

LIU, RUI, M.S. The Influence of Privacy Awareness and Privacy Self-Efficacy in E-Commerce. (2015)  
Directed by Dr. Hamid Nemati. 40pp.

During the past decade, the Internet has become an essential tool for, among other things, communication, entertainment, and business. Especially notable is how it has changed the way business is conducted. Online information technology has profoundly affected markets and transactions. In line with the increasing use of online shopping, users have continued to expand their knowledge of the Internet. They have become more confident in this knowledge, and their self-initiated efforts at online privacy also appear to have matured. Users have expressed their unease about privacy when making online purchases, and it has been found that more than three-quarters of users basically agree they will not use services, products, or retailers if they feel their privacy is in danger of being violated. The present study helps to better understand the perceived benefits and concerns surrounding online purchasing. It applies self-efficacy theory to identify online privacy-related self-efficacy, and evaluate its influence on online purchasing intent. The study results show that awareness of online privacy influences the intent to use online shopping services. It was also found that experience using online services decreases users' tendencies to use such services in the future. This study will help to better understand the perceived benefits and concerns surrounding online purchasing.

THE INFLUENCE OF PRIVACY AWARENESS AND PRIVACY SELF-EFFICACY  
IN E-COMMERCE

by

Rui Liu

A Thesis Submitted to  
the Faculty of the Graduate School at  
the University of North Carolina at Greensboro  
in Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

Greensboro  
2015

Approved by

Hamid Nemati  
Committee Chair

APPROVAL PAGE

This thesis written by Rui Liu has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair \_\_\_\_\_

Committee Members \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Date of Acceptance by Committee

\_\_\_\_\_  
Date of Final Oral Examination

## TABLE OF CONTENTS

	Page
CHAPTER	
I. INTRODUCTION.....	1
II. LITERATURE REVIEW.....	3
E-commerce.....	3
Online Shopping Intention.....	4
Perceive Benefits of Online Shopping.....	5
III. RESEARCH MODEL AND HYPOTHESE.....	11
Perceive Benefits of Online Shopping.....	12
Awareness of Privacy and Online Shopping Intention.....	14
IV. METHODOLOGY AND DATA ANALYSIS.....	20
Measures.....	20
Data Analysis and Results.....	21
V. DISCUSSION.....	28
VI. CONCLUSION.....	33
REFERENCES.....	34
APPENDIX A. SURVEY QUESTIONNAIRE.....	39

## CHAPTER I

### INTRODUCTION

E-commerce has grown rapidly over the past decade. According to a report from the Wall Street Journal, the growth rate of e-commerce in the U.S. is about 15% annually, which is seven times greater than the growth rate of the United States' total retail spending. Furthermore, the application of smartphones and other mobile devices in e-commerce have attracted more users. Three quarters of customers used their smartphone or tablet while shopping during the 2014 holiday weekend, according to the annual survey from CEA (the Consumer Electronics Association). While the number of users who enjoy the convenience and variety of online shopping is increasing, the data gained from these fields is also growing exponentially every day. organizations track what people view, click, or buy, and use it to help differentiate among customers by their activities on the organizations' website. Furthermore, they track not only customers but also their friends' social media networks, which help companies identify potential customers and understand those customers' demand. Business analytics are tremendously helpful for companies, but they give users more reason to be concerned about privacy. There are enormous amounts of data collected from users, but most users have no control over the information collected from them. They have no idea about what data is collected about them, and how that data can be used. The data collected from users can be used to

improve the service quality, but also it could be used in business analytics that can violate privacy of users (Nemati & Modaresnezhad, 2013).

As the online shopping activities grow more popular, users have started to become knowledgeable about the use of their data. An increasing number of users who said they are worried about their privacy while purchasing online, and more than three-quarters of users agree that they wouldn't use the service, product or retailer if they felt their privacy was violated. However, do their actions really support their assertion? This study will focus on data analytics and customers' awareness of privacy concern in their online purchasing behaviors. It seeks to answer whether users are aware of these privacy issues and whether that awareness would influence their intention to continue to make purchases online.

The remainder of this study proceeds as follows. First, a literature review is provided to discuss the online shopping intention and the awareness of online. Second, a research model and hypotheses in my thesis are presented. Thirdly, the methods that will be used to test the research model are explained. Finally, a discussion of the potential contributions and future study of the thesis is provided.

## CHAPTER II

### LITERATURE REVIEW

#### **E-commerce**

During the past decade, the Internet has become an essential tool for, among other things, communication, entertainment, and commerce. It has especially changed the way business is conducted. Information technology has significantly affected the market and business. It provides information for consumers to select and compare products, and offers a powerful convenience for transaction approach between consumers and retailers (DeLone & McLean, 2004). It changed the approach to building business relationships, and the speed of information sharing has been significantly increased. Companies are more and more interested in developing an on-line business presence. In this study, electronic commerce refers to the process of using electronic data to complete the transaction of products or services through computer networks. (Grandon & Pearson, 2004) E-commerce includes the transaction relationships between organizations or individuals, and business functions that support the transaction between organizations (Zwass, 1996). Furthermore, according to the study by Belanger, Hiller, & Smith (2002), e-commerce can be broken into three main categories: business-to-business, business-to-consumer, and government-to-constituents.

Business-to-business (B2B) e-commerce refers to the electronic transactions between companies, such as suppliers, collaborators and institutional customers. It saved the transaction cost and improve partner relationship between companies, especially for global companies. Business-to-consumer (B2C) e-commerce refers to the electronic transactions between companies and consumers. Online vender ship order, and receive payment without meeting the customer (B2C E-Commerce, 2009). Government-to-constituents (G2C) e-commerce refers to the “electronic relationship between the governments and various constituents” (Belanger, Hiller, & Smith, 2002), such as filing taxes, business registrations, and renewing licenses. The focus of this study is in B2C e-commerce.

E-commerce, especially B2C e-commerce, has grown rapidly in the past decade. In 2006, e-commerce retail sales were \$113 billion, which is 2% of total retail sales in the United States. In 2014, the E-commerce retail sales was close to \$300 billion, which is 6% of total retail sales in the U.S. (Bucchioni, Liu, & Weidenhamer, 2015) The growth rate of E-commerce retail sales was estimated to be 15% in 2014, which is seven times of the growth rate of total U.S. retail spending. Furthermore, emerging social media and mobile market have attracted more customers, resulting in the high profit to B2C e-commerce, and the convenience they provided.

### **Online Shopping Intention**

According to Ju & Koo (2010), Intention refers to target approach behavior that is an action that someone drives to. It may be referred to as a predisposition of an individual to behave in a peculiar way, and it is often due to the features and the benefits that are

perceived from that particular behavior. This study thus defines online shopping intention as the tendency of the purchaser to use online shopping services at a future time.

Research that has been done has shown that the predisposition to conduct online shopping has always been influenced by factors that include: the degree of convenience; the pricing strategy; variety of products available; and the amount of enjoyment derived from the online platform (Sun Qiang, 2007). Further, the intention of shopping online can be influenced by online shopping if there is a value gain that is to be perceived from online shopping platform (He Qiguo and Lin Meihua, 2006).

### **Perceive Benefits of Online Shopping**

Shopping as defined by Tauber (1972) is a series of behaviors involved in an acquisition of a product or the value that is derived from shopping process. He posited that motivators of attracting online shopping behavior include among others the utilitarian benefits and hedonic benefits that arise in the process of shopping. Moreover, other researchers have pointed out that the fundamental key to success in the business to business markets is through the building of customer relationships with the argument that loyal customers are way more profitable than the once who are less loyal. Gaining loyalty of any customer thus requires the high level of trust in the process of relationship building with customers.

### **Utilitarian Benefits**

These are benefits that are fundamental, instrumental and rational useful. The question of whether these benefits influence customers' depends on the significance and efficiency of the shopping mix activity. It can be said that the customer is likely to

obtain a considerable amount of utilitarian benefit when there is a completion of the shopping activities in a more convenient and efficient manner (Chandon et al., 2000). Perceived benefit of online shopping according to the most recent of research are the availability of adequate information, convenience, and variety of the available products for shopping (Singh, 2002). This is the result of customers demanding a process that is convenient and offers a variety of choices of products in the online shopping platform. The amount of information that is available in the business to consumer markets which is also constantly on the rise has in significant proportions impacted the process of customer satisfaction.

### **Hedonic Benefits**

Hedonic benefits provide for more experiential consumption, fun, pleasure and excitement. According to Overby & Lee, (2006), shopping behavior in the online environment does no longer involve the acquisition of products; the customers must enjoy the experience and relish the emotional benefits that came from online platform use.

### **Online Privacy**

According to research done by Bart and other researchers in 2005, it was recognized that the risk of information is related with privacy that is brought about by the invisibility of management of information and the people that are authorized to have access to the said information. According to Culnan, (2000), Privacy refers to the right of a person in selecting what personal information is harvested and utilized. Youn, (2009) defined consumer privacy as the ability to control personal information. Consumers

normally get concerned with their privacy if there is a feeling of being uninformed on the extent to which their personal information should be used (Lin, 2007).

In the online environment, apart from personal information provided by the consumer, for example, name, address and credit card number, the companies may also gather a considerable amount of information through tracking of users via their online activities (Davis Jr et al., 2003). For instance, the online website can be used to track users' search history and their recent social media activities to generate a list of the recommendation of their interest areas that can inform the purchase decision. This study thus defines online privacy as the control measures that the internet user of the information that is electronically generated in their activities undertaken online like the collection of their personal information and utilization of that information according to Mekovec & Hutinski, (2012).

To prove the level of information privacy, customers are currently more concerned about what they do online to help safeguard their privacy as compared to the level of safeguards to information privacy as in the traditional setup. The biggest concern for individuals who use websites according to an article by Harris poll on BusinessWeek argued that most customers regard e-commerce as an unfamiliar business environment, and there were so many attempts to govern this particular environment (Green, Yang, & Judge, 1998). It can, therefore, be noted that people have increased their level of concern on the risks that are associated with e-commerce. Nevertheless, the drama that emanates from the difference between the traditional retail and the online retail platform has made people feel that control of this new online shopping environment has been lost. The

research that was done by Culnan (2000) revealed that people often provide untrue information online due to their privacy of information concern. The subsequent survey developed by IBM on consumer privacy, 80% of the respondents who are residents of United States believed that it is impossible for them to control how companies collect their information online and use them, 54% of the respondents declined to perform online shopping due to their worry about collection of their information's online during the transactions process. It is therefore of great concern as privacy related issues impact the willingness of the consumers to adopt the e-commerce platform to conduct their shopping activities.

### **Awareness**

Matyáš, (2009), described awareness as the predictor of the concerns that arise from privacy-related misfortunes. Awareness is usually based on the individual's insight and thought of physical or non-physical objects. Experience, as well as education level of an individual coupled with attitude and tendency of behavior, has helped to enhance the level of awareness. Engin & Cam, (2009) posited that privacy awareness imitates the perception of, the collector and tracker of personal information, which personal information has been collected, how to safely store personal information and how to process and use personal information.

Smith regarded privacy related concerns in his research as personal awareness of several privacy practices on the organizational information included information collection analytics of information, illegal use of ancillary data and inaccuracies in the private information. The user that is more informed about the collection of online

information is more likely to forgo the use of the internet. In a similar way, Malhotra argued in his research that the commercial practices that include a collection of the information and their analytics and the fear of commercial practices of business persons have escalated the risk related to privacy in the e-commerce platform. He further points that collection of information and awareness of confidentiality practices forms the component of internet user's concern on information privacy. There are, therefore, four dimensions of privacy that include information collection awareness, information analytics awareness, and unauthorized use of secondary data awareness and errors of personal information awareness.

### **Self-Efficacy**

Self-efficacy according to study conducted by Bandura (1986), can be defined as people's judgment of their capabilities for organizing and execution of courses of action that are usually needed to assist in attaining designated types of performances. Apart from the skills and capabilities endowed to one, this self-efficacy refers to the measure of a person's awareness of their talent. Self-efficacy regulates what is to be done by a person about their previous knowledge and abilities that go a long way to impact on various tasks. Bandura goes ahead to mention that the self-efficacy of an individual plays a critical role in the analysis of tendency of a particular behavior in a given assignment. Additionally, he advanced the self-efficacy concept that has assisted to describe the connection that exists amid self-efficacy, outcome and behavior.

The expectation about efficacy and outcome of an individual normally affect their respective action when performing a given task, but there exist differentiations between

the outcome and self-efficacy. The outcomes due to the result of a particular behavior and efficacy expectations result from the evaluation of the capability of successful performance of a particular behavior. Bandura further argues that the expected outcome is not so much as in leading behaviors. Self-efficacy influences outcome expectation, even though outcome expectations do not impact individuals' self-efficacy. A person may have well-informed about a particular behavior can lead to a certain result, but this knowledge has few impact on his behavior if he doubts about his abilities in performing this action (Bandura, 1986).

## CHAPTER III

### RESEARCH MODEL AND HYPOTHESE

This is going to lay emphasis on the elements that affect customers' online purchasing intention. By drawing upon the perceived benefits of online shopping, self-efficacy of online privacy, some research models have been put as below.

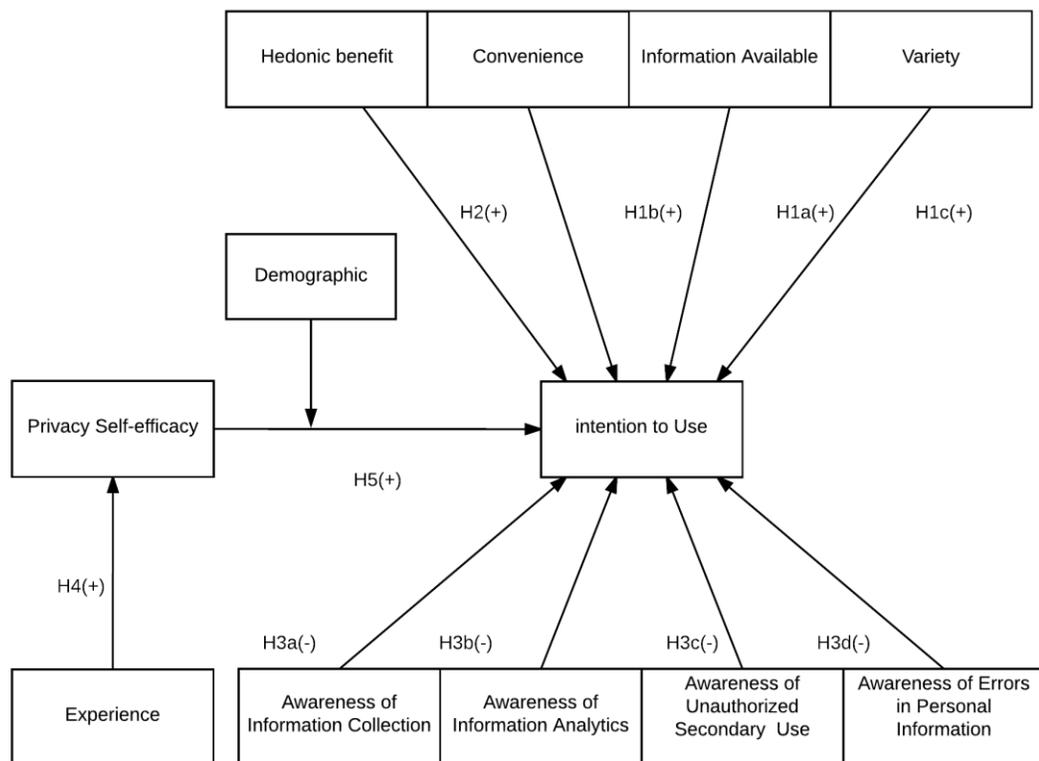


Figure 1. Research Model

## **Perceive Benefits of Online Shopping**

### **Information Availability**

Information is an important resource for consumers. The availability of information is one of the critical factors that affect customers purchase behavior in an electronic commerce environment (Wolfenbarger & Gilly, 2000). The internet offers the consumer an effective way to explore information about products, to compare alternatives, and to know pricing (Kolesar & Galbraith, 2000). Shopping on an electronic market can reduce the cost of obtaining information that relates to the product, as well as comparing information of alternatives (Bakos, 1991). Furthermore, online stores provide a wealth of product-related information to their customers, such as price comparisons, user perspectives, and instructions. Customers can get useful information directly without leaving the website same way; they can read those reviews before they make any purchasing decision (Wolfenbarger & Gilly, 2000). When there is more information available on online shopping websites, there will be increased customer shopping satisfaction and reduced the cost of purchasing (Peterson, Balasubramanian, & Bronnenberg, 1997).

Therefore, widespread information on the Internet provides useful data for purchasing decisions, which illustrates that online purchasing behavior is functional.

H1a: There will be a significant positive relationship between the information available online and customers' intention to shopping online.

## **Convenience**

Convenience is another benefit that has been realized in online shopping activities. In comparison to the traditional shopping, convenience is unparalleled. The internet offers the flexibility of time and location for an online shopping experience. Research shows that customers enjoy shopping online because it is open 24 hours a day so that they could shop anytime. (Hofacker, 2001) Also, customers could shop from variety locations without worry about the traffic issue and long checkout line. (Forsythe, Liu, Shannon, & Gardner, 2006) Shopping online significantly increases the efficiency of the shopping experience. The convenience of online shopping has been more attracted to modern customers who seek convenience and speed (Katawetawaraks & Wang, 2011).

H1b: There will be the significant positive relationship between the convenience of shopping online and customers' intention to shopping online.

## **Variety**

The wide variety of products and products information has been found as an important benefit of online shopping. (Forsythe, Liu, Shannon, & Gardner, 2006) The internet offers the fewer restrictions on geographical characteristics. Customers could choose more variety of products from all around the world through the Internet, and the product will be shipped directly to their house. E-commerce also perceives a tremendous source for customers who seek for special commodities which are usually out of stock in the local store. Wolfinbarger and Gilly (2000) mentioned that online shopping is useful for customers who have specialized hobbies such as sword collecting or the need for special sizes in clothing.

H1c: There will be the significant positive relationship between the variety of shopping online and customers' intention to shopping online.

### **Hedonic Benefits**

The rationality of hedonic consumers preferring to shop is that consumers shop online usually for an appreciation of the experience; they enjoy the shopping process rather than completing the task. (Babin, Darden, & Griffin, 1994) In this study, hedonic benefits refer to multiple emotions that include “happiness, fantasy, awakening, sensuality, and enjoyment” that is gained from online shopping activities. (To, Liao, & Lin, 2007) The benefit of Hedonic in the online shopping activities is experiential and emotional, which drives the usage of online shopping and it attract consumers to visit the website. (To, Liao, & Lin, 2007)

H2: There is going to be a significant progressive relationship between the hedonic benefits that customers gain from online shopping experience and their intention to shop online.

### **Awareness of Privacy and Online Shopping Intention**

#### **Awareness of Information Collection**

Awareness of Information collection refers to the Internet users' attitudes of the quantity of personal data that has been collected during shopping activities. (Korzaan, Brooks, & Greer, 2009) Individuals' perception of information collection is the starting point of information privacy concerns. (Malhotra, Kim, & Agarwal, 2004) Customers have to provide enough information, such as name, address and credit card information, to complete online transactions. In other words, online customers give up some information

in exchange for benefits of online purchasing. However, the pay and reward tradeoff does not scale linearly. Miller (1982) argued that too much data has been collected by online organizations. Similarly, Rader (2014) mentioned that even online companies collect information for providing a more personalized service, but customers still believe that information collection is an "invasion of privacy."

H3a: There will be a significant negative relationship between customers' awareness of data collection and their intention to shopping online.

### **Awareness of Information Analytics**

Organizations claim that data analytics could help them understand their customers and provide better service. However, according to Cavoukian et al. (2012), with the rapid development of data mining and analytics technologies, organizations could do more precise analysis on individual's behavior intention as well as personal identification. He mentioned that organizations could identify an individual with enough data of that person, even without personal identifiers of the individual such as their name or SSN. A quick imagination of a folder containing no credit to the locality where one lives, the region where you work, your favorite coffee shop, and the make or model and the year of your car. Without personal identifiers, is there a possibility that it can be connected with you?" Therefore, processing and analyzing of personal information can cause serious privacy issues. (Malandrino, et al.)

H3b: There will be a significant negative relationship between customers' awareness of information analytics and their intention to shop online.

### **Awareness of Unauthorized Secondary Use of Data**

Unauthorized secondary use of data refers to the situation where organizations use customers' information for other business purposes without the authorization from the customer to whom the data was collected. (Korzaan, Brooks, & Greer, 2009) Smith et al. (1996) split unauthorized secondary use into internal and external, internal unauthorized secondary use of data refers to unauthorized use by the organization that originally collected the information, and external secondary use of data focus on unauthorized use by a third party organization. However, no matter internal or external, data are collected ostensibly for research only to be used for marketing purposes. (Smith, Milberg, & Burke, 1996) Unauthorized secondary use of data threatens Internet users' information privacy and reduces customer intention of using e-commerce. According to Solove, individuals' awareness of unauthorized secondary use causes the fear of information usage; they are uncertain about who will use their information in the future, which leads individual's stoppage to use e-commerce.

H3c: There will be a significant negative relationship between consumers' awareness of the unauthorized use of secondary data and their intention to shop online.

### **Awareness of Errors in Personal Information**

Human errors are one of the serious risks in information privacy (Im & Baskerville, 2005). In this study, awareness of errors in personal information refers to individuals' consciousness of deliberate and accidental errors about their personal information collected and used by organizations. Smith (1996) mentioned that many individuals worry their personal information will be collected incorrectly, and they also

get concerned that organizations may not have effectively recorded the information they collected. Furthermore, some organizations might make errors balefully. Donaldson (p. 251) argued that for-profits, a manager might request employees to falsify data in business organizations.

H3d: There will be a significant negative relationship between consumers' experience of inaccuracy or manipulation of personal data and their intention to shop online.

### **Self-efficacy and Behavior Control**

Self-efficacy could control individuals' motivation and behavior, which will affect their decision-making circumstances (Bandura, 1990). Previous studies show that self-efficacy has been shown to predict behavioral intentions in the online environment. Wang, Yeh, & Liao, (2013), exhibit a study that focused on the influences of computer self-efficacy on individuals' feeling and behaviors in e-commerce activities (Leonard & Jones, 2009). Another study concentrated on the relationship among online customers. Acceptability of Electronic service and their Internet self-efficacy (ISE) is a study that focuses on the effect of privacy self-efficacy on behavioral intentions.

Privacy self-efficacy was developed based on Bandura's theory of self-efficacy. In this study, online privacy self-efficacy refers to the individuals' confidence in their abilities to protect their information privacy from e-markets' information collection and sharing activities. (Rifon, Larose, & Marina, 2005) Privacy self-efficacy has a positive effect on individuals' privacy-protecting behaviors. People with higher self-efficacy will be more likely to recognize the threat in the specific task, and their self-efficacy

determines what they will do to protect themselves. (Milne, Labrecque, & Cromer, 2009) Individuals with high privacy self-efficacy have a high regard for their abilities to control information privacy, (Korzaan, Brooks, & Greer, 2009) but consumers have to place their personal information in the shopping website, where it is out of their control, and therefore, they would be more concerned about their privacy. Individuals who have a high level of privacy concerns are more likely to take measures, such as avoiding shopping online to protect themselves as well as their information. (Korzaan, Brooks, & Greer, 2009)

H4: There will be a significant negative relationship between customers' privacy self-efficacy and their intention to shop online.

The study from Bandura (1986) showed that experience, social persuasion, and physiological factors are three factors that affect self-efficacy. On the contrary, individuals' experience in a specific area is the most powerful sources of self-efficacy. Based on the way that individual gained the experience, it could be separated into mastery experience and vicarious experience. Mastery experience is the greatest source of self-efficacy. It refers to individuals' subjective experience of a specific task, which is based on past personal experience especially success experience. (Muretta, 2005) The direct experience that can as well be referred to as mastery experience is the major that measures the self-efficacy in the online shopping studies while social persuasion and physiological states barely affect the direct experience (Milne, Labrecque, & Cromer, 2009).

Vicarious experience is the indirect experience of a specific task. Individuals obtain information from watching others perform and then evaluate whether or not they could complete that task. Comparison between mastery experience and vicarious experience is less effective in building the self-efficacy beliefs though it may become more sensitive if the individual had less prior personal experience. In this study, experiences include mastery and vicarious are the areas to be discussed.

H5: There will be a significant positive relationship between consumers' experience of Internet and their self-efficacy of privacy.

## CHAPTER IV

### METHODOLOGY AND DATA ANALYSIS

I used a survey research methodology to investigate individuals' attitude of information privacy and online purchasing activities. Questions in The measure was developed through reviewing relevant previous studies from information systems, e-commerce, and psychology fields. This survey was developed and hosted online using the survey tool Qualtrics. Participants for this study were Internet users who using or considering using e-commerce. Mostly, UNCG students and employees. All the participants for this survey were recruited through email invitation. Over 200 completed useable responses were collected. Data collected in this survey were analyzed by SmartPLS 2.0, which is a variance-based Structural Equation Modeling tool. The survey instrument is presented in the Appendix.

#### **Measures**

The entire survey instrument is presented in the Appendix. All items (except the demographics) used a 5-point Likert scale. A brief summary of the measures is as follows.

Table 1. Measures Summary

Construct	Items	Definition	Sources
Hedonic Benefits	4	An overall assessment of experiential benefits and sacrifices.	Forsythe, Liu, Shannon, & Gardner, 2006
Convenience	5	Convenience refers to the flexibility of time and location that Internet offered for online shopping experience.	Forsythe, Liu, Shannon, & Gardner, 2006
Information Available	4	widespread information on the Internet provides useful data for purchasing decisions	Forsythe, Liu, Shannon, & Gardner, 2006
Variety	4	The wide variety of products and alternative options in the online environment.	Forsythe, Liu, Shannon, & Gardner, 2006
Privacy Self-Efficacy	5	Individuals' confidence in their abilities to protect their information privacy from online activities.	Korzaan, Brooks, & Greer, 2009; Youn, 2009
Experience	3	Individuals' subjective experience of specific task, which is based on past personal experience, especially success experience.	Korzaan, Brooks, & Greer, 2009
Awareness of Information Collection	3	Awareness of personal data that has been collected during shopping activities.	Korzaan, Brooks, & Greer, 2009
Awareness of Information Analytics	4	Awareness of personal data been analysis by online service providers.	Korzaan, Brooks, & Greer, 2009
Awareness of Unauthorized Secondary Use	3	Awareness of the situations where organizations use customers' information for other purpose without the authorization from whom the data was collected by.	Korzaan, Brooks, & Greer, 2009
Awareness of errors in personal information	2	Awareness of organizations did not effectively record the information they collected.	Korzaan, Brooks, & Greer, 2009
Online Shopping Intention	4	A user's tendency to use online shopping service in the future.	Forsythe, Liu, Shannon, & Gardner, 2006

## Data Analysis and Results

### Demographics

336 responses were collected for this study totally. After deleting 116 uncompleted responses, 220 valid responses used for data analysis. Most participants

were undergraduate students (73%), and 43% of participants are males, 57% of participants are females.

Table 2. Demographics

<b>Gender</b>	Male	43%
	Female	57%
<b>Age</b>	18-24	52%
	25-34	31%
	35-44	11%
	45-54	5%
	55-64	1%
	65 or over	0%
<b>Education</b>	High school	1%
	College Student	29%
	associate degree	23%
	Bachelor's Degree	31%
	Master's Degree	15%
	Doctorate Degree	0%

### Measurement Model

The measurement model examined:

1. The reliability entails Cronbach's alpha (initial reliabilities) and composite reliabilities for the entire instrument as well as each construct.
2. The confirmatory factor analysis for each item in this instrument.
3. Average variance extracted by each construct.

Nunnally (1967) mentioned in his study that the reliability must exceed 0.7. The Table 2 shows that initial construct reliabilities for each construct are between 0.7 and

0.85, and the initial reliability for the entire instrument is 0.9. The result satisfies Nunnally's theory, which could prove the instrument is useful.

Table 3. Reliabilities (Cronbach's Alpha)

Construct	Items	Cronbach's Alpha
hedonic benefits	4	0.782
convenience	5	0.805
variety	4	0.758
available	4	0.838
secondary use	3	0.796
information collection	3	0.787
errors	2	0.738
data analytics	4	0.723
self-efficacy	5	0.871
experience	3	0.886
intention to use	4	0.792

Table 4. Latent Variable Correlations

	ADA	AVA	AIC	CON	AOE	EXP	HED	INT	ASU	SEF	VAR
ADA	0.726										
AVA	0.162	0.820									
AIC	0.666	0.018	0.820								
CON	0.185	0.666	0.005	0.747							
AOE	0.026	0.215	-0.001	0.151	0.655						
EXP	0.334	0.048	0.379	0.107	-0.040	0.903					
HED	0.374	0.557	0.106	0.542	0.218	0.097	0.771				
INT	0.326	0.446	0.188	0.582	0.214	0.128	0.541	0.801			
ASU	0.643	-0.134	0.562	-0.087	-0.126	0.245	0.249	0.184	0.829		
SEF	0.602	0.258	0.382	0.258	0.085	0.421	0.344	0.365	0.379	0.814	
VAR	0.009	0.625	-0.039	0.510	0.252	0.004	0.439	0.383	-0.102	0.157	0.764

The confirmatory factor analysis followed the initial reliabilities. Table 3 presents the loadings of the measurement items on confirmatory factor were above 0.6.

Table 5. Confirmatory Factor Loadings

Construct	Item	Factor Loadings	Construct	Item	Factor Loadings
Hedonic Benefits	HED1	0.829	Data analytics	ADA1	0.790
	HED2	0.801		ADA2	0.788
	HED3	0.757		ADA3	0.692
	HED4	0.738		ADA4	0.686
Convenience	CON1	0.801	Secondary use	ASU1	0.908
	CON2	0.780		ASU2	0.847
	CON3	0.741		ASU3	0.783
	CON4	0.740	Information collection	AIC1	0.890
	CON5	0.714		AIC2	0.850
Variety	VAR1	0.823	Errors	AIC3	0.781
	VAR2	0.767		AOE1	0.682
	VAR3	0.763	AOE2	0.891	
	VAR4	0.687	Self-efficacy	SEF1	0.841
Information available	IFA1	0.838		SEF2	0.835
	IFA2	0.837		SEF3	0.820
	IFA3	0.823		SEF4	0.818
	IFA4	0.806		SEF5	0.753
Intention to use	INT1	0.866	Experience	EXP1	0.928
	INT2	0.833		EXP2	0.927
	INT3	0.791		EXP3	0.851

In the next step, the average variance extracted (AVE) by each construct had been analyzed. Table 4 shows the AVE range of all constructs were 0.5 to 0.8

Table 6. Average Variance Extracted (AVE)

Construct	AVE
ADA	0.528
IFA	0.673
AIC	0.673
CON	0.558
ERR	0.629
EXP	0.815
HED	0.595
INT	0.642
ASU	0.688
SEF	0.662
VAR	0.584

The final step for instrument validation was assessing composite reliability for constructs in the instrument. The composite reliabilities for the constructs are shown in Table 9. The values presented shows that composite reliabilities of all constructs are above 0.7, which is satisfying the cutoff of 0.7 for composite reliability. Thus, all scales are acceptable, which provide strong evidence of instrument validity.

Table 7. Composite Reliability

<b>Construct</b>	<b>Composite Reliability</b>
ADA	0.816
IFA	0.892
AIC	0.857
CON	0.863
ERR	0.929
EXP	0.854
HED	0.876
INT	0.865
ASU	0.907
SEF	0.848

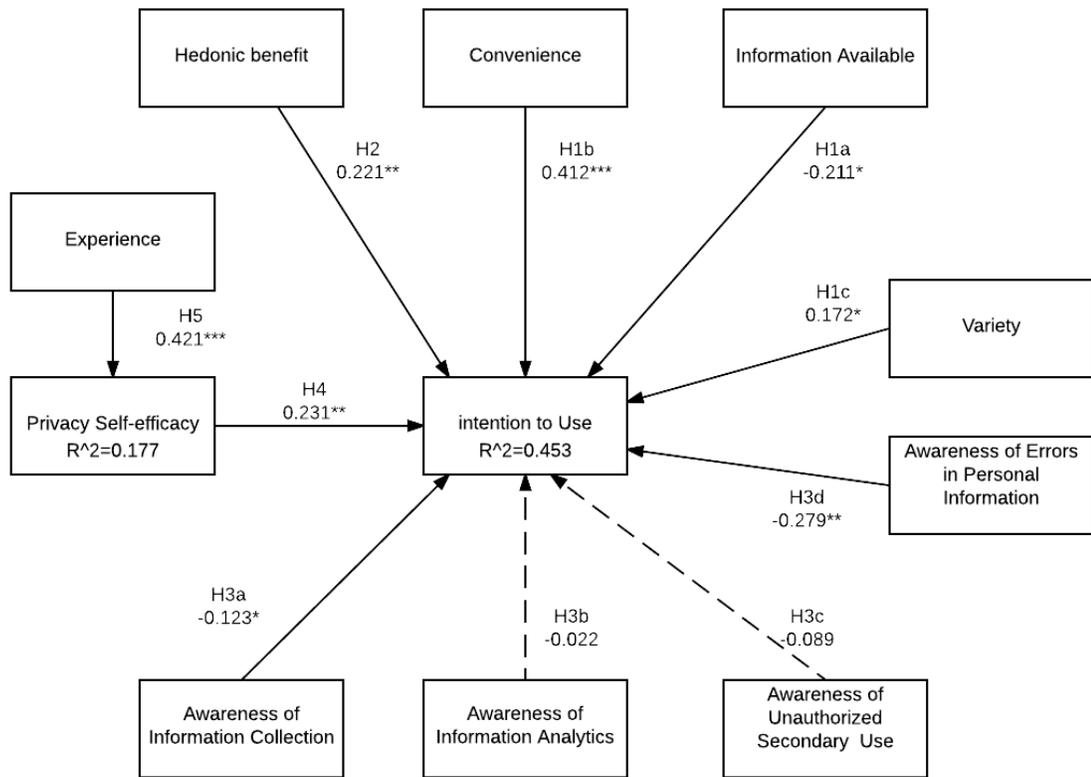
### **Structural Model**

Table 8 showed that the path from awareness of secondary use of data ( $\beta = -0.089$ ,  $t = 1.035$ ,  $p > 0.1$ ) and awareness of data analytics ( $\beta = -0.022$ ,  $t = 0.222$ ,  $p > 0.1$ ) to intention were not significant, which didn't support H3b and H3c. Awareness of information collection ( $\beta = -0.273^*$ ,  $t = 1.938$ ,  $p < 0.01$ ) and awareness of errors ( $\beta = -0.254^{**}$ ,  $t = 1.988$ ,  $p < 0.05$ ) presented negative effect on intention, which supported H3a, H3d. self-efficacy presented a negative relationship with intention to shopping online did reach the significance level of 0.05 ( $\beta = -0.111^{**}$ ,  $t = 1.973$ ,  $p < 0.05$ ), which supported

H4. Personal experience had significant effect to self-efficacy ( $\beta = 0.421^*$ ,  $t = 0.222$ ,  $p < 0.1$ ), indicating a support to H4. For perceive benefits of online purchasing, variety ( $\beta = 0.172^*$ ,  $t = 1.792$ ,  $p < 0.1$ ), convenience ( $\beta = 0.412^{***}$ ,  $t = 4.940$ ,  $p < 0.01$ ) and hedonic benefits ( $\beta = 0.221^{***}$ ,  $t = 2.737$ ,  $p < 0.01$ ) showed positive effect on intention, which support H1b, H1c and H2. However, information available ( $\beta = -0.021$ ,  $t = 0.1.726$ ,  $p < 0.1$ ) presented negative relationship with intention, which is opposite to Hypothesis H1a.

Table 8. Structural Model Results

<b>Paths</b>	<b>Total Effect</b>	<b>T Values</b>	<b>Significance Levels</b>	<b>P Values</b>
ADA -> INT	-0.022	0.222		0.412
INA -> INT	-0.211	1.726	*	0.086
AIC -> INT	-0.223	1.938	*	0.054
CON -> INT	0.412	4.94	***	0.000
ERR -> INT	-0.279	1.988	**	0.024
EXP -> SEF	0.421	7.018	***	0.000
HED -> INT	0.221	2.847	**	0.005
ASU -> INT	-0.089	1.035		0.151
SEF-> INT	0.231	1.973	**	0.025
VAR -> INT	0.172	1.692	*	0.092



\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Figure 2. Structural Model and Paths Coefficient

## CHAPTER V

### DISCUSSION

The key principle of this survey was to analyze the influence of users' self-efficacy on their online purchasing intention. The primary research contribution of this study are as follows: using privacy self-efficacy, perceive benefits from online purchasing, and privacy awareness of information collection, data analytics, errors, and secondary use of data to explain how users' online purchasing intention will be influenced. I identified this study confirmed the awareness of information collection is negatively related to online purchasing intention. And users' self-efficacy is positively related to online purchasing intention.

Hypotheses testing shows the relationship between the perceive benefits form online purchasing and intention to use. Hypotheses H1b, H1c, and H2 were supported.

H1b proposed a positive relationship between convenience of the online environment and intention of online purchasing. The internet offers a flexibility of time and location for the online shopping experience. The results of test confirm the fact that convenience of the online environment is the most significant factor that affect customer's intention to shopping online. It also implied that convenience is the most important factor that attract customer to shop online.

H2c raises the positive relationship between variety and intention of online purchasing. Customers could choose more variety of products from all around the world through Internet, which are significant increase utility of online purchasing, and attract more users. Our study found the support for the relationship between variety and online purchasing intention, and hypothesis H1c was supported as well.

However, H1a was not supported by the study as it hypothesized that the information available would positively relate to customers' intention of using online shopping website. The internet is a hub of uncertainty and risks. It is true that there is general information on the Internet that provides useful data for purchasing decisions, but there are far too many adverts and product information cluttering up the Internet, which decrease customers' intention of using online shopping website. In cases where consumers have relied on the many adverts and cluttered information, continued consumer misinformation has increased as consumers end up purchasing what they did not intend to in the first place, only to become aware after purchase. Further, according to Crowder (2000), many of these adverts are scams, as the available information on the internet does not tell online consumers that adverts work and those that do not as advertising power has been diluted. Consumers are thus left on their own to either make a right of the wrong case that puts both their information and money in jeopardy to only hope for the best. In cases where the advert is a fake, compensation or restitution is not an option. Consumer's intention to use online shopping website thus decreases.

The hypotheses testing also confirm that individuals' awareness of their online privacy will reduce their will to purchase online. In this study, we discussed four specific

privacy awareness including awareness of information collection, awareness of information analytics, awareness of the unauthorized secondary use of data, awareness of errors in personal information. Online users give up some only privacy in exchange for benefits of online shopping. Moreover, users' willingness of using online shopping website will decrease by their awareness of online privacy. Hypotheses H3a and H3d were supported. However, based on the results of path analysis, the other two hypotheses, the awareness of data analytics and the secondary use of data to customers' intention did not achieve the intended result as there is no relation of the two to consumer intention to purchasing online.

A cursory look at data analytics definition according to Crowder (2006), is the finding and communication of meaningful patterns in data. In this context, therefore, data analytics would involve the detection and recording of data on some online purchases on the internet. The data analytics depends on the continuous application of statistics for purposes of researching on quality performance. Since analytics tends to favor the data visualization so to communicate the insight, it would not have any effect on the purchasing intention of the online consumer as data reports consumer insights as an opinion and besides it's the consumers who volunteer to give the information (Close, 2012). Additionally, data analytics from consumers rely on those that have purchased online before, thus customers or those who are willing to do so in future. Close (2012) thus concludes that awareness of data analytics by the consumer does not affect online purchasing intention but improves the same as the views of consumers are taken into

consideration, and they get the quality services they desire while online shopping (Close,2012).

On the other hand, in understanding the secondary use of data, Crowder (2000) begins with explaining the process of anonymizing data. Crowder states that it is a process of removal of the information collected from participants or consumers from the data bank for purposes of protecting the privacy of the research participants or customers that are being interviewed or examined. It is from this process that preparation of data for secondary use is adopted and made available to other researchers. Against this backdrop, Close (2012) concludes that awareness of the secondary use of data does not in any way affect online purchasing intention as consumers privacy is not affected in any way nor is the same deployed to other researchers.

Additionally, the secondary use of data relates to using data to examine a question that was not the purpose of the original data collection and has thus nothing to do with online consumer intention. According to Close (2012), the level of data anonymizing for secondary use involves the removal of or renaming the direct identifiers. This stage goes beyond removing names of the participant as it includes substituting all of the elements or removing them entirely. It is from the above that hypothesis on awareness of the secondary use of data having a relation to affect online purchasing intention is not supported.

The hypothesis H4 is the primary hypothesis in this study, and it assessed that online users' privacy self-efficacy positively relates to their intention to purchase online. In this study, online privacy self-efficacy refers to "individuals' confidence in their

abilities to protect their information privacy from e-markets' information collection and sharing activities" (Rifon, Larose & Marina, 2005). Individuals' experience in a specific area is the most powerful sources of self-efficacy, which was be supported by H5. H4 confirms that online users' self-efficacy received by their experience will increase their concern about privacy in online shopping activities, which will decrease their intention to use online shopping website.

## CHAPTER VI

### CONCLUSION

This study helps better understand the perceived benefits and concerns about online purchasing activities. Using Self-Efficacy Theory to identify the online privacy self-efficacy, we identify that privacy self-efficacy negatively influenced the intention of using online shopping services. Results of this study show that convenience of the online environment is the most significant factor affecting customers' intention to shop online, providing an incentive for individuals to ignore privacy awareness during online shopping activities. We also found that information available is no longer a benefit of shopping online, and it decreased users' tendency to use online shopping services.

There are some limitations in this study. The explanatory power of the relationship between awareness of online privacy and intention is rather low. We explain this with data analytics and secondary use of data during online activities not being visible. Also, most of the survey responses were from college students who have experience with online shopping. They are easy to adapt to new technology and embrace it as a natural part of life. However, we do not exclude the possibility that customers who never use online purchasing services may have different attributes in data analytics and secondary use of data in online activities. Future studies can clarify the survey results from different backgrounds as well as different age groups.

## REFERENCES

- Ackerman, M. S., & Davis Jr, D. T. (2003). Privacy and Security Issues in E-Commerce. *New economy handbook*, pp. 911-930.
- B2C E-Commerce*. (2009). Retrieved from Farlex Financial Dictionary: <http://financial-dictionary.thefreedictionary.com/B2C+E-Commerce>
- Babin, B., Darden, W., & Griffin, M. (1994, March). Work and/or fun: Measuring Hedonic and Utilitarian Shopping Value. *Journal of Consumer Research*, 20(4), 664-656.
- Bakos, Y. (1991). A Strategic Analysis of Electronic Marketplaces. *MIS Quarterly*, 15(3), 295-310.
- Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Prentice-Hall.
- Bandura, A. (1990). Perceived Self-Efficacy in the Exercise of Control over AIDS Infection. *Evaluation and Program Planning*, 13(1), 9-17.
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: W.H. Freeman & Company.
- Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005, October). Are the Drivers and Role of Online Trust the Same for All Web Sites and Consumers? A Large-Scale Exploratory Empirical Study. *Journal of Marketing*, 69, 133-152.
- Belanger, F., Hiller, J. S., & Smith, W. J. (2002). Trustworthiness in Electronic Commerce: the Role of Privacy, Security, and Site Attributes. *Journal of Strategic Information Systems*, 11, 245-270.
- Branscum, D. (2000). Guarding on-line privacy. *Newsweek*, 135(23), pp. 77-78.
- Bucchioni, P., Liu, X., & Weidenhamer, D. (2015, May 15). *Quarterly Retail E-Commerce Sales ST Quarter 2015*. Retrieved from U.S. Department of Commerce: [http://www.census.gov/retail/mrts/www/data/pdf/ec\\_current.pdf](http://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf)

- Chandon, W. P., & Laurent, G. (2000). A Benefit Congruency Framework of Sales Promotion Effectiveness. *Journal of marketing*, 64(4), 65-81.
- Chen, H.-T., & Chen, W. (2015, Number 1). Couldn't or wouldn't? The Influence of Privacy Concerns and Self-Efficacy in Privacy Management on Privacy Protection. *Cyberpsychology, Behavior, and Social Networking*, 18(1), 13-19.
- Corbitt, B. J., Thanasankit, T., & Yi, H. (2003). Trust and E-Commerce: A Study of Consumer Perceptions. *Electronic Commerce Research and Applications*, 2(3), 203-215.
- Culnan, M. J. (2000). Protecting Privacy Online: Is Self-Regulation Working? *Journal of Public Policy & Marketing*, 19(1), 20-26.
- DeLone, W. H., & McLean, E. R. (2004). Measuring e-Commerce Success: Applying the DeLone & McLean Information Systems Success Model . *International Journal of Electronic Commerce*, 9(1), 31-47.
- Donaldson, R. H. (2015). *The Meta-Analytic Organization: Introducing Statistico-Organizational Theory*.
- Dowling, G. (2002). Customer Relationship Management: In B2C Markets, Often Less Is More. *California Management Review*, 44(3), 87.
- Engin, E., & Cam, O. (2009). Effect of Self-awareness Education on the Self-efficacy and Sociotropy-Autonomy Characteristics of Nurses in a Psychiatry Clinic. *Archives of Psychiatric Nursing*, 23(2).
- Forsythe, S., Liu, C., Shannon, D., & Gardner, L. (2006). Development of a Scale to Measure the Received Benefits and Risks of Online Shopping. *Journal of Interactive Marketing*, 20(2), 55-75.
- Grandon, E. E., & Pearson, J. M. (2004). Electronic Commerce Adoption: An Empirical Study of Small and Medium US Businesses. *Information & Management*, 42(1), 197-216.
- Green, H., Yang, C., & Judge, P. C. (1998). *A Little Privacy, Please*. Retrieved from BuinessWeek: <http://www.businessweek.com/1998/11/b3569104.htm>
- He, Q., & Lin, M. (2006). Empirical Study on Online Shopping Behavior. *Economic Management*, 10, 44-49.
- Hofacker, C. F. (2001). *Internet Marketing 3rd edition*. Wiley.

- Im, G. P., & Baskerville, R. (2005). A Longitudinal Study of Information System Threat Categories: the Enduring Problem of Human Error. *ACM SIGMIS Database*, 36(4), 68-79.
- Katawetawaraks, C., & Wang, C. (2011). Online Shopper Behavior: Influences of Online Shopping Decision. *Asian Journal of Business Research*, 1(2), 66-74.
- Kolesar, M. B., & Galbraith, W. (2000). A Services-marketing Perspective on E-retailing: Implications for E-retailers and Directions for Further Research. *Internet Research*, 10(5), 424-438.
- Korzaan, M., Brooks, N., & Greer, T. (2009). Demystifying Personality and Privacy: An Empirical Investigation Into Antecedents of Concerns for Information Privacy. *Journal of Behavioral Studies in Business*, 1(1), 1-17.
- Larose, R., & Rifon, N. J. (2007). Promoting i-Safety: Effects of Privacy Warnings and Privacy Seals on Risk Assessment and Online Privacy Behavior. *Journal of Consumer Affairs*, 41, 127-149.
- Leonard, L. K., & Jones, K. (2009). The Role of Self-Efficacy, Trust, and Experience and the Mediating Effects of Satisfaction in the Choice of C2C E-Commerce among Young Adults. *Journal of Electronic Commerce in Organizations*, 7(3).
- Malandrino, D., Petta, A., Serra, L., Spinelli, R., Scarano, V., & Krishnamurthy, B. (n.d.). Privacy Awareness about Information Leakage: Who knows what about me? *WPES*, (pp. 279-284).
- Malhotra, N. K., Kim, S. S., & Agarwal, J. (2004). Internet Users' Information Privacy Concerns: The Construct, the Scale, and a Causal Model. *Information Systems Research*, 15(4), 336-355.
- Mekovec, R., & Hutinski, Z. (2012, May). The Role of Perceived Privacy and Perceived Security in Online Market. 1549-1554.
- Miller, A. (1982). Computers and Privacy. *Ethics and the Management of Computer Technology*.
- Milne, G. R., Labrecque, L. I., & Cromer, C. (2009). Toward an Understanding of the Online Consumer's Risky Behavior and Protection Practices. *The Journal of Consumer Affairs*, 43(3), 449-473.
- Muretta, R. J. (2005). Exploring the Four Sources of Self-Efficacy. *The Sciences and Engineering*, 65(10).

- Nemati, H. R., & Modaresnezhad, M. (2013). Participatory Sensing or Sensing of Participation: Privacy Issues with Smartphone Apps Usage. *Nineteenth Americas Conference on Information Systems*. Chicago.
- Nunnally, J. C., & Bernstein, I. H. (1967). *Psychometric theory* (Vol. 226). New York: McGraw-Hill.
- Overby, J., & Lee, E.-J. (2006). The Effects of Utilitarian and Hedonic Online Shopping Value on Consumer Preference and Intentions. *Journal of Business Research*, 59, 1169-1166.
- Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. (1997). Exploring the Implications of the Internet for Consumer Marketing. *Journal of the Academy of Marketing Science*, 25(4), 329-346.
- Privacy by Design in the Age of Big Data. (2012). *Information and Privacy Commissioner of Ontario*.
- Rader, E. (2014). Awareness of Behavioral Tracking and Information Privacy Concern in Facebook and Google. *Tenth Symposium On Usable Privacy and Security*, (pp. 51-67). Menlo Park, CA.
- Rifon, N., Larose, R., & Marina, S. (2005, September). Your Privacy Is Sealed: Effects of Web Privacy Seals on Trust and Personal Disclosures. *Journal of Consumer Affairs*, 39(2), 339-362.
- Singh, M. (2002). E-Services and Their Role in B2C E-Commerce. *JOURNAL OF SERVICE THEORY AND PRACTICE*, 12(6), 434-446.
- Smith, J. H., Milberg, S. J., & Burke, S. J. (1996, June). Information Privacy: Measuring Individuals' Concerns About Organizational Practices. *Information Privacy Instrument*, 20(2), 167-196.
- Strecher, V., DeVellis, B. M., Becker, M. H., & Rosenstock, I. M. (1986). The Role of Self-Efficacy in Achieving Health Behavior Change. *Health Education & Behavior*, 13(1), 73-92.
- Sun, Q., & Si, Y. (2007). On Form of Customer Perceived Value of Online Shopping. *Technology Management Research*, 7, 185-187.
- Švenda, P., Cvrcek, D., Fischer-Hübner, S., & Matyáš, V. (2009). *The Future of Identity in the Information Society*.
- Tauber, E. M. (1972). Why Do People Shop? *Journal of Marketing*, 36(4), 46-49.

- To, P.-L., Liao, C., & Lin, T.-H. (2007, December). Shopping Motivations on Internet: A study Based on Utilitarian and Hedonic Value. *Technovation*, 27(12), 774-787.
- Wang, Y.-S., Yeh, C.-H., & Liao, Y.-W. (2013). What Drives Purchase Intention in the Context of Online Content Services? The moderating Role of Ethical Self-Efficacy for Online Piracy. *International Journal of Information Management*, 33, 199-208.
- Wolfenbarger, M., & Gilly, M. (2000). *Shopping Online for Freedom, Control and Even Fun*. Retrieved from <http://www.crito.uci.edu/papers/2000/gilly-wp-6-00>. Pdf
- Xu, H., Dinev, T., Hart, P., & Smith, J. J. (2008). Examining the Formation of Individual's Privacy Concerns: Toward an Integrative View. *International Conference on Information Systems*, 1(1), 14-17.
- Youn, S. (2009). Determinants of Online Privacy Concern and Its Influence on Privacy Protection Behaviors Among Young Adolescents. *Journal of Consumer Affairs*, 43(3), 389-418.
- Zwass, V. (1996). Electronic Commerce: Structures and Issues. *International Journal of Electronic Commerce*, 1(1), 3-23.
- Close, A. G. (2012). *Online Consumer Behavior: Theory and Research in Social Media, Advertising and E-tail*. New York: Routledge.
- Crowder, D., & Crowder, R. (2000). *CliffsNotes Shopping Online Safely*.

APPENDIX A  
SURVEY QUESTIONNAIRE

Construct	Items	
Hedonic benefits	HED1	In my opinion online shopping is fun.
	HED2	In my opinion online shopping is overall a pleasant experience.
	HED3	I get excited when I receive a package.
	HED4	Shopping online can be fun for its own sake.
awareness of data analytics	ADA1	I feel confident that I know how my online personal information will be used.
	ADA2	I believe online companies will keep confidential what they learn about me from my activities on their site.
	ADA3	I believe online companies use what they learn about me from my activities on their site to provide me with a better shopping experience.
	ADA4	I am not concerned about analytics performed on my information.
Convenience	CON1	In my opinion online shopping is convenient.
	CON2	I can shop in the privacy of my home.
	CON3	I can shop whenever I want.
	CON4	I don't have to wait to be served or attended to.
	CON5	I am not embarrassed if I don't make a purchase.
Variety	VAR1	Items from everywhere are available online.
	VAR2	There is a broader selection of products online.
	VAR3	In my opinion online shopping provides better product selection.
	VAR4	In my opinion online shopping allows for better shopping comparison.
Information available	AVA1	I can access many brands and retailers online.
	AVA2	I can compare the pricing of the same product from multiple companies.
	AVA3	I can get good product information (reviews) online.
	AVA4	I think that information obtained from the web is useful.
Intention to use	INT1	I would be willing to recommend online shopping to others.
	INT2	I would be willing to shop online again.
	INT3	I would have positive things to say about shopping online.
	INT4	I will keep shopping online, even if I have had a bad shopping experience.
Awareness of Secondary use of data	ASU1	I believe that the information I share with online companies will not be shared with other companies.
	SEU2	I am not concerned about online shopping companies using my personal information for other purposes without notifying me or getting my authorization.

Awareness of Secondary use of data	SEU3	I am NOT concerned about my personal privacy because I think that the information I share with these companies will not be shared with third party companies.
Awareness of information collection	AIC1	I feel comfortable with an online shopping website collecting my information from my activities on their site.
	AIC2	I feel confident about knowing what type of personal information companies collect about me on the Internet.
	AIC3	I feel that I have control on the type of information collected on me on the Internet.
Awareness of errors	AOE1	I believe that online companies should have better procedures to correct errors in personal information.
	AOE2	I believe I am able to correct any errors about me that exist with the online company I shop with the most.
Self-efficacy	SEF1	I feel confident that I can see through Internet fraud.
	SEF2	I feel confident that I can identify Phishing Websites.
	SEF3	I feel confident that I could recognize if my private information were compromised online.
	SEF4	Overall, I consider myself a computer savvy person.
	SEF5	Overall, I consider myself a savvy Internet user.
Experiences	EXP1	I review and read different sources to gain a better understanding about how to protect my online privacy.
	EXP2	I review and read different sources to gain a better understanding about how my personal data is used by online companies.
	EXP3	I read and follow news that relates to online privacy.