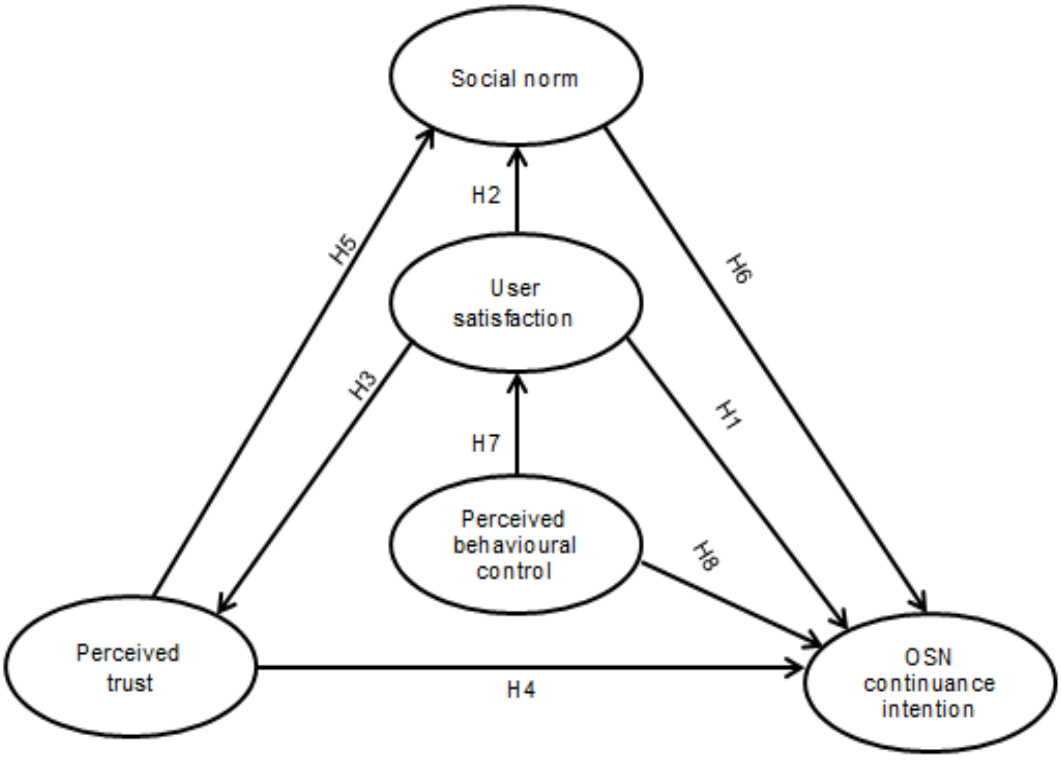


Figure 3.1: Proposed OSN continuance intention index (OSN-CII)

3.5. Chapter summary

Eight hypotheses in all were formulated based mainly on these factors: Perceived behavioural control, Perceived trust, Social norm and User satisfaction, leading to the reseach model in figure 3.1. These hypotheses will be tested and discussed in the next two chapters after outlining the methodologies (chapter 4) followed to test these hypotheses.

CHAPTER 4: RESEARCH METHODOLOGY

This chapter discusses the methodology of this study. In an attempt to validate the research hypotheses, the following steps were followed: First the model design process is set out, followed by the research method, respondents and sampling procedure, surveys procedure and the survey model used. The rationale for the selected statistical methods is discussed, while ethical considerations, and matters of confidentiality are also presented. Lastly, authenticity of the data collection process is presented.

4.1 Research Design

The research design is the general plan on how the research questions will be addressed (Saunders et al. 2007), and conveys both the structure of the research problem and the plan of investigation. A research model was developed to address issues raised in this thesis, based on the three theoretical frameworks used. The instrument is a qualitative framework to explore the factors for business transactions on OSN. The constructs used as survey items, were drawn from a host of pre-validated ECM, TST and TPB studies, including: Bhattacherjee (2001), (modified for OSNs for business transactions) and Devaraj et al. (2002), Davis (1989) and Davis (1989); Gefen et al (2003) (modified for OSNs for business transactions).

The above factors were reworded to fit this study, and categorized into:

- **Dependent variable:** OSN continuance intention for business transactions.
- **Independent variables:** demographics, perceived trust, user satisfaction, perceived behavioural control, social norm and continuation intention.

A 5-point Likert-scale, ranging from (1) strongly disagree to (5) strongly agree, was used to measure the factors, and the model was hosted online for data collection.

4.1.1 Model design process

The assessment model, having used the items mentioned above, ended up as a ten factor model, including demographics and was forwarded to postgraduate students at Durban University of Technology (DUT) to complete and comment on. Comments, ranging from inconsistency of wording, to ambiguity in understanding of questions, were received and used

to fine tune the model before hosting it. The instrument was examined to ensure content validity and reliability, and divergent validity within the target context. Factors such as OSN demographics, PBC, social norm, satisfaction, Perceived trust and continuance intention, were the factors tested, among a targeted population sample of 300 participants (Bearden et al. 1982).

There are three types of research; exploratory, descriptive and casual. Each of these is more valuable than the other, depending on the circumstances, the nature of the issue at stake and the audience it is meant for. Exploratory studies provide a valuable means in analysing current situations; seeking new insights and assessing developments in different contexts (Robson 2002).

If the nature of the problem is unclear or the area of investigation is very new, (as in this case of OSN for business transactions), an exploratory research can be very useful (Cooper and Schindler 2003, Saunders et al. 2007). According to Saunders et al. (2007) there are three principle methods of conducting an exploratory research: searching existing literature, interviewing 'experts' in the subject, and conducting focus group interviews.

A key characteristic is the flexibility of this approach (Ghauri and Gronhaug 2005). However, on review of the literature for a more concise investigation, this study revised the method for this thesis, due to the robustness and the nature of the issue this study intends to address, making it an empirical analysis, with the below method.

4.2 Research method

After three months of hosting the assessment model on the researcher`s online social network, for friends to fill in, the survey responses were very poor, which led the researcher to seek the assistance of the online survey agent 'SurveyMonkey', to collect data on the web by sending the model to respondents in their database. The questions were formulated in such a way, that only people using OSN to transact business would find it meaningful to answer, as it addresses key and technical concepts not common to unfamiliar persons.

The survey model asked, the participants a series of pre-established questions with a limited set of response categories, meant to disqualify intruders. A 5-point Linkert scale rating, as

indicated earlier on, was used, ranging from (1) strongly disagree to (5) strongly agree, to measure the relative importance of constructs.

Through this agent, who has a database of respondents specifically for this targeted sample, clients were contacted who qualify as target persons for such an assignment, sending them the web address for the model. The survey, whils on the web and through the web link address, allowed the researcher to monitor respondents through the IP address accompanying all responses, ensuring respondents were within the targeted group.

4.2.1 Respondents and sampling procedure

Data were collected from online buyers and sellers who have accounts with Twitter and LinkedIn, and are members of Survey Monkey's panel of networks. A sample population of 317 (Bearden et al. 1982) was collected, with 17 disqualified due to various inconsistencies. Physical evidence, in the form of printouts of responses, was collected and filed for reference during analyses and write ups. The advantages of such data collection are

(1) Faster responses,

(2) Lower cost, and

(3) A geographically unrestricted sample (Bhattacherjee 2001).

4.2.2 Surveys

In business research there is great use of questionnaires (Saunders et al. 2007). This is explained by Hutton (1990) as "The method of collecting information, by asking a set of pre-formulated questions, in a predetermined sequence, in a structured questionnaire, to a sample of individuals drawn so as to be representative of a defined population". This method was deemed appropriate to solicit information from people who visit Social Networking Sites (ONSs) because such users of ONSs, are widely dispersed but can be reached with technology such as Web 2.0.

This method was selected, due to its low cost and time efficient nature. Another benefit of using this method is that it allowed targeting of a larger audience, without territorial boundaries, rather than a narrow selection; yielding important, quantifiable data.

4.2.3 Survey Model Used

Using a questionnaire was an ideal method for this contemporary study, as it works best with standardized questions, which does not leave much room for different interpretations (Saunders et al. 2007). The targeted audience received details of the survey model through the use of electronic mail, instructing them to either go to a social networking site or a web address, sent to them for participation.

The selection, by using a digital format over a traditional format (i.e. mail/web), was a well-considered decision, as the former has a higher level of cost efficiency, can reach a wider audience and the data are more easily transferable for analysis purposes, Again, this allowed a real-time collation of results, as this study could observe participation directly from the web site (while the latter is expensive, time consuming and has a very low rate of response).

The design and content of the questionnaire was deemed very important, as it can determine the response rate (Saunders et al. 2007). The questions were developed considering the research questions and the literature review. The final questionnaire had 10 close ended questions (Appendix A), with a matrix of options under each question, and divided over 10 categories, giving respondents a more realistic impression and creating a better overview of ONSs.

The model was developed using the sophisticated software of SurveyMonkey, which enabled the author to exploit useful features, including live statistics and the output of data, in a format used for SPSS and any other analytical software. SurveyMonkey also allowed the author to design an accessible and powerful model, with the researcher`s choice of colors, line spacing and display styles. The font size and colors can impact the reader; hence special attention was paid to selecting the most comfortable setting. The model could be completed by anyone who is a user of OSN sites, without being contacted by an agent.

4.2.4 Rationale for selected statistical Methods

By conducting a further literature review, the researcher had a better understanding of what knowledge exists and what knowledge needs to be created, in order to accomplish the research objectives. This led to a review of a number of existing methods, after which it was decided to select the Partial Least Square Structural Equation Modelling (PLS-SEM)

methods, with which to evaluate the continuation intention of OSN sites for business transactions.

PLS is a strong approach for work intended to develop and refine theories. In contrast to techniques for structural modelling, such as Amos and Lisrel, PLS makes less severe assumptions about theoretical closure in models (Chin and Newsted 1999, and Gefen et al. 2003). Where Amos and Lisrel are strong approaches to testing the fit of fully developed models, PLS is a superior approach for developing and refining theoretical models (Table 4.1).

PLS is an advanced statistical method that allows optimal empirical assessment of a structural (theoretical) model, together with its measurement model (Gefen et al. 2003). It first estimates loading of indicators on constructs and then iteratively estimates causal relationships among constructs (Fornell 1982).

SEM is a second generation, multivariate analysis technique that combines features of first generation techniques, such as principal component and linear regression analysis (Fornell 1982). SEM is particularly useful for the process of developing and testing theories and has become a quasi-standard in research (Hair et al. 2012, Ringle et al. 2012). When estimating structural equation models, researchers must choose between two different statistical methods: covariance-based (CB) SEM and variance-based partial least squares (PLS) path modelling, also referred to as PLS-SEM (Hair et al. 2012, Chin and Newsted 1999).

These two approaches to SEM differ greatly in their underlying philosophy and estimation objectives (Henseler et al. 2009). CB-SEM is a confirmatory approach that can test model's theoretically established relationships. In contrast, PLS-SEM is a prediction-oriented, variance-based approach that focuses on endogenous target constructs in the model and aims at maximizing their explained variance (i.e., their R^2 value).
WarpPLS software specifies nonlinear relationships among latent variables. It can perform a standard PLS regression, robust path analysis, or a WarpPLS regression analysis and allows for the use of three alternative resampling algorithms, namely: bootstrapping, jackknifing, and blindfolding (Kock 2010).

Table 4.1: Comparison of Partial Least Squares and Covariance-Based Structural Equation Modeling

Criterion	PLS	Covariance-Based SEM
Objective	Prediction oriented	Parameter oriented
Approach	Variance-based	Covariance-based
Assumptions	Predictor specification (nonparametric) Robust to deviations from a multivariate distribution	Multivariate, normal distribution and independent observations (parametric)
Parameter Estimates	Consistent as indicators and sample size increase	Consistent
Latent variable scores	Explicitly estimated	Indeterminate
Latent variables	Can be modeled in a formativeor reflective mode	Can typically only be modeled with reflective indicators
Implications	Best for prediction accuracy	Best for parameter accuracy
Model complexity	Large complexity	Small to moderate complexity
Model comparison	Does not provide statistics to compare alternative models	Provides statistics to compare alternative, confirmatory factor analysis models
Sample size	Power analysis based on the portion with the largest number of predictors. Minimal recommendations range from 30 to 100 cases	Ideally based on power analysis of specific model. Minimal recommendations range from 200 to 800
Theory base	Supports exploratory and confirmatory research	Requires sound theory base. Supports confirmatory research

(Adapted from Chin and Newsted 1999 and Gefen et al. 2003)

4.2.5 Ethical Considerations

Ethics are moral principles and values that will impact the way the research activities will be conducted, and the goal of ethical clearance in research, is to ensure that the researcher does no activity that may harm or from which the research activities may suffer adverse consequences. The Durban University of Technology (DUT) has formulated a 'Research Ethics Policy', which aims at establishing and promoting good ethical practice in the conduct of academic research. This has been considered with the filing of a student Ethical Issues Checklist for Research Approval (EICRA) form, to comply with the (DUT) policies. The EICRA form must be completed by every postgraduate student undertaking research at the DUT. The respondents were well informed on the background and nature of the research and their rights to participate or opt out.

4.2.6 Confidentiality

Though there were no issues of confidentiality, as respondents' names and identities were not sought, the study followed DUT guidelines. Respondents were assured of confidentiality, to alleviate the concerns of those who might not realise that confidentiality threats are absent from the survey.

4.3 Authenticity of the Data

Due to the understanding of the respondents not being checked first hand, though some initial work was done during the pre-testing stage with DUT post-graduates, issues of accuracy can be raised (Blaxter et al. 2001). This issue was resolved by striving to maintain straightforward questions, leaving no space for misinterpretation. Again, as the survey was web-based, the responses were monitored through the web link address, and through the IP address that accompanies all responses, to ensure respondents remained within the targeted group.

CHAPTER 5: DATA ANALYSIS AND INTERPRETATION

This chapter presents experimental results of the study and various methods followed, to calculate and interpret research results. It starts with the main theories, from which various factors were taken to develop the research model (Table 5.1), to the empirical findings. PLS results of the structural model, descriptive statistics and latent variables are among the experimental results discussed.

Table 5.1: Summary of derived factors:

Theory	**Factors**	**Prediction**
ECT (Kim et al 2009, Bhattacherjee 2001 and Oliver 1999),	Users` satisfaction, OSN continuance intention	Continuance intention
TPB (Ajzen, 1985)	Social norm, perceived behavioural control	Continuance behaviour
TST (Castelfranchi and Falcone, 2010)	Trust	Estimate trustworthiness of unknown trustees based on an ascribed membership to categories
This study	Users` satisfaction and OSN continuance intention (from ECT)	OSN continuance intention
	Perceived trust (from TST and modified)	
	Social norm and perceived behavioural control (from TPB)	

5.1 Research instruments development

The research model hypothesised a set of theories, which was empirically tested using a longitudinal field survey. The items for the factors were formulated based on pre-validated ECM and TPB studies. The question measurements were rewarded to suit the OSNs environment in such a way that only people using OSN to transact business, would find it meaningful to answer. The survey model asked a series of pre-established questions, with a limited set of response categories, in order to disqualify intruders.

A 5-point Likert scale rating was used, ranging from (1) strongly disagree, to (5) strongly agree, to measure relative importance of factors, The survey was hosted on the web site of

SurveyMonkey, and through the web link address, respondents were monitored through their IP address and emails that accompany all responses, to ensure there were no repetitions of responses. The model was administered to Twitter and LinkedIn buyers and sellers doing business on OSN.

5.2 Data collection

Collecting psychological data over the World-Wide Web (WWW) is becoming a common phenomenon, particularly in the form of online surveys and psychometric testing (Silverstein et al. 2007). However, researchers who have no skill in computer programming or are pressed for time, will have to pay a programmer to undertake the work, or else utilise pre-existing applications (such as SurveyMonkey).

SurveyMonkey has been used by numerous researchers (Wright 2005, Buchanan and Hvizdak 2009, Hegarty et al. 2009, Custin and Barkacs 2010, Lambeth 2013) to administer online surveys, resulting in exceptional results. This survey instrument was designed with SurveyMonkey`s applications and co-conducted at www.surveymonkey.com, with data finally collated on August 23, 2013, by means of an online survey, accessible for evaluation at SurveyMonkey.

Web-based surveys have many advantages over traditional, paper-based methods (Bhattacherjee 2001, Wright 2005), such as being convenient, cheap, fast, more accurate, and with the ability to survey hard-to-reach respondents who are only loyal to certain agents. Even though only respondents who are able to access the Internet were able to participate in this survey, this bias is exactly what was desired for this study; people who do business on OSN will have to have access to the Internet.

5.2.1 Subject

The online survey was administered to respondents who use OSNs to buy and sell products, as an example of OSN business transactions. Although users of other OSNs were accommodated in the survey, the emphasis was on Twitter and LinkedIn because of their growing popularity for business models (Pallis et al 2011). Twitter is a microblogging service that has grown rapidly in the three years of its existence. In that period, it commanded more

than 41 million users, over 41.7 million user profiles, 1.47 billion social relations, 4 262 trending topics and 106 million tweets (Kwak et al. 2010).

In addition, if an OSN is to be used as a facility geared toward career management or business goals, an OSN with a more serious corporate image, such as LinkedIn, is preferred (Cutillo et al. 2009). Finally, the online survey tool from SurveyMonkey was used to collect data from respondents. Online surveys have several advantages such as allowing for fast response, lower cost, hard to reach subjects, and vast geographical boundaries, as opposed to traditional, paper-based surveys (Bhattacherjee 2001, Wright 2005).

Subjects were drawn from SurveyMonkey's database, which posted a message on the online survey and invited interested individuals to fill out the survey. An introductory letter explained the essence of the survey to the subjects and assured them of confidentiality. The online survey yielded a total of 317 responses, with 300 of these being valid responses, that were used for analysis.

5.2.2 Measurement items

Five factors were measured by multiple item scales, adopted from pre-validated measures in social science, marketing and information system studies. The measurement items were reworded to suit the OSN context. In order to ensure the modified measurement items are applicable, a pre-test was performed using lecturers and postgraduate students at DUT in South Africa.

Several issues regarding semantic wordings, consistency of format and length of texts were raised and were factored into the model design, to fine tune the measurement instrument. The measurement instrument consisted of two parts, the first dealt with demography about the subjects and the second with items to measure the theoretical factors of the proposed OSN model. The demographic information included gender, age and rating of the residential area, among others. In order to be more precise, subjects were asked to rate using the 5-point Likert scale ratings already mentioned. Table 5.2 shows these measurement items, their operational measurements and closely related sources.

Table 5.2: Operationalisation of factors influencing OSN continuance intention.

Factor	Item	Measurement	Closely related source
Perceived behavioural control (PBC)	PBC 1	I am entirely in control of using OSN for business activities.	Taylor and Todd (1995), Gopi and Ramayah (2007),
	PBC 2	I have the knowledge and skills to use OSN for business activities.	
	PBC 3	I have what it takes to use OSN for business activities.	
	PBC 4	I would be able to use OSN for business activities regardless of circumstances.	
Social norm (SN)	SN1	It is expected that people like me use OSN for business activities	Taylor and Todd (1995), Venkatesh and Davis (2000), Baker et al. (2007), Teo and Lee (2010).
	SN2	The nature of my life and work influences me to use OSN for my business needs.	
	SN3	People who influence my behaviour think that I use OSN for my business needs.	
	SN4	People I look up to as mentors expect me to use OSN for my business activities	
	SN5	People important to me motivate that I should use OSN for my business activities	
User satisfaction (US)	US1	I was very satisfied with my overall OSN business experience	Oliver (1981), Bhattacherjee (2001), Devaraj et al. (2002).
	US2	I was very pleased with my overall OSN business experience	
	US3	I was very contented with my overall OSN business experience	
	US4	I was absolutely delighted with my overall OSN business experience.	
Perceived trust (PT)	PT1	I feel safe in my business activities with my OSN.	Gefen et al. (2003), Hassanein and Head (2007).
	PT2	I believe my OSN can protect my privacy	
	PT3	I select OSN which I believe are honest	
	PT4	I feel that my OSN is trustworthy	
	PT5	I feel that my OSN will provide me with a good service.	
OSN continuance intention (CI)	CI1	I intend to continue sharing knowledge about OSN with others	Bhattacherjee (2001), Devaraj et al. (2002).
	CI2	In the future, I would not hesitate to use OSN for business activities.	
	CI3	In the future, I will consider OSN for business activities as my first choice.	
	CI4	I intend to continue using OSN for business activities.	
	CI5	I intend to continue recommending the use of OSN for business activities.	
	CI6	My intention is to continue using OSN for business activities rather than traditional shopping	

5.2.3 Descriptive statistics

Table 5.3 gives a summary of the descriptive statistics of respondents who participated in this study. Out of the 300 valid responses received, 55 percent were females, which implies that females are more business oriented on OSN platforms than their male counterparts. A reasonable percentage (83.33 percent) of respondents are Twitter or LinkedIn users. The statistics show that 16.77 percent of respondents use OSNs which differ from Twitter and LinkedIn for business transactions.

Most of the respondents (40 percent), fall within the 26 to 35-year age group. This group is the working class, spending between 1-3 hthiss per week on OSNs. A quarter (25 percent) of the respondents were within the range of 18 to 25 years, 18 percent were within the 36 to 45-year age group, nine percent within 46 to 55 years, four percent were between 56 to 65 years and four percent were 66 years and above. The information provided by the respondents on their OSN usage behaviour, revealed that they were experienced OSN users. A sizable number of respondents (29 percent) indicated the use of both Twitter and LinkedIn for business transactions, while 28 percent of respondents have used OSNs between 21 and 50 times. Respondents residing in Europe (22 percent) constituted the majority of OSN users for business transactions.

Table 5.3: Descriptive statistics of respondent characteristics

Demography	Characteristics	Response	Percentage (%)
Gender	Male	135	45
	Female	165	55
Age	Between 18 and 25	76	25
	Between 26 and 35	120	40
	Between 36 and 45	54	18
	Between 46 and 55	27	9
	Between 56 and 65	12	4
	Above 65	11	4
Location	Urban	177	59
	Rural	55	18
	Semi-Rural	68	23
My OSN for business transactions	LinkedIn only	39	13
	Twitter only	53	18
	Other	56	19
	Both LinkedIn and Twitter	87	29
	LinkedIn, Twitter and Other	65	21
OSN	Just once	30	10

business experience	2-5 times	39	13
	6-20 times	75	25
	21-50 times	85	28
	More than 50 times	71	24
Reasons for doing business on OSN	Convenience	45	15
	Product/Service not available offline	45	15
	Better prices	45	15
	Time-saving	45	15
	All the above	93	31
	None of the above	27	9
Time spent on online shopping per week	0-15 minutes	26	9
	16-60 minutes	88	29
	1-3 hours	104	35
	More than 3 hours	82	27
Current continent of residence	Africa	48	16
	Antarctica	29	10
	Asia	40	13
	Australia	43	14
	Europe	66	22
	North America	44	15
	South America	30	10

5.3 Measurement model

The strength of the measurement model can be demonstrated through measures of convergent and discriminant validity (Hair et al. 2012). Convergent validity is normally assessed using three tests: reliability of questions, composite reliability of constructs, and variance extracted by constructs (Fornell and Larcker 1981). Discriminant validity can be assessed by looking at correlations among the questions (Fornell and Larcker 1981) as well as variances of and covariances among constructs (Igbaria et al. 1994).

The measurement model was evaluated in terms of reliability and validity, with the aid of WarpPLS 4.0 software (Kock 2010). The confirmatory factor analysis (CFA) of WarpPLS was used to establish whether the widely accepted criteria for reliability and validity were met. Reliability is the extent to which factors, measured with a multiple item scale, reflect the true scores on the factors relative to the error (Hulland 1999, Aibinu and Al-Lawati, 2010). The reliability was measured by the estimate of internal consistency and composite reliability. Internal consistency was measured using Cronbach's alpha (α) (Cronbach 1951) as follows:

$$\alpha = \frac{N - \bar{r}}{1 + (N-1) - \bar{r}} \quad \ldots\ldots\ldots \quad (1)$$

In order to estimate how consistent an individual responds to items within a scale, composite reliability is used (Shin 2009). Composite reliability (CR) offers a more retrospective approach of overall reliability measure of a factor in the measurement model and estimates consistency of the factor itself, including stability and equivalence of the factor (Roca et al. 2009, Suki 2011). CR is estimated to represent correlations between item and factor following suggestions by Henseler et al. (2009) as follows:

$$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum (1 - \lambda_i^2)} \ldots\ldots\ldots\ldots (2)$$

As shown in the buttom two rows of Table 5.4, all values of composite reliability and Cronbach's alpha were above 0.7, which indicates that all factors have good reliability (Fornell and Larcker 1981, Henseler et al. 2009, Bagozzi and Yi 2012).

Table 5.4: Item loadings, cross-loadings and reliability estimations

Items	Mean	STD	PBC	SN	US	PT	OSN-CI
PBC1	4.09	0.89	(0.909)	-0.087	0.031	0.064	-0.066
PBC2	4.10	0.91	(0.974)	-0.026	-0.052	0.006	0.015
PBC3	4.06	0.90	(0.944)	0.029	-0.021	-0.041	0.000
PBC4	4.00	0.90	(0.724)	0.087	0.051	-0.028	0.053
SN1	4.00	0.95	0.205	(0.710)	0.010	-0.010	0.009
SN2	3.94	0.96	0.045	(0.899)	-0.024	-0.047	0.023
SN3	3.92	0.96	-0.067	(0.911)	-0.029	0.055	-0.006
SN4	3.90	0.97	-0.090	(0.937)	-0.102	0.057	0.035
SN5	3.89	0.94	-0.097	(0.871)	0.154	-0.057	-0.065
US1	4.05	0.92	-0.027	0.051	(0.870)	0.018	-0.017
US2	3.97	0.92	-0.075	-0.004	(0.984)	0.002	-0.021
US3	4.00	0.90	0.040	-0.090	(0.968)	-0.019	0.010
US4	3.98	0.87	0.066	0.048	(0.775)	0.000	0.030
PT1	4.02	0.91	0.043	0.008	0.042	(0.709)	0.052
PT2	3.99	0.93	0.048	0.026	-0.052	(0.842)	-0.009
PT3	3.99	0.94	-0.042	-0.009	-0.043	(0.949)	-0.018
PT4	3.99	0.93	-0.064	0.045	-0.035	(0.922)	-0.043
PT5	4.02	0.91	0.021	-0.077	0.100	(0.725)	0.024
CI1	3.97	0.88	-0.014	0.032	-0.080	0.090	(0.803)
CI2	3.99	0.89	-0.059	-0.065	-0.011	-0.008	(0.919)

CI3	3.95	0.91	-0.139	0.107	-0.025	-0.048	(0.891)
CI4	3.99	0.97	0.000	-0.094	0.148	-0.073	(0.838)
CI5	3.98	0.95	0.105	0.021	-0.027	0.002	(0.714)
CI6	4.00	0.93	0.118	0.000	-0.007	0.039	(0.685)
Composite reliability			0.939	0.937	0.945	0.919	0.920
Cronbach's alpha			0.913	0.916	0.923	0.889	0.895

OSN-CI (online social network's continuance intention), PBC (perceived behavioural control), US (user satisfaction), SN (social norm), PT (perceived trust), STD (standard deviation) and P-values <0.01

The model validity tells whether a measuring instrument measures what it was supposed to measure (Raykov 2011). The validity was measured by the estimate of convergent validity and discriminate validity. Convergent validity shows the extent to which items of a specific factor represent the same factor and is measured using a standardized factor loading, which should be above 0.5 (Fornell and Larcker 1981).

Table 5.4 indicates that all items exhibited loadings (values in brackets) higher than 0.5 on their respective factors, providing evidence of acceptable convergence validity. Discriminate validity indicates the extent to which a given factor is truly distinct from other factors (Suki 2011). A commonly used statistical measure of discriminant validity is a comparison of the Average Variance Extracted (AVE), with the correlated squared root (Fornell and Larcker 1981). In order to pass the test of discriminant validity, the AVE of factor must be greater than the square root of the inter-factor correlations (Fornell and Larcker 1981).

The AVE determines the amount of variance that a factor captures from its measurement items (Henseler et al. 2009). Table 5.5 shows the AVE values and the correlations among factors, with the square root of the AVE in brackets on the diagonal. The diagonal values exceed the inter-factor correlations, it can therefore be inferred that discriminate validity was acceptable. This study therefore concludes that measurement scales have sufficient validity and demonstrate high reliability after calculating AVE as follows (Henseler et al. 2009):

$$AVE = \frac{\sum \lambda_i^2}{\sum \lambda_i^2 + \sum (1 - \lambda_i^2)} \quad \text{..... (3)}$$

and discriminate validity (r) (Spiegel, 1972):

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 (y_i - \bar{y})^2}} \quad \text{.....(4)}$$

Table 5.5: Factor AVE and correlation measures

Factor	AVE	PBC	SN	US	PT	OSN-CI
PBC	0.794	(0.891)				
SN	0.750	0.644	(0.866)			
US	0.812	0.565	0.610	(0.901)		
PT	0.693	0.578	0.573	0.604	(0.833)	
OSN-CI	0.656	0.569	0.612	0.610	0.649	(0.810)

Note: the value in a bracket along the diagonal is the square root of AVE for each factor.

5.3.1 Structural model

The structural model was assessed using WarpPLS 4.0 software, after confirming reliability and validity of measurements. In order to test the structural relationship, the hypothesized causal paths were estimated. The variance (R^2) of each dependent factor is an indication of how well the model fits the data. R^2 showing the amount of variance in a dependent factor, that is explained by the research model, is computed as (Cornell and Berger 1987):

$$R^2 = 1 - \frac{\sum (y_i - \bar{y})^2}{\sum (y_i - \bar{y})^2} \quad \text{.....(5)}$$

Alternatively, Tenenhaus *et al*. (2005) suggest a global goodness-of-fit (GoF) criterion for PLS path modelling, to account for the PLS model performance at both measurement and structural terms. It aims to find the overall predictive power of model and shows the geometric mean of average Communality Index (CI) and average R^2, computed as follows (Tenenhaus *et al*. 2005):

$$GoF = \sqrt{\overline{CI} * \overline{R^2}} \quad \text{.....(6)}$$

The assessment of the structural model is to validate the model fitness, which is a measure of model validity of the model. Each of the hypotheses (H1 to H8) corresponds to a path in the structural model for the dataset. Both R^2 and path coefficients indicate model fit

(effectiveness), depicting how well the model is performing (Hulland 1999). The overall fit and explanatory power of the structural model were examined, together with the relative strengths of the individual causal path. Figure 5.1 shows the result of the structural model assessment, with the calculated R^2 values (explanatory power) and significance of individual paths summarised.

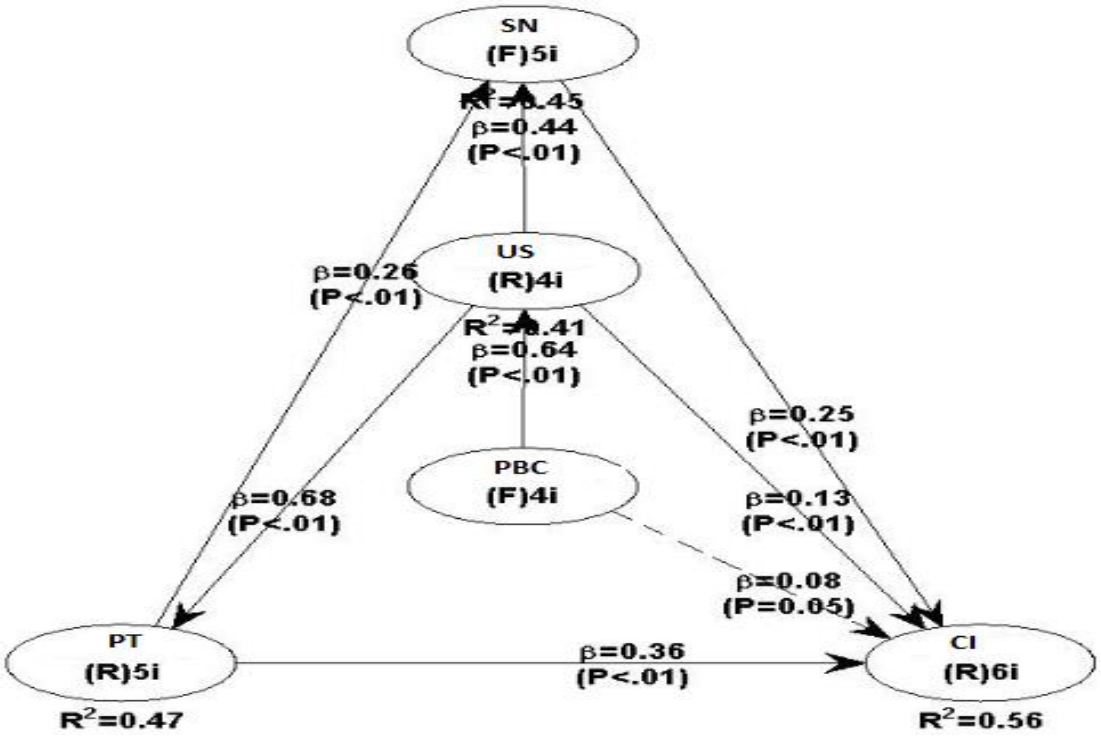


Figure 5.1: Empirical result of testing the OSN-CII

5.3.2 Hypothesis testing

The support for each hypothesis could be determined, by examining the sign (positive or negative) and statistical significance of the t-value for its corresponding path. WarpPLS 4.0 uses a bootstrapping technique to perform the statistical testing (t-test) of path coefficients, to explain the research hypothesis. Table 5.6 shows the result of hypothesis testing, wherein seven hypotheses were supported and one rejected. User satisfaction shows a positive influence on OSN continuance intention (β=0.127, p=0.0292), supporting hypotheses H1. In addition, this study shows user satisfaction to influence perceived trust (β=0.683, p=0.0001) supporting hypothesis H2.

The importance of satisfaction in the life of people using OSN, was again seen when user satisfaction showed influence on social norm (β=0.441, p=0.0001), to support the hypothesis H3. Furthermore, perceived trust proved to be a crucial factor in business transactions on OSN, by exhibiting a strong influencing relationship with continuance intention (β=0.363, p=0.0042), to support hypothesis H4. The factor of perceived trust is also found, by this study, to influence social norm (β=0.264, p=0.0025), in support of hypothesis H5.

The path coefficient between social norm and continuance intention is interestingly noteworthy (β=0.246), at a significance level of p=0.0453, supporting hypothesis H6. In addition, perceived behavioural control showed a significant influence on user satisfaction (β=0.642, p=0.0001) to support hypothesis H7.

Finally, in information technology continuance intention research, PBC has not been thoroughly investigated. The study has found PBC to have a non-significant influence on OSN continuance intention (β=1.212, p=0.2265). This result proves PBC does not influence the decision to do business on OSN, which means that hypothesis H8 is not supported. This could be because of the fact that, today, several devices abound in a lot of varieties with which to access online businesses. These devices range from desktop to handheld computers, such as cell phones, smart phones, iPad, allowing almost extreme ease of access to the Internet. As expected, all hypothesised paths in the OSN model were significant at various levels, except for H8. This result is expected because, having control over using an OSN, does not always imply the continuance intention of people to use OSN for business transactions.

Table 5.6: Summary of the result of hypothesis testing

Effect	**Cause**	**Estimate (β)**	**T-value**	**SE**	**P-value**	**Result**
OSN continuance intention	User satisfaction	0.127	2.191	0.095	0.0292*	H1 supported
Perceived trust	User satisfaction	0.683	6.249	0.102	0.0001***	H2 supported
Social norm	User satisfaction	0.441	4.473	0.090	0.0001***	H3 supported
OSN continuance intention	Perceived trust	0.363	2.883	0.106	0.0042**	H4 supported

Social norm	Perceived trust	0.264	3.047	0.105	0.0025**	H5 supported
OSN continuance intention	Social norm	0.246	2.010	0.120	0.0453*	H6 supported
User satisfaction	Perceived behavioural control	0.642	5.478	0.103	0.0001***	H7 supported
OSN continuance intention	Perceived behavioural control	0.079	1.212	0.107	0.2265ns	H8 unsupported

Note: SE (standard error), ns (not significant), *p<0.05, **p<0.01, ***p<0.001 (two-tailed t-tests)

The path coefficient between social norm and OSN continuance intention is noteworthy (β=0.26) at the significance level of p<0.01, supporting hypothesis H6, while PBC showed a positive, direct influence on user satisfaction (β=0.65, p<0.01) to support hypothesis H7.

Finally, in information technology continuance intention research, PBC has not been thoroughly investigated. The study has found PBC to have a non-significant influence on OSN continuance intention (β=0.10). This result proves to have no influence on the decision to do business on OSN, which means hypothesis H8 is not supported. This could be because of the fact that there are several devices to access online businesses nowadays, in a lot of varieties, from desktop to handheld computers, such as cell phones, smart phones, and iPads, which allowone to easily access the Internet. As expected, all hypothesised paths in the OSN model were significant at the various levels, other than that of H8.

The study used a bootstrapping technique to obtain the corresponding T-values. Each hypothesis (H1 to H8) corresponded to a path in the structural model (see Figure 5.1). Support for each hypothesis could be determined by examining the β values and statistical significance of the T-value of its corresponding path (Table 5.6). With a significance level of 0.01, the acceptable T-value should be greater than 2.0 (Keil et al. (2000). The loadings suggest that the instrument has acceptable convergent validity (Hair et al. 2010).

5.4 Effect size

The effect of each of the predictor factors on the dependent factor, is derived by computing the R^2 values for independent factors, when each factor is excluded $R^2(e)$ and included $R^2(i)$ to test for its significance. The effect size f^2 is calculated thus (Helm et al. 2010):

$$f^2 = \frac{R^2(i) - R^2(e)}{1 - R^2(i)} \quad \ldots\ldots\ldots\ldots \quad (7)$$

Table 5.7 shows the quality of effect size, of the model factors. By investigating effect sizes, researchers are able to ascertain if the effects of the path coefficients are small, medium or large, according to these recommended values: 0.02, 0.15 or 0.3,5 respectively (Kock 2010). Values below 0.02 are too weak to be considered effective (Kock 2010), thus all values of this research model are effective.

Table 5.7: Effect Size Quality

	PBC	SN	US	PT	OSN-CI
PBC					
SN			0.286	0.161	
US	0.413				
PT			0.466		
OSN-CI	0.052	0.165	0.085	0.255	

5.5 Model fit

The strength of the measurement model can be demonstrated through measures of convergent and discriminant validity (Hair et al. 2010). Convergent validity is normally assessed using three tests: reliability of questions, composite reliability of constructs, and variance extracted by constructs (Fornell and Larcker 1981). Discriminant validity can be assessed by looking at correlations among the questions (Fornell and Larcker 1981), as well as variances of and covariances among constructs (Igbaria et al. 1994).

The overall model fit was assessed using six measures of the average path coefficient (APC), the average R-squared (ARS), the average block inflation factor (AVIF), the goodness of fits (GoF), the average adjusted R-square (AARS) and the R-square contribution ratio (RSCR), to indicate how the model is good. Each of the model fit metrics is discussed according to Kock (2010). Based on the results depicted in Table 5.5, the OSN model has a good fit. The values of APC and ARS are significant at a five percent level, while AVIF is still lower than five. This concludes that a good fit exists between model and data (Rosenthal and Rosenow 1991, Kock 2010).

Table 5.8: Model fit and quality indices

Fit index	Model	Recommendation
Average path coefficient (APC)	0.356	Good if P<0.001
Average R-squared (ARS)	0.471	Good if P<0.001
Average block VIF (AVIF)	3.213	Acceptable if <= 5, Ideally <= 3.3
Goodness of Fit (GoF)	0.591	Small >= 0.1, Medium >= 0.25, Large >= 0.36
Average adjusted R-squared (AARS)	0.467	Good if P<0.001
R-squared contribution ratio (RSCR)	1.000	Acceptable if >= 0.7, Ideally = 1

5.6 Warped and linear relationships between latent variables

WarpPLS 4.0 displays the relationship between latent variables in a form of plotted graphs. The graphs below, display the latent variables's standard values, which warrant interpretation in light of changes in standard deviation values. Since a 5-point Likert scale was used to measure the intensity of each construct, a mean score of 2.5 indicates a neutral response, while a mean score of 1 represents an extremely negative response, and 5 an extremely positive response.

Tables 5.9 shows the correlations, means, and standard deviations for the indicators of all latent variables, while table 5.10 shows variables' means and standard deviations. The calculated means indicate that respondents favour the use of OSN for business transactions based on trust more intensely (M = 0.311) than the respondents who favour SN and US (M=0.247) and (M=0.202), respectively. While respondents showed PBC to favour US (M=0.568) strongly, in determining their behavioural intention for OSN, on its own, it showed no force to using OSN for business transactions (0.116). Respondents indicated satisfaction based on trust of OSN for business, to be more intense (M=0.602) than that of SN (0.411), unlike the intensity of PT to SN.

Table 5.9: Indicator correlation matrix for OSN

	BC1	BC2	BC3	BC4	CI1	CI2	CI3	CI4	CI5	CI6	SN1	SN2	SN3	SN4	SN5	SA1	SA2	SA3	SA4	PT1	PT2	PT3	PT4	PT5
BC1	1.00																							
BC2	0.83	1.00																						
BC3	0.71	0.84	1.00																					
BC4	0.55	0.66	0.75	1.00																				
CI1	0.42	0.44	0.48	0.44	1.00																			
CI2	0.33	0.39	0.40	0.43	0.82	1.00																		
CI3	0.31	0.37	0.38	0.41	0.62	0.73	1.00																	
CI4	0.38	0.43	0.38	0.41	0.50	0.55	0.67	1.00																
CI5	0.41	0.49	0.46	0.43	0.48	0.42	0.48	0.67	1.00															
CI6	0.44	0.50	0.47	0.45	0.56	0.48	0.48	0.56	0.79	1.00														
SN1	0.53	0.59	0.63	0.60	0.49	0.40	0.45	0.44	0.53	0.50	1.00													
SN2	0.46	0.51	0.54	0.55	0.45	0.38	0.46	0.46	0.48	0.48	0.86	1.00												
SN3	0.41	0.49	0.49	0.50	0.44	0.40	0.46	0.39	0.42	0.44	0.63	0.73	1.00											
SN4	0.42	0.49	0.49	0.44	0.46	0.41	0.49	0.38	0.42	0.45	0.58	0.66	0.77	1.00										
SN5	0.42	0.46	0.46	0.48	0.44	0.39	0.41	0.34	0.38	0.41	0.62	0.64	0.60	0.74	1.00									
SA1	0.41	0.44	0.45	0.47	0.44	0.41	0.40	0.47	0.46	0.46	0.51	0.47	0.49	0.44	0.52	1.00								
SA2	0.44	0.43	0.43	0.44	0.43	0.41	0.41	0.46	0.44	0.47	0.49	0.45	0.45	0.41	0.50	0.83	1.00							
SA3	0.45	0.45	0.45	0.47	0.41	0.45	0.45	0.51	0.42	0.43	0.46	0.46	0.46	0.41	0.45	0.71	0.79	1.00						
SA4	0.49	0.50	0.51	0.49	0.47	0.46	0.44	0.51	0.43	0.45	0.56	0.52	0.47	0.44	0.51	0.61	0.68	0.82	1.00					
PT1	0.48	0.47	0.46	0.42	0.52	0.42	0.41	0.42	0.47	0.51	0.47	0.41	0.44	0.42	0.40	0.47	0.47	0.47	0.52	1.00				
PT2	0.47	0.47	0.44	0.45	0.45	0.44	0.43	0.44	0.44	0.46	0.46	0.45	0.45	0.43	0.36	0.43	0.44	0.45	0.48	0.79	1.00			
PT3	0.44	0.44	0.41	0.39	0.48	0.45	0.43	0.44	0.40	0.43	0.43	0.41	0.42	0.41	0.37	0.42	0.44	0.46	0.47	0.59	0.72	1.00		
PT4	0.35	0.42	0.41	0.43	0.44	0.40	0.40	0.41	0.45	0.43	0.42	0.41	0.44	0.43	0.37	0.46	0.44	0.43	0.42	0.51	0.56	0.74	1.00	
PT5	0.40	0.43	0.44	0.44	0.47	0.42	0.42	0.41	0.45	0.44	0.45	0.38	0.36	0.38	0.37	0.49	0.46	0.44	0.44	0.47	0.45	0.56	0.73	1.00
Mean	4.09	4.10	4.06	4.00	3.97	3.99	3.95	3.95	3.98	4.00	4.00	3.94	3.92	3.90	3.89	4.05	3.97	4.00	3.98	4.02	3.99	3.99	3.99	4.02
Dev	0.89	0.91	0.90	0.90	0.88	0.89	0.91	0.97	0.95	0.93	0.95	0.96	0.96	0.97	0.94	0.92	0.92	0.90	0.87	0.91	0.93	.094	0.93	0.91

Table 5.10: Latent variables means and standard deviation

Variables	Sample Mean (M)	Standard Deviation (SDEV)
PBC -> OSN-CI	0.115911	0.100147
PBC -> US	0.567736	0.106409
PT -> OSN-CI	0.310866	0.109766
PT -> SN	0.316200	0.102467
SN -> OSN-CI	0.247155	0.122545
US -> OSN-CI	0.202160	0.097687
US -> PT	0.601851	0.099061
US -> SN	0.411444	0.091508

OSN-CI (OSNs continuance intention), PBC (perceived behavioural control), US (user satisfaction), SN (social norm), PT (perceived trust), SDev (standard deviation)

Hypothesis 1 (H1) proposed a positive relationship between user satisfaction and OSN site use for business transactions. This turned out to be a significant relationship (β=0.127, p=0.0292), supporting hypothesis H1.

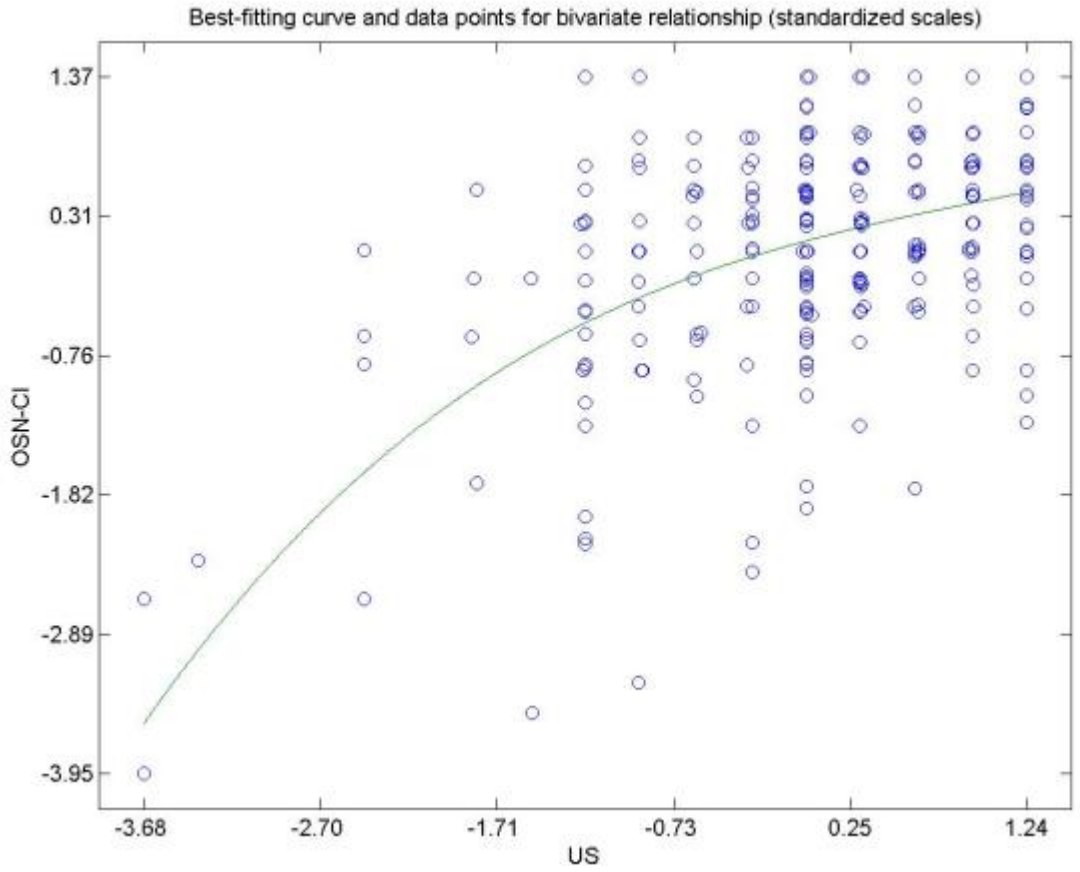


Figure 5.2: User satisfaction and OSN continuance intention plot

As evinced from Figure 5.2, although the relationship is positively supported, it is not linear and begins to intensify at approximately -2.70 standard deviation to the right of the mean of the standardized data. In terms of a 5- point-Likert scale, it equals 0.366 when the mean (M=0.311) is added to one half of a standard deviation (SDev=0.110). In other words, this graph shows a nonlinear relationship, in which ONS use intensity for business transactions, begins to enhance satisfaction at a 0.366 Likert scale point threshold.

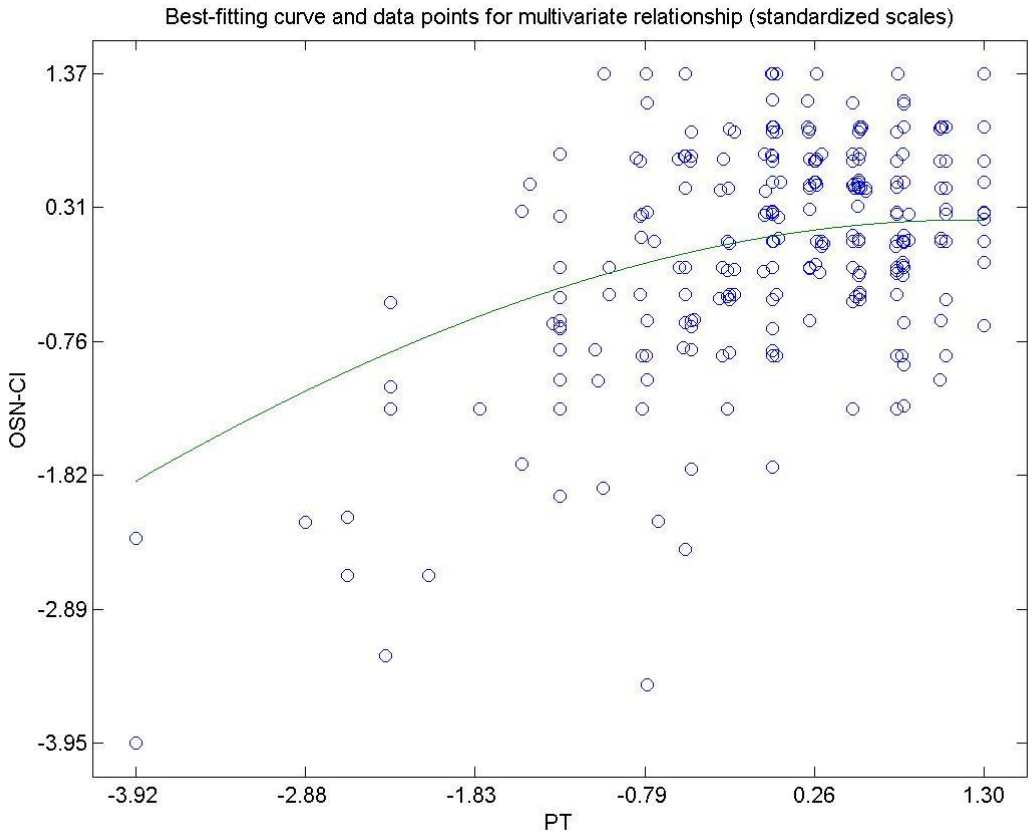


Figure 5.3: Perceived trust and OSN continuance intention plot

The next variable that displayed a significant relationship (most) with OSN, is hypothesis 4 (H4). It proposed that, perceived trust in OSNs will positively influence continuance intention of users to use OSNs for business transactions, and also showed a significant relationship to support H4. The significant level is β=0.363, p=0.0042, and this practically means that for every 0.42 percent increase in social network site use intensity, there is supposed to be a 36 percent increase in trust level, towards the OSN.

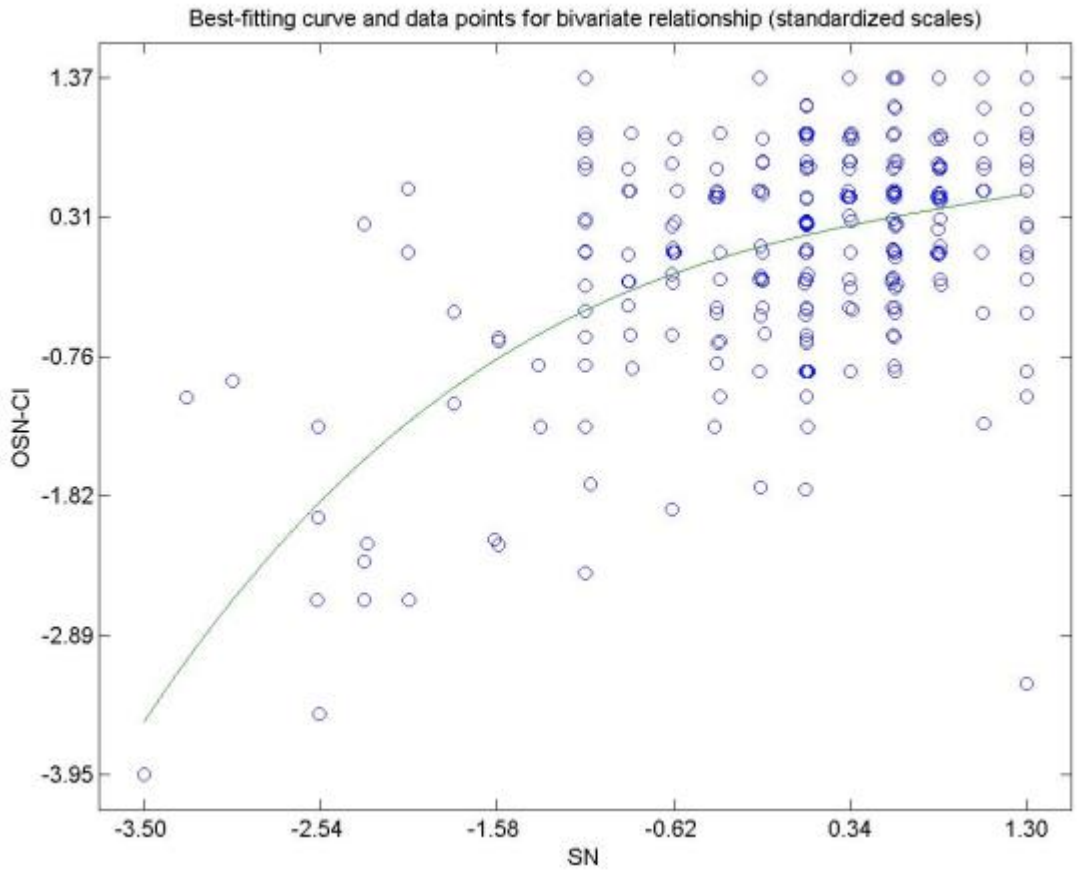


Figure 5.4: Social norm and OSN continuance intention plot

H6 is another significant relationship that emerged in this study, showing a positive association between SN and OSN (β=0.246, p=0.0453). Figure 5.4 shows that, after passing the mean at -3.50 on the 5-point Likert scale, the greater the use of OSN sites for business transactions, the more users became influenced by social norms, until somewhere around -1.58, where the influence starts yielding an increase in a diminishing fashion. Practically, it means that the majority of OSN participants for business activities, who turned out to be young (26-35) according to this study, for every 4.5 percent of pressure exerted on them by their peers and their social network cycle of friends, there is a 24.6 percent result that they yield to this influence, until such a time that they trust the site and therefore, the pressure from friends then begins to yield little influence. Thus, the strong positive relationship between these two factors should give practitioners clues to appropriate policy formulation and implementation.

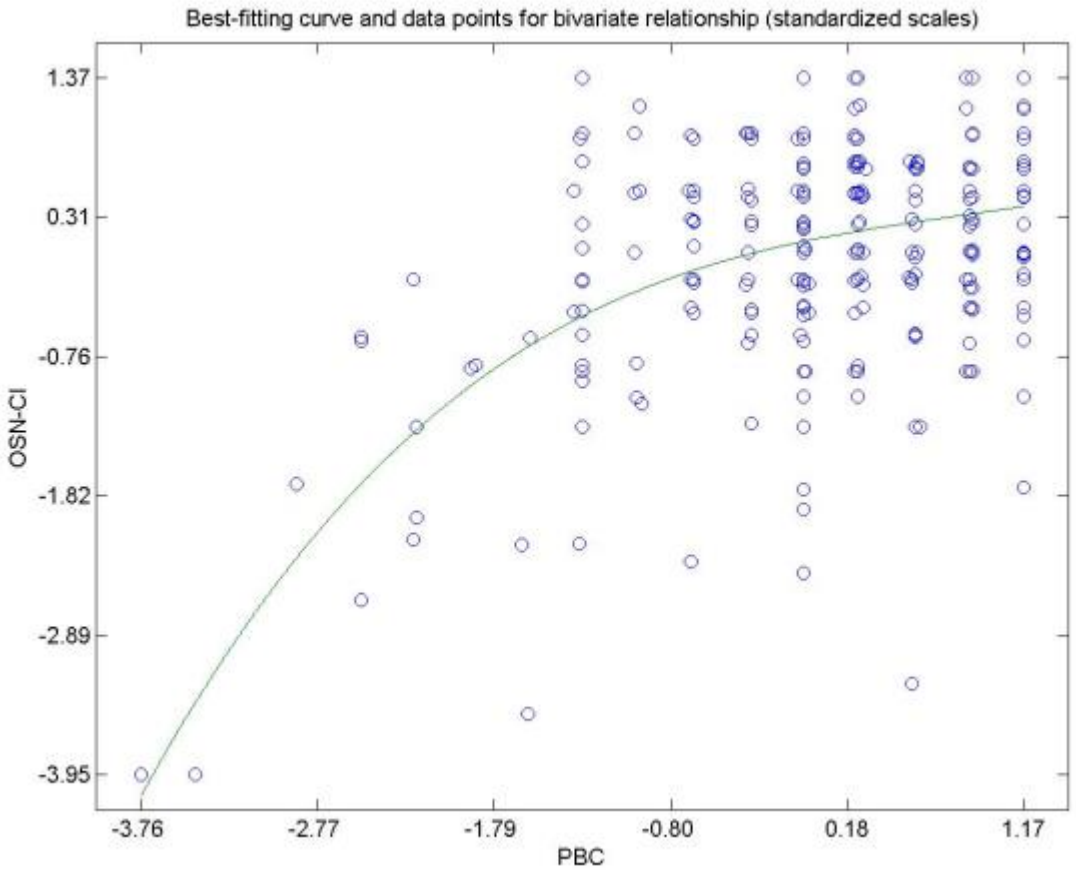


Figure 5.5: PBC and OSN continuance intention plot

The last variable that showed no significant relationship to OSN for business transactions is H8. Thus, PBC over OSNs will not influence continuance intention of users to use OSNs for business transactions (β=0.10, p=0.2265). The graph in Figure 5.5, shows almost zero influence of PBC on OSN-CI at -3.76 mean of PBC. This means, when users decide to do business on OSN, equipment or access points to these OSN sites are not a problem at all. It is, however, worth noting that, although the relationship is not significant, OSN use for business transactions starts to demand availability of these accessible tools at a certain level. This threshold appears to be around 0.17 standard deviation to the right of the mean of the PBC. This level, in terms of the 5-point Likert scale, is calculated as (M=0.12) + 0.5(SDev=0.10), equalling 0.17.

The graph, though showing a nonlinear relationship, starts to demand PBC to enhance OSN continuance intention at a 0.17 Likert scale point threshold. It means that, when one decides to transact business on a social network, initially, tools such as computers and the like will not hinder the operation, but as the intention to continue using these sites as the choice of

business medium increases, these gadgets will become necessary, in order to shape the behaviour to continue use.

5.7 Moderating effects

The study explored a different model, to find out how habit might moderate the effects of the main determining factors, PT, SN and PBC on OSN-CI, in order to contribute a more scientific knowledge to the research community. Neglect of moderating effects leads to a lack of relevance (Henseler and Fassott 2010), assuming that relationships that hold true, regardless of the context factors, are perfect and work under all conditions. Despite the importance of developing a model, without showing the moderating effect and the injustice this causes to the research communities, to date only a few methodologically oriented studies have been dedicated to the showing of moderating effects in PLS path models, among which are Chin et al. (2003) and Eggert et al. (2005). Moderating effects are suggested by variables, whose variation impacts the strength or the direction of a relationship between an exogenous and an endogenous variable (Baron and Kenny 1986, p. 1174).)

5.7.1 Habit as moderating factor

The notion of habit being a potential moderator is not new, though it has received relatively little attention, in comparison to showing it in main models. Researchers have realised the need to investigate this habit moderator concept, in order to uncover the real picture of its effect on both exogenous and edogenous factors. Some of these are Limayem et al. (2007), Bhattacherjee and Barfar (2011), Limayem and Cheung (2011) and Shiau and Luo (2013).

To test the moderating effect, the researcher revisited the developed research model and plugged in habit (HB), to experiment with the influence of the exogenous variables (PT, PBC, SN) on the endogenous variable (OSN-CI). Moderator hypothesis is confirmed if the interaction effect of other determinants (i.e., path coefficient (β) is significant, and independent of the magnitude of the path coefficients of other determinant variables (Baron and Kenny 1986). This study did not hypothesise on the direction of the moderator variable, (HB), therefore a two-sided test of significance is applied.

Though e-satisfaction has an impact on e-loyalty (i.e continuous behaviour), user satisfaction is not considered for moderation in this study because satisfaction measures are likely to be

positively biased (Peterson and Wilson 1992), and establishing the relationship between satisfaction and repurchase behaviour has been intangible for many firms (Mittal and Kamakura 2001). This stems from the unfinished business surrounding the satisfaction element and since this study is meant to contribute practically to the body of knowledge, it does not intend to invest in controversy.

Peterson and Wilson (1992) note that satisfaction ratings are determined in part by measurement artifacts or personal characteristics of the survey customers, hence caution needs to be exercised when interpreting or using them in decision making. By this statement, the authors mean that satisfaction ratings are tinted with so many biases, it no longer serves any good purpose.

Peterson and Wilson (1992) go on to assert that satisfaction measurement and research design studies share the following common biases: "virtually all self-reports of customer satisfaction process are distribution, in which a majority of the responses indicate that customers are satisfied and the distribution itself is negatively skewed". Moreover, the modal response to a satisfaction question, is typically the most positive response allowed (Peterson and Wilson 1992). This study takes these criticisms seriously because it is noted by other researchers, for instance (Hunt 1977, LaBarbara and Mazursk 1983, Oliver 1981) to the extent that Westbrook (1980), even tried to develop a scale that would produce a more normal distribution.

As hinted earlier on (research design section) the satisfaction measurement items used in this study were borrowed from prior research studies and therefore cannot be exonerated from these biases. For instance, Anderson and Srinivasan (2003), noted that the relationship between satisfaction and continuous behaviour seems almost intuitive, and several research works have attempted to confirm this in their work (Cornin and Taylor 1992, Newman and Werbel 1973, Woodside et al. 1989).

This intuitive appeal notwithstanding, the strength of the relationship between satisfaction and continuous behaviour, has been found to differ significantly under different conditions. For example, Jones and Sasser (1995) show that the strength of the relationship depends on the competitive structure of the industry, while Oliver (1999) finds that satisfaction leads to continuous behaviour. Nevertheless, true loyalty can only be achieved when other factors,

such as an embedded social network, are present. Some forms have even labelled satisfaction measurement as a 'trap' and argue for curtailing satisfaction measurement efforts (Reichheld 1996). Tanner and Stacy (1985), reporting in the context of mental health services, go as far as terming satisfaction ratings "too good to be true" (P.148).

While none of the above explanations and criticism can be summarily dismissed, this research does not intend to add injury to an already controversial issue, until further research is undertaken to set the records straight. These striking criticisms, which have not been resolved to the best of the knowledge of this researcher, have induced this study to not further investigate satisfaction.

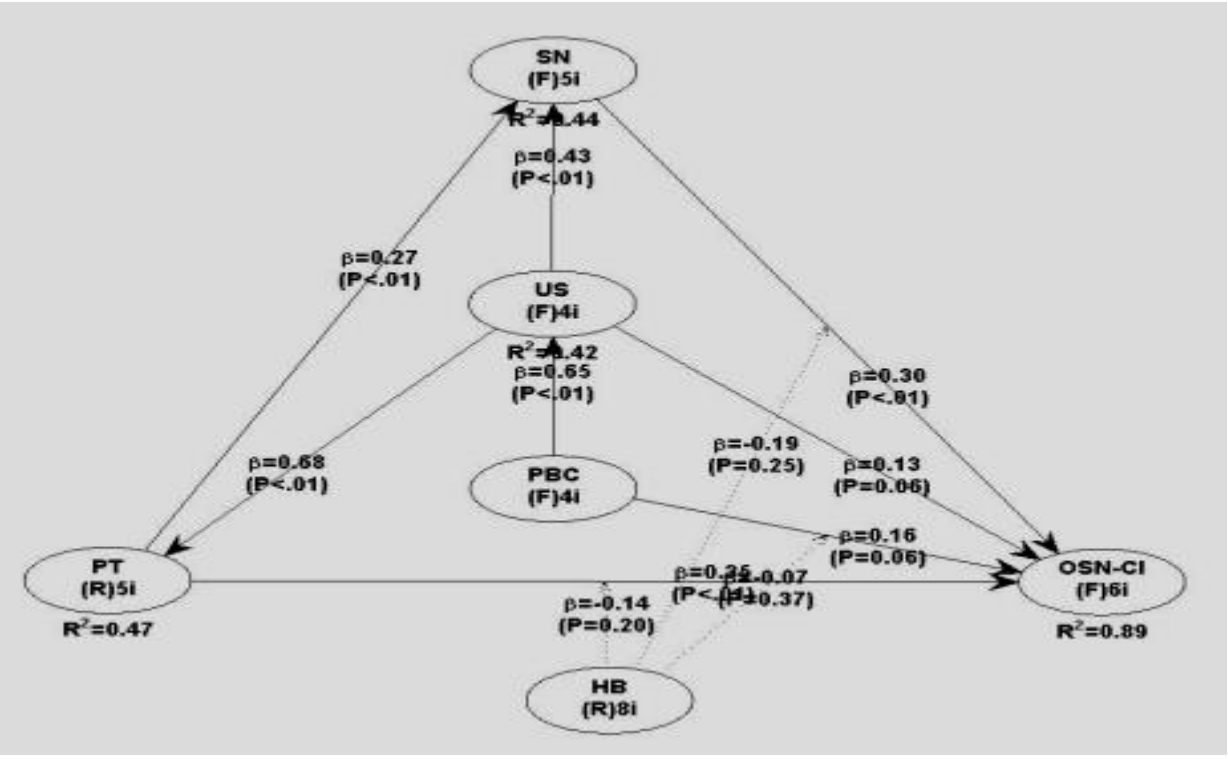


Figure 5.6: Results of moderating effect

Table 5.11: Summary of the result of moderating testing

Effect	Cause	Estimate (β)T	F-value	SE	P-value
OSN continuance intention	User satisfaction	0.128	-	0.083	0.063*
Perceived trust	User satisfaction	0.685	-	0.060	0.001***
Social norm	User satisfaction	0.433	-	0.068	0.001***
OSN continuance intention	Perceived trust	0.350	14.042	0.127	0.003***
Social norm	Perceived trust	0.271	-	0.068	0.001***
OSNcontinuance intention	Social norm	0.296	6.874	0.097	0.001***
Usersatisfaction	Perceived behavioural control	0.647	-	0.057	0.001***
OSN continuance intention	Perceived behavioural control	0.160	6.874	0.102	0.059*

Note: SE (standard error), ns (not significant), *p<0.05, **p<0.01, ***p<0.001 (two-tailed t-tests)

Table 5.12: Moderating Effect Size for path coefficients

	PBC	SN	US	PT	**HB*PT**	**HB*PBC**	**HB*SN**
PBC							
SN			0.279	0.165			
US	0.418						
PT			0.469				
OSN-CI	0.105	0.200	0.085	0.246	0.092	0.043	0.117

HB*PT (Habit moderates on PT) HB*PBC (Habit moderates on PBC), HB*SN (Habit moderates on SN)

5.7.2 Interpreting moderating effects

Figure 5.6 presents the moderated results with overall explanatory powers, estimated path coefficients, and associated p-value of the paths. Tests of significance of all paths were performed using the bootstrap resampling procedure. As shown in Figure 5.6, PT maintained

its variance explanation on OSN-CI, but with a slightly higher coefficient (β =35), followed by SN (β =0.30) and PBC (β =0.16), as compared to Figure 5.1. This moderated result underscores the salient effect habit plays on these variables. Detail report of differences in various (β) and P-values is shown in table 5.11.

Regarding moderating variable habit (HB), it is shown that it negatively moderated the path PT, (HB*PT: β = -0.14 p=0.20), PBC (HB*PBC: β = -0.07 p=0.37) and US (HB*US: β = -0.19 p=0.25), increasing the contribution of these variables to endogenous variable slightly above original contribution. User satisfaction to OSN-CI was not moderated since, to take care of collinearity. What this means is that, though these moderated variables are important in predicting user behavioural intention of OSN-CI, there is a another factor of users (habit), which when taken into account, reveals the actual intentions of these users.

The negative impacts could be inferred to mean the lower the habitual tendencies of users on PT, PBC and SN, the higher their level of trust for OSN-CI, behavioural control over OSN and more easily convinced to continue using OSN for business transactions. Since PBC was initially less of an influencer in the main effect model, it means PBC will move to neutral (zero) until it becomes positive to impact on OSN at this point. These effects, together with the contribution of user satisfaction, results in a larger effect in the model's predictive power (R^2=0.89).

Overall, the antecedent of OSN continuance explains 89 percent of the variance. In testing for interaction effects using PLS, the hierarchical process, similar to multiple regression, is used to compare the R^2 for the interaction model, with the R^2 for the 'main effects' model, which excludes the interaction construct (Chin 1998). The difference in R-squares is used to assess the overall effect size f^2 for the interaction, where 0.02, 0.15 and 0.35 have been suggested as small, moderate and large effects, respectively (Cohen 1988).

As indicated in Table 5.13, the model in which habit is proposed to moderate the link between PT, PBC, SN and OSN continued usage, possesses a significantly higher explanatory power than the main effect model. As effect size for the interaction effect is 3.00 (large), it is important to understand that this (large) f^2 does imply an important conclusion

for the proposed research model. The effect size is calculated as follows (Chin et al. 2003, Helm *et al.* 2010):

$$f^2 = \frac{R^2(i) - R^2(e)}{1 - R^2(i)} \quad \ldots\ldots\ldots\ldots \quad (8)$$

Table 5.13: Hierarchical test

	R^2
Main effect model	0.56
Interaction effect model	0.89
f^2	3.00

f^2 = [R^2 (interaction effect model) - R^2 (main effect model)] / [1 - R^2 (interaction effect model)].

The test for moderating effects on the predicting factors (PT,PBC and SN), in relation to OSN continuance intention, was determined by calculating R^2 values for OSN continuance intention when the moderating factor (habit) was excluded and when it was included. Then the effect size, based on these two R^2 values, was computed using Equation (8) and tested for statistical significance using Equation (9) (Aibinu and Al-Lawati, 2010).

$$F = (f^2)(N - M - 1) \ldots\ldots..(9)$$

Table 5.14 shows this result, whereby the effect size f^2 = 0.0476, 0.0233, 0.0233 respectively are significants (F-value = 14.042, 6.874, 6.874), implying that the relationship between PT, PBC, SN and OSN continuance intention, significantly differ depending on the habit of the individual in question. As a result though, PBC might not be a force in determining OSN continuance intention, as the habit of the individual determines the extent at which this factor affect his or her intentions to continue with OSN for business transactions.

Table 5.14: Moderating effect on individual factors analysis

Factor	R^2 included	R^2 excluded	f^2	F
Perceived trust	0.58	0.56	0.0476	14.042
Perceived behavioural control	0.57	0.56	0.0233	6.874
Social norm	0.57	0.56	0.0233	6.874

Additionally, a collinearity test was run, in order to determine if there was a multicollinearity problem among the latent variables. Relying on the variance inflation factors (VIFs), this test calculates each latent variable in relation to all of the other latent variables (Kline 2005). The full collinearity test results was generated by WarpPLS 4.0 software (Kock, 2010), which displayed VIF values of the latent factors, to be less than the threshold of 5 (Hair et al. 2010). The highest VIF value was 3.005 for the habit of perceived trust (HB*PT) model, as shown in Table 5.14. This means that collinearity can be ruled out as a significant source of bias.

In summary, the measurement model passes several stringent tests of convergent validity, discriminant validity, reliability, and collinearity, proving the model passes widely accepted data validation criteria. This suggests the results of the SEM, and hence this model, can be generally trusted as free from data measurement problems (Schumacker and Lomax 2004, Kline 2005).

Table 5.15: Latent variable coefficient showing collinearity results

	PBC	SN	US	PT	HB	OSN-CI	HB*PT	HB*PBC	HB*SN
R- squared		0.443	0.418	0.469		0.887			
Adj. R-squared		0.440	0.416	0.467		0.884			
Composite reliab.	0.938	0.936	0.943	0.918	0.923	0.920	0.966	0.967	0.972
Cronbach`s alpha	0.911	0.915	0.920	0.887	0.905	0.895	0.964	0.965	0.970
Average variance extracted	0.792	0.746	0.806	0.691	0.600	0.656	0.417	0.482	0.464
Full Collin. VIF	2.162	2.254	2.127	2.531	2.814	2.466	3.005	2.990	2.405
Q-squared		0.445	0.414	0.463		0.570			

5.8 Case for comparison and evaluation of two models

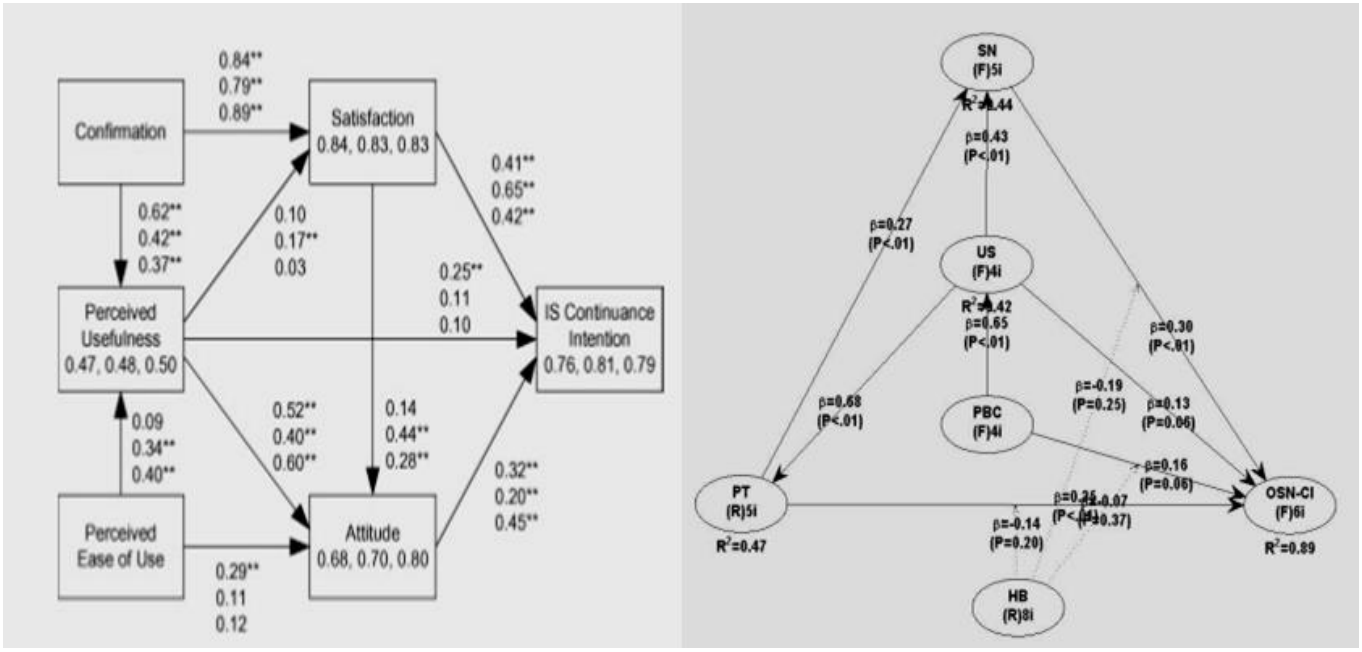
Today there a lot of IS behavioural intention models, the majority of which stems from comparisons of existing models to improve on identified gaps in existing models. For instance, Venkatesh et al. (2003) refined eight such existing models, integrated them and came up with the unified theory of acceptance and use of technology (UTAUT) model, which is widely applied in the IS field today. The UTAUT allows researchers to study unforeseen events of moderating factors that would amplify or constrain the effects of core determinants, and have been tested and proven empirically superior to other existing models (Venkatesh et

al. 2003, Park et al. 2007, Venkatesh and Zhang 2010). Liao et al. 2009, integrated three very popular models after comparing them, namely TAM, ECT and COG and came up with a technology continuance theory (TCT).

Therefore, in comparing, researchers and the community of knowledge stand to benefit a great deal. The lack of comparison studies implies little agreement on whether some factors exert more influence than others (Weinstein 1993, Conner and Norman 2005).

These studies therefore compare a moderated model (Fig. 5.6) with an existing TCT model (Liao et al. 2009) (Fig. 5.7), since the latter contains some of the construct examined, investigating moderating effects and measuring IS continuance intentions, just as the present study does.

TCT is an examination of behavioural intentions in a three-level model; initial adopters, short-term users and long-term users, with IS continuance intention as the final dependent variable. The model used experience of respondents to examine moderating effects.



Source: Liao et al. 2009. This study

Figure 5.7: Comparisons of TCT and OSN-CI

The inference from Fig. 5.7 displays the TCT and OSN-CI path coefficients and R^2 values for the two models (three levels of experience for the TCT). Perceived usefulness' direct impact

on intention (β = 0.25, 0.11, 0.10) is only significant in the initial stage and becomes insignificant at the later two stages, while satisfaction (β = 0.41, 0.65, 0.42) and attitude (β = 0.32, 0.20, 0.45) display significant effects on intention for all levels of experience. The moderated path coefficients values of the OSN-CI, namely, HB*PT (β = 0.14), HB*PBC (β = 0.16) and HB*SN (β = 0.30) all display significant effects on intention. The total direct effects of these determinants in TCT managed to account for only (R^2 = 0.76, 0.81, 0.79), while in the case of OSN-CI, the variance explained by these direct determinants is (R^2 = 0.89).

This certainly makes OSN-CI a better predictor of IS behavioural intention compared to TCT. Since confirmation is highly correlated with satisfaction (β = 0.84, 0.79, 0.89) in the case of TCT, it could very well be interpreted that PU's affect on intention is indirectly represented by satisfaction, because satisfaction is a stronger predictor of intention. On the contrary, looking at PT`s affect on intention, this study sees social norm as the mediator variable, representing only (R^2 = 0.44) of the total variance explained.

This highlights the importance of trustworthiness and habit in designing a model to predict IS continuance usage, especially if the said model is meant to capture behavioural intentions regarding business activities. The R^2 values of INT (R^2 = 0.76, 0.81, 0.79) in TCT are said to be higher than TAM, ECT and even the COG model (Liao et al. 2009), on which TCT is based. This gives TCT the grounds to boast of superior quality against the former ones. However, if OSN-CI is displaying a more superior model, in terms of predictive power (R^2 = 0.89), and made use of trust, satisfaction, social norm and perceived behavioural control in predicting IS continuance intention (OSN), then this outcome opens a page for a new model (OSN-CI) and challenges researchers to re-visit IS continuance models.

5.9 Empirical findings

The advancement in Internet technologies has enabled OSN users to compare prices, access general information and exchange information regarding OSN shopping experiences. This opportunity prevents users from trading with a particular vendor, if they find other vendors offering cheaper and better deals. OSN is gaining greater strategic importance, moving from just the customer world, to the business world.

However, what is more crucial, is to uncover the factors that compel customers and vendors to converge on OSN for business activities and the possible clues to determine their future continuance intentions. This study has revealed the factors of perceived trust, social norm and user satisfaction, in that order, to play important roles in influencing continuance intention. The study result generally suggests that, when the confidence level of trust is attained among groups or individuals, they automatically become satisfied with the act they are performing. This act may be doing business on OSN.

This result generally gives credence to the argument that user satisfaction is an important determinant of continuance intention (Oliver 1980, Bhattacherjee 2001). However, this study found perceived trust to be the most important determinant of continuance intention and not user satisfaction. This could be attributed to the fact that the study is about business, but Bhattacherjee (2001) does not consider perceived trust in his model of continuance intention. PBC and social norm played a more prominent role in user satisfaction, not forgetting that PBC entails the means by which one can access OSN. The pervasiveness of portable devices, such as smart phones and iPads, makes it easy to access the Internet these days, hence PBC is shown not to directly influence OSN continuance intention.

5.10 Theoretical contributions

This work has investigated the factors of social norm, PBC, user satisfaction and perceived trust, to predict OSN continuance intention. Perceived trust was the most important, direct determinant of OSN continuance intention. On one hand, users might fear supplying their credit card information to any commercial OSN business provider, because of online security threats, which is a common phenomenon nowadays. On the other hand, a commercial OSN service provider may fear the effort of network hackers, who may intend to steal credit card numbers.

This cycle of suspicion obviously borders on trust, which is an important issue to be considered when talking about intention to do business, whether online or offline. These findings are therefore not surprising, when perceived trust emerged as the greatest influencing factor that will compel users to indulge in OSN for business transactions. This gives support to several other studies that have focused on various issues of trust in electronic

commerce (Awad and Ragowsky 2008, Choudhury and Karahanna 2008, Kim et al. 2008, Vance et al. 2008).

It can be deduced from this analysis that users will only deal with OSNs that they perceive to be trustworthy in providing them with services or products. However, trust does not happen overnight, but through a process and continuous interactions between a particular OSN and customers. This study, therefore makes this first theoretical contribution, by suggesting that OSN vendors search for holistic strategies to build the initial trust that users look for, before deciding on their choice of OSN for business transactions.

The social norm or peer pressure factor is found to be the next direct determinant of OSN continuance intention. Following the line of argument that social norm is a strong influencing factor to create an intention (Sripalawat et al. 2011), this study lends support to that result, by finding social norm to be the second most important determinant of OSN continuance intention. Consequently, the second theoretical contribution of this study is that OSN business providers who intend to win more customers, should adopt the strategy of peer pressure to motivate users to use their websites. In particular, the popularity of social media can be explored to create interpersonal interactions on blogs and in networking communities. After they come to the OSN, electronic vendors should be honest, mindful of privacy and security of the users, as well as provide them with improved services and products.

The bulk of these respondents are young people, between the age of 18 and 35, who do business online. As a result, before making any decision to use OSN for business, young people are far more likely to consult their social networks for advice (Thorbjornsen et al. 2007, Wang and Xiao 2009). The social networks created through LinkedIn, Twitter, Facebook and other social platforms, are more than just a static hobby, they are also a complex support circle. For these young people, an OSN mirrors the social groups established by the older generations. We all sometimes rely on advice from people that we trust, to support this decision-making process.

The third most important, direct determinant of OSN continuance intention, according to the results of this study, is user satisfaction. These findings add confirmation to the several discussions and extensive studies that user satisfaction has received as a topic of interest throughout the psychology, marketing, management and information system literature

(Bhattacherjee and Lin 2014, Hsu et al. 2014). Support is lent by this study, to the popular theory that customer satisfaction is a post-purchase attitude, formed through a mental comparison of service and product quality that a customer expects to receive from an exchange, as well as the level of service and product quality the customer perceives from the exchange (Bhattacherjee and Lin 2014, Hsu et al. 2014).

This study, therefore contributes to the body of user satisfaction knowledge, that OSN vendors should strive to make customers happy by being honest, and providing quality services and products, in as much as they receive these from their social network providers.

5.11 Business implications

Results of this research suggest that user satisfaction of a particular OSN, in addition to perceived trust and social norm impact users` continuance intention to do business on that platform.

Although this study looked at only one aspect, customer satisfaction is said to be composed of multiple components. These components include satisfaction with the product (product satisfaction) (Homburg and Rudolph 2001); the supplier's performance (performance satisfaction) (Sheth 1973); and the relationship with the individual salesperson (interpersonal satisfaction, also referred to as relationship satisfaction) (Manning and Reece 2001). Understanding these differences could be useful to both OSN vendors and practitioners, to better understand decision-making processes and explain why different users, given similar information, select different OSNs for business transactions.

The indirect influence of PBC on OSN continuance intention through user satisfaction, the greatest coefficient factor (β=0.642) suggests that when infrastructures, needed to access OSNs, are within reach (user reach), the user satisfaction level rises and users would intend to continue using OSN for business transactions. Findings from this research add confirmation to the important role that technology plays in solving numerous customer problems. These findings are consistent with previous offline research, where customer participation in OSN was shown to lead to greater satisfaction (Cermak et al. 2011) and higher expected benefits from OSN.

The notion that customers actively participate in the process of co-creating value with firms, is attracting increasing attention from academia (Prahalad and Ramaswamy 2004). Based on the strong influence of user participation in OSN found in this study, the current research can be viewed as adding value to existing knowledge and extending this stream of academic research in a new direction (i.e. doing business with OSN).

The concept of PBC has been discussed to be the means by which an individual can access a technology and the confidence with which he or she is capable of performing a given behaviour (Ajzen 2008). In addition, this implies the perception of volitional control or the perceived difficulty towards the behaviour affecting the intent (Chang 1998). Yet, the findings of this research' proved that PBC is not significant when it comes to directly forming intention.

This again supports Al-Debai et al. (2013), Ajjan et al. (2014), Kwong and Park (2008) who find that the influence of PBC on continuance intention is not insignificant in research conducted on college students. This could be attributed to the computer and knowledge of Internet services, which are now common skills among the youth, who believe they would be able to use OSN for business transactions, regardless of circumstances. External control factors, such as financial resources, might be more important for younger users, as opposed to internal control factors, such as abilities and skills (Thorbjornsen et al. 2007). With the upsurge of electronic learning these days proving to be the highest mode of learning, it could probably take the youth only a few seconds to master transacting business on OSN platforms.

5.12 Limitations

Online surveys generally have some intrinsic limitations and this study is no exception. Respondents to the survey were self selected, and may have their own agenda for participating in the study, rather than being randomly or scientifically selected. Moreover, if the data were self-reported, there is no guarantee that participants would provide accurate information (Bhattacherjee 2001, Wright 2005). Future research studies should take the above limitations of the survey study into account.

CHAPTER 6: SUMMARY AND CONCLUSION

This chapter presents the overall summary of the research and recommendations accruing from the work is submitted as well. Finally, a conclusion is drawn.

6.1 Summary

This study synthesized other research approaches to venture into quite a new dimension of OSN for business transactions (social business) and demonstrated the different types of Web 2.0. It also sought to unravel the factors that influence people using OSN for business, instead of the well-known e-commerce models. The two platforms are not the same, but with a traditional e-commerce mind set, it is hard to see the difference between a presence on Twitter, LinkedIn and Facebook as distinct from e-commerce websites. OSN is more than just a platform for social interaction, where first time users (adults) are influenced by bandwagon effects and social media adverts, among other possible factors.

After adopting the theory of socio-cognitive trust (TST), PBC theory and ECT to build a new model that predicts intentions for social business, findings suggest that trust, social norm and satisfaction are crucial when doing business on this platform. PBC was not seen to play a significant role in continuance intention, but is significant in relation to satisfaction. In considering OSN when buying online for the first time, this study could suggests users were influenced by peers and social media adverts, among other possible factors, or have developed a level of initial trust with any web site where they have purchased, as suggested in Wu et al. (2010).

With regards to social norm, it came to light that, for young people who normally form the bulk percentage of these platforms, the opinions and purchase decisions of others possess great value for them. This means that, in an effort to have a business on OSN, networks and e-vendor sites should think of strategies embedded in peer pressure, to win a greater market share. In this sense, belonging and social pressure play critical roles in predicting behaviour. People, especially the younger generation, seem to be looking for approval from other people who are important to them, and therefore e-vendors should keep these influences in mind when designing their web sites. The study demonstrates that the use of norm based

advertisement messages may be effective in attracting potential customers through the strategy of group buying discounts.

Providing quality services and products seem to be the reasons why people become happy on the social business platform. However, it should be borne in mind by e-vendors on this platform that it is more about interaction than just products. Consequently, vendors should listen to what customers say and provide positive and timely feedback, seeing it as an opportunity to co-create new products and services.

6.2 Suggestions for further research

Researching OSN has gained prominence in recent years. However, the majority of these works concentrate on the antecedents of continuance intention and continuance behaviour without giving any consideration to the OSN, Web 2.0 and cloud computing models fit for business activities, in terms of technicalities and regulatory policies. The researcher could not find any such comparable model, so could not compare to drawing a rigorous expository analysis. This study, therefore, recommends further studies in this light as many more are switching from brick and mortar business structures to OSN.

6.3 Conclusion

A social business does not simply sell products, but also customer experience and satisfaction. In conclusion, this implies that the more users become satisfied, the more they trust the seller and vice versa. In turn, user satisfaction affects their post-expectation and their future behavioural intention, such as repurchase intention. Building user trust is obviously the most essential mission for doing business on OSN according to this study, because there are no standard and universally acceptable regulations and policies to safeguard user interest. The purchasing decision of a user is considered as trust related behaviour (Urban et al. 2009), purely based on the trustworthiness of the OSN vendor.

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APPENDIX A: DATA COLLECTION INSTRUMENT

FACTORS THAT DETERMINE THE CONTINUANCE INTENTION OF PEOPLE TO USE ONLINE SOCIAL NETWORKS FOR BUSINESS TRANSACTIONS

COVERING LETTER

Researcher: Akwesi Assensoh-Kodua 0782898210 / mannie1111@yahoo.com.
Supervisor : Prof. Oludayo O. Olugbara (PhD)0780428567 / 0313735591
Co-supervisor: Prof. T. Nepal (PhD) 0313735591

Dear Participant,

Thank you for being part of this survey. Your participation is greatly appreciated. This survey is being conducted from Durban University of Technology (DUT) in South Africa and will take approximately 5 minutes to complete. The purpose of this survey is to gather information from online social network participants who use the model for business transactions, for academic research purposes only. The results from this study will be used for research and publications purposes only and will be made available online and DUT library, in the form of a published thesis.

Confidentiality: We would like to assure you that the information that you offer in this survey is strictly confidential and that no personal details are required of you. Your name will not appear on the survey and the answers you give will be treated as strictly confidential. Answers on the survey will be coded to ensure anonymity. You cannot be identified in person based on the answers you give.

Persons to Contact in the Event of Any Problems or Queries:

Please contact the researcher (+27782898210 : mannie1111@yahoo.com),
my supervisor (0780428560 : oludayoo@dut.ac.za) or the Institutional Research Ethics administrator on 031 373 2900.
Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za.

Kindly proceed with this survey if you have read this letter in its entirety, understand it contents and agree to voluntarily participate in this study.

Please answer the questionnaire as completely and honestly as possible, and do not answer it if you do not wish to participate in the study.

Thank you for your kind assistance.

CONSENT

Statement of Agreement to Participate in the Research Study:

• I hereby confirm that I have been informed by the researcher, Akwesi Assensoh-Kodua, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _,

• I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.

• I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.

• In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.

• I may, at any stage, without prejudice, withdraw my consent and participation in the study.

• I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

• I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

I have read the consent form and hereby agree to participate in the study (Click next to accept participation/Otherwise exist).

Next

Powered by **SurveyMonkey**

1. **Demographic Information**

(Please indicate by ticking the category that best describes your particular situation)

***NB//: OSN = Online Social Network online**

***Business = Buying & Selling**

Gender

- Male
- Female

Age

- 18-25
- 26-35
- 36-45
- 46-55
- 56-65
- 66 and above

Location

- Urban
- Rural
- Semi-rural
- LinkedIn

Time spent on OSN for business per week

- 0-15 min
- 16-60 min
- 1-3 hrs
- More than 3 hrs

Current continent of residence

- Africa
- Antarctica
- Asia
- Australia
- Europe
- North America
- South America

My OSN for business

- Twitter
- LinkedIn
- Other(s)
- I use both
- I use both and others

OSN business experience

- Just once
- 2-5 times
- 6-20 times
- 21-50 times
- More than 50 times

Reasons for doing business on OSN

- Convenience
- Product/service not available off my OSN
- Better fees
- Time saving
- All the above
- None of the above

2. Perceived Ease of Use

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I find it easy to use my OSN to do what i want	○	○	○	◉	○
I find my OSN easy to use for business transactions	○	○	○	○	○
I require less mental effort to use my OSN for business transactions	○	○	○	○	○
I find interaction with my OSN for business transactions less stressful	○	○	○	○	○
I find interaction with my OSN for business transactions understandable	○	○	○	◉	○

3. Expected Benefit

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Using my OSN for business transactions enables me to finish my shopping tasks more quickly	○	○	○	○	○
Using my OSN for business transactions helps me to make better purchase decisions	○	○	○	○	○
Using my OSN for business transactions makes it easier to make purchases	○	○	○	○	○
Using my OSN for business transactions saves me money	○	○	○	○	○
Overall, I find using my OSN for business transactions useful	○	○	○	○	○
Using OSN for business enables me to finish my shopping task more quickly	○	○	○	○	○
Using OSN for business can helps me to make better purchase decisions	○	○	○	○	○
OSN sites can provide me with useful information about my shopping needs	○	○	○	○	○
Using OSN helps me do many shopping more conveniently	○	○	○	○	○
Over all i find using OSN useful	○	○	○	○	○

4. Perceived Behavioural Control

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I am entirely in control of using OSN for business transactions					
I have knowledge and e-skills to use OSN for business transactions					
I have what it takes to use OSN applications for business transactions					
I would be able to use OSN for business transactions regardless of circumstances					

5. Social Norms

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is expected that people like me use OSN for my business transactions					
The nature of my life and work influences me to use OSN for my business needs					
People who influence my behaviour think that I use OSN for my business needs					
People I look up to as mentors expect me to use OSN for my business transactions					
People important to me motivate that I should use OSN for my businesss transactions					

6. Satisfaction

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I am satisfied with the use of my OSN for business transactions					
I am pleased with the use of my OSN for business transactions					
I am content with the use of my OSN for business transactions					

I am delighted with the use of my OSN for business transactions					

7. Perceived Trust

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel safe in my business transactions with my OSN					
I believe my OSN can protect my privacy					
I select OSN which I believe are honest					
I feel that my OSN is trustworthy					
I feel that my OSN will provide me with a good business service/product					

8. Habit / Attitude

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I enjoy using OSN for business transactions					
I plan to use OSN for business transactions in the future					
I think that using my OSN for business transactions is beneficial to me					
I have positive perception about using OSN for business transactions					
Generally speaking, I use OSN for business purposes unconsciously					
Using OSN for business transactions anytime, anywhere appeals to me					
I would like to encourage others to use OSN for business transactions					
I have the resources and knowledge to make use of OSN for business transactions					

9. Confirmation

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My experience with using OSN for business transactions was better than I expected					
The service level provided by my OSN was better than what I expected					
Overall, most of my expectations from doing business on ONS were confirmed					
Services or products recommended to me by my OSN meet my expectations					
Generally, I get the level of service I expect from my OSN					

10. Continuation Intention

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I intend to continue sharing knowledge about OSN with others					
In future, I would not hesitate to use OSN for business transactions					
In future, I will consider OSN for business transactions as my first choice					
I intend to continue using OSN for business transactions					
I intend to continue recommending the use of OSN for business transactions					
My intention is to continue using OSN for business transactions rather than traditional shopping					