How Do Trust and Risk Affect Customers' Online Purchase Intention? A Study of Trust and Risk in the Online Shopping Context

by

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ABSTRACT

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Internet technology and e-commerce have both grown rapidly over the past few decades. Customer trust and perceived risk have both been widely discussed in previous studies. According to well-established studies, trust consists of three dimensions: ability, benevolence, and integrity. Risk consists of behavioural uncertainty and environmental uncertainty. The question then is how do trust and risk influence customers’ online purchase intention? Price is also a crucial variable in the current thesis’ conceptual model, even although the relationship between price and risk is controversial. This thesis is an investigation of trust and perceived risk in online context with price incorporated as a key factor. I used survey method to investigate how trust and risk will influence purchase intentions in an online context, as they are latent constructs. My study also employed a scenario-based experimental design method. The data was analysed with structural equation modeling. The results showed that ability had negative and significant effect on risk. Benevolence had positive and significant effect on purchase intention when the product price is high. Behavioral uncertainty had significantly positive effect on benevolence and purchase intention for high-price products.
ACKNOWLEDGEMENTS

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TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION

CHAPTER2: LITERATURE REVIEW

2.1 Trust

2.1.1 Definition of trust

2.1.2 Dimensional nature of trust and their measurements

2.2 Risk Literature

2.2.1 Definition of risk

2.2.2 Dimensional nature of perceived risk and their measurements

2.3 Trust-Risk Relationship Literature

2.4 Trust-Purchase Intention Relationship Literature

2.5 Price-Risk Relationship Literature

2.6 Risk-Purchase Intention Relationship Literature

2.7 Gap identification

CHAPTER 3: CONCEPTUAL MODEL AND HYPOTHESES

CHAPTER4: RESEARCH METHODOLOGY

4.1 Survey

4.2 Measurement Items

4.3 Participants and Sample Size

4.4 Procedures

4.5 Method of Data Analysis

CHAPTER 5: RESEARCH RESULTS

5.1 Overview of Data Analysis

5.2 Assessment of Measurement Model
5.3 Assessment of Structural Model ................................................................. 38
5.4 Hypothesis Testing .................................................................................... 38
5.5 Condition Effect ....................................................................................... 43
5.6 Discussion .................................................................................................. 44

CHAPTER 6: CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCH ................................................................. 45

6.1 Contributions ............................................................................................. 45
   6.1.1 Theoretical Contributions ..................................................................... 45
   6.1.2 Managerial Contributions ..................................................................... 46
6.2 Limitations and Future Research ................................................................. 47

REFERENCES .................................................................................................... 48

Appendix ............................................................................................................. 52
   Appendix A: Final Questionnaire for Main Study ........................................... 52
   Appendix B: Correlation Matrix ..................................................................... 62
LIST OF TABLES

Table 1 Summary of Trust Measures .........................................................11
Table 2 Summary of Perceived Risk Measures ........................................17
Table 3 Risk Scenarios Description..........................................................29
Table 4 Measurement Model with Factor Loadings and Reliability ........37
Table 5 Average Variance Extraction of Constructs..................................37
Table 6 Fit Indices of Structural Model....................................................38
Table 7 Path Analysis of H1 (indirect).....................................................39
Table 8 Path Analysis of H1 (direct).........................................................39
Table 9 The Effect of Condition on Trust................................................43
Table 10 The Effect of Condition on Purchase Intention ..........................44
LIST OF FIGURES

Figure 1 Mayer et al., (1995) Trust Model ................................................................. 9
Figure 2 Conceptual Model......................................................................................... 26
Figure 3 The Web Page of Scenario 1 ........................................................................ 30
Figure 4 The Web Page of Scenario 2 ........................................................................ 31
Figure 5 The Web Page of Scenario 3 ........................................................................ 32
Figure 6 The Web Page of Scenario 4 ........................................................................ 33
Figure 7 Result of Hypothesis 1 ................................................................................ 40
Figure 8 Result of Hypothesis 2 ................................................................................ 41
Figure 9 Result of Hypothesis 3 & 4 .......................................................................... 42
CHAPTER 1: INTRODUCTION

According to United Nations Conference on Trade and Development (UNCTAD), online payment is defined as “the process of finance or payment mainly using the medium of the Internet” (UNCTAD, 2011). Forrester Research reported that online retail spending reached a height of $20.6 billion in 2013 and predicted that figure to climb to $33.8 billion in 2018 (Shaw, 2013). As e-commerce becomes a more popular shopping behavior (Keen, Wetzels, Ruyter, & Feinberg, 2004), the effectiveness and security of online transaction become more significant issues. Customers’ perceived uncertainties and sensitive concerns about the online retailers are challenges that must be addressed if the goal is to develop a better e-commerce environment (Yang, Pang, Liu, Yen, Tarn, 2015). Perceived risk has been studied extensively in extant literature. For example, several studies have stressed the unpredictability of Internet infrastructure and how this nature generates uncertainty in online transactions (Brynjolfsson & Smith, 2000). This uncertainty has been identified as one of the main problems for customers that hesitate to engage in online transactions (Yang et al., 2015). Perceived risk is also a crucial factor in customer purchase behavior as customers aim to maximize their purchasing utility by avoiding risks and mistakes (Ghotbabadi, Feiz, & Baharun, 2016).

Consumer attitudes towards B2C (business to consumer) e-commerce depend largely on consumers’ recognition of online retailers as reliable (Pavlou, 2003). Online trust and perceived risk are strongly connected to each other, and together, they represent two of the most important components in e-commerce. The relationship between trust and risk has also been extensively discussed in previous studies. Trust reduces risk and uncertainty in individuals (Corritore, Kracher, Wiedenbeck, 2003). In online context, one of the reasons why consumers worry about conducting online transactions via e-commerce is because they
have concerns about sharing personal and financial information on the web. Trust helps overcome perceived risk and insecurities (McKnight, Choudhury, Kacmar, 2002). This study aims to further existing research by proposing an aggregate model to better understand customer behavior in an online context, with the following main objectives:

- To construct a conceptual model that takes into account the interactive and complex relationships between online trust, risk, purchase intention, and price.
- To identify the tradeoff between behavioral uncertainty and environmental uncertainty on their influences on consumer purchase intentions and trust.
- To test the conceptual model on several hypotheses by using a sample of young generation of Canadians.

The rest of this paper proceeds as follows. Chapter 2 presents a detailed literature review that expounds on the concepts of trust and risk; then the relationship between trust and risk, trust and purchase intention, price and risk, and risk and purchase intention; and finally, the gap in existing literature. Next, Chapter 3 focuses on the development of conceptual model and relevant hypotheses. Finally, the research methodology and data collection procedures will be discussed in Chapter 4.
CHAPTER 2: LITERATURE REVIEW

The literature review begins by touching on the literature on trust and risk, including the definitions and dimensions of both concepts. Next, the relationship between trust and risk, trust and purchase intentions, price and risk, and risk and purchase intentions in both offline and online contexts are reviewed. The literature review will then conclude with the gap in existing literature.

2.1 Trust

Trust is everywhere. Trust exists in all forms of human relationships. Human nature is important in both business and political behaviors. Human nature is affected by objective rationality. However, the rationality of individuals is constrained by several forms of risks, including functional, social, financial or monetary, physical, and psychological risks (How, 2013). In the business environment, various co-operative economic activities, such as a co-operation between investors and companies, between retailers and vendors, or between employers and employees, requires trust (Fukuyama, 1995). “Trust”, in addition to “suspicion”, is also widely discussed in the Prisoner’s Dilemma game, given that the nature of the game involves the mutual interests of all players (Kee & Know, 1970). In the world of politics, political trust is a central factor of political efficacy, and influences citizens’ anticipations of the quality of government action. Political trust has been defined as the extent to which citizens perceive their government’s outputs to be in the interest of public or demand (Craig, 1979). In academia, trust also exists in the researcher-manager relationship. Whether or not knowledge users (e.g. marketing managers) trust their knowledge providers (e.g. marketing researchers) when making use of marketing information has been discussed in previous studies (Moorman, Zaltman, & Deshpande, 1992; Moorman, Deshpande, & Zaltman, 1993).
2.1.1 Definition of trust

*Dictionary definition of trust*

The dictionary definition of trust is “the reliance or confidence on a person or thing.”

“Expectation of predictability” and “motivational relevance” have been mentioned to be essential in the definition of trust (Deutsch, 1958). Deutsch (1958) defined trust as follows: “if an individual expected trust in the occurrence of an event and his expectations will lead to behavior which he perceives to have greater negative consequences when the expectation is not confirmed than positive consequences when the expectation is confirmed.”

*Trust in psychology literature*

Trust continues to play a crucial role in many aspects and forms of human relationships. In the psychology literature, interpersonal trust is defined as “an individual or a group hold an expectancy that the word, verbal, promise, or written statement of another individual or group can be relied” (Rotter, 1967). The introduction of parties was first discussed by Kee and Knox (1970). Specifically, the authors argued that if one party chooses to trust the other party, the other party could choose to be trustworthy or untrustworthy. However, when a party chooses not to trust the other party, then the other party has no further options. For example, a mother’s trust towards a babysitter is not the same as the trust that a country would have towards another country in economic/political environment. Trust has also been defined as “the willingness of an individual or a group based on the expectancy that the other performs a particular action important to the trustor, irrespective of the ability to control that other individual or group” (Mayer, Davis, & Schoorman, 1995). This definition can be applied to identifiable parties who are perceived to act/react to each other. Johnson-George and Swap (1982) mentioned that “the willingness to take risks may be one of the few characteristics common to all trust situations” They also pointed out that the willingness to exhibit trust is
determined by several specific factors in a given situation. Similarly, Moorman et al. (1992) defined trust as “the willingness to depend on a confident exchange partner”. Hence, the person whom one trusts to look after one’s pet when one is on vacation may not necessarily be trusted to fix one’s car.

*Trust in business literature*

In marketing literature, trust is suggested to be one of the key components of buyer-seller relationships (Morgan & Hunt, 1994; Selnes, 1998; Moorman et al., 1992). More specifically, in customer-seller relationship, trust is defined as “the expectancy held by the customer that the service provider is reliable and can be depended on to deliver on its words” (Sirdeshmukh, Singh, & Sabol, 2002). Marketers are now putting more investments into building long-term relationships with customers (Doney & Cannon, 1997). Being a trusted cooperator is now a requirement for being an effective competitor in the global economy (Morgan & Hunt, 1994). Doney and Cannon (1997) drew on social psychology literature and marketing literature to define trust as “the perceived ability and benevolence of a purpose of trust”. In online context, for trust to exist, customers need to believe that the sellers have both the motivation and the ability to provide and deliver products and services of an expected level of quality (Jarvenpaa, Tractinsky, & Vitale, 2000). Online trust is defined as “an attitude of confident expectation in an online context of perceived risk that one’s vulnerabilities will not be used”. Online trust is also viewed as the dependence on a company by its stakeholders with regard to the company’s business activities within the website or other electronic medium (Corritore et al., 2003). Managers have derived a set of attributes from the behaviors that indicate buyer-seller trust: consistency and follow-through; sharing ideas, technology, information, and cost savings; open communication and listening; mutual respect; and honesty (Smeltzer, 1997).
Both scholars and managers have used constructs like consistency, mutual respect and sharing information to explain trust.

2.1.2 Dimensional nature of trust and their measurements

According to the model of trust proposed by Mayer et al. (1995) in Figure 1, ability, benevolence and integrity are three essential factors of perceived trustworthiness. Other scholars have noted credibility (Ganesan, 1994) and competence (McKnight et al., 2002), as factors. All factors and their the measures are summarized in Table 1. The trust model proposed by Mayer et al. (1995) has been widely used in other studies (Mayer & Davis, 1999; Gefen, 2002; Hwang & Lee, 2010; Barki, Robert, & Dulipovici, 2015) and the current study will adopt this model and its measures.

**Ability**

Ability is based on the extent to which a buyer believes that a seller has the capacity to fulfill their part of a transaction effectively and reliably. Ability is concerned with a pattern of stability, consistency, and control over the behavior performed (Ganesan, 1994). It is the extent to which a party believes in the competence and skills of the trusted party (Hwang & Lee, 2010). In a specific domain where trustees are highly competent, ability is a combination of skills, proficiencies, and characteristics (Mayer et al., 1995).

**Credibility**

Ganesan (1994) also referred to credibility in his discussion of the retailer-vendor relationship. He used survey items such as “This resource’s representative is honest in dealing with us” and “The resource’s representative is frank about the problems when problems occurs such as shipment delays” to measure vendor’s credibility and items such as
“The buyer representing the retailer is knowledgeable about the product” and “The buyer representing this retailer do not think at our position” to measure retailer’s credibility.

*Competence*

The model proposed by McKnight et al. (2002) refers to competence, and some of the survey items used to measure competence include “LegalAdvice.com is capable and professional in providing legal advice”, “LegalAdvice.com plays its role of giving legal advice very well” and “Overall, LegalAdvice.com is a competent and proficient Internet legal advice provider”.

*Benevolence*

Benevolence is based on the extent to which a buyer believes that a seller has beneficial motivations to the buyers when new situations arise, especially those for which a commitment was not made (Ganesan, 1994). Benevolence encompasses the intentions, qualities, and characteristics that are attributed to the trustor rather than just the behavior (Remple, Holmes, & Zanna, 1985). It is the extent to which an individual or a group believes that the trusted one will do good to the them (that is, in the case of online commerce, the buyers) (Hwang & Lee, 2010). Benevolence indicates that the buyer has some special attachment to the seller (Mayer et al., 1995). This attachment is comparable to the relationship between a tutor and a trainee, in which the tutor would want to help the trainee regardless or not he or she is required to do so. Even if the buyers’ credibility is not fully guaranteed, sellers still trust them because perceived benevolence is a positive (Ganesan, 1994). Examples of survey items for measuring benevolence are “LegalAdvisor is interested in my well-being, not just its own” (McKnight et al., 2002), “Urban-Furniture seems to really put efforts on what is important to me”, “The resource’s representative cares for us”, “and
“The buyer representing this retailer has made sacrifices for us in the business activities” (Ganesan, 1994).

*Integrity*

Integrity in relation to the relationship between trustor and trustee involves adherence to principles of morality that the trustor finds acceptable. Integrity is defined as “a complicated concept with association to conventional moral standards—especially those of truth telling, fairness, and honesty—as well as to personal ideals that may conflict with such standards (Mcfall, 1987). Previous studies (McFall, 1987) illustrated that both the attachment to and acceptability of moral standards are essential because personal integrity is formed by this set of principles. Only if the trustor accepts a particular set of principles, the trustee would be considered to have moral integrity for our purposes. Acceptability is consistent with trustor’s trustful communications about the trustee, belief that where the trustee has a sense of justice, trustor’s past actions, and the extent to whether the trustor’s action is congruent with the words. All the above factors will influence higher or lower perceived integrity.
Discussion

Capability, proficiency, and knowledge are frequently used to measure ability, credibility and competence (Mayer et al., 1995; Ganesan, 1994; McKnight et al., 2002; Gefen, 2002; Hwang & Lee, 2010; Barki, Robert, & Dulipovici, 2015). Benevolence is crucial in human relationships, and this includes buyer-seller relationships. It is not controversial to measure benevolence. However, while most studies measured integrity (Mayer & Davis, 1999; McKnight, et al., 2002; Schlosser, White & Lloyd, 2006; Okazaki, Li & Hirose, 2009; Chuang & Fan, 2011), some studies only focused on ability and benevolence (Ganesan, 1994; Xie & Peng, 2011; Toufaily, Souiden & Ladhari, 2013). Integrity is aligned with moral standards (McFall, 1987). In customer-seller relationship, customers view corporate behavior such as corporate social responsibility (CSR) as a reflection of integrity. Taking into account the items used to measure integrity, it is clear that qualities such as values, sincerity and honesty do not overlap with ability. The current study is concerned with the online shopping
context. Integrity in this context is defined by the extent to which a party believes a trustee to be honest, able to keep promises, and accepting of rules (Hwang & Lee, 2010). To be specific, it is the extent to which customers trust that an online platform will stick to the return policy, the expected delivery date, insignificant differences between a picture of the product and the actual product, etc. In my study, I will keep three dimensions (trust, benevolence, integrity) of Mayer et al (1995) framework as the constructs to test trust.
Table 1 Summary of Trust Measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability</td>
<td>Urban-Furniture seems very capable of performing online transactions. Urban-Furniture appears to be successful at the things it tries to do. Urban-Furniture seems to have much knowledge about what needs to be done to fulfill online transactions. I feel very confident about Urban-Furniture's online skills. Urban-Furniture appears to have specialized capabilities that can increase its performance with online transactions. Urban-Furniture appears to be well qualified in the area of e-commerce. Nonexpert/expert (1 to 7) Untrained/trained (1 to 7) Inexperienced/experienced (1 to 7)</td>
<td>Mayer &amp; Davis, 1999, Moorman, Deshpande &amp; Zaltman, 1993</td>
</tr>
<tr>
<td>Credibility</td>
<td>This resource's representative has been frank in dealing with us. Promises made by this resource's representative are reliable. This resource's representative is knowledgeable regarding his/her products. This resource's representative does not make false claims. This resource's representative is not open in dealing with us. If problems such as shipment delays arise, the resource's representative is honest about the problems. This resource's representative has problems answering our question. LegalAdvice.com is competent and effective in providing legal advice. LegalAdvice.com performs its role of giving legal advice very well. Overall, LegalAdvice.com is capable and proficient Internet legal advice provider. In general, LegalAdvice.com is very knowledgeable about the law.</td>
<td>Ganesan, 1994, McKnight, Choudhury, &amp; Kacmar, 2002</td>
</tr>
<tr>
<td>Competence</td>
<td>Urban-Furniture seems very concerned about my welfare. My needs and desires appear to be important to Urban-Furniture. It does not seem that Urban-Furniture would knowingly do anything to hurt me. Urban-Furniture seems to really look out for what is important to me. Urban-Furniture appears to go out of its way to help me. This resource's representative has made sacrifices for us in the past. This resource's representative cares for us. In times of shortages, this resource's representative has gone out on a limb for us. This resource's representative is like a friend. We feel the resource's representative has been on our side. I believe that LegalAdvice.com would act in my best interest. If I required help, LegalAdvice.co, would do its best to help me. LegalAdvice.com is interested in my well-being, not just its own.</td>
<td>Mayer &amp; Davis, 1999, Ganesan, 1994, McKnight, Choudhury, &amp; Kacmar, 2002</td>
</tr>
<tr>
<td>Benevolence</td>
<td>Urban-Furniture seems to have a strong sense of justice. Urban-Furniture appears to try hard to be fair in dealings with others. Urban-Furniture's actions and behaviors are not very consistent. I like Urban-Furniture's values. Sound principles seem to guide Urban-Furniture's behavior. LegalAdvice.com is truthful in its dealings with me. I would characterize LegalAdvice.com as honest. LegalAdvice.com would keep its commitments. LegalAdvice.com is sincere and genuine.</td>
<td>Mayer &amp; Davis, 1999, McKnight, Choudhury, &amp; Kacmar, 2002</td>
</tr>
</tbody>
</table>

2.2 Risk Literature

Like trust, risk is everywhere, and there are many forms of risk, including safety risk, political risk, military risk, economic risk, investment risk, business risk, etc. However,
although we are unable to avoid risk, we can estimate it before making decisions (Kaplan & Garrick, 1981).

2.2.1 Definition of risk

Dictionary definition of risk

The term “possibility” often occurs in the definition of risk. There is distinction between risk and uncertainty. Uncertainty is the involvement of unknown information. Risk includes both uncertainty and the possibility of damage or loss. There is also distinction between risk and hazard. The dictionary definition of hazard is “a source of danger”. It emphasizes the source that delivers damage or loss (Kaplan & Garrick, 1981). Decision risk is defined as “the degree to which there is uncertainty about whether significantly potential or disappointing consequences of decisions will be realized”. Risk behavior is defined as “the extent of risk associated with the decisions made” (Sitkin & Pablo, 1992). Risk perception is defined as “one’s assessment of how risky a condition is in terms of probabilistic estimates of the extent of conditional uncertainty, how confident that uncertainty is, and controlling in those estimates” (Sitkin & Weingart, 1995).

Risk in organizational behavior literature

In organizational behavior literature, the determinants of risk propensity are risk preferences, inertia, and outcome history. The determinants of risk perception are risk propensity, problem framing, top-management team homogeneity, social influences, problem domain familiarity, and organizational control systems (Sitkin & Pablo, 1992). Sitkin and Weingart (1995) proposed risk perception to be a mediator on the risk propensity-risk behavior relationship. In an interaction partnership, if an individual enters a situation that leads to negative consequences and is unable to control it, he or she perceives risk. The degree of perceived
risk is higher when there are more negative consequences and when the individual has less control (Koller, 1988). Perceived risk is defined as “a trustor’s belief about likelihoods of gains and losses outside of expectations that involve the association with the particular trustee” (Jarvenpaa et al., 2000). Generally speaking, the higher the risk, the lower the possibility of transaction (Gefen et al., 2002). The higher the risk is, the more likely customers are to perceive an opportunity of undergoing a loss, thus the lower the expected value from the transaction (Sitkin & Weingart, 1995).

Risk is important in ecommerce. Generally, channel risk has proven to have a more significant effect on purchase willingness than store risk. For high-value products, the web tends to be a medium that provides information, but not a medium to make a purchase. For low-value products, the web tends to be a channel of purchase. The online channel introduces uncertainty and turns the situation into a negative consequence situation, not into a positive one (Gefen et al., 2002).

**2.2.2 Dimensional nature of perceived risk and their measurements**

Perceived risk is a crucial factor in customer purchase behavior as customers intend to maximize the purchasing utility by avoiding risks and mistakes (Ghotbabadi, Feiz, & Bahrarun, 2016). The uncertainties are seen as one of the main problems for customers who to hesitate to make the online transaction (Yang et al., 2015). The view of B2C e-commerce depends on consumers’ recognition of online retailers as reliable ones (Pavlou, 2003). The Internet infrastructure is unpredictable, which generates uncertainty in online transactions (Brynjolfsson & Smith, 2000). In Sitkin and Pablo’s (1992) study, outcome uncertainty, outcome expectations, and outcome potential are three important dimensions of risk. Outcome uncertainty is defined as variability of outcomes. The risk is higher in an uncontrollable situation in which outcomes occur purely by chance compared to a situation in
which decision makers modestly influence outcomes. Outcome expectations include both positive and negative outcomes although some literature emphasizes negative outcomes (Kaplan & Garrick, 1981). Positive expectations will generate different decision-making behavior and decision-framing than negative expectations. When outcome potential is great, individuals are willing to make purchases. The typical example is buying lottery tickets because the winning probability is inflated. Perceived risk focuses on customers’ losses from retailers’ action. In an online transaction, the retailer is not the only reason for losses. Trust-related behaviors such as making a purchase by providing credit card information and sharing personal information are commonly discussed in e-commerce. The online environment also leads to information compromise, as well as information risk (Lee, Warkentin, & Johnston, 2016). Therefore, in online context, the dimensions of perceived risk are behavioral uncertainty and environmental uncertainty. There is risk of monetary loss in online transactions because customers become vulnerable to distorted information, provided by the online retailers, when they rely on electronic information. Risk of loss of privacy exists because of sharing personal information with online retailers (Pavlou, 2003).

**Behavioral uncertainty**

Behavioral uncertainty creates because online platforms have the opportunity to act in an opportunistic manner by taking advantage of the long-distant and unbiased nature of e-commerce and the inability of government to fully control all online transactions. Product misrepresentations, false identity demonstrations, private information leaks, misleading advertising, and denunciations of warranties are examples of opportunistic behavior. Behavioral uncertainty arises economic risk because of the likelihood of monetary losses; personal risk because of possible insecure services and products; seller performance risk
because of incomplete controlling; and privacy risk because of the chance to disclose private consumer information (Pavlou, 2003).

*Environmental uncertainty*

Environmental uncertainty arises mostly because of the unexpected nature of the internet, which is beyond the adequate monitoring of both the websites and the consumers. Even though retailers have a critical influence on the safety of the transaction medium (e.g., encryption, authentication, firewalls), it is possible that third parties will compromise the online transaction process. Credit card information theft, leaks of personal information, and stealing of private information by hackers are examples of environmental uncertainty. Environment uncertainty includes economic risk, because of the possibility of monetary losses, as well as privacy risk because of the likelihood of theft of personal information or illegal disclosure (Pavlou, 2003). Environmental uncertainty is heavily affected by behavioral actions from online retailers that reduce concerns about web infrastructures and increase online trust (Pavlou, 2003).

*The measurements of perceived risk*

Risk can be operationalized in different ways. The first method involves measuring the probability of a negative consequence; the second method involves measuring the magnitude of the negative consequence; the third method involves calculating the difference between positive and negative consequence; and lastly, the fourth method involves calculating an entire weight of the positive-negative continuum (Gefen et al., 2002). More straightforward items for measuring perceived risk exist in early literature (Sitkin & Weingart, 1995; Jarvenpaa et al., 2000). In Sitkin and Weingart’s study (1995), the measurement of risk perception is a four-item scale. Participants were asked two questions.
The first of the two was “How would you characterize the decision of whether to buy a product from this web retailer?” measured on three semantic differential scales: “significant opportunity” to “significant threat”, “high potential for loss” to “high potential for gain”, and “very positive situation” to “very negative situation”. The second question was “What is the likelihood of you making a good bargain by buying from this store through the internet?” on a “very unlikely” to “very likely” semantic differential scale. All scales were seven point scales.

Risk was broken down into economic risk, functional risk, security risk, privacy risk, etc. (Yang et al., 2015). The researchers measured aggregate risk perception as well as the various dimensions of risk. The study aimed to test risk perception of online payment and banking. Similarly, in Clemes, Gen, and Zhang’s study (2014), they measured risk perception of different aspects of online shopping including general perception, personal information security, payment safety, etc. These dimensions of risk will be applied to my study by way of a scenario description. This will be discussed in further detail in the methodology section.
Table 2 Summary of Perceived Risk Measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk perception</td>
<td>How would you characterize the decision of whether to buy a product from this web retailer? (significant opportunity / significant risk)</td>
<td>Sittkin &amp; Weingart, 1995; Jarvenpaa et al., 2000</td>
</tr>
<tr>
<td></td>
<td>How would you characterize the decision of whether to buy a product from this web retailer? (high potential for loss / high potential for gain)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How would you characterize the decision of whether to buy a product from this web retailer? (very positive situation / very negative situation)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is the likelihood of your making a good bargain by buying from this store through the Internet? (very unlikely / very likely)</td>
<td></td>
</tr>
<tr>
<td>Overall Risk</td>
<td>Generally, I do NOT think online payment is risky. (Strongly disagree/strongly agree) it's rare to meet unexpected accidents in online payment. (Strongly disagree/strongly agree)</td>
<td>Yang et al., 2015</td>
</tr>
<tr>
<td>Economic Risk</td>
<td>I worry that network cost and other cost will make total expenditure higher than expected. (Strongly disagree/strongly agree)</td>
<td>Featherman &amp; Pavlou, 2003; Lopez-Nicolas &amp; Molina-Castillo, 2008</td>
</tr>
<tr>
<td></td>
<td>I worry that if I request refunding, the third party payment platform won't coordinate. (Strongly disagree/strongly agree)</td>
<td>Veloutou &amp; Bian, 2008</td>
</tr>
<tr>
<td></td>
<td>I worry that monetary loss can be caused by improper operations of third party platform. (Strongly disagree/strongly agree)</td>
<td>Yousaafzai et al., 2003; Corbitt et al., 2003</td>
</tr>
<tr>
<td>Functional Risk</td>
<td>I worry that limited functions of online payment tools won't satisfy my demands. (Strongly disagree/strongly agree)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I worry that I can't pay online due to unstable network. (Strongly disagree/strongly agree)</td>
<td></td>
</tr>
<tr>
<td>Security Risk</td>
<td>I worry that the transaction information will be hacked hackers or viruses caused by security lapses of operation system or online payment tools. (Strongly disagree/strongly agree)</td>
<td>Pennington et al., 2003</td>
</tr>
<tr>
<td></td>
<td>I worry that my account information will be illegally used that payment platform cannot work properly. (Strongly disagree/strongly agree)</td>
<td></td>
</tr>
<tr>
<td>Privacy Risk</td>
<td>I worry that my personal information can be stolen in transaction because of carelessness or illegal activities of others including banks, third parties, etc. (Strongly disagree/strongly agree)</td>
<td>Featherman &amp; Pavlou, 2003</td>
</tr>
<tr>
<td></td>
<td>I worry that my personal information can be improperly collected and used by vendors, banks, or service providers (such as junk mails)</td>
<td>Veloutou &amp; Bian, 2008</td>
</tr>
<tr>
<td></td>
<td>I worry that hackers can steal my personal information from service providers' database and use it illegally. (Strongly disagree/strongly agree)</td>
<td>Yousaafzai et al., 2003</td>
</tr>
<tr>
<td>Risk</td>
<td>I am confident that the information I provide to an Internet retailer is not used for other purposes. There is low risk for purchasing online. I feel secure about providing my bank card details to payment platform. I am confident that my personal information is protected by an Internet retailer. Online shopping is just as secure as traditional retail shopping.</td>
<td>Clemes et al., 2014</td>
</tr>
</tbody>
</table>

2.3 Trust-Risk Relationship Literature

The relationship between trust and risk has been well-established in past studies. Trust and risk have very strong connections to each other. Trust is the degree to which a trustee is willing to be engaged in risky behavior that origin from the trustee’s vulnerability to the trustee’s behavior (Gefen, Rao, &Tractinsky, 2002). Trust is only significant in a risky situation (Gefen, et al., 2002).
As addressed in the last section, behavioral uncertainty is one of the dimensions of risk. Trust decreases behavioral uncertainty with regard to how online retailers act and how much perceived control over possible uncertain transactions from online retailers provide to customers (Pavlou, 2003). In terms of environmental uncertainty, perceived risk in online shopping context manifests through the fear of privacy loss. An individual’s personal information could be compromised by the residual uncertainty after an individual evaluates a party’s trustworthiness (Sitkin & Pablo, 1992). Based on previous literature, Lee et al. (2016) proposed that online trust is theoretically negatively related to perceived risk. The relationship between retailers and vendors is long-term because the mutual advantage is sustainable (Ganesan, 1994; Smeltzer, 1997). For example, in the retailing marketplace, retailers, as well as vendors can attain sufficient information, best prices, and advertising resources with long-term relationships (Ganesan, 1994). Ganesan (1994) suggested that there are two main factors of long-term orientation in channel relationship: mutual dependence and to what extent both parties trust each other. He argued that environmental uncertainty is related to dependence and trust. In B2B relationship, a retailer’s trust toward a vendor can reduce the risk of opportunistic behaviors, thus increasing the possibility of a long-term relationship (Ganesan, 1994).

Koller (1988) proposed that when an individual enters a risky situation, the degree of trust he or she forms in an interaction partnership is higher as the risk is higher. The participants in the study were 28 university students. The dependent variable was trust. Participants faced two conditions; lending a cheap book or lending an expensive book. Naturally, lending an expensive book is riskier than lending a cheap book. The mean of the trust index was significantly lower in the low-risk condition compared to the high-risk condition; hence, the main hypothesis was supported. Moreover, 6 of 15 participants in the high-risk condition group chose not to enter the interaction situation. The author conducted a second study in
which he introduced the trust situation. The participants of the second study were 29 university students. When the participants were skimming a book, a fellow student went up to them and asked to borrow the book. The participants were asked not to make any decision but to tell to what extent they were likely to lose the book in the situation. The results also showed significantly high trust index in the high-risk condition compared to the low-risk condition.

Jarvenpaa et al. (2000) argued that trust decreases customers’ perceived risk of being mistreated by the seller. The low perceived risk influences customers’ attitudes towards the store. They hypothesized that as the customers perceived risk from buying from the store reduces, the higher the customers’ trust towards the online store will be. High customer trust towards an online store will generate more favorable attitudes towards buying from the physical store. The more favorable attitudes that customers have towards buying in the store, the lower the customers’ perception of risk associated with buying online. They also proposed that a reduced risk perception in customers towards purchasing online increases their willingness to purchase online. The data was collected from 184 participants in an experimental design methodology. Control variables were the frequency of the internet usage, general shopping enjoyment, attitudes toward computers, the frequency of internet shopping, past purchasing experience, and web-shopping risk attitudes. The model was tested by structural equation modeling. The items that were used to measure risk perception asked participants to characterize the decision of whether or not to buy a product from an online retailer. These items were adopted from Sitkin and Weingart’s study (1995). The semantic differential scales were “significant opportunity” to “significant risk”, “high potential for loss” to “high potential for gain”, “very positive situation” to “very negative situation”, and “very unlikely” to “very likely”. The results showed that the estimation of the path from trust in store to risk perception was significant.
Mayer et al. (1995) discussed causality relationship between trust and risk, but they did not provide clarification as to the direction of causality. Previous literature proposed three models about the relationship between trust and risk. The first model is a mediation model proposing that risk mediates the trust-behavior relationship. It is an explicit causal relationship.

Luhmann (1979) proposed that trust lowers the perception of risk. The mediation model proposes that the effect of trust reduces perceived risk and indirectly affects behavior (Mayer et al., 1995). For example, lending money to a friend who you trust is less risky than lending money to a stranger. Limerick and Cunnington (1993) argued that trust reduces perceived uncertainty about the future. The second model is a moderator model, proposing that risk has a significant moderating impact on the relationship between risk and behavior. McKnight et al. (1998) argued that when the extent of perceived risk is high versus low, the effect of perceived trustworthiness on trust intention is different. The third model is a threshold model, proposing that when the level of trust is beyond the threshold of the perception of risk, the trustor will get involved in a risk-involving relationship.

Toufaily et al. (2013) argued that perceived website social presence and perceived security/privacy generate strong and positive effect on a website’s competence and benevolence. The data was collected from an online panel with 989 randomly selected French customers. The model was tested with structural equation modelling and the results showed that perceived security/privacy and website social presence were positively correlated with online benevolence and credibility.

Kim and Koo (2016) proposed a bidirectional conceptual model. Their paper aimed to make contributions to the trust-risk literature without the suggestion that one causal directionality is more likely than the other. All constructs and measurement items in the study were widely accepted items that had been used in previous studies. 747 valid respondents from a 1300-subject random panel were selected and assessed. Non-response bias was not a problem in the
study, as observed in the results of a demographic t-test comparing early and late groups. The authors used LISREL 8.52 to test and compare possible mediation effects in two unidirectional models and one bidirectional model.

2.4 Trust-Purchase Intention Relationship Literature

Previous literature has proposed that customers’ trust is positively related to purchase intention, and reported findings that support this relationship (Harris & Goode, 2010; Schlosser, White, & Lloyd, 2006; Kwok, Wong, & Lau, 2015). Jarvenpaa et al. (2000) proposed a research conceptual model. They hypothesized that high customer trust in an online retailer leads to more favorable attitudes towards making purchases. More favorable attitudes lead to increased purchase intentions. The results showed that the effect of trustworthiness on attitude was 0.58 and significant at the 0.05 level. The effect of attitude on willingness to purchase was 0.46 and also significant at the 0.05 level. Thus, trust performs a fundamentally important role in adequately capturing consumer behavior in e-commerce. Customers are unlikely to make transactions with an online retailer that does not display trustworthiness; hence, trust enables customers to engage in online transactions (Hoffman & Novak, 1999). Customers’ trust toward online retailers plays a substantial role in online transactions, and their trust is strongly affected by the manner in which online retailers act (Pavlou, 2003). Pavlou (2003) proposed that customer online transaction intentions are positively influenced by online trust. Experiential exploratory surveys were used to test the hypothesis. Chow’s test and Wilk’s lambda were used to analyze the data. Pavlou (2003) found that trust was positively related to online transaction intentions, hence supporting his proposed hypothesis.

Chuang and Fan (2011) aimed to explore the role of trust in the relationship between online retailer quality and customer’s purchase intention. The data was collected from 325 randomly
selected e-bookstore online users in Taiwan, and the model was tested by structural equation modeling. The results show that trust performed a critical mediating role in the relationship between online retailer quality and customer intention to shop online. Both system quality and service quality positively influenced trust of online retailer directly, and indirectly influenced customers’ purchase intention. Information quality did not have a significant effect on both participants’ trust perception and their intention to shop online.

2.5 Price-Risk Relationship Literature

The price-risk relationship literature is scarce, especially in the online shopping context. In addition, past studies have reported conflicting findings. Interestingly, some research suggests that a high price vs. low price will reduce a consumers' risk perception with the purchase of a specific product (Peterson & Wilson, 1985), while other studies indicated a negative impact of high prices on perceived performance risk (Shimp & Bearden 1982; White & Truly 1989). Grewal, Gotlieb, Marmorstein (1994) proposed that message framing and source credibility have moderating effect on price-risk relationship. To be specific, they proposed that the effect of price on perceived risk was greater when the message is framed negatively compared to positively. Likewise, the effect of price on perceived performance risk was greater when source credibility is low compared to when it is high. Finally, the effect of price on perceived financial risk will be greater when the message is framed positively compared to it is framed negatively. The researchers employed a 2x2x2 between-subject factorial design experiment. The independent variables were message framing (positive vs. negative), source credibility (high vs. low), and price (high vs. low). The product was a VCR. The results supported all three hypotheses. Based on the ANOVA results, neither
the effect of price on performance risk nor the effect of price on financial risk were significant.

2.6 Risk-Purchase Intention Relationship Literature

Bhukya and Singh (2014) discussed four types of perceived risk. They are perceived financial risk, perceived functional risk, perceived physical risk, and perceived psychological risk. The authors proposed that all the four types of risks have direct negative effects on purchase intentions. The context they were interested in focused on retailers’ private labels or store brands in India. The data was collected from 352 customers who had shopped in one or more of the largest Indian retailers, and SPSS was used to analyze the data. The researchers used exploratory factor analysis to extract factors and conduct convergent and discriminant validities. They then employed multiple regression analysis to examine the direct effect of independent variables on purchase intentions. T-tests were also used to test the hypotheses. The results showed that all the perceived risks had negative and significant effects on purchase intentions, thus empirically supporting the researchers’ hypotheses.

In the online shopping context, if customers have lower perceived risk, they are more likely to make purchases. Clemes, et al. (2014) provide empirical evidence to support the negative relationship. Similarly, Jarvenpaa et al. (2000) hypothesized that lower perceived risk will generate higher likelihood to make purchases from an online retailer. The effect of perceived risk on willingness to buy was significant at the 0.05 level, which supports the hypothesis.

2.7 Gap identification

The model I proposed incorporates trust, risk, purchase intention, and price, which makes it a more aggregate model. Jarvenpaa et al.’s model (2000) tested the effect among trust, risk and purchase intention, but they did not take price into consideration. Some studies discussed the
effect of price on risk only (Grewal et al., 1994; Shimp & Bearden 1982; White & Truly 1989). My proposed model incorporates all crucial factors in the online shopping context in one model. This is the first gap the current study aims to fill.

Secondly, the relationship between price and risk is controversial due to the conflicting findings reported by previous studies. Peterson & Wilson (1985) found that a relatively high price vs. low price will reduce a consumers' perception of the performance risk. Other researchers reported a negative effect of price on perceived performance risk (Shimp & Bearden, 1982; White & Truly, 1989). All these studies were concerned with the physical marketplace. This paper aims to investigate how price will affect risk in the online marketplace.

Thirdly, the relationship between trust and risk has been well-established in past literature. I will hence use empirical evidence from young Canadians to test if past findings are still reliable in a new context. When testing the risk-trust relationship and risk-purchase intention relationship, past studies used risk items (Sitkin & Weingart, 1995; Jarvenpaa et al., 2000). I will use descriptions of risk scenarios, paired with unique combinations of behavioral uncertainty and environmental uncertainty, to design four different online retailers. I am also interested in how trust and purchase intentions are influenced by the tradeoff between two dimensions of perceived risk.
CHAPTER 3: CONCEPTUAL MODEL AND HYPOTHESES

According to a majority of the trust-risk literature (e.g. Mayer et al., 1995; Limerick & Cunnington, 1993; Cheung & Lee, 2000; Kim & Koo, 2016), the relationship between trust and risk is negative. Here trust means the trust that the trustor generates toward the trustee. Trust is divided into three dimensions (Mayer et al., 1995). The more the perceived risk, the more the required trust (Gefen et al., 2002). For example, when an individual borrows a huge amount of money from another individual, the lender needs to trust the receiver in on high level because it is a risky situation. When the amount of money decreases, the risk decreases and the required trust also decreases. In the ecommerce context, an overwhelming amount of literature (Stewart, 1999; Ratnasingham & Kumar, 2000; Cheung & Lee, 2000; Pavlou, 2001) suggests that trust reduces the perception of risk. It is worth mentioning that the required trust and the generated trust are two opposite concepts. H1 and H2 is a replication of propositions and findings of previous literature on the relationship between trust and risk and the relationship between trust and purchase intention.

H1a: Ability negatively influences perceived risk on online context.

H1b: Benevolence negatively influences perceived risk on online context.

H1c: Integrity negatively influences perceived risk on online context.

H2a: Ability positively influences online purchase intentions in an online context.

H2b: Benevolence positively influences online purchase intentions in an online context.

H2c: Integrity positively influences online purchase intentions in an online context.

As discussed in a previous section, extant literature on the price-risk relationship is very scant. Although the findings conflict, more researchers argued for the negative influence of price on perceived risk (Shimp & Bearden 1982; White & Truly 1989; Grewal et al., 1994).
Risk and purchase intentions have negative relationship. The higher the risk customers perceive, the less likely they will be to purchase the product (Clemes, et al., 2014; Jarvenpaa et al., 2000).

**H3:** Product price negatively influences perceived risk in online context.

**H4:** Perceived risk negatively influences online purchase intentions.

Figure 2 Conceptual Model
CHAPTER 4: RESEARCH METHODOLOGY

This section aims to outline the research method that was used to test the proposed hypotheses. The purpose of the survey is to test the model in four different scenarios in order to test the proposed hypotheses. I used survey method to investigate how trust and risk will influence purchase intentions in an online context, as they are latent constructs. My study also employed a scenario-based experimental design method. The data was analyzed with structural equation modeling.

4.1 Survey

A survey method was employed to measure the latent constructs. I chose t-shirts as the experiment product that participants will purchase online, mainly because t-shirts are a regular and familiar product that most participants would purchase, and for which most participants would know the average price and available brands. Participants were asked to imagine they are buying a t-shirt on an online shopping platform. There were two price sets, one of a high value and the other of a low value. I also took brands into consideration so that the scenario is more real. In the low-valued price sets, the three brands were H&M, Roots, and Gap. The low prices were $15, $18, and $21. In the high-valued price set, the three brands are Lulu Lemon, Michael Kors, and Club Monaco. The high prices were $80, $85, and $90. The three options were random combination of brands and prices, and the chosen brands are familiar and popular brands.

In the study, the perceived risk scenarios were between-subjects, while price will be within-subject design. There were four scenarios with random combination of high vs. low behavioral uncertainty and environmental uncertainty. Behavioral uncertainty creates because online platforms have the opportunity to act in an opportunistic manner by taking advantage of the long-distant and unbiased nature of e-commerce and the inability of government to fully control all online transactions. Product misrepresentations, false identity demonstrations,
private information leaks, misleading advertising, and denunciations of warranties are examples of opportunistic behavior. Behavioral uncertainty arises

1. Economic risk because of the likelihood of monetary losses;
2. Personal risk because of possible insecure services and products;
3. Seller performance risk because of incomplete controlling; and
4. Privacy risk because of the chance to disclose private consumer information (Pavlou, 2003).

Environmental uncertainty arises mostly because of the unexpected nature of the internet, which is beyond the adequate monitoring of both the websites and the consumers. Even though retailers have a critical influence on the safety of the transaction medium (e.g., encryption, authentication, firewalls), it is possible that third parties will compromise the online transaction process. Credit card information theft, leaks of personal information, and stealing of private information by hackers are examples of environmental uncertainty.

Environment uncertainty includes

1. Economic risk, because of the possibility of monetary losses, as well as
2. Privacy risk because of the likelihood of theft of personal information or illegal disclosure (Pavlou, 2003).

Environmental uncertainty is heavily affected by behavioral actions from online retailers that reduce concerns about web infrastructures and increase online trust (Pavlou, 2003).

Scenario 1 involves both high behavioral uncertainty and high environmental uncertainty; Scenario 2 involves high behavioral uncertainty and low environmental uncertainty; Scenario 3 involves low behavioral uncertainty and high environmental uncertainty; and lastly, Scenario 4 involves both low behavioral uncertainty and low environmental uncertainty. The description of high and low behavioral uncertainty and environmental uncertainty is as shown below.
I named the online shopping website as “iShopper” and I designed 4 webpages for 4 risk perception conditions. For the conditions with low behavioral uncertainty, I added and highlighted “Return policy: Full Refund & No Shipping Fee” and “Track your item every 12 hrs” on the web pages. I removed them for the conditions with high behavioral uncertainty. I put customer rating on the web pages to tell participants how others rate the website that they are browsing, which refers environmental uncertainty. 3.6 out of 5 is for high environmental uncertainty and 4.7 out of 5 is for high environmental uncertainty. I bolded the ratings in the description page. Also, I added and highlighted “Subscribe, track price or share!” on the web pages and bolded in the text with high environmental uncertainty because it makes participants to think that this button may share their cookies. The rest of the web pages are the same for four conditions. There are categories, search bar, and basic functions on the top of the page.

<table>
<thead>
<tr>
<th>Behavior</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral</td>
<td>- There is no mature tracking system. You cannot know where your purchased product is. &lt;br&gt;- There is difference between purchased product and online picture. &lt;br&gt;- If you are not satisfied with the product, you cannot get a full refund and you are paying shipping fee.</td>
<td>- There is mature tracking system. You can know where your purchased product is every 6 hrs. &lt;br&gt;- The purchased product and online picture are almost the same. &lt;br&gt;- If you are not satisfied with the product, you can get a full refund without paying shipping fee.</td>
</tr>
<tr>
<td>Environmental</td>
<td>- The ratings of this seller is relatively low and the reviews are mostly negative. &lt;br&gt;- The safety system of the website is not perfect; there was hacking history before.</td>
<td>- The ratings of this seller is relatively high and the reviews are mostly positive. &lt;br&gt;- The safety system of the website is perfect; there was no hacking history before.</td>
</tr>
</tbody>
</table>

Table 3 Risk Scenarios Description
The description of Scenario 1 is

The customer review of iShopper is **3.6 out of 5**. Like all online retailer websites, it provides a platform where you can choose all different brands of T-shirt. You can click the blue "**Subscribe, track price or share!**" then you will receive subscription email to let you know the latest fashion, sales information, and coupons.

**Figure 3 The Web Page of Scenario 1**
The description of Scenario 2 is

*The customer review of iShopper is 3.6 out of 5. Like all online retailer websites, it provides a platform where you can choose all different brands of T-shirt. If you are not satisfied with the T-shirt, you can get a full refund without shipping fee.*

Figure 4 The Web Page of Scenario 2
The description of Scenario 3 is

The customer review of iShopper is **4.7 out of 5**. Like all online retailer websites, it provides a platform where you can choose all different brands of T-shirt. You can click the blue "**Subscribe, track price or share!**", then you will receive subscription email to let you know the latest fashion, sales information, and coupons. It also has very good tracking system that you can check where your item is every **12** hours.

**Figure 5 The Web Page of Scenario 3**
The description of Scenario 4 is

*The customer review of iShopper is 4.7 out of 5.* Like all online retailer websites, it provides a platform where you can choose all different brands of T-shirt. If you are not satisfied with the T-shirt, you can get a **full refund** and **without** shipping fee. It also has very good tracking system that you can check where your item is every **12 hours**.

**Figure 6 The Web Page of Scenario 4**
4.2 Measurement Items

In this study, the scales proposed by Mayer et al. (1995) have been widely used in other studies (Mayer & Davis, 1999; Gefen, 2002; Hwang & Lee, 2010; Barki, Robert, & Dulipovici, 2015) and the current study adopted this model and its measures.

The following is the list of items

*Ability*

- The online platform seems very capable of performing online transactions.
- The online platform seems to have much knowledge about what needs to be done to fulfill online transactions.
- The online platform appears to be well qualified in the area of e-commerce.

*Benevolence*

- The online platform seems very concerned about my welfare.
- The online platform seems to really look out for what is important to me.
- My needs and desires appear to be important to the online platform.

*Integrity*

- The online platform seems to have a strong sense of justice.
- The online platform appears to try hard to be fair in dealing with others.
- Sound principles seem to guide the online platform’s behavior.

I used two items to test risk perception of four risk conditions. I used straightforward items to measure general perceived risk (Sitkin & Weingart, 1995; Jarvenpaa et al., 2000).

- I feel I will have high potential for loss if I buy a product from the online platform.
- I feel the decision to transact on the online platform is risky.
4.3 Participants and Sample Size
Participants were undergraduate students who enrolled in MCS DE courses and were recruited through the university’s SONA system. Participants got course credits as compensation. The sample size was estimated at 60 participants for each scenario, resulting in 240 participants in total.

4.4 Procedures
An online questionnaire was used. Qualtrics software was used to design the online questionnaire as well as collect the data. All participants were asked to first read and sign the consent form. Participants were asked to imagine that they are shopping from an online retailer where they can buy any of the available brands of T-shirts. After reading one of the four perceived risk scenarios (including text and picture), participants were asked several questions on the extent to which they trust the online shopping platform in ability, benevolence and integrity aspects, to be answered on a seven-point “Strongly Agree” to “Strongly Disagree” semantic differential scale (See Appendix). Participants were also asked if they intended to purchase the t-shirt with random combination of prices and brands. Participants also responded to some risk-related questions designed to test their perception of risk in the four risk scenarios. Some distraction questions on brand cognition, quality, preference, etc., were also asked.

4.5 Method of Data Analysis
Similar to previous studies (Jarvenpaa et al., 2000; Toufaily et al.; 2013; Chuang and Fan, 2011:), the data was modeled using structural equation modeling (SEM) because there are latent variables (e.g. trust and risk) in the model. The software Mplus 1.5 (1) Mac Version was used to analyze the data and test four hypotheses (Muthen & Muthen, 1998-2017).
CHAPTER 5: RESEARCH RESULTS

5.1 Overview of Data Analysis

The studies were conducted on SONA System between June 26\textsuperscript{th}, 2017 to July 28\textsuperscript{th}, 2017. The participants were students who enrolled MCS*1000 (DE) and MCS*2020 (1). The purpose of the study was not told to the participants. The description of the surveys is:

\begin{quote}
This research is about how people perceive and behave in an online shopping context, as online transactions become a popular trend in recent years. I'm interested in what purchase decisions customers will make with the influence of various factors like brand, price, website environment, trust, quality, risk, product, etc.
\end{quote}

54, 33, 17, 33 surveys were collected in Scenario 1, 2, 3, and 4 respectively, totally 137 surveys were collected. There were fewer students who registered the summer semester. This was the main reason that why I did not get enough participants. There were 33 incomplete surveys, making the valid surveys 104. 62.5\% of the participants were female, and 37.5\% were male.

5.2 Assessment of Measurement Model

The structural equation modeling (SEM) was used to analyze the general model fit and the relationship between variables. Data were analyzed using Mplus 1.5 (1) Mac Version (Muthen & Muthen, 1998-2017).

To ensure individual item reliability, factor loading should fall above 0.5 and be significant (Hair, Anderson, Tatham, & Black, 1998). The measurement model showed sufficient factor loadings for all items, except for t3 with 0.444 and t7 with 0.491 (See Table 1). Also, according to Carimines and Zeller (1979), R\textsuperscript{2} should exceed 0.50, because it ensures more than 50\% of the construct variance are explained by the item. Bagozzi and Yi (1988)
suggested that extracted variance should be over 0.5. The AVE (Average Variance Extraction) of constructs benevolence and risk is beyond 0.5, so these two constructs exhibited adequate reliability and convergent validity.

Table 4 Measurement Model with Factor Loadings and Reliability

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Standard Factor Loading</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Ability</td>
<td>t1 0.850</td>
<td>0.159</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>t2 0.510</td>
<td>0.125</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>t3 0.444</td>
<td>0.129</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Benevolence</td>
<td>t4 0.661</td>
<td>0.069</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>t5 0.987</td>
<td>0.066</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>t6 0.600</td>
<td>0.730</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Integrity</td>
<td>t7 0.491</td>
<td>0.109</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>t8 0.901</td>
<td>0.151</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>t9 0.508</td>
<td>0.105</td>
<td>0.000</td>
</tr>
<tr>
<td>Risk</td>
<td>r1 0.673</td>
<td>0.058 0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>r2 0.955</td>
<td>0.132 0.000</td>
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</tr>
</tbody>
</table>

Table 5 Average Variance Extraction of Constructs

<table>
<thead>
<tr>
<th>Ability</th>
<th>loadings</th>
<th>residual</th>
<th>AVE</th>
</tr>
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<tbody>
<tr>
<td>t1</td>
<td>0.850</td>
<td>0.277</td>
<td>0.393</td>
</tr>
<tr>
<td>t2</td>
<td>0.510</td>
<td>0.740</td>
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</tr>
<tr>
<td>t3</td>
<td>0.444</td>
<td>0.803</td>
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<table>
<thead>
<tr>
<th>Benevolence</th>
<th>loadings</th>
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<th>AVE</th>
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<tbody>
<tr>
<td>t4</td>
<td>0.661</td>
<td>0.563</td>
<td>0.591</td>
</tr>
<tr>
<td>t5</td>
<td>0.987</td>
<td>0.026</td>
<td></td>
</tr>
<tr>
<td>t6</td>
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<td>0.639</td>
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<table>
<thead>
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<tbody>
<tr>
<td>t7</td>
<td>0.491</td>
<td>0.759</td>
<td>0.437</td>
</tr>
<tr>
<td>t8</td>
<td>0.901</td>
<td>0.187</td>
<td></td>
</tr>
<tr>
<td>t9</td>
<td>0.508</td>
<td>0.742</td>
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<table>
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<tr>
<td>r1</td>
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<td>0.547</td>
<td>0.682</td>
</tr>
<tr>
<td>r2</td>
<td>0.955</td>
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</table>
5.3 Assessment of Structural Model

The fit of the model was estimated with various indices. The hypothesized model does not fit the data well, since almost all goodness of fit statistics are out of the acceptable range (RMSEA=0.123, RMR=0.132, CFI=0.715, TLI=0.602). The Comparative Fit Index (CFI) and the Tucker Lewis Index (TLI) should fall above 0.95 (Bentler, 1992; Tucker & Lewis, 1973; Hu, Bentler & Kano, 1992). For absolute fit indices, the Root Mean Square Error of Approximation (RSMEA) should fall below 0.08, and the Standardized Root Mean Square Residual (SRMR) should be lower than 0.05 (Steiger & Lind, 1980).

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>Research Result</th>
<th>Recommended Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>161.833 (p=0.000)</td>
<td>p &gt; 0.05</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.123</td>
<td>&lt;=0.08</td>
</tr>
<tr>
<td>SRMR</td>
<td>0.132</td>
<td>&lt;=0.05</td>
</tr>
<tr>
<td>TLI</td>
<td>0.602</td>
<td>&gt;=0.95</td>
</tr>
<tr>
<td>CFI</td>
<td>0.715</td>
<td>&gt;=0.95</td>
</tr>
</tbody>
</table>

5.4 Hypothesis Testing

In this section, the results of proposed hypotheses are discussed.

**H1a:** Ability negatively influences perceived risk on online context.

**H1b:** Benevolence negatively influences perceived risk on online context.

**H1c:** Integrity negatively influences perceived risk on online context.

To test hypothesis 1, first, I modeled trust as the second order factor. According to the path analysis (See Table 5), trust is not the second order factor of ability, benevolence, and integrity to risk since the effect was not significant (Trust→Risk: β=0.046, p=7.04).
I removed trust as the second order factor and tested the direct effect of ability, benevolence, and integrity on risk (Figure 1). The results (See Table 6) showed that ability had negative and significant effect on risk ($\beta=-0.369$, $p<0.05$), but the effect of benevolence and integrity were not significant ($\text{benevolence} \rightarrow \text{risk}: \beta=0.146$, $p=0.320$; $\text{integrity} \rightarrow \text{risk}: \beta=0.077$, $p=0.735$). Since only ability had significantly negative effect on risk, the H1a was supported, and H1b and H1c were not supported.

**Table 7 Path Analysis of H1 (indirect)**

<table>
<thead>
<tr>
<th>Path</th>
<th>Estimate</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability $\rightarrow$ Trust</td>
<td>0.333</td>
<td>0.140</td>
<td>0.017</td>
</tr>
<tr>
<td>Benevolence $\rightarrow$ Trust</td>
<td>0.620</td>
<td>0.133</td>
<td>0.000</td>
</tr>
<tr>
<td>Integrity $\rightarrow$ Trust</td>
<td>0.959</td>
<td>0.016</td>
<td>0.000</td>
</tr>
<tr>
<td>Trust $\rightarrow$ Risk</td>
<td>0.046</td>
<td>0.120</td>
<td>0.704</td>
</tr>
</tbody>
</table>

**Table 8 Path Analysis of H1 (direct)**

<table>
<thead>
<tr>
<th>Path</th>
<th>Estimate</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability $\rightarrow$ Risk</td>
<td>-0.369</td>
<td>0.185</td>
<td>0.046</td>
</tr>
<tr>
<td>Benevolence $\rightarrow$ Risk</td>
<td>0.146</td>
<td>0.147</td>
<td>0.320</td>
</tr>
<tr>
<td>Integrity $\rightarrow$ Risk</td>
<td>0.077</td>
<td>0.228</td>
<td>0.735</td>
</tr>
</tbody>
</table>
**H2a:** Ability positively influences online purchase intentions in an online context.

**H2b:** Benevolence positively influences online purchase intentions in an online context.

**H2c:** Integrity positively influences online purchase intentions in an online context.

The results of path analysis are showed in Figure 2. For the high price set, only benevolence had positive and significant effect on purchase intention ($\beta=0.180$, $p<0.05$), ability and integrity do not show significant effect on purchase intention (ability $\rightarrow$ purchase intention: $\beta=0.113$, $p=0.086$; integrity $\rightarrow$ purchase intention: $\beta=-0.090$, $p=0.291$). For the low price set, none of the trust dimensions had significant effect on purchase intention (ability $\rightarrow$ purchase intention: $\beta=0.005$, $p=0.935$; benevolence $\rightarrow$ purchase intention: $\beta=-0.036$, $p=0.504$; integrity $\rightarrow$ purchase intention: $\beta=0.029$, $p=0.693$). Benevolence is more important to customers’
purchase intentions when they are shopping high-price products online, however, trust has no influence on customers’ purchase intentions when they are shopping low-price products. Therefore, Hypothesis 2a and 2c were not supported for, but Hypothesis 2b was partially supported for high price set.

**H3: Product price negatively influences perceived risk in online context.**

**H4: Perceived risk negatively influences online purchase intentions.**

The effect of risk on purchase intention is negative and non-significant, for both low price set ($\beta=-0.166, p=0.180$) and high price set ($\beta=-0.088, p=0.288$). Regardless of the product price, online risk has no effect on customers’ purchase intention. Hypothesis 4 was not supported.

To test Hypothesis 3, I named the $\beta$ of purchase intention (low) on risk as $b_1$ and the $\beta$ of
purchase intention (high) on risk as b2 and tested if b1=b2. The result showed not significant since the p-value of Wald Test of Parameter Constraints is 0.4016. Therefore, there is difference between the effect of risk on purchase intention for high-price products and low-price products. Price did have effect on risk. However, the β from low price to high price is from -0.053 to -0.009, which suggests positive direction of price and risk. Hypothesis 3 was not supported either.

**Figure 9 Result of Hypothesis 3 & 4**
5.5 Condition Effect

I added three variables, x1 as behavioral uncertainty (BU), x2 as environmental uncertainty (EU), x1x2 (x1x2=x1*x2) as the interaction of behavioral uncertainty and environmental uncertainty. When the BU (or EU) is high, I coded it as 1; when it is low, I coded it as -1.

The results (Table 7) showed that none of the trust dimensions was affected by the condition except benevolence. Only BU had significantly positive effect on benevolence ($\beta=1.018$, $p<0.05$). High BU (e.g. good return policy, tracking system) leads to high benevolence.

Conditions did not have influence on ability and integrity according to the results. Also, EU and the interaction of BU and EU did not contribute to benevolence.

<table>
<thead>
<tr>
<th>ABILITY ON</th>
<th>Estimate</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.228</td>
<td>0.429</td>
<td>0.596</td>
</tr>
<tr>
<td>X2</td>
<td>0.329</td>
<td>0.502</td>
<td>0.512</td>
</tr>
<tr>
<td>X1X2</td>
<td>-0.065</td>
<td>0.639</td>
<td>0.919</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BENEVOLENCE ON</th>
<th>Estimate</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>1.018</td>
<td>0.435</td>
<td>0.019</td>
</tr>
<tr>
<td>X2</td>
<td>0.987</td>
<td>0.515</td>
<td>0.055</td>
</tr>
<tr>
<td>X1X2</td>
<td>-1.041</td>
<td>0.639</td>
<td>0.103</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTEGRITY ON</th>
<th>Estimate</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.427</td>
<td>0.458</td>
<td>0.351</td>
</tr>
<tr>
<td>X2</td>
<td>-0.166</td>
<td>0.545</td>
<td>0.761</td>
</tr>
<tr>
<td>X1X2</td>
<td>0.025</td>
<td>0.681</td>
<td>0.970</td>
</tr>
</tbody>
</table>

Purchase intention was not affected by risk conditions, either, except that BU has significantly positive effect on purchase intention for high-price products ($\beta=0.145$, $p<0.05$). Low BU (e.g. good return policy, tracking system) leads to low customers’ purchase intention when they are shopping high-price products. Conditions did not affect purchase
intentions for low-price products according to the results. Also, EU and the interaction of BU and EU did not influence purchase intentions for high-price products.

Table 10 The Effect of Condition on Purchase Intention

<table>
<thead>
<tr>
<th>PIL ON</th>
<th>Estimate</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.226</td>
<td>0.338</td>
<td>0.503</td>
</tr>
<tr>
<td>X2</td>
<td>-0.158</td>
<td>0.402</td>
<td>0.694</td>
</tr>
<tr>
<td>X1X2</td>
<td>-0.299</td>
<td>0.507</td>
<td>0.555</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PIH ON</th>
<th>Estimate</th>
<th>S.E.</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.145</td>
<td>0.068</td>
<td>0.033</td>
</tr>
<tr>
<td>X2</td>
<td>0.017</td>
<td>0.032</td>
<td>0.602</td>
</tr>
<tr>
<td>X1X2</td>
<td>0.012</td>
<td>0.040</td>
<td>0.762</td>
</tr>
</tbody>
</table>

5.6 Discussion

There were fewer students who registered the summer semester. This was the main reason that why I did not get enough participants. When testing Hypothesis 1, I found that only ability contributed to risk perception. If participants had the impression that the online website is able to deal with the online transactions, they will feel it less risky. They did not care about how much the website care about their welfare and whether the website has a sense of justice when they were asked how risky they feel about the website. It is understandable because Ability is concerned with a pattern of stability, consistency, and control over the behavior performed (Ganesan, 1994; Mayer et al., 1995). When evaluate how risky the website is, safe transactions first occur to customers.

In the results of Hypothesis 2, none of the trust dimensions had effect on purchase intention when customers are shopping low-price products. One possible reason could be price is a dominant factor of purchase intention (Chang & Wildt, 1994). Trust is not that important when the price is low enough. For the high price products, only benevolence had positive
effect on purchase intention. It could be because customers need more sentimental and emotional care when they are shopping relatively luxury products.

Risk did not have significant effect on purchase intention. It is possible that other factors influence, for instance, price, benevolence, and other factors that are not tested in the model. Risk is not a crucial factor for participants when making decisions in online context. Price had significant effect on risk (Peterson & Wilson, 1985). In online shopping context, participants felt significantly different risk when the product price is high vs. low.

CHAPTER 6: CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCH

6.1 Contributions

6.1.1 Theoretical Contributions

The current research aims to achieve a more comprehensive understanding about how customers perceive and behave in an online context under the influence of risk condition. First, the model I proposed incorporates trust, risk, purchase intention, and price, which makes it a more aggregate model. Jarvenpaa et al.’s model (2000) tested the effect among trust, risk and purchase intention, but they did not take price into consideration. Some studies discussed the effect of price on risk only (Grewal et al., 1994; Shimp & Bearden 1982; White & Truly 1989). My proposed model incorporates all crucial factors in the online shopping context in one model. Surveys were conducted online to investigate how customers perceive and behave in an online shopping context.

Second, previous literature about price-risk relationship is scarce. To the best of my knowledge, all the literature discussed price-risk relationship in the physical marketplace. Some research suggests that a relatively high price will reduce a consumers' perception of the
performance risk associated with the purchase of a particular product (Peterson & Wilson 1985), while other studies report a negative effect of high prices on perceived performance risk (Shimp & Bearden 1982; White & Truly 1989). This research investigated the effect of price on risk in an online context and the results showed the effect was significant.

Third, a previous study divided risk into two dimensions: behavioral uncertainty and environmental uncertainty (Pavlou, 2003). The current study applied the dimensions as conditions in the studies to test whether behavioral uncertainty and environmental uncertainty will influence trust and purchase intention in an online context. The results showed that behavioral uncertainty has significantly positive effect on the benevolence and purchase intention for high-price products while environmental uncertainty did not. Also, as mentioned before, the findings indicated that benevolence has positive effect on purchase intention for high-price products; benevolence is a mediation of behavioral uncertainty and purchase intention for high-price products although it is not main hypothesis of the study.

6.1.2 Managerial Contributions

The current research provides the following implications to managers when they are running an online platform. First, when controlling risk perception, managers can put more emphasis on increasing the ability of the website, for example, strengthening the safety of online transactions, displaying qualifications, and performing profession. Second, if managers are running a website for luxury products, benevolence is the most important to customers’ purchase intention. They are advised to care about customers’ welfare, listen to their suggestion, and enhance customer service to increase sales volume.
6.2 Limitations and Future Research

The research has several limitations that could be addressed in future studies.

First and foremost, the sample size of participants used for the study was smaller than the minimum number that required for testing the conceptual model and hypotheses. The students who registered summer semester were fewer than I expected. This was the main reason that why I did not get enough participants. It is possible that with a larger sample size, the results may have supported hypotheses. Also, the data did not fit the model very well. One possible reason could also be the small sample size. Due to the constraints of time and other resources, an undergraduate student sample was used in the study. Future research could be conducted with other sample.

Second, the description of risk condition was at the beginning of the survey. Although I asked participants to read it carefully and bolded the key words, they were likely to forget the risk scenario when they were answering the last few questions. Additionally, all the findings were based on the product t-shirts. The purchase decisions made by the participants might vary when the products are laptops, cosmetics, and furniture. Future research could conduct studies in other product categories to test the generalization of the results.

Third, I manipulated the risk conditions at website level. However, I did not manipulate the risk at the product level. It is possible that participants could perceive risk from the t-shirt. Future research could assess product-level risk into consideration, study the effect of risk from both website and products.
REFERENCES


Appendix

Appendix A: Final Questionnaire for Main Study

CONSENT TO PARTICIPATE IN RESEARCH
Consumer Opinions Study

You are asked to participate in a research study conducted by Dr. Vinay Kanetkar, the primary investigator, and Danqin Lu, the student investigator, from the Department of Marketing and Consumer Studies at the University of Guelph. The results of this experiment will be used towards a thesis for a Master’s of Science. There is a copy of the form for you to keep in case you need to refer to it. Also, a summary of the research results can be provided when the project is completed. This information will contain a brief overview of the research project and the major findings. If you are interested, you can inform the researcher to add you to an email mailing list to receive research results. The copy of the consent will be posted on courselink. Please print a copy for your record.

If you have any questions or concerns about the research, please feel free to contact Vinay Kanetkar, Marketing and Consumer Studies. 519-824-4120 Ext 52221 E-mail: vkanetka@uoguelph.ca.

PURPOSE OF THE STUDY

The purpose of this research project is to understand the perception and behavior when consumers make purchase decisions in online context.

PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

1. You will be compensated by a 2% course credit.
2. You will be to imagine that you are shopping on a retailer website that described in text. Please read it very carefully.
3. You will complete an esurvey.

Overall, it is expected that this experiment will take under 10 minutes to complete. You will not be contacted in the future for follow-up sessions, however, if you have any further questions or concerns about the research project, you can contact Danqin Lu via e-mail at danqin@uoguelph.ca.

POTENTIAL RISKS AND DISCOMFORTS

There are no foreseeable physical risks, discomforts or inconveniences that might be caused by participating in this study. If at any point you do feel uncomfortable, you are free to withdraw without penalty.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Your participation will help you to gain greater insights into the research process. Further, it will help the researchers and the scientific community to understand the effect of risk and
trust toward purchase intention in online shopping context better. Participants can ask for the general results of my study. They will learn how trust and risk influence purchase intention in online shopping context.

PAYMENT FOR PARTICIPATION

In exchange for your participation, you will be given a 2% course credit.

PRIVACY AND CONFIDENTIALITY

It will only be used to confirm participation that you register on the SONA system. It is Rita Raso, the Administrative Assistant in Department of Marketing and Consumer Studies, who will use this information for granting course credit purpose only. Your student ID information will not be linked to your eSurvey data in any way and researchers will not use it or analyze it. All the data that researchers get from the eSurvey is anonymized. All survey data will remain on password-protected computers and will be held for a period of up to five years after the completion of the experiment, after which it will be destroyed.

PARTICIPATION AND WITHDRAWAL

Your participation in this project is entirely voluntary. If you volunteer to be in this study, you may withdraw at any time, no penalties will be applied and no further questions asked. You will still get the promised incentives. However, once you have submitted the esurvey, your data cannot be withdrawn because the esurvey is anonymous, and it cannot be identified. The investigator may withdraw you from this research if circumstances arise that warrant doing so (for example, if you are being disruptive towards the other participants).

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This project has been reviewed by the Research Ethics Board for compliance with federal guidelines for research involving human participants. If you have questions regarding your rights and welfare as a research participant in this study (REB#17-05-015), please contact: Director, Research Ethics; University of Guelph; reb@uoguelph.ca; (519) 824-4120 (ext.56606).

Please note that confidentiality cannot be guaranteed while data are in transit over the Internet (unless this is a paper only survey).

I have read the information provided for the study “Consumer Opinions Study” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study.

☐ Yes

☐ No

Imagine that you want to buy a T-shirt online and you are browsing an online retailer website named iShopper where you can find all brands. Below is the page that you are browsing. The customer review of iShopper is 3.6 out of 5. Like all online retailer websites, it provides a platform where you can choose all different brands of T-shirt. You can click the blue "Subscribe, track price or share!", then you will receive
subscription email to let you know the latest fashion, sales information, and coupons.

Below is the website you are browsing.

1. Have you purchased a T-shirt?
   - Yes
   - No

2. When was the last time you purchased T-shirt?
   - Last week
   - Last month
   - Last 3 months
   - Last 6 months

3. Have you heard about H&M?
   - Yes
   - No
4. Which of the following do you classify H&M?
   - Mass market (factory-made clothes with robot-cut fabric)
   - Accessible luxury (normal quality with fair price)
   - Moderate and fashion (good quality fabric with fashionable design)
   - Luxury (high quality fabric and designed by well-known designers)
   - Exclusive luxury (extremely high quality cotton and limited-edition)

5. Have you heard about Michael Kors?
   - Yes
   - No

6. Which of the following do you classify Michael Kors?
   - Mass market (factory-made clothes with robot-cut fabric)
   - Accessible luxury (normal quality with fair price)
   - Moderate and fashion (good quality fabric with fashionable design)
   - Luxury (high quality fabric and designed by well-known designers)
   - Exclusive luxury (extremely high quality cotton and limited-edition)

7. Have you heard about Roots?
   - Yes
   - No

8. Which of the following do you classify Roots?
   - Mass market (factory-made clothes with robot-cut fabric)
   - Accessible luxury (normal quality with fair price)
   - Moderate and fashion (good quality fabric with fashionable design)
   - Luxury (high quality fabric and designed by well-known designers)
   - Exclusive luxury (extremely high quality cotton and limited-edition)

9. Have you heard about Club Monaco?
   - Yes
   - No

10. Which of the following do you classify Club Monaco?
    - Mass market (factory-made clothes with robot-cut fabric)
    - Accessible luxury (normal quality with fair price)
    - Moderate and fashion (good quality fabric with fashionable design)
    - Luxury (high quality fabric and designed by well-known designers)
    - Exclusive luxury (extremely high quality cotton and limited-edition)
11. Have you heard about Lululemon?
   - Yes
   - No

12. Which of the following do you classify Lululemon?
   - Mass market (factory-made clothes with robot-cut fabric)
   - Accessible luxury (normal quality with fair price)
   - Moderate and fashion (good quality fabric with fashionable designing)
   - Luxury (high quality fabric and designed by well-known designers)
   - Exclusive luxury (extremely high quality cotton and limited-edition)

13. Have you heard about GAP?
   - Yes
   - No

14. Which of the following do you classify GAP?
   - Mass market (factory-made clothes with robot-cut fabric)
   - Accessible luxury (normal quality with fair price)
   - Moderate and fashion (good quality fabric with fashionable designing)
   - Luxury (high quality fabric and designed by well-known designers)
   - Exclusive luxury (extremely high quality cotton and limited-edition)

15. Which of the following options would you like to purchase? Click the one that you will buy.
   - $15
   - $18
   - $21
   - No purchase

16. Which of the following options would you like to purchase? Click the one that you will buy.
   - $15
   - $18
   - $21
   - No purchase

17. Which of the following options would you like to purchase? Click the one that you will buy.
   - $15
   - $18
   - $21
   - No purchase
18. Which of the following options would you like to purchase? Click the one that you will buy.
   ○ $80
   ○ $85
   ○ $90
   ○ No purchase

19. Which of the following options would you like to purchase? Click the one that you will buy.
   ○ $80
   ○ $85
   ○ $90
   ○ No purchase

20. Which of the following options would you like to purchase? Click the one that you will buy.
   ○ $80
   ○ $85
   ○ $90
   ○ No purchase

21. The online platform seems very capable of performing online transactions. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. When buying a T-shirt, I always try to maximize the quality I get for the money I spend. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23. I feel the decision to transact on the online platform is risky. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
24. When I shop, I usually compare information for brands I normally buy. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

25. I feel I will have high potential for loss if I buy a product from the online platform. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

26. When purchasing T-shirt, I compare prices between online platforms and physical stores. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

27. The online platform seems to have much knowledge about what needs to be done to fulfill online transactions. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

28. When purchasing a T-shirt, the color is important to me. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

29. The online platform appears to be well qualified in the area of e-commerce. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
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<th>Agree</th>
<th>Strongly agree</th>
</tr>
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<tbody>
<tr>
<td>○</td>
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<td>○</td>
</tr>
</tbody>
</table>
30. When I purchase a T-shirt, the graphic design of the T-shirt is important to me. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
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<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

31. The online platform seems very concerned about my welfare. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
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<th>Strongly agree</th>
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<td>o</td>
</tr>
</tbody>
</table>

32. The texture of the T-shirt is important to me. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
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</tr>
</tbody>
</table>

33. The online platform seems to really look out for what is important to me. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
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<th>Strongly agree</th>
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<td>o</td>
</tr>
</tbody>
</table>

34. Buying a high priced brand makes me feel good about myself. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
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<th>Strongly agree</th>
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</tr>
</tbody>
</table>
### Questions and Options

35. My needs and desires appear to be important to the online platform. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<tbody>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

36. Buying the most expensive brand of T-shirt makes me feel classy. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

37. The online platform seems to have a strong sense of justice. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
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<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
</tbody>
</table>

38. The reputation of the company is important to me when purchasing a T-shirt. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>

39. The online platform appears to try hard to be fair in dealing with others. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
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<th>Strongly agree</th>
</tr>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

40. I have purchased luxury brands of a T-shirt just because I knew other people would notice. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
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<td>☐</td>
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</tr>
</tbody>
</table>
41. Sound principles seem to guide the online platform’s behavior. How much do you agree? Click the option below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
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42. My gender is
- Female
- Male
- Do not want to answer
Appendix B: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
<th>T4</th>
<th>T5</th>
<th>T6</th>
<th>T7</th>
<th>T8</th>
<th>T9</th>
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<th>R2</th>
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