Factors Influencing Online Purchase Behaviour:

An Instrument Development and Empirical Investigation

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Master Thesis

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MANAGEMENT SUMMARY

Nowadays, consumers are moving from the traditional channel to the electronic channel for purchasing products. The lack of physical appearances or face to face contact between buyers and sellers makes business transactions difficult to accomplish. This concern gives a reason for e-vendors to trade on communication with buyers and attract potential customers through their websites (Li and Yeh, 2010).

Purpose - The question in which (until now) researchers trying to answer is how to "convert" web surfers to web customers (Schlosser et al., 2006); as consumers have several online stores to choose from when s/he wants to purchase product via online. In the sense of that, e-vendors must experience how to gain customers' awareness. Due to a choice of situations which customers' have, we are curious on investigating the determinants factors which influence the online purchase behavior of a user. The purpose of this research is to develop and validate a theoretical model concerning the characteristics of a web shop which determine the online purchase behavior of users.

Design/methodology/approach - Choi et al. (2006) proposed two rational bases for web design in order to gain customers' awareness. First, a commercial web shop needs to be built in order to enhance customers' experiences concern the lacking products (Jahng et al., 2000 cited in Choi et al., 2006, p. 93). Second, the absence of some properties of offline stores (e.i. sensory appeal), but posses some others (e.i. flexibility across time and space). In particular, we shall employ the field experimental research design. Utilizing the Popper's (1992) falsifiability, we divide our research approach into four phases: testing internal consistency, distinguishing between the logics, comparing the theory, and empirical testing. Building the item measurements, we start by employing the sorting exercises. Sorting exercise aims to assure that the item measurements are measuring the right constructs. This also aims measuring the content validity and construct items validity through the fit placement test ratio. In addition, the research is executed in an experimental research design. Employing workshop (face to face) and online questionnaire, we gathered 122 respondents. Structural equation modeling (SEM) is applied to test the Ogenio's (2009) proposed framework. To show the instrument validity, an encompassing methodology consisting of conceptual validations, pre-test and pilot test are used.

Findings - The *first* important conclusion is that our finding supports Ogenio's (2009) framework with some specific additional characteristics. The determine characteristics are statistically supported yielding from ($p<.1$ and $p<.01$). These characteristics can be used by e-vendors or practitioners to understand the customer's decision dynamic, and begin to build a web shop which taking into account consumers' preferences on a web shop's characteristics. Thereby increasing the web shop's likelihood, customers will do purchase on an online store. *Second*, this research gives novelty on *the determinant of the online purchase behavior of a user* as most of the researches established are investigating the perceived ease of use, perceived usefulness, perceived risk, etc and not investigating the very specific web shop's characteristics. *Third*, we build and test the measurements creation for the online purchase determinant. The measurement creation or processes included surveying the established instruments, selecting the appropriate items, creating new items as necessary, and then test an extensive scale development process. It is believed that the method gain appropriate degree of confidence with 88% placement fit ratio which beneficial for the Information System and E-commerce literature.

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1. INTRODUCTION

This chapter provides the reader with an insight into research area of this thesis. The chapter starts with background of the study continued by the objective of the research and the research questions. The research approach and the structure of the thesis are also provided in the following sections.

1.1 BACKGROUND

Nowadays, consumers are moving from the traditional channel to the electronic channel for purchasing products. The lack of physical appearances or face to face contact between buyers and sellers in the electronic channel makes business transactions difficult to accomplish. This concern gives a reason for e-vendors to trade on communication with buyers and attract potential customers through their websites (Li and Yeh, 2010). The online industries are reported has vast development with project reaching US$ 578 billion by 2010 (Accenture, January 2009). Therefore electronic commerce (e-commerce) has become an important business model for e-vendors. Consumers use the Internet only to save time and effort; they would predominantly use the Internet for searching, and only for small purchases. Thus, it makes sense acquiring consumers' shopping experience by designing web shops to accommodate target market preferences, and perhaps it may lead to purchase and re-purchase (Lightner, 2003). The most common reasons for customers to shop from virtual stores are convenience, broader selection, competitive pricing, product choice product value, and greater access of information (Jarvenpaa and Todd, 1997). Despite some advantages, users are still hesitant to purchase online. One can argue that web shops should enhance consumer confidence by providing the ability to stimulate the consumers' interest and positive attitude; it is a way to encourage purchase decision from a web shop. The question in which (until now) researchers trying to answer is how to "convert" web surfers to web customers (Schlosser et al., 2006); as consumers have several online stores to choose from when s/he wants to purchase product via online. In the sense of that, e-vendors must experience how to gain customers' awareness.

Choi et al. (2006) proposed two rational bases for web design in order to gain customers' awareness. First, a commercial web shop needs to be built in order to enhance customers' experiences concern the lacking products (Jahng et al., 2000 cited in Choi et al., 2006, p. 93). Second, the absence of some properties of offline stores (e.i. sensory appeal), but posses some others (e.i. flexibility across time and space). In addition, Lin (2007) stated the crucial knowledge for e-business success identifies the determinants of online purchase behavior. It has become more difficult for e-vendors to sustain their competitive advantages as many online stores are established. To optimize the capability, e-vendors must facilitate the customers' needs, for instance, build website that offer *trust* in terms of security for customer (Devaraj et al., 2002; Gefen, 2003; Pavlov, 2003) or in terms of e-vendors (Jarvenpaa, 2000; Heijden et al., 2003; Qureshi et al., 2009) or build fancy or enjoyment website (Heijden et al., 2001; Koufaris, 2002; Zhou et al., 2009) and at the same time extend user friendly or bid website characteristics that customers like (Park and Kim, 2003; Venkatesh and Agarwal, 2006; Lin, 2007; Ogenio, 2009).

Particularly, novel study, Ogenio (2009) built theory which examines the characteristics of e-commerce websites that determine online purchase behavior in a choice situation. She claimed that her model explained 60% of the variance in intention to purchase from online store X which is high predictive power. She elicited the attitude, subjective norm and

perceive behavioral control and concluded that there are 8 characteristics that determined the online purchase behavior, which are structure and organization of layout, aesthetics aspects, categories, sorting possibilities, simple appearance (without clutter), native language, advertisement presentation, and free from error. Moreover, she employed 11 participants for validating the model.

Relying on Choi (2006) and Lin (2007), we see the necessity to persuade strength validation by employing large participants to the research studied by Ogenio (2009). Further, Ogenio also stated in her further research suggestion that there is a need to empirically test for generalization in a large number of people.

De Vaus (2009) states about theory testing approach; it uses a theory and acquires it to guide observations; it moves from the general part to particular part. He stated, the observation should provide a test for a theory. The root of the theory testing is falsifiability theory proposed by Popper (1974). The causal relationship is falsifiable only if it is shown through experiment or observation. Using deductive reasoning to derive a set of propositions from the theory does this. Straub et al. (2004) emphasized the important of the validation of an instrument in a research. Rigor in IS research is still one of the critical scientific issues facing in the field. Without the validation of the instruments, that are used to gather data, in which findings and interpretations will be derived from, the scientific basis is threatened. In our perspective, this is what happened in Ogenio‘s research. Straub et al. (2004) suggested that the good research is the one that has valid measurement. Valid measurement refers to the degree in which measurement accepted in terms of statistics. Boudreau et al. (2001) stated that “the argument for validation of instruments was based on the prior and primary need to validate instruments before such other crucial items as internal validity and statistical conclusion validity are considered”. In other words, if validation of one’s instrument does not present or does not precede internal validity and statistical conclusion validity, then all other scientific conclusions are thrown into doubt as stated by Andrews (1984). Moore and Benbassat (1991) proposed a methodology for developing items measurement either lack of theoretical foundation of a research, inadequate definitions, or measurement constructs. Their methodology can be applied for building items from scratch. By doing the literature review for developing items systematically, it may raise content validity. To test the construct validity of items, either convergent or discriminant validity, they applied sorting exercise to examine how items sorted into various construct categories. Pilot tests are done for measuring items’ reliability afterward.

Keeping in line with the assessment of validity for a measurement, we begin with building validity for Ogenio’s measurement. This is done by measuring the content validity and construct validity. Content validity is established through literature review and expert judges or panels (Straub, 1989). Construct validity is an operationalization or measurement between constructs (Straub et al., 2004). Construct validity raises the basic question of whether the measurement chosen by the researchers “fit” together in such way to capture the essence of the construct. The construct validity can be achieved through discriminant validity and convergence validity. The fact that current measurement consists of one instrument per construct, verifying the instrument is needed, it can be done through recollecting measurement instruments. Hence we employed sorting exercise consist of three rounds. Subsequently, a pre test and a pilot test are done for trialing the questionnaire to measure the questionnaire validation (qualitatively) and estimation for time needed, which is done through field experiment. Completing the stages, we validate quantitatively through statistical variances by utilizing factor analysis.

1.2 RESEARCH OBJECTIVE

As it explained in the first section, validation is seen as a crucial element to establish correct measurement of a research. Therefore, we define the main research objective in general as:

> *To develop and validate a theoretical model concerning the characteristics of a web shop which determine the online purchase behavior of users.*

Specifically the following research questions have to be answered:

1. What is the theoretical model for determining the online purchase behavior of users?
2. How to develop and validate the measurement instruments for the theoretical model?
3. How do the data collection and the data interpretation of the model?
4. How the data analysis will impact the theoretical model and what characteristics can be drawn from the research which determines the online purchase behavior?

1.3 RESEARCH APPROACH

The development of this research will follow the research and design methodology principles proposed by Popper (1992). The schema of research approach is delineated in Figure 1.

Since this research is aiming to develop and validate the previous research (based on Ogenio, 2009), we thus view our research as the operation of the model that we develop; that is, we want to assess and ensure the measurements in a large number of participant. In particular, we shall employ the field experimental research design. Utilizing the Popper's (1992) falsifiability, we divide our research approach into four phases: testing internal consistency, distinguishing between the logics, comparing the theory, and empirical testing.

During the first phase, internal consistency, we mostly relied on literature study to answer the questions arise described in the previous section. The literature studies explain the basic question of this research, such as characteristics, how we determine which characteristics are the characteristics, and supporting literatures for each construct. We divide the first research question's answers in the process for clear explanation, and report the results in chapter 2 and 3 of this report.

During second phase, the distinguishing between logics, we explained the constructs of the theoretical framework. We distinguished the logical basics of the theoretical model, and the hypotheses or propositions. We derived the theoretical model from Ogenio (2009) and develop its constructs. Through literature studies, we derived the basis knowledge and applied the results from previous studies to derive the hypotheses. We answer the second research questions in the process and report the results in chapter 3 of this report.

The third phase, comparison the theory with the existing theories, though it can't be fully stated as theory comparison (which is built the measurement's items nearly from scratch). In addition, we develop the necessary items, based on the interview result reported by Ogenio (2009), information of measurement instruments from the previous research and develop some of them. In this stage, we applied the methodology proposed by Moore and Benbassat (1991). The aim is to check whether the measurements are already measured what they are supposed to measure. First, we executed the sorting exercises procedure for determining the constructs and whether its measurements already in the right place or not. The sorting exercise is resembled the validation for the construct validity. Subsequently, the pilot test based on sorting exercise is

executed and finally the data gathering employed. The outcome of the phases is the construct validity; the discriminant and convergent validity. We answer the third research questions in the process and report the results in chapter 4 of this report.

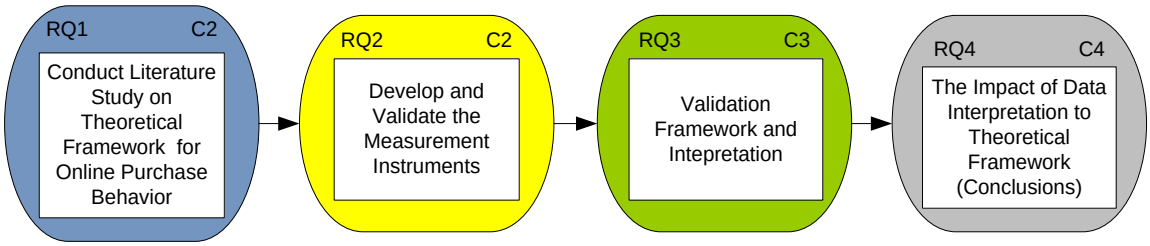

FIGURE 1 RESEARCH APPROACH

In the fourth phase, the empirical testing, the hypotheses are tested in order to falsify the theory with evidence from research design (field experiment), analyze it and interpret its result. We employed the multiple regressions on SPSS and calculated using smartPLS bootstrapping to falsify the hypotheses. This phase mostly figures out the hypotheses whether they are positively or negatively support (statistically) to the intention to purchase. These refer to the statistical validations which are reliability, beta, and p-value. We partly answered the fourth research questions in the process, and report the results in chapter 5.

Finally, we use the result of this research to determine the characteristics of a web shop in which customers are willing to purchase. Based on the data analysis, we examine its impact for the theoretical framework. We answer the research questions 4 in the process, and report the results in chapter 6 along with the conclusion, limitations, and possible further research of this report.

1.4 STRUCTURE OF THE THESIS

Aligning the research objective and research questions, the research approach, and the structure of the report is structured as followed: chapter 2 of this report presents the literature review which discussed the literature study and relevant concepts as the basis of this report. Chapter 3 presents the theoretical framework, the constructs definition and its hypotheses. Chapter 4 presents the research design, the development and the validation of the measurement instruments for its theoretical framework. Chapter 5 presents its analysis, results interpretation, and impact on the theoretical framework. Chapter 6 presents its conclusion, its limitations, and the possibility for further research of this report.

2. LITERATURE REVIEW

This chapter provides the foundations of the research. It delineates the theoretical background on the characteristics, its major concepts, and supporting researches from literature studies. It starts with the characteristics definition and its operationalization. Subsequently, it introduces the research's basis from the previous research.

2.1 LITERATURE REVIEW SCHEMA

Defining the domain of the research, the next step is searching for previous studies and identifying the relevant concepts and techniques. As stated by Levy and Ellis (2006) that a methodological review of the past literature is a crucial activity for any research. Webster and Watson (2002) defined the literature review as an effective review in which "creates a firm foundation for advancing knowledge". Two scientific search engines journal are used and by hand for the hardcopies, these are the Web of Science, Scopus, Electronic Commerce journal, and ACM journal. Two search engines covers 92% of the top 25 IS journals. Web of science covers also 100% of the top 10 IS journals and Scopus 90%.

We search the relevant studies by adopting the literature research methodology as proposed by Webster and Watson (2002), which are:

1. Keyword search

As this study is conducted in a limited time, we prioritize based on quality rather that quantity. We achieved this by reviewing papers from top journal as listed in Schwartz and Russo (2004). The keywords that we use are: online purchase behavior, e-commerce (Scopus: 524, Web of Science: 111); online shopping (Scopus: 1269, Web of Science: 500); online purchase behavior (Scopus: 242, Web of Science: 153); and online customer behavior (Scopus: 382, Web of Science: 483). Journal of electronic commerce provides 3 papers. Further, in order to have better understanding on the validation part, we separate the use of different keyword in which broadly examine in the IS domain and research methods in general. The key words are validation, measurement, validity, reliability, research methods and information system (Scopus: 29, Web of Science: 359).

2. Backward search

Webster and Watson (2002) advice to review citations from the identified articles as most of the articles have deeper understanding and could be, other essential content will emerge.

3. Forward search

It is achieved by utilizing the citation index of Scopus to obtain articles which have high citation index to be included in the review.

Figure 2 presents the steps that we exerted in order to find the proper papers. We followed the schema that was proposed by Linde et al. (2004) which already used in healthcare. Based on the results, we utilize 16 papers based on the content related and 7 papers based on the techniques for validation instruments.

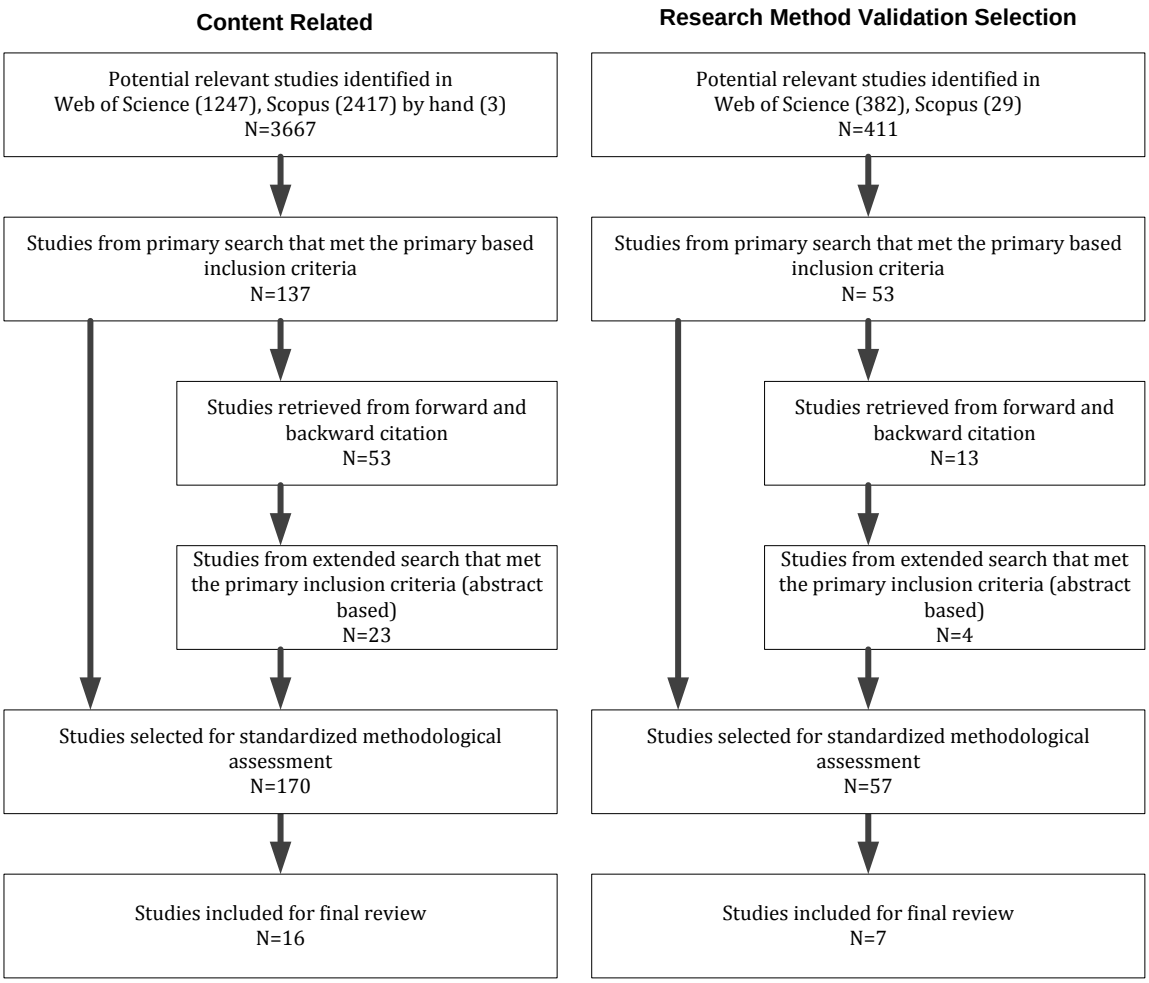

FIGURE 2 LITERATURE REVIEW SCHEMA

Having defined the literature studies, the next section will explain the first research question to be answered in detailed. The conceptual validation for the measurement instruments will be delineated in chapter 4.

2.2 CHARACTERISTIC OF A WEB SHOP AND ITS OPERATIONALIZATION

Many researchers have been studied the "characteristic" of an object as the basis foundation of their research. It is mostly used to study in psychology domain which represents a person. The term characteristics literally define as "a distinguishing trait, quality, or property" (Merriam-Webster). Other dictionary, the Princeton online dictionary defines it as "a feature that helps to identify, tell apart, or describe recognizably; a distinguishing mark or trait". In the information system, we record that there is no literally definition usage of characteristics in the literature. Particularly in the electronic commerce, the term characteristic often acquainted with the user (Bosnjak, 2007), the product (Lightner, 2003), and shopping environment, such as web site (Madhavaram and Laverie, 2004; Palmer, 2002).

Literature studies indicate that the web shop's characteristics are related to the appearance, its content, its functionality, its usability, etc. The way in which a web site persuade its user to get involved in a website by surfing from pages to pages, by clicking the feature in order to get information, knowledge, or product, in our opinion can be defined as a characteristic. These of

course are pointing to the users' "needs". Ogenio (2009) implicitly defined characteristic as the likeliness of an appearance in e-commerce interface, in this case it is a website, in which derived from the attitude of the users. She identified the characteristics of an online store that may influence users' behavior in a choice of a situation, as (mostly) users are in a situation which have to choose a web shop among others in which has competitive advantages or likeliness. She examined the most used theory which determines the intention of online purchase. She analyzed Theory of Reaction Action (TRA) (Fishbein and Ajzen, 1975), Theory of Planned Behavior (TPB) (Ajzen, 1985), Technology Acceptance Model (TAM) (Davis, 1989) and Unified Theory of Acceptance Model (UTAUT) (Venkantesh et al., 2003). The framework is mostly derived from TPB as the TAM and UTAUT are not applicable in the context of online purchase behavior in a choice situation. She derived the characteristics based on the elicitation study. The elicitation study consists of "giving task" by experiencing buying products from websites, filling-in questionnaires, and interviewing the participants to get the idea, the experience and opinion of the participants about the websites. From the elicitation study, she derived the website characteristics which determine online purchase behavior.

In this study, we define the characteristic as the property of a web shop which can persuade users to get involved with. We based the definition on Merriem-Webster and Ogenio's (2009) research. We are emphasizing on the "persuade" as this is the term in which user are willing to do an action.

Competing in fast and vast e-markets, e-vendors need to realize the mechanisms of virtual shopping and the behavior of online shopping (Constantinides, 2004). Researchers are trying to determine the characteristics by applying the fundamental theory from other field, mostly psychology, in order to understand human behavior which often affected by the norm and the attitude; thus then applied into IS context. Researchers are stimulating the variables which can affect the attitude. The outcomes of these studies are often used to understand and predict the behavior of human in IS context due to the basic intention of a behavior. These can be operated through various research designs. Most of the researches used survey research design; as they try to acquire large participants in order to get high generalization. They executed by delivering online surveys or mailing with free stamps, such as Fogg et al. (2003). Others employed the experimental research design. One can argue that the best research design for this case is the field experiment research design. This approach is trying to establish the real situation for gathering data from users, by using the representative sample population; therefore generalization can be achieved.

2.3 CONCEPT MATRIX

In order to refine the essence of the papers used, we utilize the concept matrix proposed by Webster and Watson (2002). The table or matrix shows us the similarities and differences between papers. We write down the antecedents of the dependent variable, its dependent variable; and its results. Please see Table 1 for further detailed of the content related. This synthesize literature study is mostly derived from previous study of Ogenio's (2009).

Study	Research Method	Response Rate	Purpose study	Antecedents of the dependent variables and nature of relationship with dependent variable	Dependent variables (DV)	R^2 DV	Findings
Barkhi et al. (2008)	Empirical (Survey) Respondent: • Undergraduate and Graduate student (US&GS)	92%	Describe consumers purchase decisions in a virtual store.	• Attitude toward online purchasing o Perceived security (+) o Perceived peer influence (+) o Perceived behavioral control (+) o Perceived usefulness (+)	Actual purchase	NA	Significant to actual purchase Not Significant to attitude Significant to attitude Significant to attitude Significant to attitude
Choudhury and Karahanna (2008)	Empirical field study (Survey) Respondent: • Faculty and staff university	23%	Aim to develop a more nuanced understanding of consumer purchase channel choices.	• Relative advantage (+) (R^2: 0.37) o Convenience (+) o Trust (+) o Efficacy of information acquisition (+)	Behavioral intention to adopt electronic channel	0.38	Significant to BI Significant to relative advantage Not Significant to relative advantage Significant to relative advantage
Childers et al. (2001)	Experiment (laboratory setting) Respondent: • Customer of home shopping system	37%	Explore several determinants of interactive forms of shopping by integrating aspects of consumer behavior with research from the information system domain.	• Usefulness (+) (R^2: 0.37) o Convenience (+), Sub experience (+) • Ease of use (+) (R^2: 0.37) o Navigation (+), Convenience (+) • Enjoyment (+) (R^2: 0.37) o Navigation (+), Convenience (+), Sub experience (+)	Attitude towards interactive online shopping	0.64	Significant to Attitude Significant to Usefulness Significant to Attitude Significant to Ease of use Significant to Attitude Significant to Enjoyment
Heijden et al. (2001)	Empirical (Survey) Respondent: • 227 US (NL)	Not mentioned	Juxtapose two competing models that explain online purchase intention.	"Trust-oriented model" • Attitude towards online purchase (+) (R^2:0.58) • Perceived risk (-) (R^2:0.41) "Website" perspective model: • Perceived website ease of use (+) (R2:0.35) • Attitude towards online purchasing (+) (R^2:0.13)	Online purchase intention	0.56 0.55	Significant Significant Not significant Significant
Heijden et al. (2003)	Empirical (Survey) Respondent: • 228 US (NL)	Not mentioned	Explore factors that influence consumer's intention to purchase online.	• Attitude Towards Online Purchasing (R^2:0.62) o Trust in online store (+) o Perceived risk (-) (R2:0.42) o Perceived ease of use (+) o Perceived usefulness (+)(R2:0.49)	Online Purchase Intention	0.56	Not significant Significant Not significant Not significant
Jarvenpaa et al. (2000)	Experimental Survey	Not mentioned	Explore the relationship perspective of internet consumer commerce.	• Attitude (+) (R2: 0.57) • Risk perception (-) (R^2: 0.38) o Trust (+) (R^2: 0.83) ▪ Perceived size (+) ▪ Perceived reputation (+)	Willingness to buy	0.43	Significant to Willingness Significant to Willingness Significant to Attitude and Risk perception Not Significant to Trust Significant to Trust
Khalifa and Lui (2007)	Empirical (Survey) Respondent: • 122 online customers	Could not be estimated	Develop the information systems continuance model in the context of online shopping.	• Online shopping satisfaction (+) (R^2: 0.60) • Perceived Usefulness (+) o Online shopping experience (+)	Online repurchase intention	0.71	Significant to online repurchase intention Significant to online repurchase intention and satisfaction Significant to online shopping satisfaction

TABLE 1 CONCEPT MATRIX (SOURCE: OGENIO, 2009)

Study	Research Method	Response rate	Purpose study	Antecedents of the dependent variables and nature of relationship with dependent variable	Dependent variables (DV)	R^2 DV	Findings
Koufaris (2002)	Empirical (Survey) Respondent: • New customers of Booksamillion.com	93.3%	Examine how emotional and cognitive responses to visiting a Web-based store for the first time can influence online consumers' intention to return and their likelihood to make unplanned purchases.	• Perceived Control (-) • Shopping Enjoyment (+) (R^2: 0.28) • Concentration (+) (R^2: 0.21) • Perceived Usefulness (+) (R^2: 0.60) • Perceived ease of Use (+)	Unplanned purchases (UP) Intention to return (IR)	0.08 0.55	Not significant to Up nor IR Not significant to UP, Significant to IR Not significant to UP nor IR Not significant to UP, Significant to IR Not significant to UP nor IR
Lin (2007)	Empirical (Questionnaire) Respondent: • UG and GS	97%	Understand the determinants of consumer intentions to shop online.	Compared TAM, TPB and TPB decomposed. TPB decomposed provides a fuller understanding of behavioral intentions to shop online. Variables: • Behavioral intention to shop online (+) (R^2: 0.57) o Attitude (+) (R^2: 0.63) o Subjective norms (+) (R^2: 0.43) o Perceived behavioral intention (+) (R^2: 0.52)	Actual Purchase	0.33	Significant to Actual Purchase Significant to BI Significant to BI Significant to BI
Ogenio (2009)	Empirical (Questionnaire and interview) Respondent (11 respondent): • Student, secretary, and manager	Not mentioned	Indentify the characteristics of an online store that may influence the choice of the customer and lead the customer to purchase decisions on a specific online store.	Examine the applicability TRA, TPB, TAM, and UTAUT in a choice of situation with the different product type. o Subjective norm o Structure and organization of layout o Aesthetics o Categories o Sorting possibilities o Simple appearance o Native language o Advertisement presentation o Free from error	Intention to purchase Actual Purchase	0.60	Only TRA and TPB are applicable in this context Significant to intention Significant to intention Significant to intention Significant to intention Significant to intention Significant to intention Significant to intention Significant to intention Significant to intention
Pavlou (2003)	Empirical (2 studies: Experiential exploratory survey, On-line survey) Respondent: • Study 1 : 102 US • Study 2: web users using email extractor	86% 9%	Aim to predict consumer acceptance of e-commerce by proposing a set of key drivers for engaging consumers in online transactions.	• Perceived usefulness (PU) (+) • Perceived ease of use (PEOU) (+) • Perceived Risk(PR) (-) • Trust (+) (R^2: 0.51)	Intention to transact	0.64	Significant to intention Significant to intention Significant to intention Significant to intention, PU, PEOU and PR

(CONTINUED) TABLE 1 CONCEPT MATRIX (SOURCE: OGENIO, 2009)

Study	Research Method	Response rate	Purpose study	Antecedents of the dependent variables and nature of relationship with dependent variable	Dependent variables (DV)	R^2 DV	Findings

Park and Kim (2003)	Empirical (Survey)
	Respondent:
	• Customer online bookstores in Taiwan
		78%	Investigate the relationship between characteristics of online shopping and consumer purchase behavior.	• Site Commitment (R2:0.35)
				  ○ Information satisfaction (Affected by User interface quality, Product information quality, Service information quality, Security perception) (+)
				  ○ Relational benefit (affected by Product information quality, Service information quality, Security perception, Site awareness) (+)
					Purchase behavior	0.04	Significant
							
							Significant

Qureshi et al. (2009)	Empirical (Questionnaire) Respondent: Staff and student University	42%	Investigate the extent to which trust mediates the effects of vendor-specific factors on customers' intention to repurchase from an online vendor.	• Perceived website quality • Perceived order quality of fulfillment • Reputation	Repurchase Intention	0.23	Significant Significant Not Significant
Schlosser et al. (2006)	Experiment Respondent: • Study 1: 111 university employee • Study 2: 79 US • Study 3: 152 US • Study 4: 98 US	Not mentioned	Investigate the impact of Web Site design investments on consumers' trusting beliefs and online purchase intentions.	• Trusting beliefs (ability, benevolence) (+)	Online purchase intentions	0.18	Significant

Venkatesh and Agarwal (2006)	Longitudinal field study
	Respondent:
	• Phase I: visitors of 3 websites
	• Phase II: the same respondent as phase I
		82%
		
		48%
			Investigate usability as predictor of online purchase behavior.	• Use (R2: 0.53)
				• Control variable: Purchase need
				• Control variable: Previous purchase
				  ○ Content (R2: 0.35)
				  ○ Ease of use (R2: 0.34)
				  ○ Promotion (R2: 0.21)
				  ○ Made-for-the-medium (R2: 0.43)
				  ○ Emotion (R2: 0.30)
				  ○ Control variable: Prior experience with similar sites
				  ○ Control variable: Previous purchase
					Online purchase behavior (OPB)	0.53	Significant to OPB
							Significant to OPB
							Significant to OPB
							Significant to Use
							Not significant to Use
							Not significant to Use
							Significant to Use
							Not significant to Use
							Not significant to Use
							
							Significant to Use

Zhou (2009)	Empirical (Questionnaire survey)
	Respondent:
	• User of e-commerce research lab
		77%	Investigating the website design quality and service quality in determining online repurchase behavior	• Trust (+) (R2: 0.57)
				  ○ Website design quality (+)
				  ○ Service quality (+)
				• Satisfaction (+) (R2:0.47)
					Repurchase intention (RI)	0.33	Significant to RI
							Not significant to Trust
							Significant to Trust
							Significant to RI

(CONTINUED) TABLE 1 CONCEPT MATRIX (SOURCE: OGENIO, 2009)

Though online shopping brings advantages for individuals, it also argue that feeling of enjoyment or experience which customers get is an e-commerce major limitation. Childers et al. (2003) revealed that customers judge online store differently depend on the type of products being sell. The online shoppers cannot physically experience a product at the time of purchase. "Because of its inability to provide product experience prior to purchase or use, the Internet is more appropriate for selling search goods than experience goods" (Moon et al., 2008). Because of the time limitation, we prioritize the "experience vs search quality products" for product types as these types of products demand products quality by experiencing the products. The distinction between these two types of products is the degree in which a consumer can assess the quality of the product virtually. Since the uncertainty over the product's qualities increases as it becomes harder to assess them, the importance of peripheral cues in the consumer decision process should increase (Tractinsky and Lowengart, 2007). For instance: camera. The camera's quality, its ease of use and its results are hardly to get by experiencing it online. While the search quality of products, such as book, users can simply read the sample pages provided and see the picture of the cover to know its quality.

Looking at Table 1 in the respondents part (tab: research design), we identified that the research were mostly done in the university setting, region setting, or country setting. We recorded, there are studies which investigate the user's characteristics, in terms of user's personality (Bosnjak et al., 2007), consumer's characteristics (Lian and Lin, 2007), personality type (Barkhi and Wallace, 2007), and culture (Pavlou and Chai, 2002).

In this study, we are less taking into account the cultural effect of a society which could be affecting online actual purchase. Lam and Lee (2005) stated that "culture have a strong influence on consumers' values, perceptions, and actions". Hence, one can argue that culture set people's mind what people wear, eat, and travel.

As cited in Pavlou and Chai, (2005), Herbig (1998) stated that culture affects people's decision-making styles and purchase behaviors. The concept of culture is complex and widely researched (Inkeles and Levinson, 1969; Hofstede, 1980; Trompenaars, 1994; Triandis, 1995). Hofstede (1997) defines culture as "the collective programming of the mind, which distinguishes the members of one group or category of people from another". Hofstede conducted research over 53 countries, identified four basic dimensions of differences among national cultures. However, in this research, we limit ourselves in the individualism setting and in the national cultures as similar study conducted by Shim and Gehrt (1996); they examined the differences in shopping orientation between ethnic groups and found that White and Hispanics students showed significantly more brand loyalty proneness than Native American students. Study in consumer behavior, culture define as " the values, ideas, artifacts, and other meaningful symbols that help individuals communicate, interpret, and evaluate as members of society". We briefly mentioned the culture as the respondents being used are mostly International student. This will be explained in more detail explanation on chapter 4.

3. THEORETICAL MODEL

This chapter presents the theoretical model which is derived from previous chapter. The basics of constructs' theoretical model from prior studies are portrayed as foundation for building hypotheses. The constructs' definition and its hypotheses are presented afterward.

3.1 THEORETICAL FRAMEWORK

Most researches on attitude and behavior theory report that attitude guides behavior. It entails that purchase behavior is determined by their attitude. For instances, if a buyer is having positive attitude on a web shop, s/he is more willing to purchase on that web shop than others (Barkhi, 2008). Most of previous studies (studies which based on TRA and TPB) suggest that attitude influences the action to purchase; therefore by managing the antecedents of attitude, e-vendors hope the chance consumers' act to purchase is firmly decided especially when customers have intention only surfing to get products' information.

The theory of reaction action describes how attitude can lead to an action. A consumer with positive attitude toward purchasing from a web shop is more likely to purchase from a virtual store than one that has a negative attitude toward it (Barkhi, 2008). It can be concluded that by influencing the attitude it is possible to influence an action.

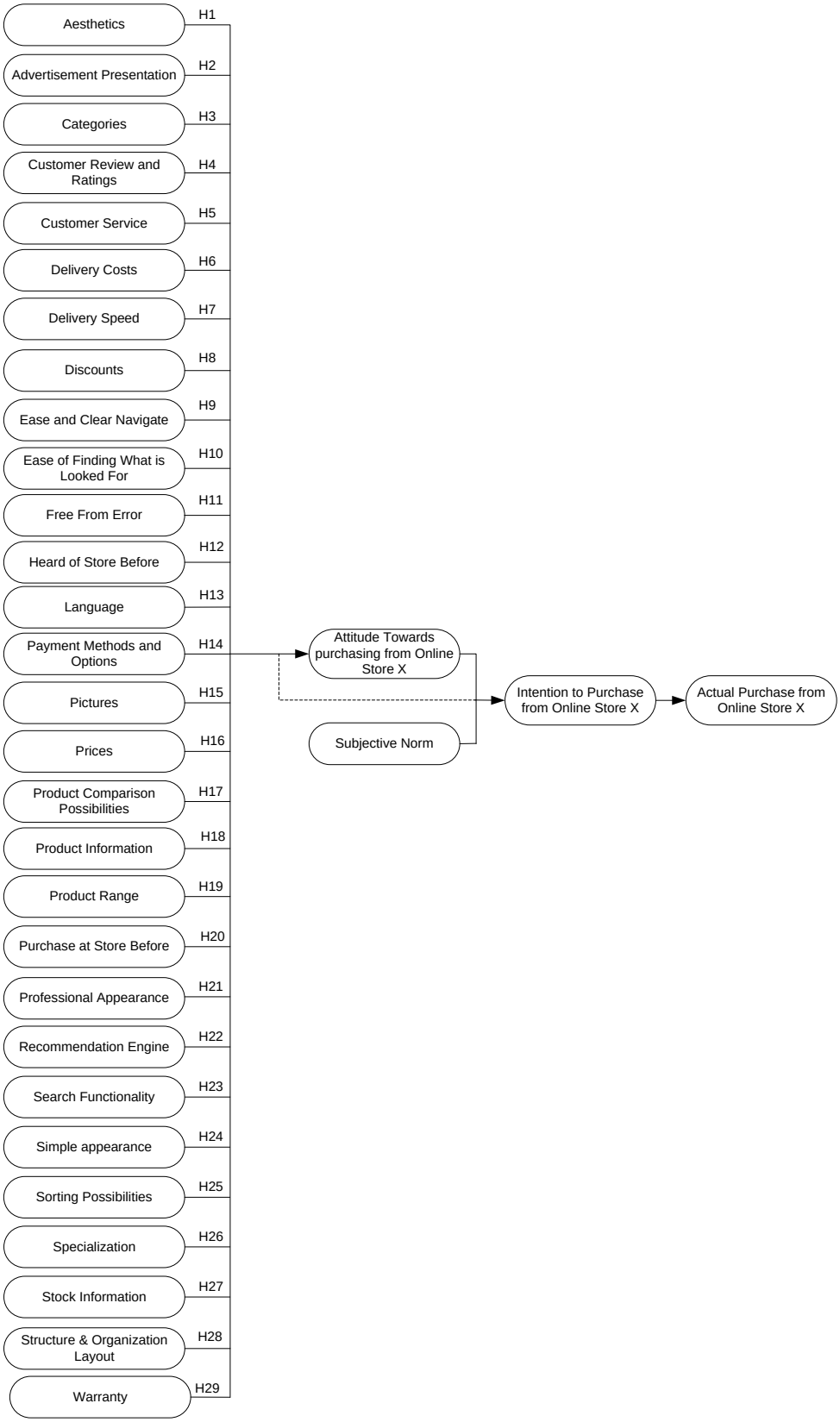

FIGURE 3 THEORETICAL RESEARCH MODEL

3.2 ADVERTISEMENT PRESENTATION

Most paper in International Journal of Marketing studies on attitude toward advertisement and the effectiveness of online advertisement. Robinson et al. (2007) defined the *advertisement presentation* as the visual representation or design of public promotion for some products or services. The advertisement is twofold heading, where it brings benefits for displaying the ads but at the same time they are also very annoying. Hence, practitioners investigate how to display their ads and its locations where customers can see, read, enjoy, and at the same time the ads' aim reached. The banner design click-trough is a mean for gaining credibility for an online gambling. Dreze and Hussnerr (2003) cited in Robinson et al. (2007) investigated the effectiveness size of banner found that internet users prefer to avoid looking at ads while online, and hypothesized that the internet users might perceive banner ads in their peripheral vision. They concluded that, in terms of artistic influence, audiences were most affected by the banner message rather than how the message was conveyed. According to them, smaller ads performed just as well as the large ones.

Research conducted by Baltas (2003) and Chandon et al. (2003) cited in Robinson et al. (2007) revealed a negative impact of *advertisement presentation* on the intention to purchase and suggested that "unbranded" banners might stimulate greater curiosity, and lead to click through. Baltas (2003) also found that "bigger ads are more often effective in attracting attention and (hence) more likely to trigger response". Ogenio (2009) reported some of her respondents mentioned the advertisement can be annoying if it is displayed on a number of pop up banners. Though Ogenio's result indicated the positive effect of *advertisement presentation* to the intention to purchase, we propose the following hypothesis:

> Hypothesis 1 (H1). *Advertisements presentation* negatively affects the intention to purchase on online store

3.3 AESTHETICS

Aesthetics is used in various domains of inquiry hence it also has been defined differently (Lavie and Tractinsky, 2004). Empirically tested, *aesthetics* aspect of various computing products used in HCI field has been part in determining users' attitude in general (Tractinsky, 1997 and 2007). Empirical evidences suggest that the most important determinant a user prefer a web site were because of its beauty (Schenkman and Jonsson, 2000) or web site quality (van der Heijden, 2003b). Naturally, to gain on attracting potential users' attention, beauty plays important role where it makes an immediate judgment of the attractiveness (Lindgaard et al., 2006). Madu and Madu (2002) examined *aesthetics* of mobile website and define aesthetics as the visual attractiveness or pleasant appearance of website which interpret relatively based on the individual. We use the *aesthetics* definition from the mobile website as most of researches on the website design define it using perspective from psychology domain which relate to usability and ease of use.

Vast development of *aesthetics* in various aspects of computing and pleasure positively serves users' satisfaction and attitudes towards the service provider. Tractinsky and Lowengart (2007) stated the importance of *aesthetics* is laying on the limited opportunity for e-vendors to create a store's environment that would positively influence consumer behavior.

> Hypothesis 2 (H2). *Aesthetics* positively affects the intention to purchase on online store

3.4 CATEGORIES

Choi et al. (2006) investigated the mechanism of customers buying on a web shop through customers' involvement and information quality fitness. E-vendors persuade customers' involvement through products categorization. This *products categorization* brings benefits not only for customers, but also for e-vendors, because it can help to understand product attributes clearlier. In addition, scholars interpret this term as the outcome of a sorting functionality. To gain website's usability, e-vendors consistently displayed its products categorization in every page. Omari et al. (2008) proposed for products' classification using data mining to gain well structure website. It is built on the design phase. "The improvement of the structure of the website depends on the extracted patterns in a way that makes it easy for the website's navigator to find their target products in an efficient time, give them the opportunity to have a look at some products that might interest them, and encourage them to purchase more from the available products which will consequently increase the company's overall profit" (Omari et al., 2008).

To engage and serve customers, an efficient strategy is to have them involved with the web site. Yoon et al. (2009) studied the *product categorization* intent from questions and asks room (Q&A) of a website. It is empirically tested that *product categorization* based on the Q&A show refine customers' purposes which can efficiently describe what must be in a category, and search results can be efficiently categorized without any human supervision. This can be served through products assortment based on brand, price, etc. We record no explicit definition found about "categories" definition for a website, as most of studies examine the products' type category ("experience vs search quality product", "hedonic vs utilarian product", etc). Thus, we use the definition from *Wordweb* which define category as collection of things sharing a common attribute of product or service.

Hypothesis 3 (H3). *Categories* positively affect the intention to purchase on online store

3.5 CUSTOMER REVIEW AND RATING

Customers often rely their purchase decision on consideration from people whom consumers' know and trust (Kim and Srivastava, 2007). Hu and Liu (2004) identified customer reviews as a positive and negative opinion of products or services based on customers' experiences. Melnik and Alm (2002) defined rating as reputational variable of a seller or product. Synthesizing these terms, we define *customer review and rating* as the reputational preferences of product or service which established in positive and negative opinions of individuals.

Customers are unique, in terms of how they perform their purchase behavior. Some are prone to rush for purchasing products (they already know their goal) while others tend to be conservative (might be still in doubt) and expect someone's reviews first. Investigated existing customer review and decision making, Kim and Srivastava (2007) concluded that the high quality reviews from other consumers' experience have a direct, positive effect on potential consumers' decision making which can be dispersed through social network, for example, amazon.com. It provides a feature which called "Customer Review Discussion Board" which allows its customers to post a review and comment on others' reviews, express their opinion to other reviewers either they known each other or not, and ask others to be *friend* in their social network. Most comparison price websites, such as pricegrabber.com and cnet.com also provide the store rating made by the consumers.

Hypothesis 4 (H4). *Customer review and rating* positively affects the intention to purchase on online store

3.6 CUSTOMER SERVICE

One can argue that *customer service* is strongly related to customers' satisfaction. As a base line, e-vendors and vendors boost customers' satisfaction by using customer service since it is the front line of a company to have competitive advantages. Turban (2002) defined customer service as a support or supplement action of a website to enhance customer satisfaction level. For an online store, *customer service* can be performed by an automatic email replies. For instance, if a consumer interests on a non stock product, normally s/he wants to have notification if the product already available; e-mails' notification for the acceptance of an order, the anticipated delivery date, and later the actual delivery date is a further service that customers appreciate; a thank you, an apology (for delays) and a greeting to customers strengthens the relationship between buyers and seller; phone and e-mail contacts for assisting to set up or install the products' purchased, troubleshooting, the warranty period or terms, and contacts for repairing and improving information can be packaged and presented as a link on the Web site (Singh, 2002). Madu and Madu (2002) mentioned the guidelines on how to be a good customer service; such as: customer service responds to customers' needs, the flexibility of policies, and the warranty terms concerning the refund, the returning policies, etc.

Hypothesis 5 (H5). *Customer service* positively affects the intention to purchase on online store

3.7 DELIVERY COST

Fu et al. (2007) stated that delivery issues affect the number of customers whom interest in participating online purchase, as customers are aware of effort needed to get the product, in terms of money or time. Fu et al. (2007) defined *delivery cost* as the cost that needs to be paid to the company who delivers customers' goods. Products' delivery has a great effect on e-vendors' operation costs hence they are carefully on defining it. Most of e-vendors cooperate with third parties for delivering the customers' products purchased; it might because of its practical or want to concentrate on their core business. Users demand the cheapest and the simplest way for determining products' cost. In different context, survey study by Fu et al. (2007) in China revealed that pursuing cheap price is users' main intention of online shopping. Based on Ogenio's results, she found that users call for constant delivery charges (not different product); pay one amount of money for delivery irrespective of the number of products.

Hypothesis 6 (H6). *Delivery cost* negatively affects the intention to purchase on online store

3.8 DELIVERY SPEED

Stalk et al. (1988) cited in Li and Lee (1994) argued that beside the high quality and low prices of products, consumers also demand delivery speed. *Delivery speed* refers to the required time needed for delivering product or service to customers' hand. Basically customers expect to receive their ordered products in a short time. One benefits of electronic commerce is to increase the service speed and easiness through electronic delivery of commerce data and products' delivery. However, studied by Fu et al. (2007) in China mentioned that almost half of

the respondents giving up on online shopping due to the long delivery time which they can't bear. The delivery speed and its cost are related in this term.

> Hypothesis 7 (H7). *Delivery speed* negatively affects the intention to purchase on online store

3.9 DISCOUNT

The attitude toward cheap price is affected by individual's pride and culture. Customers are mostly tend to love cheap price and at the same time demand high quality products. E-vendors persuade web surfers to purchase by putting discount in the first page. This is mostly effective to attract new customer which has no intention to purchase. Raju (1992) defined *discount* as any price which has lower amount than the highest price by more than *k* cents. Simplyfing this term, we define it as reductions to a basic price of goods or services. Raju (1992) identified discount as two facet promotional activities, magnitude of discount and frequency of discount. Magnitude of discount is a deep discount which may induce customers' loyalty to stockpile product and new customers to unpredicted purchase, while frequency of discount refers to the period of discount given. If it is frequent discount, people tend to un-stock-pilling their product as they can buy it whenever and infrequent discount gives the scheme to immediate purchase for gaining benefit. In his research, he revealed that magnitude of discounts leads to a greater variability in sales while frequency of discount has negative effect on brand recognition.

> Hypothesis 8 (H8). *Discount* positively affects the intention to purchase on online store

3.10 EASE AND CLEAR NAVIGATION

Without efficient and user friendly navigation, users are likely to get confused, or frustrated and leave a site for good. The *ease and clear navigation* in e-commerce studies are leading to website usability. Nah and Davis (2002) define web usability as "the ability to find one's way around the web, to locate desired information, to know what to do next and very importantly, to do so with minimal effort (which centralized in navigation and ease of use)". Simplifying this, we define *ease and clear navigate* as ability provided to keep track and not to lose way from browsing activity. To conclude, website usability affects the customer satisfaction. Hence, e-vendors are competing to provide the easiest way to operate their website. Elements enhance the website usability are the convenience of using the site, the loading speed, information structure, etc. One can argue that creating user-friendly website does not need high quality technology, but we can provide users' needs. Providing a way to keep track of their surfing activity is crucial for users' browsing activity as customers are tend to open many pages which prone to get lost; establishing clear sequential steps for filling-in the forms such as sign up or detailed purchase forms. In addition, Gerhke and Turban (1999) suggested to consistently keeping website's navigation every page for maintaining its ease of use.

> Hypothesis 9 (H9). *Ease and clear navigation* positively affects the intention to purchase on online store

3.11 EASE OF FINDING WHAT IS LOOKED FOR

Ease of finding what is looked for has the same interpretation as *ease and clear navigation* variable; which is leading to web usability and ease of use. Bart et al. (2005) defined it as the appearance, layout, and possible sequence of clicks, images, and path on a website. *Ease of*

finding what is looked for refers to the minimum effort sequence of clicks, and path on a website to get what users want. With only few clicks, users already found what they are looked for. This can be achieved by providing clear navigation and search functionality as a tool for raising website usability. Singh (2002) proposed that e-vendors should provide detailed information for the general browsing activity, promptly available or click-through a mouse on text or pictures provide as service during the pre-purchase phase. Further, he stated that this support is crucial as the purchase itself.

> Hypothesis 10 (H10). *Ease of what is looked for* positively affects the intention to purchase on online store

3.12 FREE FROM ERROR

One of the assessments of website quality and the success of e-commerce website is the absence of error or free from error. *Free from error* refers to the lack of mistakes at a site in response to consumers' actions at that site (Bart et al., 2005). Turel and Yan (2008) identified that absence of error is the basis for transaction and negotiation. Users will confidence and trust the websites or vendors if they can provide reliable system (error-free functionality of the website, data security and privacy technologies, information on the legitimacy of the website). In every transaction, even in a simple surfing activity, consumers expect to surf in a reliable system without having any errors, such as: busy server message, links do not work in order, wrong information or incorrect processing of inputs and orders. The fact that a site does not content error will raise customers' trust to purchase on a web shop (Bart et al., 2005).

> Hypothesis 11 (H11). *Free from error* positively affects the intention to purchase on online store

3.13 HEARD OF STORE BEFORE

People tend to buy products in physical store and buy it online only if they already known or familiar with the product or the store (Ogenio, 2009). Nowadays, established physical store are widening its market by selling its products via online. In order to boost online purchase, physical store also advertise through word of mouth (WOM). "WOM provides vital information about a firm to consumers that oftentimes helps consumers decide whether or not to patronize a firm" (Maxham, 2001). Empirical evidences revealed that WOM has positive impact on influencing someone to purchase on brand related and building trust as most of customers are abandon their shopping cart during online transaction (East et al., 2008). Awad and Ragowsky (2008) examined WOM and its effect to gender; it is known that female is prone listen to major voice of WOM for purchasing online as they are less interested spending much time to do online activity, hence they prefer to stick with the major opinions. We define *heard of store before* as reputational information of product or service from a store which you familiar with.

> Hypothesis 12 (H12). *Heard of store before* positively affects the intention to purchase on online store

3.14 LANGUAGE

Hallier (2003) defined language as an "association of words (or phrases) and the perceived purpose of the cultural context in a status symbol, communication tool, conduit of emotion, or artistic expression". In the context of electronic commerce, language used by a website plays an

important role, as users want to be sure about information they proceed. Simplifying this, we define language as association of words (or phrases) to communicate which has common understandable among both sides. Yang et al. (2008) studied the language anxiety, prior non-native language experience, internet self-efficacy, and language self-efficacy. These variables are analyzed for the intention to use non-native language commercial web sites, respectively. The results indicate that these variables have an effect on the intention to use non-native language commercial web sites. Nvision (1999); O'Cass and Fenech (2003) as cited in Yang et al. (2008) has identified that there are many established and attractive web shops however there are barriers and other concerns preventing users' intention to visit and users' actual purchase on international websites, which is language.

Study by Wu et al. (2009) in Taiwan indicated that one of variables which promote behavioral intention to use tourism website is language and its contents besides online help and user guide; website's consistency; user feedback, etc. The reason could be that, users tend to prefer website which use language that they can understand; they are afraid if misinterpret its instructions. Rong et al. (2009) research finding also indicated the necessity to design bilingual (English and Chinese-language) websites hotel. Their research is employed using scientific classification techniques on surfers or buyers and between Western and Asian users of hotel websites. Generally, people tend to prefer website which use their native language, it is supported by Ogenio (2009). She reported that language has negative effect on intention to purchase. Given some Dutch websites and an English website, it is revealed that respondents prefer to purchase on Dutch website better than English website. Referring to Ogenio's (2009) finding, we also purpose the following hypothesis:

> Hypothesis 13 (H13). *Language* negatively affects the intention to purchase on online store

3.15 PAYMENT METHODS AND OPTIONS

Online payments are critical issues in e-market (Zhang et al., 2006). Ba et al. (2000) cited in Zhang et al. (2006) stated that not all online users are comfortable to use credit card due to various security concerns. For instance, buyers are afraid that their credit card information might be intercepted during transmission over internet or misused by other parties or even the sellers itself. Zhang et al. (2006) surveyed eBay users on payment choices relate to product quality and seller characteristics. The research indicates that payment choices are strongly affected by product attributes than sellers characteristics. In general, if the product's attribute uncertainty can be reduced, buyers are willing to use credit card otherwise they are more likely to adopt the cash payment.

Mangiaracina and Perego (2009) studied preferences on payment method through survey and case study in Italy. Further stated, payment method is a barrier for online transaction concerning the limitations of trust. The fear of the online frauds builds consumers' emotion to choose other possibility to transfer money. Italian facilitates online transaction through variety of payment methods, credit card, eWallet, bank transfer and cash on delivery. We record there is no explicit definition found in the literature of *payment methods and options*, however Ogenio (2009) implicitly define it as the variability of procedures to transfer money for the exchange of product or service. Singh (2002) stated that variability of e-payment methods, with multi-payment systems such as by check, money order, and cash on delivery could enhance convenience for online payment transactions. With these facilities, customers have position to choose their

preferences in payment methods they familiar and happy with. This is a crucial service to support and gain trust for online purchase of goods and services. Kwon and Lee (2003) empirically tested the relationship between payment security, providing alternative payment method (offline) and internet purchase. They revealed that attitude toward internet shopping was found to be negatively related to security concerns internet purchases. Furthermore, it was found that by providing alternative off-line payment methods reduces security concerns and therefore promotes on-line purchases.

Hypothesis 14 (H14). *Payment method and option* negatively affects the intention to purchase on online store

3.16 PICTURES

Pictures represent a product. Park et al. (2005) investigated the product presentation in a dynamic movement (product in motion) and image's size to attract customers. Empirically tested, the research reported that product presentation affects the customers' mood which leads to purchase intention. Park et al. (2005) defined it as presentation of product displayed on a site which aims to attract customer to purchase. They stated "positive moods have been found enhance the performance of behaviors that lead to positive outcomes, such as greater personal power and greater freedom to act as one wishes". Concerning this opportunity, e-vendors can persuade customers by providing visual ability to check a product, such as simulating on-line with enlargement or zoom functions, or by virtual rotation of the product. Park et al. (2005) defined product presentation as the presentation of product displayed which aim to attract customer to purchase. Jiang and Benbassat (2007) examined the effect of presentation format for product understanding which will lead to intention to return. They investigated four presentation formats: static pictures, video without narration, video with narration, and virtual product experience (VPE). Empirical result revealed that video and VPE lead to higher perceived diagnostic than static pictures. In addition, we record that no empirical evidence prove that nice product presentation leads to intention to purchase, however we are confidence to expect it will have positive correlation.

Hypothesis 15 (H15). *Pictures* positively affect the intention to purchase on online store

3.17 PRICE

For online shopping customers, price information is very crucial for their purchase decisions. Web shops are competing on their price setting. Thus, to attract consumers, bargaining products or top selling products are frequently advertised with its prices on the front page. Customers more interest to participate in bidding process to get lowest price. Constantinides (2004) defined *price* as costs which have to be paid in order to get products. Basically, customers demand e-vendors to mention products' tag price with detailed information, such as: the basic price, the extra cost, the tax, and the delivery cost. For cost presentation, most of users are prefer having detailed explanation for the basic price, tax, the delivery cost, and the actual price need to be paid. Constantinides (2004) stated that" research on role and importance of the online price contradicts with predominant belief; it states that price is the main motivator for consumers when choosing a particular web site". Most of online consumers would firmly state that low price is their major motivation to perform online shopping. However, The Mckinsy Quarterly (2001) cited in Constantinides (2004) reported that based on the click-through analysis, it indicates that only 8% of online users in North America are aggressive price hunter and 30% of

purchasing managers identify lower prices as the key benefit of buying online though it could be related to cultural effect.

Hypothesis 16 (H16). *Price* negatively affects the intention to purchase on online store

3.18 PRODUCT COMPARISON POSSIBILITY

Consumers generally compare product attributes from different sellers to get products' information, superior product, and cheap ones. Though there are websites that specifically serves for products' comparison (from different websites), such as pricegrabner.com and cnet.com, customers demand this capability as internal services. Implicitly defined by Bart et al. (2005), *product comparison* refers to a feature of a website which can provide information on relation of product based on similarities and differences.

Haubl and Trifts (2000) examined product comparison with the intention to online purchase. They observed that consumers are often unable to evaluate all available alternatives in depth thought while making purchase decisions. As customers are offered with tons of products, they need to compare those products and able to make decision which product that they really wants. Customers hope they can evaluate in depth all possibility, perform relative comparisons across products on important attributes and make purchase decision. Providing interactive tools that provide help would be valuable, the initial products' screening will be worth and comparison selected products before making actual purchase decision.

A decision support system available on internal some sites (such as www.dell.com) aids user decision making. Nowadays, web shops provide links of comparison shopping engine search for specific information using key words and report the results (Turban et al., 2000). With competition among web shops, consumers are confuse and difficult to make fast decision. E-vendors incorporate with sites that can quickly provide online shoppers with decision-making support, win e-customers, and get them to make a purchase. For example, websites generate results (i.e. product search results) in the form of a list with the first entry represents the most desired option. Though there is no empirical evidence that product comparison possibility influenced intention to purchase, we confidence to propose the following hypothesis:

Hypothesis 17 (H17). *Product comparison possibility* positively affects the intention to purchase on online store

3.19 PRODUCT INFORMATION

One of methods to attract and commit customers' intention to purchase is tailoring the interactive experience based on customers' preferences. As cited by Detlor et al. (2003), product information seeking often portrayed as a critical early stage in the consumer buying process (Shim et al. 2001; Hodkinson et al. 2000; Haubl and Trifts 2000; Maes et al. 1999; Zellweger 1997; Moorthy et al. 1997). Detlor et al. (2003) examined what information is needed to accommodate both type of consumers, dis-orentiation consumers and directed goal consumers. Directed search consumers jump from subset to subset for direct purchase without considering any browsing activity to look supplement information. While dis-orentiation consumers are actively seek out product information with a view to make a decision. Once the customers commit to purchase, utile facts, knowledge and information related to products should be provided. The study suggested that information such as pricing and detailed product descriptions should be stated upfront as it is needed by both consumers. The *product*

information displayed are product aesthetics (its picture, its color, and its size); product description (its positive and negative aspect and its brand), product manufacturer (its name, and reputation), the price (specific tag price, price range, discount, rebate), the product quality (positive and negative aspect of product quality), product warranty (positive and negative aspect of product reliability), product specification (feature and performance, product availability, the delivery cost. Singh (2002) called dell.com provides these issues. Customer service by Dell Computers includes pre-packaged "specials" to customers who are given the option to "custom-build" systems. Manvi and Venkataram (2005) stated, those electronic commerce web-sites must be equipped with multimedia presentations for effective marketing of their products. Providing required product-information to a genuine buyer is a complex task in the present day web-based service environments.

In service industry, airlines and hotels are offering supplement information or services by furnishing links to maps, price comparisons, and information about low tickets to favorite destinations, weather, travelers' experiences, and other relevant news. Other sites offer information on detailed product information, weight, price, warranty, supplements product, and review or opinions of other users. Merriem-Webster defines *product information* as collection of facts, attribute, and knowledge of product or service from which conclusions may be drawn about the product or service

> Hypothesis 18 (H18). *Product information* positively affects the intention to purchase on online store

3.20 PRODUCT RANGE

Product range is defined as product diversity; most online store offer variability of products in their store. Online store tends to cover all range of customers by providing range of product that they need. Ogenio (2009) defined it as variability or diversity of products or service that a website offered. E-vendors are trying to boost usability by providing the ease of use their website; one way is providing products' catalogues for simplifying the product range. Since most of web shops have thousand of products to be sold, they are trying to arrange the products. Barnes (2001) stated that a high proportion of the surveyed companies featured product catalogue, though with varying level of details. While most of catalogue covered the whole product range (70%), only a handful (5%) provided information or comparisons with competitor's products.

Simonson (1999) stated that product assortment can play a key role, not only in satisfying customers' desire, but also in influencing buyer wants and preferences. Empirically tested (Simonson, 1999), product assortment can enhance the likelihood that a purchase will be made. This is typically likely to be the case for retailers involved in selling books, CD-ROMs and music. A good example is amazon.com which offers diverse of product from books to electronics with clear category of product.

> Hypothesis 19 (H19). *Product range* positively affects the intention to purchase on online store

3.21 PROFESSIONAL APPEARANCE

Keeping up the competition with other e-vendors, e-vendors supposedly do not only offer website's unique characteristics for attracting and notifying people. However, the main point is

its web shops need to have *professional appearance* in order to attract and engage users. Studies indicated that website's trust can be increased through its professional appearance. Wang (2001) stated that a trustworthy web site should be at least having two features: professional appearance and likeability. The reason is that professional appearance has basis on navigation; nice and ease of use navigation makes browsing and shopping become a pleasure activity. One can argue that it will lead to trust. In addition, Wang (2001) implied that *professional appearance* is a user-friendly website which may gain trustworthiness. And thus we interpret it as websites' presentation or appearance which may gain users' trustworthiness.

Warrington et al. (2000) cited in Wang (2001) claimed that professional appearance implies an expertise of a web site. As indicated by Nielsen (1999), professional appearance brings confidence to consumers. Further, Levis et al. (2008) examined the website quality concerning its appearances. 21 Irish corporate websites are examined and the result reported that 19 sites had a professional appearance in terms of no annoying horizontal scroll bars and 20 sites used the page title of the page linked to as an anchor. As the professional appearance aims to attract and customers which base on thrust, thus we propose professional appearance will lead to actual purchase.

> Hypothesis 20 (H20). *Professional appearance* positively affects the intention to purchase on online store

3.22 PURCHASE AT STORE BEFORE

Prior experience of traditional scheme purchase and hands-on products surely affects the intention to online purchase. Customers are much more confidence to perform online purchase if they already experienced with the products. Most of studies research on reason of switching purchase from offline to online store. However what we mean *purchase at store before* here is the previous traditional experience which might influence the decision to go forward on online sore. For instance, pleasant offline buying experience mostly will discourage customer to move from traditional to online store while having bad treated by physical store's customer service, it might encourage customer to move for purchasing online. Another reason could be that due to the variability type of product and bunch of online store, customers rely their online purchase decision only if they already known the characteristics of a product and the online store. Hence we define the *purchase at store before* characteristics as the prior experience of acquiring or hands-on product or service in physical store.

Brown et al. (2004) illustrated that nowadays vendors have changed they business processes at their physical store location in attempt benefit from a perceived disadvantage of buying on line. For example, Wal-Mart's just-in-time inventory management system is designed to ensure that items at its physical stores are never out of stock. This allows customers to be able to see a product before purchasing, which is a commonly stated disadvantage of shopping on-line.

> Hypothesis 21 (H21). *Purchase at store before* positively affects the intention to purchase on online store

3.23 RECOMMENDATION ENGINE

E-vendors attempt to support their potential customers' decision making process by introducing personalized web-based decision support systems, such as recommender systems. "Adopting the correct tools can affect its survival: effective product recommender tools are increasingly

recognized by online stores as effective means to sell more products" (Castagnos et al., 2009). Recommendation engine generates personalized list of the possible recommended alternatives.

Cenfetelli et al. (2008) defined recommendation engine as a feature of website which offered its customer with information to buy complement products. The products can be recommended based on the top overall sellers on a site, based on the demographics of the customer, or based on an analysis of the past buying behavior of the customer as a prediction for future buying behavior. These collaborative filter based on recommender systems have been applied to many e-commerce websites (i.e., movie, music, and restaurant recommendation) and shown good performance in predicting a list of products which a consumer prefers; for instance, amazon.com supports its marketing by employing the recommendation engine. Amazon.com provides services with features such as history of customers who bought, eye feature which allows customers to be notified via email of new items added to the amazon.com catalogue, book matcher, and customer comments. It has become apparent that customers' decision process is influenced by information from trusted people, neither from product manufacturers nor recommendation systems. Additionally, Schafer et al. (1999) reported that having recommendation do raise the sales, thus one can argue that having recommendation engine will enhance intention to purchase.

> Hypothesis 22 (H22). *Recommendation engine* positively affects the intention to purchase on online store

3.24 SEARCH FUNCTIONALITY

Customers are searching for a product that best meets their need with its attributes, such as best price, best service, best support, and best quality of product which they can get. In finding the perfect product, customers spend a lot of time searching and comparing products' characteristics. Hence, e-vendors boost its website usability by providing search functionality. Cited in Constantinidies (2004), massive scholars investigate the necessity of this feature (Liang and Lai, 2002; Madu and Madu, 2002; Lowengart and Tractinsky, 2001; Nah and Davis, 2002; Koufaris et al., 2002; and Wan, 2000). They suggested that site designers apply a consistent search engine; either it is the location or the precise outcome. Ogenio (2009) revealed that users are uncomfortable with un-precise outcome, with theirs key words; they get un-selective or un-related products.

Singh (2002) defined the search support (functionality) as the application of intelligent and software agents that gives value added for consumers. Simplifying this, we define search functionality as a website's feature which allows you to get information in a short time by inputting keywords. It is firmly claimed through a survey by Internet World that 89 percent of 163 leading web design firms used search mechanism of some type to lengthen and enhance their users' experience (Koufaris et al., 2002b).

> Hypothesis 23 (H23). *Search functionality* positively affects the intention to purchase on online store

3.25 SIMPLE APPEARANCE

Manes (1997) reported that uncluttered screens, simple search paths and fast presentations will provide a more pleasurable shopping experience which we interpret as *simple appearance*. Ogenio (2009) defined simple appearance as a plain websites' appearance displayed. Gehrke and

Turban (1999) examined the determinants of successful website design and they provide suggestion of the business content which use simple background colors and texture. Cited by Gehrke ad Turban (1999), Heath (1998) prefered green on black and Wilson (1998) provides a "how to" dealing with colors and textures. Color is considered as an important factor of quality that serves to reflect the corporate image and gives the customers' the confidence for using the site.

> Hypothesis 24 (H24). *Simple appearance* positively affects the intention to purchase on online store

3.26 SORTING POSSIBILITY

As stated before, sorting possibility relates to products' categorization. One can argue that sorting possibility is a method which can order product diversity into products' categorization hence customers spend least time for looking information or products. Studies indicated that the aim of the products' categorization or grouping or cataloguing is to have simple arrangement of products. Thus makes credit for attracting users. Diehl et al. (2003) cited in Cai and Xu (2007) reported on how consumers respond and react to variability order of product list. Product list could be generated from simple keyword searches, or naturally occur because of heterogeneity in consumer attribute weights.

Ogenio (2009) defined the sorting possibilities as the degree in which possibility alternatives can segregate items into groups according to a specified criterion (brand, price, genre, etc). The product list on websites appears in several ways. Some e-vendors present their products in alphabetic order of brand or model, which results in a somewhat random list in terms of product quality; some e-vendors allow consumers to sort products by various product attributes in either a descending order or an ascending order; and some others provide consumers with sorting tools but only allow them to sort the products in one order, descending or ascending. Cai and Xu (2007) uttered that it is more important to arrange product list on descending order based on product quality attributes than the random list. Further, the research indicated that the importance of product quality and relative importance of product quality/price was improved in a descending list, compared to an ascending list. Based on her interview, Ogenio (2009) revealed that respondents are willing to have sorting based on the products' type categorization, such as by brand (camera), genre (game). Though, Ogenio's (2009) result indicated negative relationship between sorting possibility and intention to purchase, looking at the validated outcome prior studies, we propose the following hypothesis:

> Hypothesis 25 (H25). *Sorting possibility* positively affects the intention to purchase on online store

3.27 SPECIALIZATION

Ogenio (2009) defines specialization on e-commerce website as an expertise website which offered a particular type of product. Ogenio (2009) revealed that respondents are more interest on performing their purchase in an individual website that sells only a type of product. Someone who has intention to purchase camera, s/he would prefer to buy the camera from a particular website which is recognized by its expertise on camera; for instance, digicamshop.nl which provides variability of camera and its accessories. Customers' cognitive thinking may encourage trust to this particular online store. Rather than having tons of products, some e-vendors prefer

to specialize their business, for instance dell.com or swatch.com. The visitors for this kind of online store are customers whom already known their purpose to buy a product or people who in pre-purchase decision making where they want to gather detailed information about the product.

> Hypothesis 26 (H26). *Specialization* positively affects the intention to purchase on online store

3.28 STOCK INFORMATION

Stock information is a way of product information's operationalization. The product's availability number information is important as it concerns with store's ability to fulfill customers' need in a real-time. It is essential for customers to know whether the ordered product is available or out of stock. This is one of the practical issue how the customer service can support websites' customer with such information. If it is in zero stock, customers would like to know how many days needed to get the product. This can be performed by sending individual emails to the potential customers. Browne et al. (2004) implicitly defined stock information as the availability information number of product left which displayed in web site. It is clearly seen that traditional store compete with online store for providing products or services every time as customers demand real time process. One can argue that once offline store run out of stock, customers can move to online shopping for purchasing products. Therefore the availability stock product will be one of the determinants for winning the competition.

> Hypothesis 27 (H27). *Stock Information* positively affects the intention to purchase on online store

3.29 STRUCTURE AND LAYOUT ORGANIZATION

Merriem-Webster defines structure and layout organization as a coherent form or organization of website set up appearance. Practitioners and scholars research on the best way to serve users through website's appearance. Ogenio's (2009) study, respondents mentioned "disorder layout", "the web shop doesn't fit on the screen", "small outlay to fill personal information", and "search option/button should be visible". Taylor et al. (2002) defined the importance of having standards concerning the use of video and animation within websites, standards concerning the use of pictures and graphics within websites, standards concerning web page layout such as the use of banners and menus, and website navigation standards such as the use and placement of return buttons though they did not explicitly define the term standards are. Despite there is no record on structure and layout organization has impact on the intention to purchase, it is supported by Ogenio (2009) that structure and layout organization has positive effect on intention to purchase, and hence we propose the following hypothesis:

> Hypothesis 28 (H28). *Structure and layout organization* positively affects the intention to purchase on online store

3.30 WARRANTY

Merriem-Webster defines warranty as "a written guarantee of the integrity of a product and of the maker's responsibility for the repair or replacement of defective parts". There are two kinds of warranty that exist in e-commerce, which are assurance of the website and its products. Lee (2002) defined assurance as two phases which are *building trust and confidence* and *after*

purchase behavior. As buyers want to have reliable information for transaction, Lee's (2002) research finding indicates that e-commerce businesses should focus on acquiring assurance services logo as customers will be more comfortable after seeing this logo. In the other side, similar with offline purchase, product guarantee offered by e-vendors are powerful tools for gaining competitive advantages. Further Constantinides (2004) added that for better assurance services, e-vendors should provide clear policies on outlining product, such as: returning procedure, refunding, recompense for defect product. These assurance services found having positive effect on online vendor's credibility. This information warranty either for the security and product assurance should be clearly presented in the website. We use the definition from Merriem-Webster as it implies two kinds of warranty that exist in the e-commerce.

> Hypothesis 29 (H29). *Warranty* positively affects the intention to purchase on online store

To synthesize the meaning of the constructs, the semantic definitions are listed below:

Construct	Definition	Source
Advertisement presentation	Visual representation/design of public advertisements for some product or service	(Robinson et al, 2007)
Aesthetics	Visual attractiveness or pleasant appearance of website which interpret relatively based on the individual	(Madu and Madu, 2002)
Categories	A collection of things sharing a common attribute of product or service	(WordWeb)
Customer reviews and ratings	The reputational preferences of product or service which established in positive and negative opinions of individuals	(Hu and Liu, 2004) and (Melnik and Alm, 2002)
Customer service	A support or supplement action of a website to enhance customer satisfaction level	(Turban, 2002)
Delivery costs	The cost that needs to be paid to the company who delivers customers' goods	(Fu et al, 2007)
Delivery speed	The required time needed for delivering product or service to customers' hand	(Stalk et al, 1988)
Discounts	Reductions to a basic price of goods or services	(Ogenio, 2009)
Easy and clear to navigate	The ability provided to keep track and not to lose way from browsing activity	(Bart et al, 2005)
Ease of finding what is looked for	The minimum effort sequence of clicks, and path on a website to get what users want	(Ogenio, 2009)
Free from error	The lack of mistakes on a site in response to customer's actions on that site	(Bart et al, 2005)
Heard of store before	The reputational information of product or service from a store which you familiar with	(Ogenio, 2009)
(Native) Language	Association of words (or phrases) to communicate which has common understandable among both sides	(Hillier, 2003)
Payment methods and options	The variability of procedures to transfer money for the exchange of product or service	(Ogenio, 2009)
Picture	The presentation of product displayed on a site which aim to attract customer to purchase	(Park et al, 2005)
Price	The cost which have to be paid in order to get the product or services	(Constantinides, 2004)
Product comparison possibilities	A feature of a website which can provide information on relation of product based on similarities and differences	(Bart et al, 2005)
Product information	Collection of facts, attribute, and knowledge of product or service from which conclusions may be drawn about the product or service	(Merriem-Webster)
Product range	Variability or diversity of products or service that a website offered	(Ogenio, 2009)
Professional appearance	Websites' presentation or appearance which may gain users' trustworthiness	(Wang, 2001)
Purchased at store before	The prior experience of acquiring or hands-on product or service in physical store	(Ogenio, 2009)
Recommendation engine	A feature of website which offered its customer with information to buy complement products	(Cenfetelli et al, 2008)
Search functionalities	Website's feature which allows you to get information in a short time by inputting keywords	(Singh, 2002)
Simple appearance	The plain websites' appearance displayed	(Ogenio, 2009)
Sorting possibilities	The degree in which possibility alternative to segregates items into groups according to a specified criterion	(Ogenio, 2009)

	(brand, price, genre, etc)	
Specialization	Expertise website which offered a particular type of product	(Ogenio, 2009)
Stock information	The availability information number of product left which displayed in web site	Browne et al. (2004)
Structure and layout organization	Coherent form or organization of website set up appearance	(Merriem-Webster)
Warranty	A written guarantee of the integrity of a product and of the maker's responsibility for the repair or replacement of defective parts	(Merriem-Webster)

TABLE 2 LIST OF CONSTRUCT DEFINITION

The list of the 29 hypotheses will be tested are:

No	Hypotheses
H1	Advertisement presentation negatively affects the intention to purchase on online store
H2	Aesthetics positively affects the intention to purchase on online store
H3	Categorization positively affects the intention to purchase on online store
H4	Customer review and rating positively affects the intention to purchase on online store
H5	Customer service positively affects the intention to purchase on online store
H6	Delivery cost negatively affects the intention to purchase on online store
H7	Delivery speed negatively affects the intention to purchase on online store
H8	Discount positively affects the intention to purchase on online store
H9	Ease and clear navigate positively affects the intention to purchase on online store
H10	Ease of what is looked for positively affects the intention to purchase on online store
H11	Free from error positively affects the intention to purchase on online store
H12	Heard of store before positively affects the intention to purchase on online store
H13	Language negatively affects the intention to purchase on online store
H14	Payment method and option negatively affects the intention to purchase on online store
H15	Pictures positively affect the intention to purchase on online store
H16	Price negatively affects the intention to purchase on online store
H17	Product comparison possibility positively affects the intention to purchase on online store
H18	Product information positively affects the intention to purchase on online store
H19	Product range positively affects the intention to purchase on online store
H20	Professional appearance positively affects the intention to purchase on online store
H21	Purchase at store before positively affects the intention to purchase on online store
H22	Recommendation engine positively affects the intention to purchase on online store
H23	Search functionality positively affects the intention to purchase on online store
H24	Simple appearance positively affects the intention to purchase on online store
H25	Sorting possibility positively affects the intention to purchase on online store
H26	Specialization positively affects the intention to purchase on online store
H27	Stock Information positively affects the intention to purchase on online store
H28	Structure and layout organization positively affects the intention to purchase on online store
H29	Warranty positively affects the intention to purchase on online store

TABLE 3 LIST OF HYPOTHESES

4. RESEARCH DESIGN

The theoretical research model which was proposed in chapter 3 will be tested using experimental research design. The operationalization of the research design will be addressed in this chapter. The detail research design, operationalization of the constructs, and conceptual validation will be delineated in details in the following sections.

4.1 DETAIL RESEARCH DESIGN

To evaluate the proposed research framework shown in Figure 3 and test the hypotheses generated from the framework, we applied field experimental research design. In general, the experiment involves giving task to respondent and filling in questionnaires in order to gain information and experience from respondents in a structured format. Every constructs in this study concern with the attitude held by individuals, therefore experimental and questionnaire with open measurement might be an optimal way to validate the framework.

De Vaus (2001) would define this study as explanatory research as it relies on causal hypothesis. There are three methodological for studying consumer behavior: observation, interview and survey, and experimentation (Blackwell et al., 2006). Field experiment is an excellent tool for performing the research design which aims to investigate cause-and-effect relationship. Further, we combine this research design with survey design by asking respondents to fill-in questionnaire. Observation is difficult to be applied as a high amount of time is needed to perform in various situations. To quantitatively measure the result, we rely on the statistical conclusion.

4.1.1 RESPONDENTS

According to consumer behavior research (Rodrigez, 2009); electronic commerce users are dominated by 18-34 year old users. They are dominating with 40% statistics on purchasing electronics or entertainment products. The experiment is executed in University setting; using undergraduate students and graduate students with different level of background and age. We gather respondents for performing the shopping task by sending email's advertisements to undergraduate and graduate students. As a trigger, we randomly select respondent for an iPod, sweaters and cups.

4.1.2 PROCEDURE

Respondents are asked to perform two shopping tasks. The shopping task means *add the product to the shopping cart and follow the purchasing process until just before users enter their bank account or credit card number*. Each respondent seats in front of computer and is given the booklet which contains the shopping tasks and questionnaire. The first page of the booklet presents the instruction of the sessions. The respondents briefed by the researchers about the sessions while filling in demographic questions. The respondents are asked to surf within the web shops and performed the shopping tasks afterward. After finishing the shopping tasks, respondents are asked to fill the questionnaire.

4.1.3 SHOPPING TASK

In order to gain precision with previous research (Ogenio, 2009), we are willing to use the same amount of websites. Original framework used 4 types of products which are Camera, toaster, Xbox game, and book; and 12 web shops. However, due to time limitation, we consider to reduce the product type as listed in Table 4 List of Web Shops

and Figure 4 which will be followed by fewer amounts of web shops. We use the two web shops for each products, consists of the specialization web shop and the one that sell multiple type of products.

Book	Camera
http://www.boek.net	http://www.digicamshop.nl
http://www.amazon.com	http://www.amazon.com

TABLE 4 LIST OF WEB SHOPS

The respondents are required to perform the following shopping tasks (for detailed shopping tasks, please see Appendix B: Questionnaires):

- Selecting and purchasing a camera for users' own use on two given online stores
- Selecting and purchasing a cooking book as a give for user's best friend on two given online stores

4.1.4 OPERATIONALIZATION OF THE CONSTRUCTS

All questionnaire items are adapted to the context of our research based on the pre-existing and the validated scale. The items are listed in Appendix A: List of Items.

Podsakoff et al. (2003) identified common method biases for acquiring data in behavioral research. Common method variance refers to the variable which is attributable to the measurement methods rather than to the constructs. This is major threat for the internal validity which will be explained in the next section. Common biases are the item characteristics and items' context which influence the common method variance. To eliminate these biases, we carefully design the measurement items, in the sense of item wording, format scales and reverse coded items, item priming effects and item embeddedness.

Advertisement presentation (ADPR) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and figuring out their attitudes about the advertisement presentations, such as: their preferences statics (text) ads over the dynamic (animation or flash), and their satisfaction of the pop up ads which presented by the web shops. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Aesthetics (AEST) of a web shop is operationalized using two items that derived from Bart et al. (2005) and developed based from Ogenio's (2009) interview result. The items were reflective and asked about the level of artistic creativity and the pleasant appearance of the web shops. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Categorization (CATE) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were asking users on consistency of product categorization and the importance of the availability of product categorization in a web shop. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Customer review and rating (CRRAT) is operationalized using three items that derived from Bart et al. (2005). The items were reflective and asking on the importance of the availability of testimonial or endorsement, do the reviews from other customers affect their purchase decision, and the importance of the availability to write their reviews. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Customer service (CS) is operationalized using three items that derived from Bart et al. (2005). The items were reflective and asking on the importance of the availability of the reactive service (i.e. email, fax, phone), users' preferences of the availability of the shopping assistant, and the availability of a chat room where customers can discuss their experience with a site. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Delivery cost (DCO) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and figuring out the users' preferences on the scheme of delivery cost, whether they love to have flat rate or flexible rate irrespective number of products that they purchased and the importance of the availability of delivery cost mentioned in a web shop. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Delivery speed (DSP) is operationalized using one item that developed based on Ogenio's (2009) interview result. The item was reflective and figuring out the possibility to choose options of delivery type ranging from the express to normal time. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Discount (DISC) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and asking on preferences of the scheme of discount whether users prefer a seasonal importance over everyday discounts, and the amount of discounts that they want. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Ease and clear to navigate (ENAV) is operationalized using two items that derived on Park and Kim (2003) and Bart et al. (2005). The items were reflective and measure the easiness of operationalization such as: whether keeping track their browsing activity is easy and the clear of sequential in filling form. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Ease of what is looked for (ELOOK) is operationalized using two items that developed based on Ogenio's interview result. The items were reflective and asking the effort that they put to gather information which they looked for. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Free from error (FRR) is operationalized using three items that derived from Bart et al. (2005). The items were reflective and asking their experience when they use the web shops, such as:

internet link were working in order, the absence of errors, and the existence of busy server messages. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Heard of store before (HSTB) is operationalized using two items that derived from Park and Kim (2003) and Bart et al. (2005). The items were reflective and asking the web shops' or e-vendors' familiarity. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Language (LANG) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and asking the language of style that users' prefer whether their native language or other language. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Payment methods and options (PYMO) is operationalized using three items that derived from Bart et al. (2005). The items were reflective and asking users' preferences of web shops; whether web shops accept the variety of payments i.e. PayPal, local bank and credit card; whether their associates with the credit card issuer; and whether the payment method or mechanism is clearly stated in the web shops. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Picture (PIC) is operationalized using three items that developed based on Ogenio's (2009) interview result. The items were reflective and asking the site whether the products' picture presented on a web shop gives the feeling to have the products, and also the possibility of zooming in/out. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Price (PRI) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and asking the importance of detailed price's information and the fact that the web shops give low price. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Product comparison possibility (PCOMP) is operationalized using two items that derived from Bart et al. (2005). The items were reflective and asking users' comments on the importance of the availability feature *comparison of all competing brands* and the fact that product comparisons affect users' purchase decision. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Product information (PINF) is operationalized using three items that derived from Park and Kim (2003). The items were reflective and asking whether the web shops provide an up to date products' information; the products' information is understandable, and it is relevant information. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Product range (PRAN) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and asking users' preferences on a variability of products offers to them and the possibility to get type of products, the second hands and new products. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Professional appearance (PAPP) is operationalized using two items that developed based on Bart et al. (2005). The items were reflective and asking the web shop's proportion of color combination, type and size of font, and the visual appearance and the manner of a web shop. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Purchase at store before (PSTB) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and asking users' experiences on purchasing similar products in a traditional store before. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Recommendation engine (RENG) is operationalized using three items that developed from Bart et al. (2005). The items were reflective and asking whether the web shops could provide recommendation of related products and whether it is made based on their personal information, and the fact that the recommendation feature helps customers to reach their purchase decision making. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Search functionality (SFUNC) is operationalized using one item that derived from Bart et al. (2005). The item was reflective and asking the availability of search button and the fact whether the result is a precise outcome or not as an outcome result is prone to miss-generated. From Ogenio's (2009) result, it is revealed that users often have imprecise result. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Simple appearance (SAPP) is operationalized using two items that developed based on Bart et al. (2005) and Ogenio's (2009) interview result. The items were reflective and asking a web shop's appearance whether it displays limited pictures/text and how users react on it. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Sorting possibility (SORTP) is operationalized using one item that developed based on Ogenio's (2009) interview result. The items were reflective and asking on the fact that the sorting possibility enhances their knowledge on products or services. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Specialization (SPEC) is operationalized using two items that developed based on Ogenio's (2009) interview result. The items were reflective and asking on web shop's expertise of this area. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Stock information (SINF) is operationalized using two items that developed based on Bart et al. (2005). The items were reflective and asking on web shop's services on stock information, hence time is not wasted through filing-in forms. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Structure and layout organization (SLORG) is operationalized using two items developed based on Ogenio' (2009) interview result. The items were reflective and asking on the consistency of layout organization. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

Warranty (WARR) is operationalized using three items that developed based from Bart et al. (2005). The items were reflective and asking on the service and product guarantee term and unequivocal terms. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

The subjective norm (SNOR) is operationalized using two items which derived from Ajzen and Fishbein (1974). The items were reflective and asking on users' norm or people which users might take into account the people's consideration or reviews. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

The intention to purchase (INTP), and the actual purchase (ACTP) are operationalized using one item derive from the Ajzen and Fishbein (1974). The items were reflective and asking on the possibility that their surrounding and their basic intention to purchase on the determined web shops. The measurements are on seven point Lickert scale ranging from "strongly disagree" to "strongly disagree".

FIGURE 4 HOMPAGE OF SELECTED WEB SHOPS

4.2 CONCEPTUAL VALIDATION

There are extensive methodologies and tools for validating research, such as content validity, construct validity, factorial validity, nomological validity, predictive validity, method bias validity, etc. Straub (1989) provides an overview of how instrument validation, internal validation, and statistical conclusion validity strengthen the empirical findings. Statistical conclusion validity refers to the type of validity that addresses whether appropriate statistics were used in calculations which performed to draw conclusions about the population of interest (Straub et al., 2004). Internal validity analysis establishes whether there are other variables that could explain the observed results. To synthesize this, instrument validity reflects the internal validity whether it measures the intended construct or not.

Straub et al. (2004) synthesized the existing validity concepts. Taken from Straub et al. (2004), Table 5 and Figure 5 present the validation methods which we addressed in this study. Originally there are 4 major validity and several items represent the validity, however we examine 3 validity issues, which are: content validity, construct validity (discriminant and divergent validity), and reliability. We concern on these three issues because these are the prerequisites to build a construct and an item. Explained by Moore and Benbassat (1991), these three validation are the main basis validity for strengthen the causal relationship by supporting the addressed items for each constructs.

Validity Component	Heuristics/ Techniques	Comments (Pro and Cons)
Content Validity	Literature review; expert panels or judges; content validity ratios [Lawshe,1975]; Q-sorting	Infrequent in IS research
Construct Validity		
Discriminant validity (divergent validity)	MTMM; PCA; CFA as used in SEM; PLS AVE analysis; Q-sorting	MTMM rare in IS research; no well accepted statistical thresholds for MTMM, but without at least a two method do not account as well for common methods bias [for an opposing argument, see Bagozzi et al. [1991].
Convergent validity	MTMM; PCA; CFA as used in SEM; Q-sorting	Rare in IS research. No well accepted statistical thresholds for MTMM, but without at least a two method comparison other techniques do not account as well for common methods bias.
Reliability		
Internal Consistency	Cronbach's α; correlations; SEM composite consistency estimates	α assumes that scores for all items have the same range and meaning; if not true, adjustments can be made in the statistics; also nonparametric correlations can be plugged into the formulation.

TABLE 5 VALIDITY COMPONENTS AND TECHNIQUES

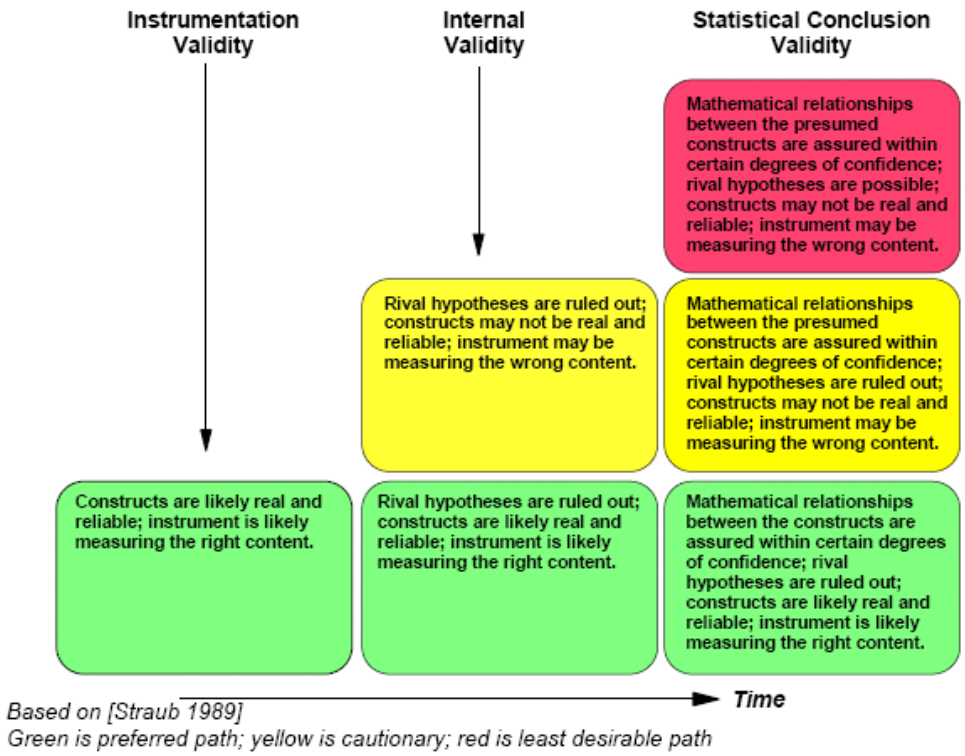

FIGURE 5 OVERVIEW OF VALIDATION (STRAUB, 2004, PP. 384)

An instrument is content valid when the items' representation drawn from universal measurements. Based on literature, it is very difficult to assess (Lewis, 1994) . Construct validity is the degree in which an item is accurately reflecting the constructs they are supposed to measure. It can be achieved through convergent and discriminant validity. In addition, reliability refers to the consistency of results if the same item administered in different times, locations, or populations. It can be shown by using the Cronbach alpha.

Moore and Benbassat (1991) formulated methodology for instrument development process. The methodology consists of three steps:

1. Item creation, aims to ensure the content validity. It is achieved by identifying items at previous literature or creating new items which fit with the constructs definition.
2. Scale development, aims to assess construct validity which attain by identify any particular items which may have ambiguous items performed by panelist or judges. It is applied on sorting exercise
3. Instrument testing, aims to ensure that the mechanism of compiling the questionnaire had been adequate. It is applied on pre-test and pilot test.

The next following section will delineate the instrument development process. Table 6 summarizes the instrument validity which addressed in this study.

Phase			Content Validity	Construct Validity	Reliability
1	Conceptual validation	Qualitative Placement ratio	x	x x	x x
2	Pre-test	Qualitative			x
3	Pilot test	Cronbach alphas Factor analysis		x	x
4	Full scale survey	Cronbach alphas Factor analysis		x	x

TABLE 6 INSTRUMENT VALIDITY (SOURCE: DRAAIJER, 2008, PP. 43)

4.2.1 INTERNAL VALIDITY

Internal validity is the basis of a scientific research. By doing the literature studies in a systematic way, it can increase the internal validity. The term internal validity indicates whether an experimental design is free from uncontrolled factors. Hence, we need to assure the dependent variable and the possibility of its changes. We have identified alternatives and moderating variable which can affect the online purchase behavior, however, it is impossible to have no risk on explaining these alternatives. Selection bias could be major threat in this study.

Issue often rises that using students for a study limits the external validity. As this study aim to identify the online purchase behavior, we put basis on Rodrigez (2009) to determine the appropriate sample. Hence we argue that using graduate students which have wide range of age for being respondents will eliminate this thread. Some may argue that students' perception is different from the general populations. However, prior study indicates that there were no statistically significant differences found between students and general consumers' belief and attitude.

As stated above, major threat on behavioral research is common method variance. It is a threat which can result in a wrong conclusion as it occurs when the same methods is used to measure the correlations between variables (Podsakoff et al., 2003). Common method bias is a subset of method bias (Burton-Jones, 2009). It arises in quantitative research when the covariance caused by the measurement approach rather than the measured trait causes measured relationships between two constructs to either inflate or attenuate compared to the true value (Williams & Brown, 1994). Since the statistical conclusion relies on questionnaire (survey) in single setting data collection, we determine and refine questionnaire to eliminate this threat through two steps, a pre-test and a pilot test.

Appendix A: List of Items presents the items which gathered from existing literature and developing items from scratch. These items are assessed the construct validity through sorting exercise which will be delineated in the following sections.

4.2.2 SORTING EXERCISE

Content validity defines how representative and comprehensive the items were in presenting hypotheses. It is assessed by examining the process that was used in generating scale item (Straub, 1989). In this phase, we applied Moore and Benbassat (1991) methodology for preliminary study constructing the items. We conducted three-rounds sorting exercises, with

three different sorters in each rounds. We abbreviate constructs for readable purpose as shown in Table 7.

Construct	Abbreviation
Advertisement presentation	ADPR
Aesthetics	AEST
Categorization	CATE
Customer review and rating	CRRAT
Customer service	CS
Delivery cost	DCO
Delivery speed	DSP
Discount	DISC
Ease and clear to navigate	ENAV
Ease of what is looked for	ELOOK
Free from error	FRR
Heard of store before	HSTB
Language	LANG
Payment methods and options	PYMO
Pictures	PIC
Price	PRI
Product comparison possibility	PCOMP
Product information	PINF
Product range	PRAN
Professional appearance	PAPP
Purchase at store before	PSTB
Recommendation engine	RENG
Search functionality	SFUNC
Simple appearance	SAPP
Sorting possibility	SORTP
Specialization	SPEC
Stock Information	SINF
Structure and layout organization	SLORG
Warranty	WARR

TABLE 7 LIST OF CONSTRUCTS' LABEL ABBREVIATION

4.2.2.1 First Sorting Round

Each item was printed on a small card and randomly presented to sorters. In this round, three graduate students took part. The sorters have various background major educations (mathematics, computer science and economics). They had to sort the items by placing related items together and giving a label to each set of related items (which made up a construct). We also asked sorters suggestion for re-wording of ambiguous questions.

The result (Table 10) indicates pretty low (59%) hit rate as most of sorters preferred to sort items into big constructs. The constructs and its label created by sorters are presented in Table 10. The logic behind this is some constructs have connections, such as simple appearance, professional appearance and aesthetics have the same basis as website presentation or

appearance; one can argue that categorization is the outcome of the sorting functionality; customer service, recommendation engine and search button or functionality are tools provided for enhancing usability. Concerning 96 items need to be sorted; majority sorters said that the items were too much in numbers. Based on sorters' suggestions, we eliminate the ambiguous questions and revise some of them. The items AEST1; CRRAT2, 3; DSP 1; ENAV1, 2; ELOOK1; HSTB3; LANG 1, 2, 3; PI 3; PRAN2; PAPP1, 3; SFUNC3; SAPP2, 3; SORTP2, 3; SPEC3; SINF3; SLORG2,3; WARR 1, 2 were deleted; DCO1 moved CS; RENG 4 moved to WARR; LANG was built new items; Finally most of remaining items were revised based on sorters' suggestions.

Construct	Sorter 1	Sorter 2	Sorter 3
Advertisement presentation	Website design, look and feel	Bad user Experience	Annoying things
Structure and layout organization		User interface and design	Overall layout
Aesthetics	Website appearance		Site appearance
Simple appearance			
Professional appearance			Impression
Ease and clear to navigate	Usability		User friendly
Ease of what is looked for			
Language		Language	Language
Delivery cost	Delivery	Delivery service quality	Delivery cost
Delivery speed			Delivery process
Discount	Promotion	Discount offer	Discount
Free from error	Running reability	Infrastructure	Site performance
Warranty	Image (product, store)	Site	Site review
Specialization		Product quality	Familiarity
Heard of store before		Image	
Purchase at store before	Offline previous		Reason online
Price	Characteristic of	Price offered	Price
Stock Information	Advance tool	Real time product	Up to date
Product comparison possibility		Flexibility to get product information	Product comparison
Product information	Avaibility product		Clarity on product
Sorting possibility	Assortment		Sorting possibility
Product range		Diversity of product	The avaibility
Categorization		Clarity on product	Product
Customer review and rating	Customer feedback	Extra helping tool	Customer review
Customer service	Supplementary service		Intercative
Pictures			Tools provided
Recommendation engine			
Search functionality			
Payment methods and options		Convenience in	Payment method

TABLE 8 FIRST ROUND SORTING EXERCISE CONSTRUCTS' LABEL

4.2.2.2 Second Sorting Round

The second round is performed by different sorters. It consists of one undergraduate student and two graduate students with various major (technical-management) on educations and various age range (21, 24, and 33 year old). We aim to have different perspective to ensure range of perceptions for the items. We use the same procedure as in the first round but we provide the definition for each constructs. The sorters have to sort the question by placing items into groups or non-fit groups.

Providing the construct's definitions forced sorters to be accurated in placing the items, hence it raises the 'fit' item placement. The first sorter performed gives useful feedback to differentiate the cards' colors between items and constructs. He found difficulty to place items into the right construct as plenty of numbers, either on constructs or items; hence it was difficult to memorize the construct's definition. This method was applied for other sorters and the time needed was decrease.

The result (Table 11) indicates significant improvement with 82% hit rate. Though we record there were no other study on the same area, one can argue that it is significantly lower than any other sorting exercise in other areas, such as knowledge sharing or technology acceptance, 92% hit rate. One way to boost 10% less differences is by doing the third round for particular constructs which has low results. With small amount of items and constructs, sorters can be precisely differentiating items which may lead to higher hit rate. In addition, label of construct (Table 9) indicate significant differences among sorters which reflects various characteristics among sorters.

Construct	Sorter 1	Sorter 2	Sorter 3
Advertisement presentation	Advertising design	Advertising attractiveness	Advertising
Aesthetics	Visual appearance	Visual attractiveness	Site appearance
Categorization	Categorization	Common product availability	Product category
Customer review and rating	Product review	Testimonial space	Product opinion
Customer service	Customer service	Helpdesk	Support for customer
Delivery cost	Delivery cost	Delivery cost	Delivery cost
Delivery speed	Delivery time	Delivery time	Delivery time
Discount	Discount	Discount	Discount
Ease and clear to navigate	Browsing history	Availability of guidance	Navigation
Ease of what is looked for	Easy interface	Easy searching	Easy browsing
Free from error	Site quality	Reability of website	Browser
Heard of store before	Site reputation	Product rating	3rd party view
Language	Phrase simplicity	Understandable information	Language
Payment methods and options	Payment	Easy payment	Payment method
Pictures	Visual product attraction	Attractivenes to buy	Product visualization
Price	Cost	Cost rate	Price
Product comparison possibility	Product comparison	Finding feature similiarity	Product comparison
Product information	Product information	Product information	Product information
Product range	Complete product	Product diversity	Diversity product
Professional appearance	Website impression	Thrusted website	Thrust website
Purchase at store before	Experience	Purchase experience	online vs offline
Recommendation engine	Related product	Related product	Recommendation feature
Search functionality	Quick information	Helpdesk short cut	Searching tool
Simple appearance	Website appearance	Un-interested website	Standard view site
Sorting possibility	Product sorting	Sorting product	Product group
Specialization	Website specialization	Specialized website	Product specialization
Stock Information	Up to date information	Availability information	Availability product
Structure and layout organization	Website organization	Understandable form	Site visualization
Warranty	Guarantee	Guarantee	Guarantee

TABLE 9 SECOND ROUND SORTING EXERCISE CONSTRUCTS' LABEL

	ACTUAL CATEGORY																											
Construc	ADPR	AEST	CATE	CRRAT	CS	DCO	DSP	DISC	ENAV	ELOOK	FRR	HSTB	LANG	PYMO	PIC	PRI	PCOMI	PINF	PRAN	PAPP	PSTB	RENG	SFUNC	SAPP	SORTP	SPEC	SINF	SLORG	WARR	TOT	TGT %
ADPR	9																												9	100
AEST		6																						3					9	67
CATE			6																3										9	67
CRRAT				7	5																								12	58
CS					3																	6							9	33
DCO						3	6																						9	33
DSP							9																						9	100
DISC								9																					9	100
ENAV									9																				9	100
ELOOK									9	0																			9	0
FRR											12																		12	100
HSTB												12																	12	100
LANG									3				6																9	67
PYMO														6								3							9	67
PIC															0							9							9	0
PRI																9													9	100
PCOMP																	9												9	100
PINF																	3	6											9	67
PRAN			3																6										9	67
PAPP		6																		3									9	33
PSTB												3									6								9	67
RENG																						16							16	100
SFUNC																						9	0						9	0
SAPP		9																						0					9	0
SORTP			3														3								3				9	33
SPEC												6														3			9	33
SINF																	5										4		9	44
SLORG		9																										0	9	0
WARR												4																8	12	67
															AVERAGE															59

TABLE 10 RESULT SORTING EXERCISE FIRST ROUND

	ACTUAL CATEGORY																													
Construc	ADPR	AEST	CATE	CRRAT	CS	DCO	DSP	DISC	ENAV	ELOOK	FRR	HSTB	LANG	PYMO	PIC	PRI	PCOMI	PINF	PRAN	PAPP	PSTB	RENG	SFUNC	SAPP	SORTF	SPEC	SINF	SLORG	WARR	N/A	TOT	TGT %
ADPR	9																													9	100
AEST		3																						3						6	50
CATE			7																						2					9	78
CRRAT				9																										9	100
CS					8																		1							9	89
DCO						6																								6	100
DSP							6																							6	100
DISC								9																						9	100
ENAV									5																			1		6	83
ELOOK										6																				6	100
FRR										1	10									1										12	83
HSTB												4									2									6	67
LANG													6																	6	100
PYMO														9																9	100
PIC		1													8															9	89
PRI						2										4														6	67
PCOMP																	5													5	100
PINF				1									1					10												12	83
PRAN											2								4											6	67
PAPP	1																			5								1		7	71
PSTB																					9									9	100
RENG																					2	7								9	78
SFUNC										2													3						1	6	50
SAPP	2																							4						6	67
SORTP																									5				1	6	83
SPEC																			1							5				6	83
SINF																							1				4		1	6	67
SLORG		1									1									1								3		6	50
WARR																		2											7	9	78
	AVERAGE																														82

TABLE 11 RESULT SORTING EXERCISE SECOND ROUND

	ACTUAL CATEGORY																													
Construc	ADPR	AEST	CATE	CRRAT	CS	DCO	DSP	DISC	ENAV	ELOOK	FRR	HSTB	LANG	PYMO	PIC	PRI	PCOMI	PINF	PRAN	PAPP	PSTB	RENG	SFUNC	SAPP	SORTP	SPEC	SINF	SLORG	WARR	N/A	TOT	TGT %
ADPR	9																													9	100
AEST		8																						2						10	80
CATE			13																						2					15	87
CRRAT				9																										9	100
CS					8																		1							9	89
DCO						6																								6	100
DSP							6																							6	100
DISC								9																						9	100
ENAV									5																			1		6	83
ELOOK										6																				6	100
FRR										1	10									1										12	83
HSTB												8									2									10	80
LANG													6																	6	100
PYMO														9																9	100
PIC		1													8															9	89
PRI						2										8														10	80
PCOMP																	6													6	100
PINF				1									1					10												12	83
PRAN											2								8											10	80
PAPP																				5									1	6	83
PSTB																					9									9	100
RENG																					2	13								15	87
SFUNC										2													7						1	10	70
SAPP	2																							8						10	80
SORTP																									5				1	6	83
SPEC																			1							5				6	83
SINF																							1				8		1	10	80
SLORG		1									1									1								7		10	70
WARR																		2											13	15	87
	AVERAGE																														88

Table 12 Result Sorting Exercise Third Round

4.2.2.3 Third Round

As the result of "fit" placement test on the second round still has 10% less differences with other result in different area, however we aim to have least differences. Hence we assure that the items are measure the right constructs. Third round exercise aims to rise scores under 80% on the second round, therefore only those items and constructs were given to three new sorters. Fewer amounts of items bring easiness to the sorters. We modify the items of AEST, CATE, HSTB, PRICE, PRAN, PAPP, RENG, SFUNC, SAPP, SINF, SLONG, and WARR. The result is 88% "fit" placement ratio which is shown in Table 12. Items in SFUNC2 and SLORG2 consistently put in different construct, hence we drop the items. Despite our hit rate is lower than (4% less) compare to Moore and Benbassat (1991) we argue that our items have good discriminant and convergent validity as we use representative users.

4.2.3 PRE TEST

A pre-test is an instrument testing. It aims to ensure questionnaire's qualitatively, times allocation to finish the questionnaire, and input for the ambiguous items found. In this step, we use three different respondents used in sorting exercise. By using different respondents, we aim to get objective opinion and inputs.

After the first respondents completed the shopping tasks and filling-in the questionnaire, we interviewed the respondent related on its length, wording and instructions. The next two respondents also give comments for ambiguous items. In average 90 minutes is needed to complete two shopping tasks and a questionnaire.

4.2.4 PILOT TEST

The pilot test is the last stage for developing items or the "full scale" test. The pilot test uses eight different respondents. The primary aim of the pilot test was to ensure the variety scale demonstrated reach appropriate levels of reliability. In addition, it also checks the difficulties that respondents might face in completing the questionnaire.

The items tested for reliability using Cronbach alphas which presented in

	Composite Reliability	Cronbachs Alpha
ADPR	0.78	0.66
AEST	0.80	0.89
CATE	0.86	0.80
CRRAT	0.76	0.71
CS	0.94	0.94
DCO	0.73	**0.58**
DISC	**0.60**	**0.05**
DSP	1.00	1.00
ELOOK	1.00	1.00
ENAV	0.89	0.77
FRR	0.86	0.76
HSTB	**0.35**	0.76
LANG	0.60	0.73
PAPP	**0.22**	0.64

PCOMP	0.70	0.78
PIC	0.84	0.76
PINF	0.95	0.92
PRAN	**0.60**	0.77
PRI	0.77	0.67
PSTB	0.84	0.62
PYMO	0.79	0.67
RENG	**0.56**	0.80
SAPP	1.00	1.00
SFUNC	1.00	1.00
SINF	0.83	0.70
SLORG	1.00	1.00
SORTP	1.00	1.00
SPEC	**0.03**	**0.38**
WARR	0.90	0.84
SNOR	**0.67**	0.86
INTP	1.00	1.00
ACTP	1.00	1.00

Table 13. The standard of Cronbach alphas of .70 should be achieved to show good internal consistency. Alpha measures the extent to which item responses obtained at the same time correlate highly with each other. Cronbach's Alpha calculation is based on the number of items (i.e. the number of questions on a questionnaire) and the inter-item correlations. A high correlation between different items will indicate they are measuring the same thing as there will be only small values for the error while a low correlation will indicate there is a lot of error and the items not realiable measuring the same things. Hence, items have below .70 slightly reworded.

	Composite Reliability	**Cronbachs Alpha**
ADPR	0.78	0.66
AEST	0.80	0.89
CATE	0.86	0.80
CRRAT	0.76	0.71
CS	0.94	0.94
DCO	0.73	**0.58**
DISC	**0.60**	**0.05**
DSP	1.00	1.00
ELOOK	1.00	1.00
ENAV	0.89	0.77
FRR	0.86	0.76
HSTB	**0.35**	0.76
LANG	0.60	0.73
PAPP	**0.22**	0.64
PCOMP	0.70	0.78
PIC	0.84	0.76
PINF	0.95	0.92

PRAN	**0.60**	0.77
PRI	0.77	0.67
PSTB	0.84	0.62
PYMO	0.79	0.67
RENG	**0.56**	0.80
SAPP	1.00	1.00
SFUNC	1.00	1.00
SINF	0.83	0.70
SLORG	1.00	1.00
SORTP	1.00	1.00
SPEC	**0.03**	**0.38**
WARR	0.90	0.84
SNOR	**0.67**	0.86
INTP	1.00	1.00
ACTP	1.00	1.00

Table 13 indicates that the result has acceptable result around .75. Though one can argue that .8 is the reasonable goal, we argue that limited number of sample size could be influencing the result. Eight respondents and mostly having no Dutch speaking capability might affect its internal consistency. DSP, ELOOK, PSTB, SFUNC, SAPP, SORTP, SLORG, INTP, and ACTP were each operationalyzed with single item scales and hence no internal consistency assessments of reliability are possible.

	Composite Reliability	**Cronbachs Alpha**
ADPR	0.78	0.66
AEST	0.80	0.89
CATE	0.86	0.80
CRRAT	0.76	0.71
CS	0.94	0.94
DCO	0.73	**0.58**
DISC	**0.60**	**0.05**
DSP	1.00	1.00
ELOOK	1.00	1.00
ENAV	0.89	0.77
FRR	0.86	0.76
HSTB	**0.35**	0.76
LANG	0.60	0.73
PAPP	**0.22**	0.64
PCOMP	0.70	0.78
PIC	0.84	0.76
PINF	0.95	0.92
PRAN	**0.60**	0.77
PRI	0.77	0.67
PSTB	0.84	0.62
PYMO	0.79	0.67
RENG	**0.56**	0.80

SAPP	1.00	1.00
SFUNC	1.00	1.00
SINF	0.83	0.70
SLORG	1.00	1.00
SORTP	1.00	1.00
SPEC	**0.03**	**0.38**
WARR	0.90	0.84
SNOR	**0.67**	0.86
INTP	1.00	1.00
ACTP	1.00	1.00

TABLE 13 RELIABILITY

4.2.5 IMPLEMENTATION OF THE EXPERIMENT

The workshop implementation was executed within one month. We use face to face workshop and online questionnaire. The first attempt on the workshop only gains limited respondents (32 respondents). The reason it gain limited respondents could be that the workshop was held on Friday afternoon; the rewards are less attractive; or less advertisements. We held continue attempts for gaining respondents. We use the same procedure where each respondent sat on a computer and perform "shopping tasks" and filing-in the questionnaire afterward. These attempts gain 34 additional respondents. The experiment started with the short briefing of the shopping task and filled in the demographic information. The instruction of the experiment is also explained in detailed in the first page of the booklet which contains the questionnaire. Each of respondents sat in a computer and performed the shopping tasks. The first shopping task is purchasing a camera for user's own use within two determines web shops which are the Digicamshop and the Amazon. The second task is purchasing a book for user's best friend as a reward. The second task also performed within one local web shop, the Boek, and one international web shop, the Amazon. The *shopping task* means *add the product to the shopping cart and follow the purchasing process until just before users enter their bank account or credit card number.* In average, one hour is needed to perform the "shopping tasks" and fill-in the questionnaire. For non-speaking Dutch, mostly they use Google translate for understanding the web shops. Most of respondents did not find any difficulties either in shopping tasks or filling-in questionnaire.

To achieve appropriate level of effect size and sample size, we need to raise high number of respondents, we provide online questionnaire to be filled-in. We spread email to students' mailing lists and friends' list for reaching the targeted respondents. To assure the online respondents actually perform the online shopping, we put the "required question" (must be filled-in) for each question hence they can only submit after filling-in the entire questionnaire. We use the Spreadsheet provided by Google Docs and asked them to state their email address to have chance winning the rewards. This attempt gains 56 respondents. In total, within 3 weeks, we gained 122 respondents with its demography portrayed in Table 14.

Measure	Items	Frequency	%
Gender	Female	43	0.39
	Male	79	0.61
Age	20-29	72	0.67
	30-39	43	0.30
	≥ 40	7	0.03
Language	Dutch	27	0.35

	Non-Dutch	95	0.65
Experience online purchase	Never	10	0.09
	Occasionally	91	0.77
	Frequently	11	0.14

TABLE 14 RESPONDENTS' DEMOGRAPHY

As we use two methodologies for data collection (workshop and online questionnaire), we are curious to assess whether the data have differences in term of the statistics view. To measure the differences we use the descriptive statistics and reliability. The result indicates that the workshop (.85) data was having similarity with online questionnaire (.83) in terms of the reliability. The skewness and the normal distribution also assure that online data is good enough. Hence, we assume that the online data might not contain error and confidence to use it.

To assure that we have enough respondents, we measured its statistical power. The objective is to measure the probability that a test will reject a false null hypothesis. Statistical power analysis can be used to calculate the minimum sample size and to accept the outcome of a statistical test with a particular level of confidence. In addition, it is also calculate the minimum effect size. We use the G*Power software for the preliminary statistical power. G*Power is a stand-alone power analysis program and often use in behavioral science which can measure the statistical power analysis. Statistical power analysis consists of sample size (n), power significance criterion (a), and the effect size (ES). These three variables are used to assure that research on behavioral science can be accepted and resembled the population.

A common analysis for measuring the statistical power after data collections are Post-hoc power analysis and Criterion analysis. Post-hoc power analysis often makes sense after a study has already been conducted. For instance, it becomes possible to assess whether a published statistical test in fact had a fair chance to reject an incorrect H_0. Criterion analysis is alternatives to post-hoc power analyses after a study has already been conducted. They may be reasonable whenever the control of α is less important than the control of β. Faul et al. (2009) stated that in case of goodness-of-fit tests for statistical models, for example, the most important concern is to minimize the β error risk of wrong decisions in favor of the model (H_0). We use Post-hoc analysis, t-test family with statistical correlation point biserial model. Table 15 delineates the output of the statistical power using G*Power. We determine the moderate effect size (p=.30) to have vicinity with the sample size that we have. With this calculation, we have 96% of statistical power. It means that we have 96% confidence to support the forthcoming results.

t tests – Correlation: Point biserial model			
Analysis:	Post hoc: Compute achieved power		
Input:	Tail(s)	=	One
	Effect size |ρ|	=	0.30
	α err prob	=	0.05
	Total sample size	=	122
Output:	Noncentrality parameter δ	=	3.4736053
	Critical t	=	1.6576509
	Df	=	120
	Power (1-β err prob)	=	0.9647799

TABLE 15 G*POWER ANALYSIS: A POST-HOC ANALYSIS SCREEN SHOT

We also compare the statistical power analysis which should be performed before the data collection. A Priori analysis is performed on the sample size and the effect size needed for

the statistical power. Comparing the Post hoc and Priori analysis, we can conclude that for having the same effect size, we have the same power for supporting the hypotheses. Taking into account Table 15 and Table 16, there are no extreme differences. For the Priori analysis, we inputted the statistical power outcome from the Post-hoc analysis, which is 96%. The actual power that we have is the same with the Post hoc analysis which is 96%. Based on this, we can conclude that out data was sufficient.

t tests – Correlation: Point biserial model			
Analysis:	A priori: Compute required sample size		
Input:	Tail(s)	=	One
	Effect size |ρ|	=	0.3
	α err prob	=	0.05
	Power (1−β err prob)	=	0.96
Output:	Noncentrality parameter δ	=	3.4161864
	Critical t	=	1.6580957
	Df	=	116
	Total sample size	=	118
	Actual power	=	0.9600535

TABLE 16 G*POWER ANALYSIS: A PRIORI ANALYSIS SCREEN SHOT

5. DATA ANALYSIS AND RESULTS

This chapter presents the data analysis which processed through the structural equation modeling. The analysis of framework, result of the hypotheses and its impacts are presented in the following sections.

5.1 STRUCTURAL EQUATION MODELING

Structural equation modeling (SEM) can be used to test whether the IS research meets recognized standards for high quality statistical quality (Gefen et al., 2000). It is used on behavioral research for the causal modeling of complex, multivariate data set which has multiple measures of proposed constructs (Hair et al., 1988, cited in Gefen et al., 2000). First generation of SEM; ANOVA, MANOVA, and linear regression; can analyze one layer of linkages between independent variable and dependent variable at a time, while the second generation; LISREL and PLS (Partial Least Square); enables to answer a set of interrelated research questions in a single, systematic, and comprehensive analysis by modeling the relationship among multiple independent and dependent construct simultaneously (Gerbig and Anderson, 1988, cited in Gefen et al., 2000).

Nowadays, PLS procedure has been recognized and used among researchers because of its ability to model the latent constructs under non-normality and small to medium sample sizes conditions (Gefen et al., 2000). The statistical objective is to test the model and its similiar with the multiple regressions, to show high R^2 and significant t-values which mean rejecting the null hypothesis. LISREL aims to show null hypothesis is insignificant (Thompshon et al., 1995, cited in Gefen et al., 2000). Using OLS (Ordinary Least Square) as its estimation technique PLS performs an iterative set of factor analysis combined with the path analyses until the difference in the average R^2 of the constructs become insignificant (Thompshon et al., 1995). Once the measurement and the structural paths have been estimated, PLS applies the bootstrapping re-sampling approach to estimate the significance (t-values) of the paths. PLS is thus especially suited for the analysis of small data samples and for data that does not necessarily exhibit the multivariate normal distribution required by the covariance-based SEM (Thompson et al., 1995). Rather than estimating the variance of all the observed variables, as in covariance based SEM, PLS estimates the parameters in such a way that will minimize the residual variance of all the dependent variables in the model (Chin, 1998). Based on these facts, we use PLS as a tool for proving the relation between constructs.

Anticipated the deleterious effects of measurement error, PLS uses a product indicator approach. The variables are viewed as latent variable that cannot be directly measured, but indicators are needed to be obtained. Each indicator is influenced by the latent variable and error. These indicators are then checked into PLS algorithm for estimation to have more accurate assessment of the underlying variable and its relations. PLS is a component based structural equations modeling technique, PLS algorithm varies each indicators "weight" to measure the composite score of the latent variable. This will cause indicators with weaker relationships are given lower weightings.

Based on above arguments, we use the SmartPLS version 2.0 to perform the analysis. Quantitatively measures the relationships, PLS weighted the indicators how much they will contributes to the latent variables' score (Chin et al., 1995).

5.2 MEASUREMENT MODEL

We measure five scenarios for determining the characteristics using five different data which are a global data and four specific web shops data. The motivation of using five scenarios is that we are curious with the differences which might occur. However, we will only mention the results of the global framework (using global data) and presents the specific web shops' results in the Appendix C.

Measurement model sometimes referred as confirmatory factor analysis (CFA). The first step in PLS is to establish validity of measurement model and the reliability. The rule of thumbs are the outer loading >.70, the average variance extracted (AVE) >.50, and the communality >.50 (Esposito Vinzi et al, 2010). The outer loading with value below .70 should be eliminated and iteratively measured the AVE and its communality for the appropriate level.

Assessing construct validity (discriminant and convergent validity), we use several measurements. To establish convergent validity, we used reliability and AVE (average variance extracted). AVE tries to measure the amount of construct's variance. We may conclude that constructs are different if the AVE for one's constructs is greater than their shared variance. That is, the square root of the AVE for a given construct greater than the absolute value of the standardized correlation of the given construct with any other construct in the analysis. The AVE should be higher than .50 signifying that a majority of the variance is captured by the construct.

Discriminant validity also can be assessed using AVE by comparing AVE's square root for particular construct with its correlations with other constructs (Chin, 1998). The root square of AVE is listed in bold on the diagonal of the AVE. In addition, the square root of the AVE is greater than all of the inter-construct correlations; it is evidence of sufficient discriminant validity (Chin, 1998). Table 18 indicates that all AVEs are greater than the correlation with all other constructs, hence our measurement model demonstrates sufficient discriminant validity. In order to further assess validity of our measurement instruments, a cross-loadings table (Appendix D) was constructed, as suggested by Gefen et al. (2000). It can be seen that each item loading in the table is much higher on its assigned construct than on the other constructs, supporting adequate convergent and discriminant validity.

PLS offers two reliability measurements using composite reliability and Cronbach alphas. To state that a variable is a latent variable, both reliabilities should have Cronbachs alpha >.60 and Composite reliability >.70. Indicators below those limits will be removed. In total we have 36 indicators which measure the online purchase behavior.

	Composite Reliability	Cronbachs Alpha
ACTP	1.00	1.00
ADPR	1.00	1.00
AEST	1.00	1.00
CATE	1.00	1.00
CRRAT	1.00	1.00
CS	0.80	0.64
DCO	1.00	1.00
DISC	1.00	1.00
DSP	1.00	1.00
ELOOK	1.00	1.00
ENAV	1.00	1.00
FRR	1.00	1.00
HSTB	1.00	1.00
INTP	1.00	1.00
INTP*SNOR	1.00	1.00
LANG	1.00	1.00
PAPP	1.00	1.00
PCOMP	1.00	1.00
PIC	1.00	1.00
PINF	1.00	1.00
PRAN	1.00	1.00
PRI	1.00	1.00
PSTB	1.00	1.00
PYMO	1.00	1.00
RENG	1.00	1.00
SAPP	1.00	1.00
SFUNC	1.00	1.00
SINF	1.00	1.00
SLORG	1.00	1.00
SORTP	1.00	1.00
SPEC	1.00	1.00
WARR	1.00	1.00
SNOR	1.00	1.00
INTP	1.00	1.00
ACTP	1.00	1.00

TABLE 17 RELIABILITY (POST-ELIMINATED INDICATORS)

	AVE	ACTP	ADPR	AEST	CATE	CRRAT	CS	DCO	DISC	DSP	ELOOK	ENAV	FRR	HSTB	INTP	LANG	PAPP	PCOMP	PIC	PINF	PRAN	PRI	PSTB	PYMO	RENG	SAPP	SFUNC	SINF	SLORG	SNOR	SORTP	SPEC	WARR
ACTP	1	1																															
ADPR	1	0.094	1																														
AEST	1	0.1055	0.0557	1																													
CATE	1	0.0088	0.0989	0.2349	1																												
CRRAT	1	0.0043	-0.031	0.1049	-0.029	1																											
CS	0.5755	-0.019	-0.021	0.1065	0.1182	0.0553	1																										
DCO	1	-0.009	0.1765	0.0741	0.0791	-0.104	0.2787	1																									
DISC	1	0.083	-0.031	-0.192	0.0228	-0.136	0.1936	0.1842	1																								
DSP	1	0.0928	0.1751	-0.089	-0.115	0.0887	-0.097	0.0111	0.1447	1																							
ELOOK	1	0.2364	0.115	0.2267	0.2057	-0.001	-0.072	0.0719	0.069	0.0616	1																						
ENAV	1	0.1967	-0.01	0.1649	0.1329	-0.033	0.068	0.0713	0.0552	0.0313	0.3398	1																					
FRR	1	0.0046	-0.037	0.0345	0.1444	0.0341	-0.023	0.04	0.0563	-0.042	0.0304	0.0645	1																				
HSTB	1	0.01	-0.019	0.0064	0.0914	0.099	0.1292	0.1116	-0.055	-0.133	0.0551	0.12	0.0009	1																			
INTP	1	0.2964	0.1004	0.0944	0.0661	0.1771	-0.046	-0.17	-0.173	-0.009	0.1081	0.0245	-0.098	0.1468	1																		
LANG	1	0.079	0.1104	0.1034	0.1841	0.0212	0.1928	0.159	0.0193	-0.089	0.0979	0.1047	-0.012	0.084	0.1052	1																	
PAPP	1	0.2861	0.0306	0.2889	0.107	0.04	0.0305	-0.025	-0.117	-0.082	0.1788	0.1529	0.0093	0.1023	0.1296	0.1159	1																
PCOMP	1	0.0258	0.0513	-0.022	0.0999	-0.06	0.1371	0.1704	0.1188	-0.033	0.1308	0.0747	0.1359	-0.076	-0.156	-0.06	0.0342	1															
PIC	1	0.1092	0.0876	0.1932	0.0547	0.1499	0.1473	-0.015	-0.059	-0.059	0.0565	0.1259	0.0625	0.1306	0.121	0.0999	0.1906	-0.096	1														
PINF	1	0.1346	0.1252	0.1615	0.182	-0.092	-0.04	0.0037	0.0423	0.0447	0.1835	0.1981	-0.137	0.1801	0.1133	0.0937	0.1951	0.0126	0.1876	1													
PRAN	1	0.2294	0.0424	0.1743	0.0339	0.0137	0.0252	0.0599	-0.052	-0.05	0.2437	0.1901	-0.043	0.1908	0.1761	0.1204	0.1461	-0.015	0.1531	0.2373	1												
PRI	1	0.209	0.1327	0.2447	0.1632	-0.042	-0.035	0.0679	0.0443	0.0949	0.2221	0.1911	-0.074	0.1433	0.0606	0.0836	0.2169	0.0692	0.0654	0.3672	0.1321	1	0									
PSTB	1	-0.011	0.1032	0.0646	0.2212	-0.139	0.0398	0.0561	0.0607	-0.006	0.0878	0.0755	0.2434	0.0352	-0.121	-0.043	0.0285	0.2904	-0.126	0.0578	-0.008	0.1505	1									
PYMO	1	0.064	0.079	0.049	0.1934	-0.093	0.0406	0.1554	-0.076	-0.054	0.141	0.074	0.2027	0.0513	-0.099	0.0891	0.0636	0.2788	-0.128	0.0236	-0.006	0.1041	0.262	1								
RENG	1	0.2566	-0.015	0.0421	0.079	0.0986	-0.099	-0.017	0.09	0.1028	0.2534	0.2118	-0.064	0.2417	0.2471	0.0005	0.2924	-0.012	0.2317	0.3325	0.2064	0.2867	0.0166	-0.062	1							
SAPP	1	0.0403	-0.188	-0.079	-0.02	-0.076	-0.165	-0.065	0.0157	0.1577	0	0.0786	0.0878	0.0862	-0.015	-0.136	0.0427	0.2136	-0.047	-0.006	-0.044	0.0343	0.0784	0.018	0.1415	1						
SFUNC	1	0.2188	0.0636	0.2015	0.1999	-0.07	0.0671	0.092	0.0807	-0.025	0.2227	0.1064	0.0694	-0.031	0.0001	0.0493	0.1651	0.1564	0.0249	0.1379	0.0901	0.25	0.12	0.087	0.0859	-0.024	1					
SINF	1	0.1669	0.0191	0.1246	0.0863	-0.093	0.0057	0.0881	0.0797	-0.076	0.1584	0.1351	0.1635	0.083	0.014	0.019	0.1149	0.0922	0.0873	0.1863	0.1907	0.1667	0.1248	0.1789	0.0977	-0.017	0.1424	1				
SLORG	1	0.1472	0.0095	0.1673	0.2004	0.0043	0.0156	-0.003	-0.011	-0.074	0.2136	0.17	0.0749	0.0495	0.0333	0.0793	0.2618	0.1531	0.104	0.054	0.1375	0.2563	0.142	0.1599	0.1715	-0.017	0.3078	0.1601	1			
SNOR	1	0.2299	-0.011	0.111	0.1721	0.1179	0.0409	0.0683	0.0824	0.0003	0.1289	0.0758	-0.004	0.1965	0.2207	0.0753	0.1346	-0.052	0.1799	0.3044	0.1637	0.2762	-0.025	-0.035	0.2659	0.0175	0.0954	0.2181	0.1872	1		
SORTP	1	0.045	0.1492	0.0945	0.2855	-0.191	0.3354	0.4154	0.0958	-0.022	0.1188	0.1866	0.0573	0.0331	-0.171	0.1815	0.0582	0.338	-0.138	-0.001	0.0153	0.1356	0.2227	0.2732	-0.057	-6E-04	0.1658	0.1853	0.1524	-0.01	1	
SPEC	1	0.0855	0.0952	0.0272	0.0494	-0.069	-0.007	0.1084	0.0905	0.0604	0.0152	0.0401	0.1889	-0.064	-0.146	0.1085	-0.016	0.1388	0.0283	-0.075	-0.001	-0.047	0.04	0.0623	-0.158	0.073	0.3179	0.0764	0.1402	-0.067	0.1375	1
WARR	1	0.085	-0.111	0.1	-0.022	0.1327	0.0141	0.006	-0.117	-0.162	-0.029	0.0276	0.0315	0.2072	0.1035	0.0822	0.267	-0.122	0.1842	0.0709	0.069	-0.031	-0.12	0.019	0.1558	0.0091	-0.006	0.0206	0.0532	0.1208	-0.112	-0.066	1

TABLE 18 CONSTRUCT CORRELATION GLOBAL DATA (DISCRIMINANT AND CONVERGENT VALIDITY)

5.3 COMMON METHODS VARIANCE

As with all self-reported data, there is a potential for common method biased resulting from multiple sources such as consistency motif and social desirability (Podsakoff et al. 2003; Podsakoff and Organ 1986). Following Podsakoff et al. (2003) and Williams et al. (2003), we included in the PLS model a common method factor whose indicators included all the principal constructs' indicators and calculated each indicator's variances substantively explained by the principal construct and by the method as it pictures in Figure 6 (a), while in (b) is the second order latent variable logic that we use on smartPLS.

According to Williams et al. (2003), evidence of common method bias can be obtained by examining the statistical significance of factor loadings of the method factor and comparing the variances of each observed indicator explained by its substantive construct and the method factor. Furthermore, they suggested that the squared values of the method factor loadings were interpreted as the percent of indicator variance caused by method, which the squared loadings of substantive constructs were interpreted as the percent of indicator variance caused by substantive constructs. If the method factor loadings are insignificant and the indicators' substantive variances are substantially greater than their method variances, we can conclude that common method bias is unlikely to be a serious concern.

The results demonstrate that the average explained variance of the indicator is .574, while the average variance explained by the method factor is .006. The ratio substantive variance explained by the method variance is around 70:1 as it can be seen on Appendix E: Common Method Variance. In addition, most method factor loadings are not significant. Given the small magnitude and insignificance of method variance, we contend that the method is unlikely to be a serious concern for this study.

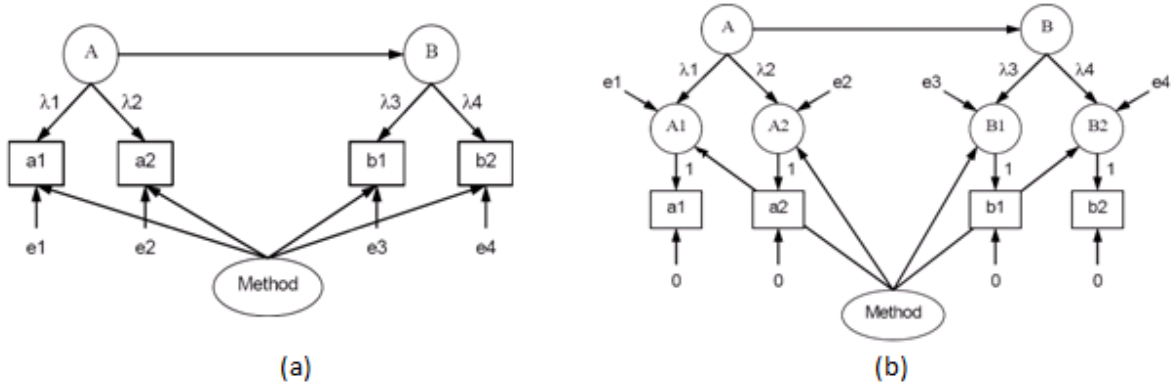

FIGURE 6 COMMON METHODS VARIANCE (A) PODSAKOFF ET AL., 2003, PP. 891 (B) LIANG ET AL., 2007, PP. 85

5.4 HYPOTHESIS TESTING

We conducted the analysis using regression analysis and SmartPLS 2.0 to investigate the structural model. We employ Spearman's rho using SPSS for calculating the correlation. Through Spearman's rho calculation, tHe results indicate that 11 hypothesis are supported and 28 are not supported; while using SmartPLS, the result indicate that 6 hypotheses are supported and 23 hypotheses are not supported. Since regression analysis cannot assess measurement error and regression at the same time, the regression analysis might be misleading (Gefen et al., 2000). Hence, we primarily rely on the PLS result.

Following Chin (1998), we conducted a test of significance for all paths using 1000 iterations of the bootstrapping and a two-tailed T-test. The beta in PLS is read similar with the multiple regression which indicates the strength relation The R^2 (.23) is less predicted than R^2 (.60) (Ogenio, 2009) for overall intention to purchase, and R^2= .14 is for the overall intention to the actual purchase, which are presented in Figure 7 and Figure 8. The result provides evidence for 6 of the 29 hypotheses and 2 additional hypothesis concerns with the actual purchase. Hypotheses are supported with significance level ranging from *p<.01*, to *p<.1*.

The first hypothesis was supported by the empirical data with the (β=.16, p=.1). This indicates that the advertisement presentation do influence the intention to purchase. The H2, H3, H4, H5 (aesthetics, categories, customer review and rating, customer service) have pretty low t-value hence they are not statistically supported to determine the intention to purchase. The H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, and H18 (the delivery speed, discount, ease and clear navigate, the ease of what is looked for, free from error, heard of store before, language, payment method and options, pictures, price, product comparison possibility, product information) are not statistically supported with the low t-values.

Hypothesis 19 (product range) was empirically supported with (β=.09, p=.1). This result is the opposite of H26 (specialization) with low t-value (1.23). This could be seen that as the constructs' definition is the opposite hence it makes sense that only one hypothesis is supported. H20, H21 and H23 are not statistically support as they have low t-values. H22, the existence of the recommendation engine do influence the intention to purchase and could be increase the sales products. Hypothesis 24 (simple appearance) do influence the intention to purchase as empirically supported with (β=.04, p=.01). Hypothesis 25 (sorting possibility) is influencing the intention to purchase as it empirically support with (β=-.12, p=.05). H27, H28, and H29 are not empirically influence the intention to purchase due to the low t-values.

Additional result was emerged that the intention to purchase do influence the actual purchase with (β=.26, p=.01) and the subjective norm affects the actual purchase with (β=.26, p=.01). These additional hypotheses can be resulted in the PLS as it measure all the possibilities of the correlation visualized in Figure 3 and Figure 7.

To assure there is no high correlation among free variables on a multiple regression, we employ the multicollinearity test. Multicollinearity is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated, where the coefficient estimates may change unpredictably in response to small changes in the model or the data. Multicollinearity does not reduce the predictive power or reliability of the model as a whole; it only affects calculations regarding individual predictors. If there is a high correlation in between, hence its relation will be affected due to many indicators and constructs. The data used were the latent variables standardize scores as an output from PLS. Calculated in SPSS, the results revealed that there is no correlation established in between. Multicolleniarity is measured by the variance inflation factor (VIF), where in average our model has VIF 1.8, which is below the indicator VIF 3.3 of multicollinearity (Leech et al., 2008). The SPSS output can be seen in the Appendix D: Multicolleniarity.

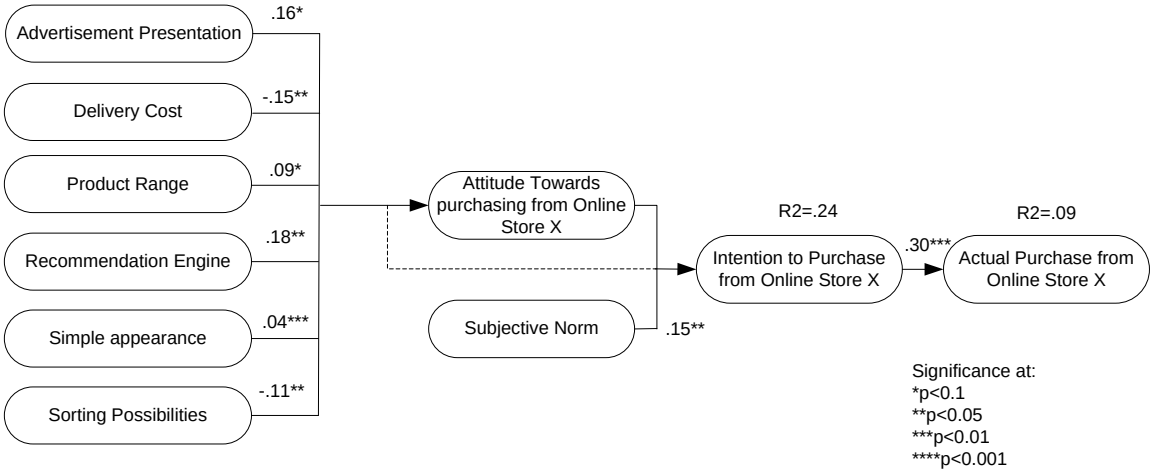

FIGURE 7 FINAL MODEL (NURAINI, 2010, BASED ON THE CALCULATION USING SMARTPLS)

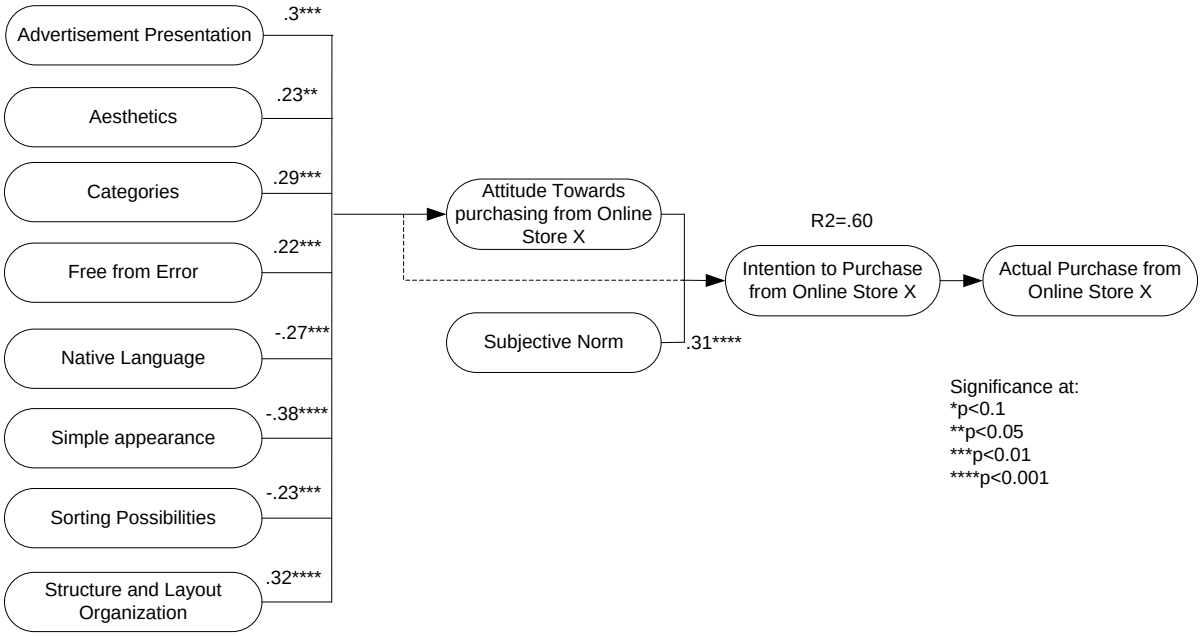

FIGURE 8 FINAL MODEL (OGENIO, 2009, BASED ON THE CALCULATION USING SPSS)

Ogenio, 2009		Nuraini, 2010		Nuraini, 2010(#)	
Hypothesis	**β**	**Hypothesis**	**β**	**Hypothesis**	**β**
Advertisement presentation --> Intention to purchase	0.30***	Advertisement presentation --> Intention to purchase	0.16*		
Aesthetics --> Intention to purchase	0.23**			Aesthetics --> Intention to purchase	.11*
Categories --> Intention to purchase	0.29***				
		Delivery cost --> Intention to purchase	-0.15**		
Free from Error --> Intention to purchase	0.22***			Ease what is looking for --> Intention to purchase	.10*
				Heard of store before --> Intention to purchase	.13**
		Intention to purchase -> Actual to Purchase	0.30***		
Native language --> Intention to purchase	-0.27****				
				Picture --> Intention to purchase	.16**
				Product Comparison Possibilities --> Intention to purchase	-.11*
				Product Information --> Intention to purchase	.16**
		Product range --> Intention to purchase	0.09*	Product range --> Intention to purchase	.15**
				Profesional appearance --> Intention to purchase	.12**
		Recommendation Engine --> Intention to purchase	0.18**	Recommendation Engine --> Intention to purchase	.25**
Sorting possibilities --> Intention to purchase	-0.23***	Sorting possibilities --> Intention to purchase	-0.11**	Sorting possibilities --> Intention to purchase	-.15**
Simple appearance --> Intention to purchase	-0.38****	Simple Appearance --> Intention to purchase	0.04***		
Structure and layout organization --> Intention to purchase	0.32****				
Subjective Norm --> Intention to purchase	0.315****	Subjective Norm--> Intention to purchase	0.15**	Subjective Norm--> Intention to purchase	.34**

*p=0.1
**p=0.05
***p=0.01
****p=0.001

#: SPSS

TABLE 19 COMPARISON RESULTS OGENIO (2009) AND NURAINI (2010)

5.5 RESULTS' INTERPRETATION

The result interpretation is based on the Figure 7, Figure 8, Figure 9, Figure 10, Figure 11, Figure 12, and also Table 20. The results interpretation is compared to the prior research and the results of Ogenio (2009).

The first important interpretation is the *advertisement presentation* of a web shop does influence the intention to online purchase. With (β=.16 and p=.1), this study is empirically supporting the hypothesis in the opposite direction, that the *advertisement presentation* is positively influencing the intention to online purchase. Supported with high statistical evidence (*p<0.01*) (Ogenio, 2009), we are assure that the *advertisement presentation* will definitely determine users' intention to surf and also support the intention to purchase. For the individual web shops, two web shops also support the hypothesis (Digicamshop, β=.19 and p=.1; Boek, β=.19 and p=.1). 67% of the respondents prefer to have static ads better than dynamic (animation flash). As it indicates by Robinson et al. (2007), most of online users are avoiding looking at ads especially the pop up ads. Nowadays, there is an add-on browser called "ads blockers" which can be used to prevent the un-wanted ads. However not all people know this feature (ads blokers) hence probably they do not turn-on this feature. Supported by Robinson et al. (2007), users prefer to see ads on a banner which might indicate that the ads messages were received.

In this study, using all web shops data, *aesthetics* does not influence the intention to purchase. This indicates that due to build the intention to online purchase, a web shop's *aesthetics* does not influence someone's intention and do the actual purchase. This result is the opposite of Ogenio's study (2009). With (β=.23 and p=.05), she stated that the aesthetics do influence the intention to purchase. However, in the SPSS we also result that the aesthetics do influence the intention to purchase (β=.11 and p=.01). Her result is aligned with Tractinsky and Lowengart (2007) which indicated that *aesthetics* lead to the user satisfaction which points to the intention to purchase. However, on the individual web shop, one web shop (Digicamshop) supports that *aesthetics* do have positive effect on the intention to online purchase. It is statistically supported (β=.27 and p=.001). Other study, Schenkman and Jonsson (2000), stated that the most important determinant of user to prefer a web shop were because of its beauty.

Category of product presented on a web shop does not influence the intention to purchase. However, it is statistically supported by individual web shop (Amazon-book) (β=. 01 and p=.001) that the *category* do have positive influence on the intention to purchase. It may conclude that most of respondents are pleased with the book's category presented by Amazon. The respondents who follow the workshop stated that they often purchase book at Amazon, hence they understand and already familiar with book's category Amazon has. We record there is no research studies on this particular web shop's characteristic other than Ogenio (2009). Her result positively supports that the category affects someone's intention to purchase with (β=.29 and p=.001).

Customer review and rating does not influence the intention to purchase on a web shop. However, It is statistically supported by one individual web shop (Digicamshop) (β=.18 and p=.05) that products' reviews and rating does positively affect the intention to purchase.

The fact that the Digicamshop lacks of this feature firmly supports that it is crucial feature for users especially for the experience product. Amazon is recognized as one of web shops which have the best customer review and rating. Amazon has "Customer Review and Board: which allows its customers to post a review and comment on others' review, etc. Supported by Kim and Srivastava (2007), the high quality reviews from other customer has a direct, positive effect on potential customers' decision making.

Customer service of a web shop does not have influence on the intention to online purchase. The fact that the web shops display and offer personal *customer service* to help its customers should gain respondents' satisfaction. Sigh (2002) stated that a web shop's can offer best services, for instances if a consumer interests on a non stock product, normally s/he wants to have notification if the product already available; e-mails' notification for the acceptance of an order, the anticipated delivery date, and later the actual delivery date is a further service that customers appreciate; a thank you, an apology (for delays) and a greeting to customers strengthens the relationship between buyers and seller; phone and e-mail contacts for assisting to set up or install the products' purchased, troubleshooting, the warranty period or terms, and contacts for repairing and improving information can be packaged and presented as a link on the web site. We record there is no study which particularly do empirical research on this characteristic.

Delivery cost is supported by the entire scenario that it is negatively influence the intention to online purchase. It is statistically supported (β=-.15 and p=.05) and all web shops as well (Digicamshop, β=-.37 and p=.001; Amazon-camera, β=-.20 and p=.05; Boek, β=-.26 and p=.05; Amazon-book, β=-.20 and p=.05). The respondents are stated that due to the high *delivery cost* they might not perform the actual purchase. The fact that the Amazon is centered in the United Stated, respondents consider *delivery cost* as a barrier due to the expensive cost. From this study, it is also believed that the respondents prefer to have constant delivery cost irrespective with the number of products purchased. This research is aligned with study by Fu et al. (2007). They stated that delivery issues affect the number of customers whom interest in participating online purchase, as customers are aware of effort needed to get the product, whether in terms of money or time.

Delivery speed is not statistically support having influence on the intention to online purchase. However, it does negatively influence the intention to online purchase supported by one individual web shop (Digicamshop). It is statistically supported (β=-.17 and p=.05). Customers are aware with the fact that the time needed to get online products is longer than the offline purchase. Stalk et al. (1988) supported that other than high quality and low price products, *delivery speed* have big impact on the intention to purchase and the actual purchase. Most of studies revealed that customers are giving up on online shopping due to the long delivery time that they cannot bear. Hence, e-vendors offer customers with delivery speed choices, of course with extra money needed.

Discount of a web shop is not statistically supported by five scenarios. It is not influencing the intention to online purchase. This result is not aligned with most of research which stated online users' tend to love low price product. Most of online consumers would firmly state that low price is their major motivation to perform online shopping. However, The Mckinsy Quarterly (2001) cited in Constantinides (2004) reported that based on the click-through analysis, it indicates that only 8% of online users in North America are aggressive price hunter

and 30% of purchasing managers identify lower prices as the key benefit of buying online though it might be related to cultural effect.

Ease to navigate is not statistically supported the intention to purchase using all web shops data. However, it is statistically supported by one web shop (Boek) (β=-.2 and p=.01). Negatively influence the intention to purchase; one can argue that it does not make sense. Looking at the way we formulate the questionnaire, there is a chance that this result emerged. On the questionnaire we asked whether the respondents are satisfied with the navigation (in terms of the web shop's ability to provide a way to keep track location on their browsing history) and also the sequence of filling forms (i.e. sign-in forms, purchase forms). As we asked the satisfaction, the respondents who are un-satisfy with the criteria will directly give low score on Lickert scale. Hence, in this term, it does not mean that easy to navigate characteristics is not crucial for determining the online purchase behavior. One can argue that providing a way to keep track of their surfing activity is crucial for users' browsing activity as customers are tend to open many pages which prone to get lost and also establishing clear sequential steps on filling-in the forms such as sign up or detailed purchase forms. Study by Gerhke and Turban (1999) suggested that to consistently keep the web shop's navigation every page for maintaining web shop's ease of use.

Ease what is looked for is not statistically supported by five scenarios has influence to the intention to purchase. This result does not align with the study by Singh (2002). He proposed that e-vendors should provide detailed information for the general browsing activity, promptly available or click-through a mouse on text or pictures provide as service during the pre-purchase phase. However, it is also supported by the SPSS result that the ease what is looked for is influencing the intention to purchase. From Ogenio's (2009) interview result, this characteristic can be achieved through providing the search functionality (search button placed in a visible place).

Free from error is not statistically supported by five scenarios has influence to the intention to purchase However, it is statistically supported by one individual web shop (Amazon-book) and positively inf with (β=.08 and p=.01). Supported by only one individual web shop, this study is aligned with Ogenio (2009). She revealed that one of the characteristics which influence the intention to purchase is free from error which statistically supported (β=.22 and p=.01). Turel and Yan (2008) stated that absence of error is the basis of online transaction and negotiation. As users will be more confidence, secure, and trust the web shop (e-vendor) if they can provide reliable system.

Heard of store before is not statistically supported influence the intention to purchase in this study using data of all web shops. However, it is supported by the Amazon (both the camera and the book) and positively influence the intention to purchase (β=.22 and p=.01). It is also supported by the SPSS result (β=.13 and p=.01). The reason could be that, Amazon is a well known international web shop. The fact that the Amazon is widely well-known as the largest web shops is admitted by the respondents. All respondents are firmly stated that they know this shop. With this acknowledgment, users will consider the Amazon as a safe place to purchase.

Language is not statistically supported influence the intention to purchase. However, it is supported by one individual web shop (Boek). It is positively supported (β=.19 and p=.1) influencing the intention to online purchase. As most of the respondents are international

students who can speak English, hence they do not find difficulties to perform the "shopping tasks". Though there are two web shops are Dutch websites, most of them are not find difficulties to interpret the web shops' instructions. Study by Wu et al. (2009) in Taiwan indicated that one promote the behavioral intention to purchase is language. Rong et al. (2009) also suggest designing bilingual language for web shops for anticipating users' ability, local language and international language. Ogenio (2009) also shows that users prefers to use native language to execute purchase, which mean they prefer to use local web shops rather than international web shop. From the result, it is revealed that most of the respondents are prefer to use English website. With (β=-.27 and p=.01), she concludes that the language do influence the intention to purchase as she used all Dutch speaking respondents and use 11 Dutch web shops and 1 international web shop. Hence, one can argue that with these settings, the results will support the propositions.

Payment method and option is not statistically supported in general framework having influence on the intention to purchase. However, it is supported by one particular web shop (Digicamshop) and positively influence the intention to purchase with (β=.20 and p=.05). It supports Ba's et al. (2000) research which demonstrate not all online users are comfortable using credit cards to online purchase due to various security risks. This study shows that respondents prefer to use the region transfer (i.e. iDEAL, which facilitates transfer payment within the Netherland) as mean for online transaction. It supports the study by Mangiaracina and Perego (2009), which examine the Italian payment online purchase. Italian facilitates online transaction through variety of payment methods, credit card, eWallet, bank transfer and cash on delivery. Zhang et al. (2006) surveyed eBay users on payment choices relate to product quality and seller characteristics. The research indicates that payment choices are strongly affected by product attributes than sellers characteristics. In general, if the product's attribute uncertainty can be reduced, buyers are willing to use credit cards otherwise they are more likely to adopt other payment methods (i.e. pay on delivery, etc).

Picture is not statistically supported influence the intention to online purchase. This study does not support Park's et al. (2005) study, which empirically tested the product presentation do affect to the customers' mood which leads to the intention to purchase. However, it is supported by the SPSS result (β=.16 and p=.05). Jiang and Benbassat (2007) examined on the product presentation format which influence the intention to purchase. The study indicate that the video and virtual product experience (VPE) lead the higher intention than the static pictures.

Price is not statistically supported influence the intention to purchase using all web shop data. However, it is statistically supported by the individual web shop (Amazon-book) and negatively influenced the intention to purchase with (β=-.06 and p=.05). Basically, customers demand e-vendors to mention products' tag price with detailed information, such as: the basic price, the extra cost, the tax, and the delivery cost. For cost presentation, most of users are prefer having detailed explanation for the basic price, tax, the delivery cost, and the actual price need to be paid. Constantinides (2004) stated that" research on role and importance of the online price contradicts with predominant belief; it states that price is the main motivator for consumers when choosing a particular web site". The same argument with the discount characteristics, most of online consumers would firmly state that low price is their major motivation to perform online shopping. However, The Mckinsy Quarterly (2001) cited in Constantinides (2004) reported that based on the click-through analysis, it indicates that only 8% of online users in

North America are aggressive price hunter and 30% of purchasing managers identify lower prices as the key benefit of buying online though it could be related to cultural effect.

Product comparison possibility is not statistically supported influence the intention to online purchase. However, it is supported by one individual web shop (Amazon-camera) and negatively influence the intention to purchase with (β=-.18 and p=.05). It is also supported by the SPSS result (β=-.11 and p=.05). The two results support each other results. Supported by one web shop and an SPSS result and negatively influence the intention to purchase, this study is the opposite of Haubl and Trifts (2000). They observed that the customers are often unable to evaluate all available alternatives in depth thought while making purchase decisions; hence they suggested that product comparison should embed in internal web shop rather than using the third party sites.

Product information is not statistically supported influence the intention to online purchase by five scenarios. However, it is supported by the SPSS result (β=.16 and p=.05). Examined by Detlor et al. (2003), product information is a critical for the early stage in the customer buying process. The product information displayed are product aesthetics (its picture, its color, and its size); product description (its positive and negative aspect and its brand), product manufacturer (its name, and reputation), the price (specific tag price, price range, discount, rebate), the product quality (positive and negative aspect of product quality), product warranty (positive and negative aspect of product reliability), product specification (feature and performance), product availability, and the delivery cost.

Product range is statistically supported having influence to the intention to online purchase. It is positively influence the users' intention to purchase. It is significantly supported (β=.09 and p=.1) the intention to online purchase. It is also supported with two web shops, Digicamshop with (β=.12; p=.1); and Amazon-book with (β=.08; p=.001). It is also supported by the SPSS result (β=.15 and p=.05). It indicates that users prefer to online purchase which offers products variety. We record there are no empirical studies which investigated in this particular web shops' characteristics.

Professional appearance is not statistically supported influencing the intention to online purchase in this study. However, it is supported by the SPSS result (β=.12 and p=.01). Most researches indicate that professional appearance will lead to trust. We record that there are no studies which empirically tested the professional appearance. But, Warrington et al. (2000) cited in Wang (2001) claimed that *professional appearance* implies an expertise of a web site. As indicated by Nielsen (1999), *professional appearance* brings confidence to consumers. Further, Levis et al. (2008) examined the website quality concerning its appearances.

Purchase at store before is not statistically supported influencing the intention to purchase. Though one can argue that this experience will be surely affect the decision making of online purchase. People tend to be firmly to online purchase if they have prior offline purchase experience and hands-on products. We record that there is no empirical study research on this particular characteristics.

Recommendation engine is statistically supported the intention to online purchase. It is positively influence the intention to purchase (β=.18 and p=.05). It is also supported by one particular web shop (Digicamshop) (β=.24 and p=.001). It is also supported by the SPSS result (β=.25 and p=.01). This result is aligned with study of Schafer et al. (1999). They empirically tested that having recommendation engine do raise the sales. They stated that this

feature can be seen as advertisement methods which advertise related or supplement products, even for products that customers do not need, for instance, as their friends buy particular products, they might also want to have and buy the same products.

Search functionality is not statistically supported influencing the intention to online purchase. However, it is supported by a web shop (Boek) (β=.22; p=.1). From Ogenio's (2009) research, it is known that users demand the visibility of the search button, as they found difficulty on finding it. Hence the search functionality (search button) should be placed in visible place with consistent location. We record there is no prior empirical evidence that support *search functionality* influence the intention to online purchase, however many studies indicate that this feature is one way to boost website usability (Constantinides, 2004).

Simple appearance is statistically supported having influence on the intention to online purchase. It positively influence the intention to online purchase (β=.04; p=.001). This result is supported by two individual web shops (Digicamshop, β=.22; p=.001, and Amazon-camera, β=-.24; p=.001). On the Amazon, the negative sign might indicate that the Digicamshop and Boek have simpler web shop compare to Amazon. One can argue that *simple appearance* do raise the intention to purchase. Ogenio's (2009) study also indicate that *simple appearance* with less clutter is preferred by respondents with (β=-.38; p=.0001). Manes (1997) reported that uncluttered screens will give pleasurable shopping experience to users; while study by Gerhke and Turban (1999) suggest to have simple background either color or text.

Sorting possibility is statistically supported for influencing the intention to purchase. It is negatively influence the intention to online purchase (β=-.11; p=.05). It is also supported by two individual web shops (Digicamshop, β=.10; p=.1, and Amazon-camera, β=-.26; p=.05). It is also supported by the SPSS result (β=-.15 and p=.01). Study by Diehl et al. (2003) empirically supports the *sorting possibility* in terms of how customers respond and react to variability order of product list. Clear and efficient product list is the main goal. Product list could be generated from simple keyword or naturally occur because of the heterogeneity in consumer attribute weights. Cai and Xu (2007) uttered on a sorting presentation. They suggest on descending order based on product attributes. Further, Ogenio (2009) suggests for having sorting or product assortment based on product categorization for building intention to purchase.

Specialization is not statistically supported influence the intention to purchase using all web shop data. However, it is supported by one web shop (Amazon-book) (β=.09; p=.001) and positively influences the intention to purchase. Based on the interview result, Ogenio (2009) stated that the respondents are more interest on performing their purchase intention in an individual web shop (specialization web shop) which sells only a type of product. The respondents stated that this specialization indicates that the web shop is the expertise in a particular area.

Stock information is not statistically supported by five scenarios that it has influence on the intention to online purchase. One can argue that available stock will affect the intention to purchase on a particular web shop. The fact that a web shop displays a zero stock available will move its customers from the online channel to traditional channel or vice versa. Brown et al. (2004) stated that the online stores are competing with the traditional store for providing the real time transaction; hence the availability stock product will be one of the determinants for winning the competition.

Structure and layout organization is not statistically supported influence the intention to online purchase. However, it is negatively supported by one particular web shop (Amazon-book) (β=-.03 and p=.1). This result does not align with prior research which highly supported (β=.32 and p=.001). Ogenio's (2009) result indicates that the *structure and layout organization* do positively influence the intention to purchase. We record that there is no research which investigated on this particularly web shop characteristics'. Most of them are investigating the big construct which is web site design. We differentiate this as a website design consists of structure website, layout website, color combination, type and size of font.

Warranty is not statistically supported by this study for influencing the intention to purchase. However, it is statistically supported by one particular web shop (Digicamshop) (β=-.07 and p=.1). It indicates that the *warranty* do not influence the intention to purchase. Constantinides (2004) added that for better assurance services, e-vendors should provide clear policies on outlining product, such as: returning procedure, refunding, recompense for defect product. In this study, most of the respondents are not satisfied with the terms.

Subjective norm is statistically supported with (β=.15 and p=.01). It is positively influence the intention to online purchase, which indicates that the reviews or comments from users' relatives or the one who influence their attitude or some who they trust or close do influence the intention to purchase. It is also supported by the SPSS result (β=.34 and p=.01). This study supports the result of prior result (Ogenio, 2009). She conclude that with (β=.31 and p=.0001), the subjective norm do influence the intention to purchase. We record no studies which investigate empirically on this subject.

It is also statistically confirmed that the intention to purchase will lead to the actual purchase, with (β=.30 and p=.001) and R^2 =.24. This study is aligned with Ogenio (2009) which has R^2 =.60. The fact that this study has lower R^2 than prior research indeed brings questions. The reason could be that the respondents' variability and different methodology for gaining the data (the workshop vs online questionnaire). This study also revealed the possibility of the intention to online purchase and the actual purchase. The relation is supported with R^2 =.14. The low result force e-vendors to keep enhance their web shops appearance and service to increase the actual purchase.

As we can see in Table 19 and Appendix C: PLS Result's, most of the results are supporting each others. However, some of them are in overlapping. But looking into details, for some characteristics that do not support by the PLS for the all web shops data, on the SPSS they are supported. The SPSS result is supported with the individual web shop, for instance: *product comparison possibilities* and the *heard of store before* characteristic.

Hypothesis	Explanation	All Web shops	Digicamshop	Amazon (Camera)	Boek	Amazon (Book)
H1	Advertisement presentation --> intention to purchase on online store	+	+		+	
H2	Aesthetics --> intention to purchase on online store		-			
H3	Categorization --> intention to purchase on online store					
H4	Customer review and rating --> intention to purchase on online store		+			
H5	Customer service --> intention to purchase on online store					
H6	Delivery cost --> intention to purchase on online store	-	-	-	-	-
H7	Delivery speed --> intention to purchase on online store		-			
H8	Discount --> intention to purchase on online store				-	-
H9	Ease and clear navigate --> intention to purchase on online store				-	
H10	Ease of what is looked for --> intention to purchase on online store					
H11	Free from error --> intention to purchase on online store					+
H12	Heard of store before --> intention to purchase on online store			+		+
H13	Language --> intention to purchase on online store				-	
H14	Payment method and option --> intention to purchase on online store		+			
H15	Pictures --> intention to purchase on online store					
H16	Price --> intention to purchase on online store					-
H17	Product comparison possibility --> intention to purchase on online store					
H18	Product information --> intention to purchase on online store			-	-	
H19	Product range --> intention to purchase on online store	+	+			+
H20	Professional appearance --> intention to purchase on online store					
H21	Purchase at store before --> intention to purchase on online store					
H22	Recommendation engine --> intention to purchase on online store	+	+	+		
H23	Search functionality --> intention to purchase on online store				+	
H24	Simple appearance --> intention to purchase on online store	+	+	-		
H25	Sorting possibility --> intention to purchase on online store	-	+	-		-
H26	Specialization --> intention to purchase on online store					+
H27	Stock Information --> intention to purchase on online store					
H28	Structure and layout organization --> intention to purchase on online store					-
H29	Warranty --> intention to purchase on online store		-			
Additional Hypothesis						
	Subjective norm --> actual to purchase	+		+	+	
	Intention to purchase --> actual to purchase	+	+	+	+	+

TABLE 20 CORRELATION SINGS OF HYPOTHESIS

6. DISCUSSION

This chapter summarizes the analytical findings into conclusion. The research contribution (theoretical and practice), research limitations and suggestion for further research are discussed in the following sections.

6.1 CONCLUSION

Based on the result of structural equation modeling and results' interpretation, we draw several conclusions. We draw the conclusion by revisiting a set of the research question and see whether the processed answered them appropriately.

The first important conclusion is trying to answer the first research question (RQ1: What is the theoretical model for determining the online purchase behavior of users?). In section 3.1, a theoretical model was portrayed with all supporting articles from prior studies. We develop the model based on the Ogenio's (2009) proposed framework. There are 29 characteristics that might influence the intention to purchase of a web shop. These characteristics are moderated by the subjective norm of users.

The second conclusion is answered the second research question (RQ2: How to develop and validate the measurement instruments for the theoretical model?). We develop and validate the measurement instruments through an extensive validation. Section 4.2 portrays the validation in detail. Started with sorting exercises based on Moore and Benbassat (1991), it refines the possible instrument. Tested with the pre-test and pilot test, the result validated 36 out of 65 items instruments with acceptable levels of reliability (Composite reliability.>70, and Cronbach alphas .>60). These items are listed in Appendix A.

The third conclusion is trying to answer the third research question (RQ3: How do the data collection and the data interpretation of the model?). Utilizing the field experimental research design (Section 4.1, section 4.2.3 4.2.4, and 4.2.5), we examine the attitudes of 122 respondents gathered from the face to face workshop and online questionnaire. Using regression analysis (Spearman's rho) and SmartPLS, 6 out of 29 hypotheses are supported.

The fourth conclusion answers the fourth research question (RQ4: How the data analysis will impact the theoretical model and what characteristics can be drawn from the research which determine the online purchase behavior?). The data analysis is mostly support Ogenio's (2009) framework with some specific additional characteristics. In addition, the determine characteristics are statistically supported yielding from ($p<.1$ and $p<.01$). The characteristics which considered by users to build their intention to purchase are:

a. Advertisement presentation
b. Delivery cost
c. Product range
d. Recommendation engine
e. Sorting possibilities
f. Simple appearance
g. Subjective norm

6.2 CONTRIBUTION

This research makes some contribution to theoretical significance and the practical significance. The detailed contribution will be explained below.

6.2.1 THEORETICAL CONTRIBUTION

This research gives several important contributions for theoretical significance First; it validated the theoretical model which provides valuable insight on the specific characteristics of a web shop that determine online purchase behavior. This research gives **novelty** on *the determinant of the online purchase behavior of a user* which gives added value on the Information System and E-commerce literature. We record, there is no literature which has been investigated and validated this type of behavior of a user.

Second, we build and test the measurements creation for the online purchase determinant. The measurement creation or processes included surveying the established instruments, selecting the appropriate items, creating new items as necessary, and then test an extensive scale development process. It is believed that the method gain appropriate degree of confidence with 88% placement fit ratio which beneficial for the Information System and E-commerce literature.

6.2.2 PRACTICAL CONTRIBUTION

This result brings benefits also on the practical significance. The research's result can be used by practitioners, developers and e-vendors as a strong knowledge and as a basis for enhancing their web shops to gain competitive advantages. It is empirically tested; hence, we argue that practitioners and developers may stimulate consumers to build their intention which might be leading to the actual purchase.

6.3 LIMITATIONS AND FURTHER RESEARCH

This research has several limitations that need to be discussed. In this study, the external validity might be threatened by its respondents. Though we use students to perform the experiment, we argue that they are the main users or customers for online shopping. Icek and Fishben (1988) argue that there is no evidence that using students as respondents will influence a research result. Looking at the respondents' demography most of them have their own income, either from the scholarship or from their previous job. A major limitation is the culture of the respondents in terms of language. Most of the respondents are international students which have basis English language (non Dutch speaking) and we use two Dutch web shops to be assessed. The misinterpretation meaning might occur and affect their objectivity on answering the questionnaire. A further research should use more variability of respondents, in terms of occupation, ages and level of income with different background of education (i.e. workers/professional, parents, etc.

As it stated that the intention purchase is statistically supported to the actual purchase. The fact that the R^2 of the intention to purchase always much higher that the R^2 of the actual purchase, one can argue that building intention to purchase means building the actual purchase. However, to further interpret the R^2 differences, it would be interesting to do some observation in the real setting. Hence, a further research should integrate and

In addition, this study is taken on a one time data collection; therefore it is impossible to firmly support the causality relationship. The dynamic changes on users' preferences might

occur; hence a further research study can execute in a longitudinal study. High competition among web shops and vast development of web shops, investigation on changes characteristics of a web shop, for instance: eliminate a characteristic and observe the customers' reaction about it will be beneficial for e-business and academic parties.

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APPENDIX A: LIST OF ITEMS

This appendix presents the items for measuring the constructs. Most of the items are derived from the literature, and some are new items that we build based on the fact results interview of the past studies. The items are measured using seven point Lickert scale (Strongly Disagree – Strongly agree).

Construct	Items
Advertisement presentation	*Source : new (based on interview result) Pop up ads are annoying I like the static ads (text) than dynamic (animation or flash)
Aesthetics	*Source : new (based on interview result), Bart et al (2003) The site displays a high level of artistic creativity The site has pleasant appearance
Categorization	*Source : new (based on interview result) Consistency in product categorization is important for me Having product categorization is important for me
Customer review and rating	*Source : Bart et al (2005) Testimonial/endorsement by past users are important Reviews and ratings from other customers affect my purchase decision The site provides a column to express my opinion is important for me
Customer service	*Source : Bart et al (2005) Reactive service (i.e. email, fax, phone) is important for me I feel comfortable if site provides me with contact to communicate with shopping assistant through email, fax, and free number A chat room with customer service is available where consumers can discuss their experience with the site and/or its products is helpful
Delivery cost	*Source : new (based on interview result) I prefer flat rate than flexible rate for delivery cost The availability information of delivery cost is important for me
Delivery speed	*Source : new (based on interview result) Options type of delivery speed is important for me (i.e. express or normal speed)
Discount	*Source : new (based on interview result) Higher online discount is important for me I prefer seasonal discount than everyday discount
Ease and clear to navigate	*Source : Park and Kim (2003), Bart et al (2003) Providing a way to keep track of their locations within its pages is essential for me Clear sequential in filling form (i.e. sign up, purchase registration) is important for me
Ease of what is looked for	*Source : new (based on interview result) Only few clicks I can get what I am looking for on the site I easily found what I am looking for on the site
Free from error	*Source : Bart et al (2005) The internet link were in working order There were no errors or crashing There were no busy server message
Heard of store	*Source : Park and Kim (2003), Bart et al (2005)

before	I have heard the online store reputation
	I am familiar with the company whose site it is
Language	*Source : new (based on interview result)
	I like the web shop's language of style
	I prefer English website rather than Dutch website
Payment methods and options	*Source : Bart et al (2005)
	I prefer the site which accept variety of payment methods (i.e. PayPal, local bank and international credit card issuers)
	The site associates with my credit card issuer (i.e. Master card, Visa, American express, etc) is important
	The payment method/mechanism/procedure exist in the site is essential for me
Pictures	*Source : new (based on interview result)
	The site has clear picture, thus give me feeling that I want own that product
	The zoom in/out product's picture helps me to get visualization of a product
Price	*Source : Bart et al (2005) and new (based on interview result)
	Detailed information of price (i.e. original-promo price) is important for me
	The products' price is cheap
Product comparison possibility	*Source : Bart et al, (2005),
	Comparisons of all competing brands presented is important
	Product comparisons affect my purchase decision
Product information	*Source : Park and Kim (2003)
	The site has up to date product information
	The product information is understandable
	The product information is relevant
Product range	*Source : new (based on interview result)
	Every product that I need is offered by the site
	The site offers complete products collection (i.e. usage and new)
Professional appearance	*Source : Bart et al (2005)
	The proportion, color combination, type and size of font are nicely presented
	The visual appearance and manner of this site is professional (not amateur looking)
Purchase at store before	*Source : new (based on interview result)
	I have bought this product in physical store before
	I've known the product before therefore I purchase it online
Recommendation engine	*Source : Bart et al (2005)
	I prefer the site that can recommend products based on my previous purchase
	Useful shopping recommendations are made based on my personal information and preferences
	The site is helpful to me in reaching my buying decisions by its recommendation
Search functionality	*Source : Bart et al (2005)
	The availability "search" button is crucial for me
	Precise "search" outcome is important for me (i.e. eliminate unrelated items/outcome)
Simple appearance	*Source : Bart et al (2005), new (based on interview result)
	The site displays few pictures and text is comfortable
	I feel uncomfortable with site with a lot of action dynamic presentation (e.i.: flash animation, java scrip, special effect)
Sorting possibility	*Source : new (based on interview result)

	Sorting possibility enhance my knowledge on products or services
Specialization	*Source : new (based on interview result)
	The site is recognized because of its products/services expertise
	The site is specialized in a product (i.e. Camera)
Stock Information	*Source : Bart et al (2005)
	The site tells me immediately if something is out of stock, so time is not wasted going through the checkout process and finding this out later
	Displaying stock information of a product in a site is important
Structure and layout organization	*Source : new (based on interview result)
	The consistent presentation of site (theme, fonts) is important for me
	Consistent layout across all pages is important for me
Warranty	*Source : Bart et al (2005)
	I feel comfortable if the site provides both benefits and drawbacks of products and services
	Service and product guarantees which clearly stated is important for me
	I feel more comfortable if there were signs/symbols on the site placed by third-party company that the site had been reviewed or audited

TABLE 21 LIST OF ITEMS

'* grey color: eliminated.

APPENDIX B: QUESTIONNAIRES

Online Purchase Behaviour Experiment

Introduction

First of all, thank you for your participation! This experiment consists of 2 tasks. For each task you are asked to visit 2 online stores and "purchase" a specific product on each website. With "purchase" we mean: ***add the product to the shopping cart and follow the purchasing process until just before you enter your bank account or credit card number***. After each task you are asked to fill in a questionnaire.

Through this experiment I hope to find out what is important to you while shopping online and what factors influence your choice for a web shop.

Some information about yourself

What is your…

Sex? ☐ Female ☐ Male

Age? _____ years old

Is Dutch your first language? ☐ Yes ☐ No, (Please specify) _____

If no, how well can you write, speak, read the Dutch language?

☐ I think my Dutch is poor

☐ I think my Dutch is average

☐ I think my Dutch is excellent

How often do you purchase products online?

☐ I have never purchased products online

☐ Occasionally

☐ Frequently

Consider yourself in the following <u>situations</u> and perform the <u>specified task.</u>

FIRST TASK

<u>Situation</u>

You have a new hobby: photography. You are crazy about it and want to upgrade your pocket camera into a DSLR (Digital SLR-Single Lens Reflex) one. You have money and have chosen to buy Nikon D90 and still looking for the suitable lens. You would like to purchase it via online store.

<u>Task</u>

Visit two online stores and "purchase" Nikon D90 with your lens preference.

Specify your lens preference here (after you browse)

_____

Online store	Do you know this store?	Have you ever bought a product from this store before?
www.digicamshop.nl	0 Yes 0 No	0 Yes 0 No
www.amazon.com	0 Yes 0 No	0 Yes 0 No

The questions in this survey make use of rating scales with 7 levels; as stated below:

1 = *strongly disagree*
2 = quite disagree
3 = slightly disagree
4 = neither disagree nor agree
5 = slightly agree
6 = quite agree
7 = strongly agree

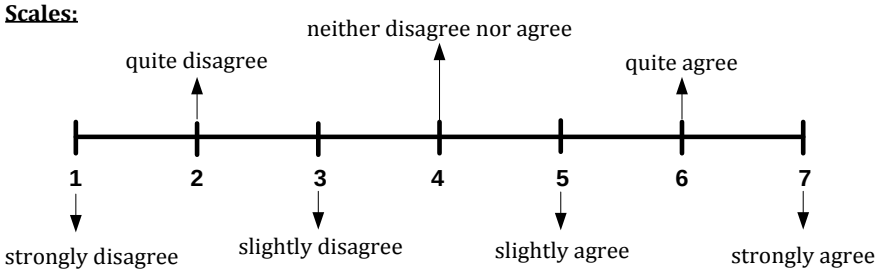
You need to select the number that best describes your opinion. For example, if you were asked to rate the importance of a characteristic of an online store on such a scale, the 7 levels should be interpreted as follows:

When you consider purchase a camera at an online store,
"It is important for me that the online store provides the number of available cameras (stock information)"

If you think that you strongly agree with **"It is important for me that the online store provides the number of available cameras (stock information)"**, then you need to select 7 and put mark "X" as follows:

The availability number of the camera is important for you 1 2 3 4 5 6 X

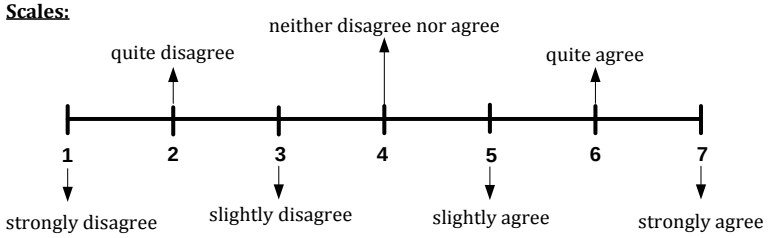
Scales:



1	I am satisfied with advertisement presentation (limited pop up ads) of:						
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
2	In general, I like static ads better than dynamic (animation or flash) ads	1	2	3	4	5	6	7
3	I am satisfied with the appearance in terms of artistic creativity of:						
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
4	I am satisfied with pleasant appearance of:						
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
5	I am satisfied with the consistency of product categorization (i.e. Camera, Accessories, Book, Electronics, etc) of:						
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
6	In general, having a clear product categorization (i.e. camera, lens, tripod, etc) is important for me	1	2	3	4	5	6	7
7	In general, an online store that provides reviews from other users is important for me	1	2	3	4	5	6	7
8	In general, reviews and ratings from other users affect my purchase decision	1	2	3	4	5	6	7
9	I prefer to use/visit an online store which has a column to express my opinion	1	2	3	4	5	6	7
10	I prefer to use/visit an online store which offers reactive services (i.e. email, phone, etc)	1	2	3	4	5	6	7
11	I feel comfortable if an online store allows me to communicate with shopping assistants through email, fax, or free phone call	1	2	3	4	5	6	7
12	I feel comfortable if an online store allows me to chat with its customer service	1	2	3	4	5	6	7
13	In general, I prefer a flat rate than a flexible rate for delivery cost	1	2	3	4	5	6	7
14	An online store has to provide delivery cost information	1	2	3	4	5	6	7
15	An online store that offers the possibility to choose the delivery speed (i.e. express delivery or normal speed delivery) is important for me	1	2	3	4	5	6	7
16	I am satisfied with the discounts offered by:						
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
17	I prefer to use/visit an online store which offers seasonal discounts rather than daily discounts	1	2	3	4	5	6	7

18	I am satisfied with the navigation, in terms of providing a way to keep track of my locations within its pages of:						
	A. www.digicamshop.nl	1	2	3	4	5	6	7

	B. www.amazon.com	1	2	3	4	5	6	7
19	I am satisfied with the sequence of filling up forms (i.e. sign up, purchase forms, etc) of:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
20	I am satisfied with the ease of use (with only few clicks I can find what I am looking for) of:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
21	I am satisfied with the absence of errors from:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
22	The internet link was working at:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
23	I am comfortable with www.digicamshop.nl as it has a limited "busy server" message	1	2	3	4	5	6	7
	I am comfortable with www.amazon.com as it has a limited "busy server" message	1	2	3	4	5	6	7
24	I am familiar with www.digicamshop.nl	1	2	3	4	5	6	7
	I am familiar with www.amazon.com	1	2	3	4	5	6	7
25	I purchase a camera at www.digicamshop.nl because I have heard of this site's reputation before	1	2	3	4	5	6	7
	I purchase a camera at www.amazon.com because I have heard this site's reputation before	1	2	3	4	5	6	7
26	I prefer English website than Dutch website	1	2	3	4	5	6	7
27	I prefer the language style of www.digicamshop.nl/www.amazon.com over www.digicamshop.nl/www.amazon.com because _____	1	2	3	4	5	6	7
	* cross over/out the one you do not prefer ** fill-in the blank							
28	I prefer an online store which accepts various payment methods (i.e. PayPal, local bank, pay on delivery, and credit card)	1	2	3	4	5	6	7
29	An online store's payment service which accept my credit card (i.e. Master card, Visa, American express, etc) is important	1	2	3	4	5	6	7
30	The payment method/mechanism/procedure that exist in the online store is essential for me	1	2	3	4	5	6	7
31	I am satisfied with camera graphical presentation which shows the whole product (from top, bottom, left and right side/angles) of:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
32	The clear pictures and sample photos produced by the selected camera in www.digicamshop.nl influence my desire to own it	1	2	3	4	5	6	7
	The clear pictures and sample photos produced by the selected camera in www.amazon.com influence my desire to own it	1	2	3	4	5	6	7



33	I am satisfied with the zoom in/out of the photos of the selected camera in www.digicamshop.nl. They are sufficient to have a clear idea how the camera looks like.	1	2	3	4	5	6	7
	I am satisfied with the zoom in/out of the photos of the selected camera in www.amazon.com. They are sufficient to have a clear idea how the camera looks like.	1	2	3	4	5	6	7
34	I am satisfied with the detailed information about the Camera price (original price, promo price) of:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
35	I am satisfied with the price tag for Camera at www.digicamshop.nl. It is cheap	1	2	3	4	5	6	7
	I am satisfied with the price tag for Camera at www.amazon.com. It is cheap	1	2	3	4	5	6	7
36	The fact than an online store presents comparisons of all competing brands is important for me	1	2	3	4	5	6	7
37	Product comparisons affect my purchase decision	1	2	3	4	5	6	7
38	www.digicamshop.nl provides an up-to-date Camera Information	1	2	3	4	5	6	7
	www.amazon.com provides an up-to-date Camera Information	1	2	3	4	5	6	7
39	The Camera information of www.digicamshop.nl is easy to understand	1	2	3	4	5	6	7
	The Camera information of www.amazon.com is easy to understand	1	2	3	4	5	6	7
40	The Camera information of www.digicamshop.nl is relevant	1	2	3	4	5	6	7
	The Camera information of www.amazon.com is relevant	1	2	3	4	5	6	7
41	I am satisfied with the variety of camera offerings (broad assortment) on:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
42	I am satisfied with the fact I can purchase both second hand and new Camera on:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
43	I am satisfied with the proportion, color combination, and type & size font of:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
44	I am satisfied with the visual appearance and style of www.digicamshop.nl. It has professional look	1	2	3	4	5	6	7
	I am satisfied with the visual appearance and style of www.amazon.com. It has professional looks	1	2	3	4	5	6	7
45	In general, I prefer to have hands-on (check a product in physical store) before buy a product online	1	2	3	4	5	6	7
46	In general, I prefer to know the product before I decide to purchase it online	1	2	3	4	5	6	7
47	I am satisfied with the additional products complementing my Camera's functionality suggested by:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
48	I am satisfied with the products that have been recommended based on my preferences on:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
49	In general, the recommendation feature in an online store is helping me decide which product to buy	1	2	3	4	5	6	7
50	I am satisfied with the Camera's accurate search results of:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7

	B. www.amazon.com	1	2	3	4	5	6	7
51	I feel comfortable with the number of pictures and text presentation of:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
52	In general, I feel comfortable when an online store presents a lot of dynamic presentation (i.e. flash animation, special effect, etc)	1	2	3	4	5	6	7
53	In general, the range of possible search criteria (based on brand, genre etc) can save time spent for online shopping	1	2	3	4	5	6	7
54	I am satisfied with expertise of www.digicamshop.nl in Camera product area	1	2	3	4	5	6	7
	I am satisfied with expertise of www.amazon.com in Camera product are	1	2	3	4	5	6	7
55	www.digicamshop.nl is recognized as Camera's online store	1	2	3	4	5	6	7
	www.amazon.com is recognized as Camera's online store	1	2	3	4	5	6	7
56	I am satisfied with the available stock of Camera information shown in :							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
57	I am satisfied with the immediate response of www.digicamshop.nl if the Camera is out of stock, so time is not wasted going through the checkout process and finding this out later	1	2	3	4	5	6	7
	I am satisfied with the immediate response of www.amazon.com if the Camera is out of stock, so time is not wasted going through the checkout process and finding this out later	1	2	3	4	5	6	7
58	I am satisfied with the layout consistency of www.digicamshop.nl across all pages	1	2	3	4	5	6	7
	I am satisfied with the layout consistency of www.amazon.com across all pages	1	2	3	4	5	6	7
59	I am satisfied with the warranty terms of www.digicamshop.nl. The terms are *fair*	1	2	3	4	5	6	7
	I am satisfied with the warranty terms of www.amazon.com. The terms are *fair*	1	2	3	4	5	6	7
60	I am satisfied with the warranty terms of www.digicamshop.nl. The terms are *clearly stated*	1	2	3	4	5	6	7
	I am satisfied with the warranty terms of www.amazon.com. The terms are *clearly stated*	1	2	3	4	5	6	7
61	In general, I feel more comfortable if there were icons/logos placed by a third party company that certifying an online store had been audited	1	2	3	4	5	6	7
62	People the opinion of which I trust would encourage me to use www.digicamshop.nl to purchase a Camera	1	2	3	4	5	6	7
	People the opinion of which I trust would encourage me to use www.amazon.com to purchase a Camera	1	2	3	4	5	6	7
63	People who are important to me would encourage me to use www.digicamshop.nl to purchase a Camera	1	2	3	4	5	6	7
	People who are important to me would encourage me to use www.amazon.com to purchase a Camera	1	2	3	4	5	6	7
64	I intend to purchase a Camera on www.digicamshop.nl within the next 1-year period	1	2	3	4	5	6	7
	I intend to purchase on www.amazon.com within the next 1-year period	1	2	3	4	5	6	7
65	I prefer to buy a Camera online on:							
	A. www.digicamshop.nl	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7

Continued to Second Task →

Continued to Second Task →

(Consider yourself in the following <u>situations</u> and perform the <u>specified task</u>)

SECONDTASK

<u>Situation</u>
Today is your best friend's birthday and she loves cooking. She is a fan of Jamie Oliver. You decide to purchase a cooking book of Jamie Oliver for her on a web shop.

<u>Task</u>
Visit two online stores and "purchase" Jamie Oliver Cooking Book.
Specify the title of Jamie Oliver Cooking Book here (after you browse)
_____
_____
_

Online store	Do you know this store?	Have you ever bought a product from this store before?
www.boek.net	0 Yes 0 No	0 Yes 0 No
www.amazon.com	0 Yes 0 No	0 Yes 0 No

The questions in this survey make use of rating scales with 7 levels; as stated below:

1 = *strongly disagree*
2 = quite disagree
3 = slightly disagree
4 = neither disagree nor agree
5 = slightly agree
6 = quite agree
7 = strongly agree

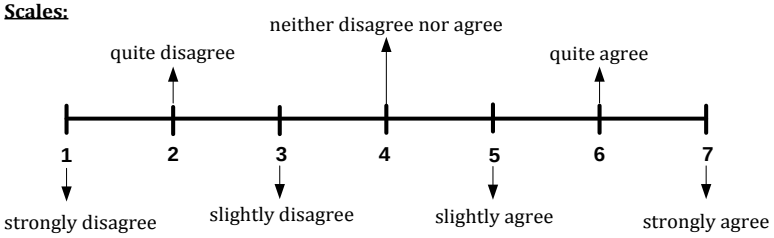
You need to select the number that best describes your opinion. For example, if you were asked to rate the importance of a characteristic of an online store on such a scale, the 7 levels should be interpreted as follows:

When you consider purchase a camera at an online store,
"It is important for me that the online store provides the number of available cameras (stock information)"

If you think that you strongly agree with **"It is important for me that the online store provides the number of available cameras (stock information)"**, then you need to select 7 and put mark "X" as follows:

The availability number of the camera is important for you 1 2 3 4 5 6 X

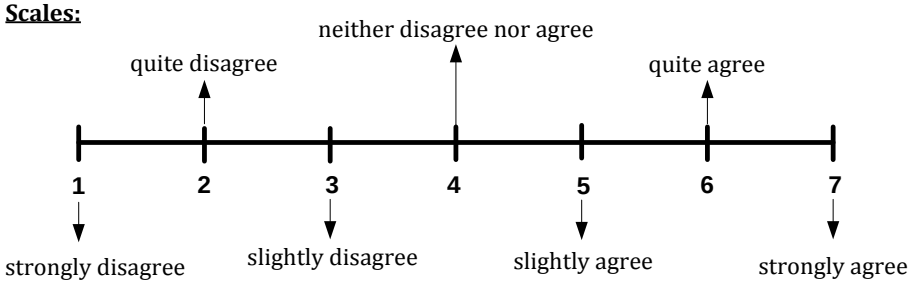
Scales:



1	I am satisfied with advertisement presentation (limited pop up ads) of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
2	I am satisfied with the appearance in terms of artistic creativity of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
3	I am satisfied with pleasant appearance of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
4	I am satisfied with the consistency of Books product categorization (i.e. English book, Academic book, etc) of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
5	I am satisfied with the discounts offered by:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
6	I am satisfied with the navigation, in terms of providing a way to keep track of my locations within its pages of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
7	I am satisfied with the sequence of filling up forms (i.e. sign up, purchase forms, etc) of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
8	I am satisfied with the ease of use (with only few clicks I can find what I am looking for) of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
9	I am satisfied with the absence of errors from:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
10	The internet link was working at:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
11	I am comfortable with www.boek.net as it has a limited "busy server" message	1	2	3	4	5	6	7
	I am comfortable with www.amazon.com as it has a limited "busy server" message	1	2	3	4	5	6	7
12	I am familiar with www.boek.net	1	2	3	4	5	6	7
	I am familiar with www.amazon.com	1	2	3	4	5	6	7
13	I purchase a Book at www.boek.net because I have heard of this site's reputation before	1	2	3	4	5	6	7
	I purchase a Book at www.amazon.com because I have heard this site's reputation before	1	2	3	4	5	6	7

14	I prefer the language style of www.boek.net/www.amazon.com over www.boek.net/www.amazon.com because _____	1	2	3	4	5	6	7
	* cross over/out the one you do not prefer ** fill-in the blank							
15	I am satisfied with Book graphical presentation which shows the whole product (from top, bottom, left and right side/angles) of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
16	The clear pictures and sample content/recipes of selected book in www.boek.net influence my desire to own it	1	2	3	4	5	6	7
	The clear pictures and sample content/recipes of selected book in www.boek.net influence my desire to own it	1	2	3	4	5	6	7
17	I am satisfied with the zoom in/out of the photos of the selected book of www.boek.net. They are sufficient to have a clear idea how the book looks like	1	2	3	4	5	6	7
	I am satisfied with the zoom in/out of the photos of the selected book of www.amazon.com. They are sufficient to have a clear idea how the book looks like	1	2	3	4	5	6	7
18	I am satisfied with the detailed information about the Book price (original price, promo price) of: www.boek.net							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
19	I am satisfied with the price tag for Book at www.boek.net. It is cheap	1	2	3	4	5	6	7
	I am satisfied with the price tag for Book at www.amazon.com. It is cheap	1	2	3	4	5	6	7
20	www.boek.net provides an up-to-date Book Information	1	2	3	4	5	6	7
	www.amazon.com provides an up-to-date Book Information	1	2	3	4	5	6	7
21	The Book information of www.boek.net is easy to understand	1	2	3	4	5	6	7
	The Book information of www.amazon.com is easy to understand	1	2	3	4	5	6	7
22	The Book information of www.boek.net is relevant	1	2	3	4	5	6	7
	The Book information of www.amazon.com is relevant	1	2	3	4	5	6	7
23	I am satisfied with the variety of book offerings (broad assortment) on:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
24	I am satisfied with the fact I can purchase both second hand and new book on:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
25	I am satisfied with the proportion, color combination, and type & size font of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7

Scales:



26	I am satisfied with the visual appearance and style of www.boek.net. It has professional looks	1	2	3	4	5	6	7
	I am satisfied with the visual appearance and style of www.amazon.com. It has professional looks	1	2	3	4	5	6	7
27	I am satisfied with the additional products complementing my Book's functionality suggested by:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
28	I am satisfied with products that have been recommended based on my preferences:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
29	I am satisfied with the Book's accurate search results of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
30	I feel comfortable with the number of pictures and text presentation of:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
31	I am satisfied with expertise of www.boek.net in Book product area	1	2	3	4	5	6	7
	I am satisfied with expertise of www.amazon.com in Book product area	1	2	3	4	5	6	7
32	www.boek.net is recognized as Book's online store	1	2	3	4	5	6	7
	www.amazon.com is recognized as Book's online store	1	2	3	4	5	6	7
33	I am satisfied with the available stock of Book information shown in :							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7
34	I am satisfied with the immediate response of www.boek.net if the Book is out of stock, so time is not wasted going through the checkout process and finding this out later	1	2	3	4	5	6	7
	I am satisfied with the immediate response of www.amazon.com if the Book is out of stock, so time is not wasted going through the checkout process and finding this out later	1	2	3	4	5	6	7
35	I am satisfied with the layout consistency of www.boek.net across all pages	1	2	3	4	5	6	7
	I am satisfied with the layout consistency of www.amazon.com across all pages	1	2	3	4	5	6	7
36	I am satisfied with the warranty terms of www.boek.net. The terms are *fair*	1	2	3	4	5	6	7
	I am satisfied with the warranty terms of www.amazon.com. The terms are *fair*	1	2	3	4	5	6	7
37	I am satisfied with the warranty terms of www.boek.net. The terms are *clearly stated*	1	2	3	4	5	6	7
	I am satisfied with the warranty terms of www.amazon.com. The terms are *clearly stated*	1	2	3	4	5	6	7
38	People who the opinion of which I trust would encourage me to use www.boek.net to purchase a Book	1	2	3	4	5	6	7

	People who the opinion of which I trust would encourage me to use www.amazon.com to purchase a Book	1	2	3	4	5	6	7
39	People who are important to me would encourage me to use www.boek.net to purchase a Book	1	2	3	4	5	6	7
	People who are important to me would encourage me to use www.amazon.com to purchase a Book	1	2	3	4	5	6	7
40	I intend to purchase a Book on www.boek.net within the next 1-year period	1	2	3	4	5	6	7
	I intend to purchase on www.amazon.com within the next 1-year period	1	2	3	4	5	6	7
41	I prefer to buy a Book online on:							
	A. www.boek.net	1	2	3	4	5	6	7
	B. www.amazon.com	1	2	3	4	5	6	7

Thank you for your participation ☺

APPENDIX C: PLS RESULT'S

Hypothesis	Explanation	All Web shops	Digicamshop	Amazon Camera	Boek	Amazon Book
		β	β	β	β	β
H1	Advertisement presentation --> intention to purchase on online store	**0.16***	**0.19***	0.06	**0.19***	0.06
H2	Aesthetics --> intention to purchase on online store	0.02	**-0.27*****	0.04	-0.12	0.04
H3	Categorization --> intention to purchase on online store	0.06	0.00	0.01	-0.01	0.01
H4	Customer review and rating --> intention to purchase on online store	0.07	**0.18***	0.08	0.15	0.08
H5	Customer service --> intention to purchase on online store	0.05	-0.07	-0.03	0.08	-0.03
H6	Delivery cost --> intention to purchase on online store	**-0.15****	**-0.37******	**-0.20****	**-0.26****	**-0.2****
H7	Delivery speed --> intention to purchase on online store	-0.01	**-0.17***	0.07	-0.07	0.07
H8	Discount --> intention to purchase on online store	-0.14	-0.10	-0.12	-0.16*	-0.12
H9	Ease and clear navigate --> intention to purchase on online store	-0.01	-0.02	-0.01	**-0.2****	-0.01
H10	Ease of what is looked for --> intention to purchase on online store	0.05	-0.09	-0.01	0.13	-0.01
H11	Free from error --> intention to purchase on online store	-0.03	0.02	0.08	-0.02	**0.08***
H12	Heard of store before --> intention to purchase on online store	0.06	0.07	**0.22*****	0.00	**0.22****
H13	Language --> intention to purchase on online store	0.10	0.04	-0.05	**0.19***	-0.05
H14	Payment method and option --> intention to purchase on online store	-0.04	**0.20****	0.12	-0.02	0.12
H15	Pictures --> intention to purchase on online store	-0.05	-0.03	0.02	0.10	0.02
H16	Price --> intention to purchase on online store	-0.05	0.00	-0.07	0.09	**-0.06****
H17	Product comparison possibility --> intention to purchase on online store	-0.04	-0.06	**-0.18****	0.01	-0.18
H18	Product information --> intention to purchase on online store	-0.05	0.12	-0.16	-0.15	-0.16
H19	Product range --> intention to purchase on online store	**0.09***	**0.12***	0.08	-0.03	**0.08*****
H20	Professional appearance --> intention to purchase on online store	0.01	-0.12	0.13	0.02	0.13
H21	Purchase at store before --> intention to purchase on online store	-0.07	-0.11	-0.05	0.08	-0.05
H22	Recommendation engine --> intention to purchase on online store	**0.18****	**0.24*****	0.12	0.13	0.12
H23	Search functionality --> intention to purchase on online store	0.04	-0.04	-0.06	**0.22****	-0.06
H24	Simple appearance --> intention to purchase on online store	**0.04*****	**0.22*****	**-0.24*****	-0.03	-0.24
H25	Sorting possibility --> intention to purchase on online store	**-0.11****	**0.10***	**-0.26****	-0.02	**-0.26****
H26	Specialization --> intention to purchase on online store	-0.08	-0.15	0.09	-0.04	**0.09*****
H27	Stock Information --> intention to purchase on online store	0.02	-0.02	-0.07	0.08	-0.07
H28	Structure and layout organization --> intention to purchase on online store	-0.02	-0.14	-0.03	-0.14	**-0.03***
H29	Warranty --> intention to purchase on online store	0.00	**-0.07***	0.02	-0.03	0.02
Additional Hypothesis						
	Subjective norm --> actual to purchase	**0.15****	0.26	**0.20****	**0.32*****	0.20
	Intention to purchase --> actual to purchase	**0.30*****	**0.17***	**0.33*****	**0.27****	**0.33*****

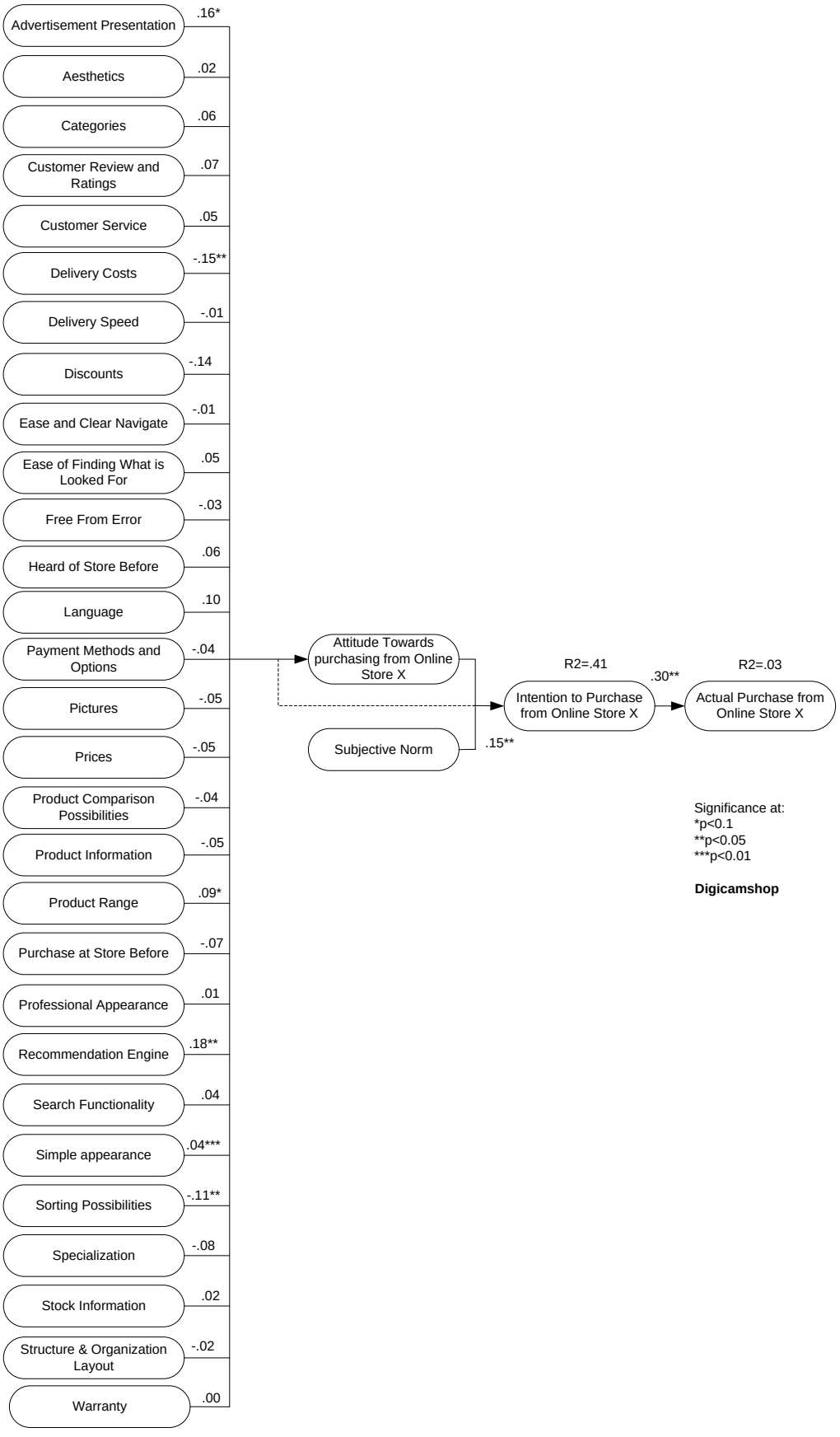


FIGURE 9 PARTICULAR WEB SHOP (DIGICAMPSHOP) RESULT

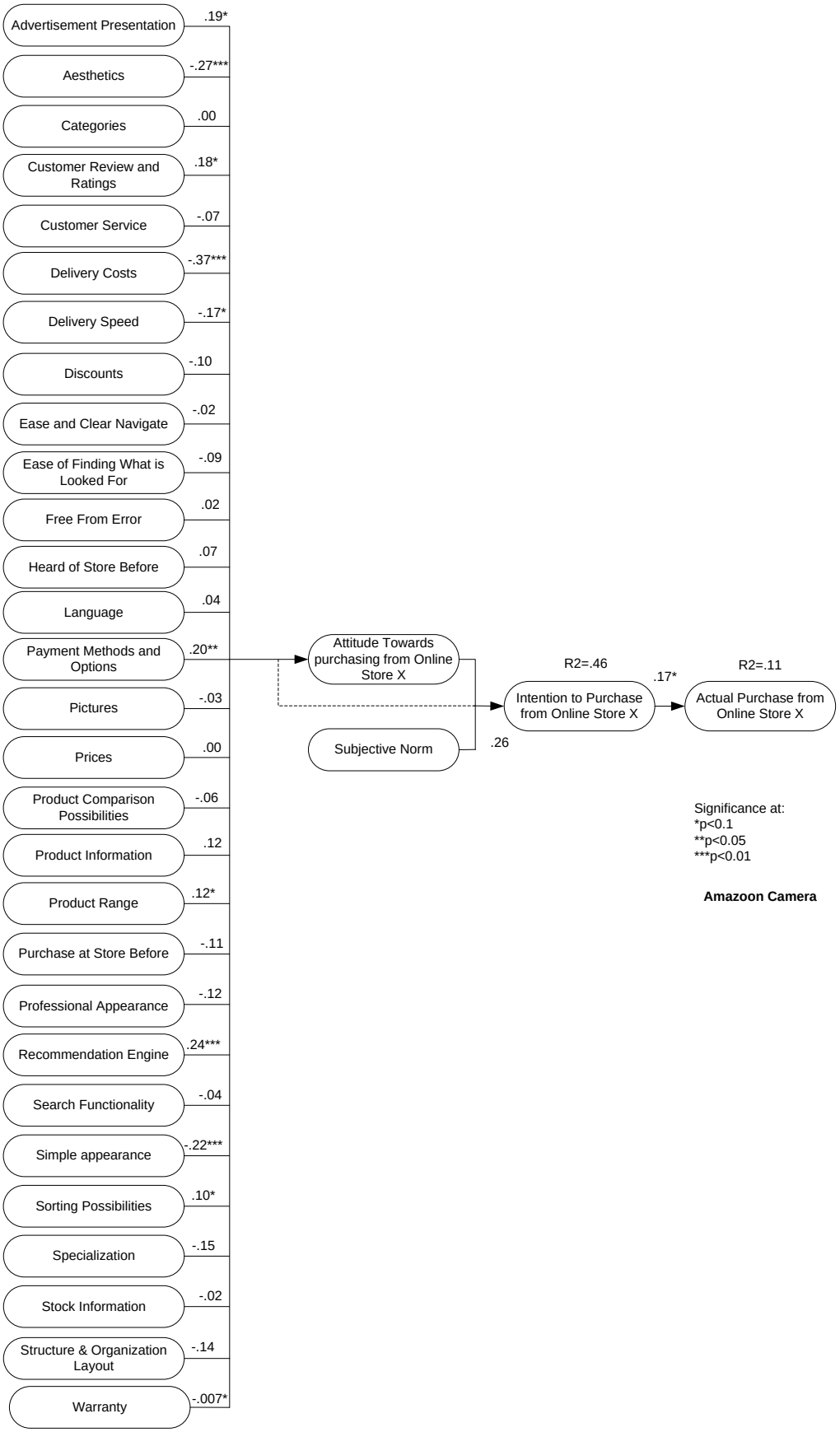


FIGURE 10 PARTICULAR WEB SHOP (AMAZON-CAMERA) RESULT

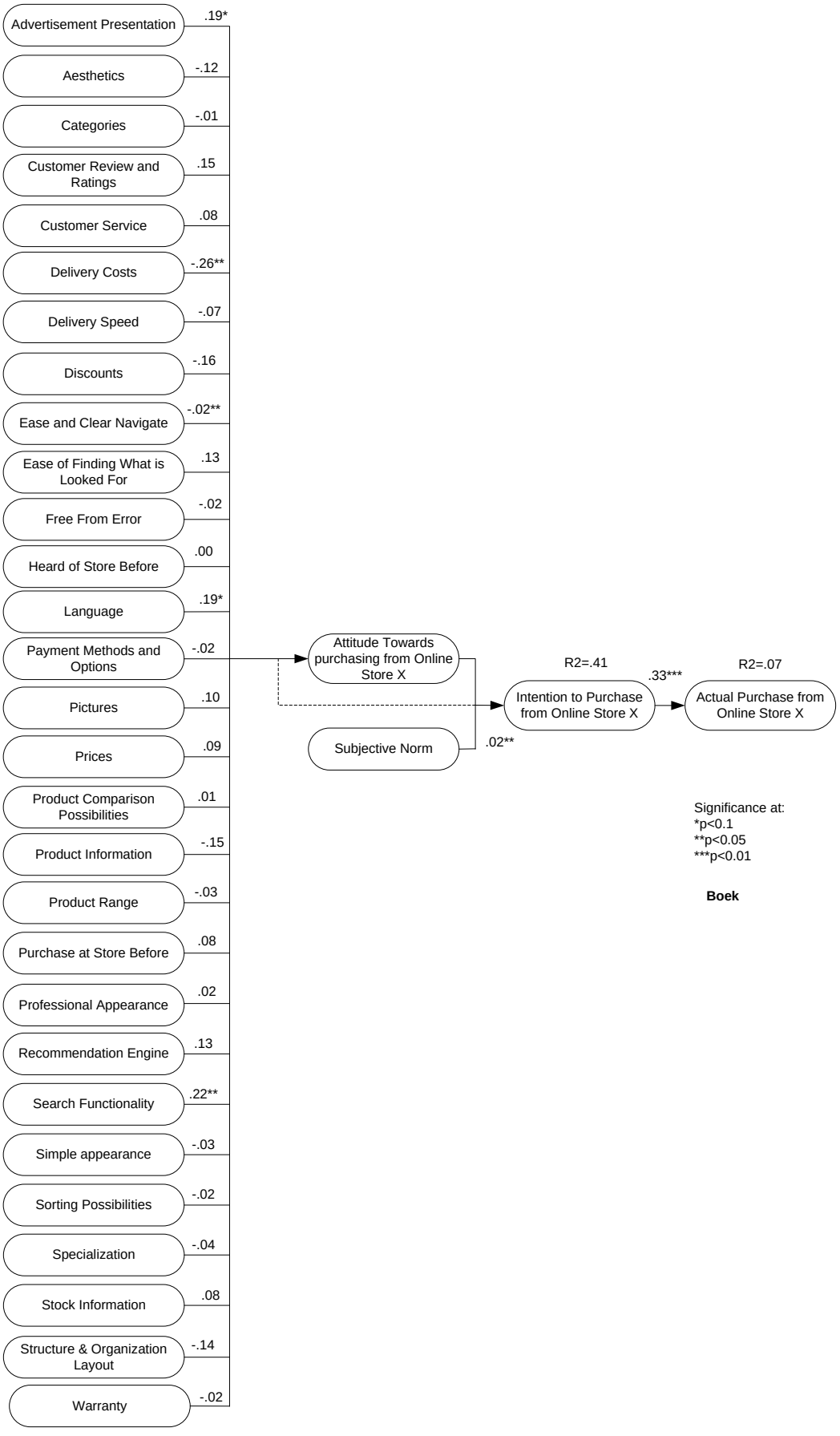


FIGURE 11 PARTICULAR WEB SHOP (BOEK) RESULT

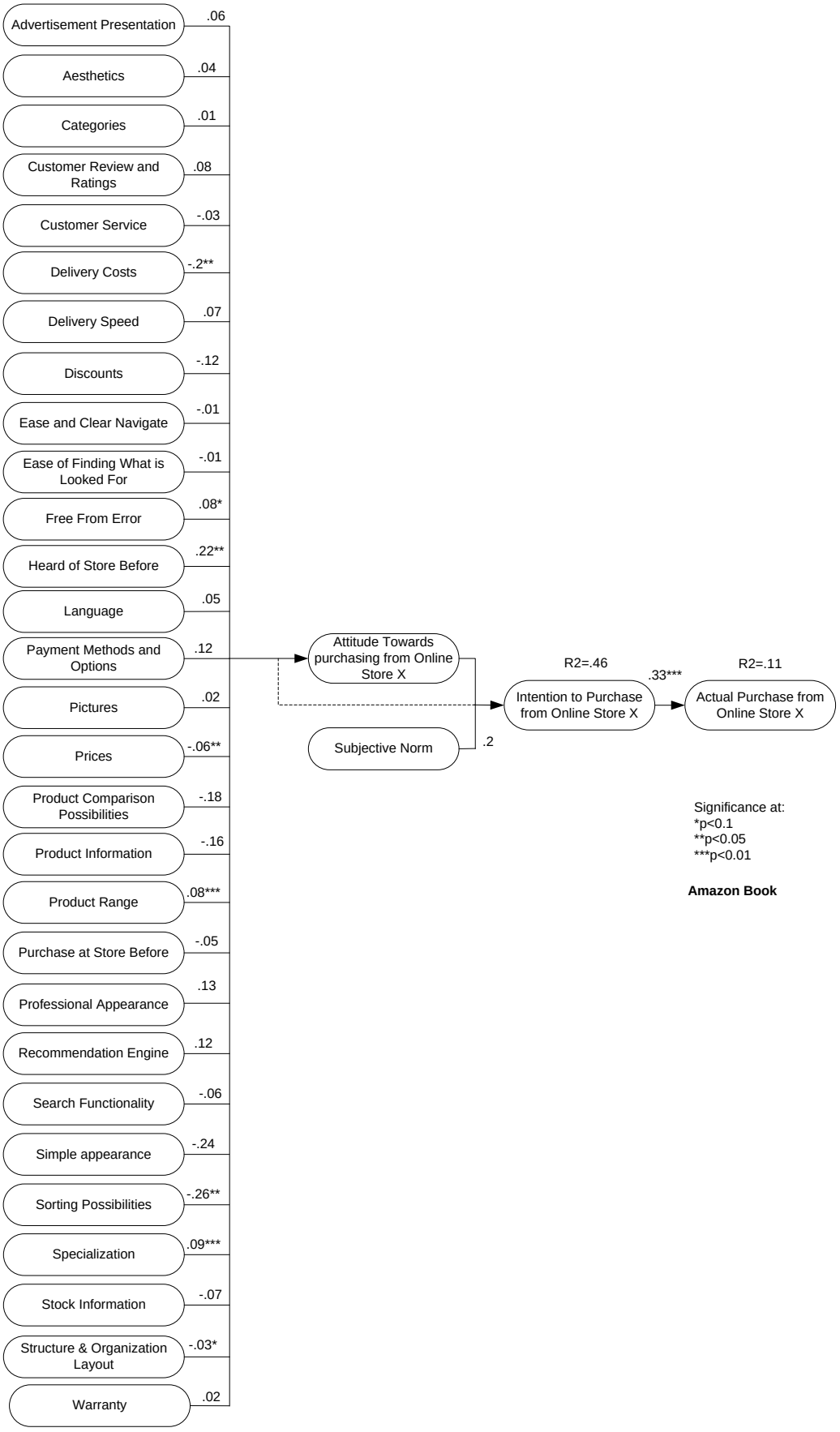


FIGURE 12 PARTICULAR WEB SHOP (AMAZON-BOOK) RESULT

APPENDIX D: MULTICOLLENIARITY

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Consta	4.938	1.196		4.128	.000		
	ADPR	.114	.035	.159	3.227	.001	.697	1.435
	AEST	-.037	.043	-.042	-.864	.388	.723	1.383
	CATE	.052	.047	.055	1.120	.263	.712	1.404
	CRRAT	.046	.027	.093	1.715	.087	.580	1.723
	CS	.029	.033	.047	.879	.380	.599	1.670
	DCO	-.091	.047	-.094	-1.922	.055	.707	1.415
	DSP	-.125	.067	-.091	-1.860	.064	.704	1.421
	DISC	-.111	.034	-.150	-3.293	.001	.817	1.224
	ENAV	-.009	.042	-.010	-.205	.838	.713	1.403
	ELOOK	.123	.067	.091	1.839	.067	.690	1.450
	FRR	-.016	.026	-.032	-.628	.530	.641	1.560
	HSTB	.014	.022	.031	.633	.527	.715	1.400
	LANG	.007	.029	.011	.233	.816	.755	1.325
	PYMO	-.014	.037	-.019	-.384	.701	.705	1.419
	PIC	-.004	.027	-.007	-.142	.887	.631	1.585
	PRI	-.016	.033	-.024	-.478	.633	.646	1.547
	PCOM	-.078	.040	-.102	-1.937	.053	.611	1.636
	PINF	-.032	.031	-.057	-1.063	.288	.581	1.721
	PRAN	.066	.039	.082	1.668	.096	.697	1.435
	PAPP	.074	.039	.092	1.915	.056	.729	1.372
	PSTB	-.124	.054	-.108	-2.319	.021	.774	1.292
	RENG	.066	.030	.131	2.226	.027	.489	2.046
	SFUNC	-.015	.056	-.013	-.267	.790	.715	1.398
	SAPP	.009	.036	.012	.239	.811	.684	1.462
	SORTP	-.255	.071	-.185	-3.588	.000	.639	1.565
	SPEC	.012	.029	.019	.409	.683	.803	1.245
	SINF	-.022	.032	-.033	-.683	.495	.722	1.386
	SLORG	.000	.063	.000	.005	.996	.746	1.341
	WARR	-.026	.034	-.038	-.755	.451	.675	1.481
	SNOR	.167	.035	.242	4.807	.000	.666	1.501

a. Dependent Variable: INTP

TABLE 22 MULTICOLLENIARTY TEST

APPENDIX E: CROSS LOADINGS

Indicators	Constructs																															
	ACTP	ADPR	AEST	CATE	CRRAT	CS	DCO	DISC	DSP	ELOOK	ENAV	FRR	HSTB	INTP	LANG	PAPP	PCOMP	PIC	PINF	PRAN	PRI	PSTB	PYMO	RENG	SAPP	SFUNC	SINF	SLORG	SNOR	SORTP	SPEC	WARR
ACTP1b	**1.00**	0.07	0.14	0.02	-0.10	-0.08	0.02	0.01	-0.08	0.20	0.05	0.10	0.23	0.27	-0.04	0.43	0.13	0.08	0.07	0.32	-0.05	0.18	0.19	0.04	-0.04	0.15	0.16	0.02	0.18	0.09	0.21	0.00
ADPR1b	0.07	**1.00**	0.55	0.13	-0.11	0.04	0.16	-0.06	-0.19	0.22	0.18	0.01	0.33	0.24	0.37	0.19	-0.07	0.24	0.09	0.30	0.08	0.20	0.04	0.11	-0.21	0.14	0.14	0.16	0.09	0.07	0.26	0.09
AEST1b	0.11	0.41	**0.77**	0.19	-0.04	0.06	0.25	0.01	-0.10	0.18	0.26	0.05	0.03	0.06	0.30	0.17	0.13	0.05	0.17	0.10	0.25	0.13	0.10	0.12	0.06	0.13	-0.03	0.05	0.18	0.21	0.05	0.23
AEST3b	0.12	0.51	**0.91**	0.17	-0.26	0.17	0.16	-0.10	-0.24	0.24	0.22	0.12	0.18	0.10	0.37	0.28	-0.08	0.26	0.19	0.32	0.06	0.16	0.11	0.05	-0.17	0.26	0.23	0.19	0.13	0.12	0.21	0.04
CATE3	0.02	0.13	0.21	**1.00**	0.00	0.09	-0.01	-0.16	0.08	0.23	0.08	0.08	-0.09	0.05	0.08	-0.01	0.07	-0.05	-0.01	-0.01	-0.07	0.07	0.10	-0.08	-0.03	0.17	-0.06	-0.10	-0.03	0.21	0.05	0.11
CRRAT2	-0.10	-0.11	-0.20	0.00	**1.00**	-0.05	0.04	0.13	0.32	-0.20	-0.05	0.05	-0.15	0.05	-0.04	-0.19	0.04	-0.09	-0.04	-0.36	0.06	-0.06	0.01	0.09	0.25	-0.17	-0.23	-0.19	0.03	-0.02	-0.07	0.30
CS1	-0.07	-0.04	0.14	0.18	-0.05	**0.82**	0.14	0.00	-0.19	-0.11	-0.07	0.03	0.18	-0.08	0.13	0.14	0.21	0.06	-0.11	-0.06	0.01	-0.12	-0.02	-0.06	-0.08	0.10	-0.09	-0.04	-0.03	0.29	-0.03	-0.01
CS2	-0.05	0.10	0.10	-0.03	-0.04	**0.83**	0.30	0.23	0.04	-0.14	0.06	-0.09	0.11	-0.08	0.16	-0.06	0.09	0.15	-0.09	-0.08	-0.07	-0.27	0.01	-0.07	-0.17	0.02	-0.09	0.02	-0.12	0.29	-0.04	-0.17
DCO2	0.02	0.16	0.23	-0.01	0.04	0.27	**1.00**	0.18	0.01	0.12	0.14	-0.01	-0.02	-0.20	0.21	-0.03	0.17	-0.05	-0.01	0.06	0.03	-0.08	0.18	-0.14	-0.07	0.09	0.06	0.02	0.12	0.42	-0.08	0.02
DISC3	0.01	-0.06	-0.07	-0.16	0.13	0.14	0.18	**1.00**	0.14	0.11	-0.02	-0.01	-0.09	-0.20	0.01	-0.09	0.12	-0.12	-0.02	-0.19	0.00	-0.15	0.13	-0.07	0.02	0.02	-0.02	-0.13	-0.09	0.10	-0.14	-0.01
DSP1	-0.08	-0.19	-0.22	0.08	0.32	-0.09	0.01	0.14	**1.00**	-0.08	-0.07	-0.12	-0.27	-0.09	-0.09	-0.30	-0.03	-0.03	0.03	-0.29	0.00	-0.10	0.16	0.09	0.16	-0.14	-0.18	-0.24	-0.04	-0.02	-0.21	0.08
ELOOK1b	0.20	0.22	0.25	0.23	-0.20	-0.15	0.12	0.11	-0.08	**1.00**	0.32	0.17	-0.03	0.05	0.18	0.27	0.19	0.00	0.16	0.28	0.09	0.21	0.15	0.09	-0.15	0.28	0.08	0.27	-0.04	0.09	0.16	0.12
ENAV1b	0.08	0.15	0.26	0.07	-0.06	0.00	0.14	0.00	-0.11	0.27	**0.94**	0.14	0.00	-0.15	0.14	0.20	0.00	0.15	0.22	0.08	0.19	0.08	0.02	0.21	0.11	0.03	0.23	0.23	0.05	0.12	0.16	0.13
ENAV3b	0.00	0.18	0.22	0.07	0.00	0.00	0.11	-0.03	0.01	0.31	**0.79**	0.00	-0.05	-0.08	0.19	0.19	-0.03	0.08	0.24	0.03	0.16	0.08	0.06	0.05	-0.04	0.12	0.11	0.19	-0.05	0.11	0.20	0.06
FRR5b	0.10	0.01	0.11	0.08	0.05	-0.04	-0.01	-0.01	-0.12	0.17	0.10	**1.00**	0.04	0.10	0.08	0.27	0.05	0.25	-0.10	0.07	-0.09	0.08	0.18	0.17	0.00	0.04	0.00	0.27	0.23	-0.01	0.11	0.25
HSTB1b	0.29	0.35	0.18	0.01	-0.24	0.24	-0.02	-0.04	-0.24	0.06	0.02	0.08	**0.87**	0.18	0.09	0.23	-0.19	0.50	0.13	0.48	-0.02	0.05	-0.18	0.01	-0.23	0.12	0.16	0.06	0.14	-0.13	0.35	-0.02
HSTB3b	0.08	0.20	0.04	-0.17	0.00	0.04	-0.01	-0.13	-0.21	-0.12	-0.05	-0.02	**0.81**	0.16	0.02	-0.04	-0.24	0.23	-0.15	0.16	0.14	0.07	-0.30	-0.04	0.04	-0.13	0.00	-0.03	0.24	-0.19	0.24	0.13
INTP1b	0.27	0.24	0.10	0.05	0.05	-0.10	-0.20	-0.20	-0.09	0.05	-0.14	0.10	0.20	**1.00**	0.17	0.12	-0.09	0.17	-0.09	0.20	0.05	0.12	-0.10	0.20	-0.05	0.21	0.06	-0.02	0.30	-0.12	0.19	0.07
LANG2b	-0.04	0.37	0.40	0.08	-0.04	0.18	0.21	0.01	-0.09	0.18	0.17	0.08	0.07	0.17	**1.00**	0.08	-0.07	0.20	0.08	0.19	0.19	-0.12	0.07	0.08	-0.16	0.20	-0.05	0.19	-0.04	0.23	0.14	0.10
PAPP3b	0.43	0.19	0.28	-0.01	-0.19	0.04	-0.03	-0.09	-0.30	0.27	0.22	0.27	0.13	0.12	0.08	**1.00**	0.02	0.09	0.12	0.34	0.10	0.33	0.16	0.13	-0.06	0.18	0.22	0.30	0.13	0.08	0.17	0.02
PCOMP2	0.13	-0.07	0.00	0.07	0.04	0.18	0.17	0.12	-0.03	0.19	-0.01	0.05	-0.25	-0.09	-0.07	0.02	**1.00**	-0.16	-0.02	-0.12	0.01	-0.02	0.40	0.04	0.21	0.07	-0.02	-0.02	-0.15	0.34	-0.23	0.00
PIC1b	0.08	0.24	0.21	-0.05	-0.09	0.13	-0.05	-0.12	-0.03	0.00	0.14	0.25	0.45	0.17	0.20	0.09	-0.16	**1.00**	0.22	0.45	0.13	-0.06	0.16	0.23	-0.08	0.13	0.16	0.16	0.05	-0.29	0.44	0.05
PINF1b	0.00	0.11	0.09	-0.03	0.03	-0.11	-0.04	-0.10	0.01	0.18	0.34	0.02	0.11	-0.07	0.06	0.09	-0.10	0.24	**0.84**	0.28	0.25	0.09	0.04	0.19	-0.10	0.15	0.20	0.28	-0.05	-0.08	0.28	0.17
PINF3b	0.11	0.05	0.26	0.01	-0.09	-0.09	0.02	0.07	0.03	0.09	0.09	-0.19	-0.11	-0.07	0.07	0.11	0.05	0.14	**0.85**	0.25	0.35	0.19	0.27	0.15	0.03	0.24	0.23	0.11	-0.09	0.00	0.18	0.06
PRAN1b	0.33	0.28	0.30	-0.02	-0.21	-0.13	0.14	-0.09	-0.19	0.32	0.06	0.07	0.22	0.16	0.15	0.31	0.01	0.28	0.40	**0.79**	0.12	0.34	0.14	0.22	-0.14	0.38	0.29	0.15	0.16	-0.07	0.31	-0.04
PRAN3b	0.20	0.22	0.15	0.01	-0.37	-0.01	-0.04	-0.22	-0.28	0.14	0.06	0.05	0.42	0.18	0.16	0.26	-0.20	0.45	0.13	**0.84**	0.12	0.08	-0.17	0.09	-0.31	0.22	0.29	0.16	0.09	-0.23	0.47	-0.03
PRI3b	-0.05	0.08	0.16	-0.07	0.06	-0.04	0.03	0.00	0.00	0.09	0.21	-0.09	0.07	0.05	0.19	0.10	0.01	0.13	0.36	0.15	**1.00**	0.04	0.10	0.22	0.16	0.06	0.02	0.26	0.07	0.01	0.25	0.42
PSTB1	0.18	0.20	0.17	0.07	-0.06	-0.24	-0.08	-0.15	-0.10	0.21	0.09	0.08	0.07	0.12	-0.12	0.33	-0.02	-0.06	0.17	0.25	0.04	**1.00**	0.07	0.09	0.15	-0.01	0.17	0.21	0.17	-0.13	0.02	0.09
PYMO1	0.19	0.04	0.12	0.10	0.01	-0.01	0.18	0.13	0.16	0.15	0.04	0.18	-0.28	-0.10	0.07	0.16	0.40	0.16	0.19	-0.03	0.10	0.07	**1.00**	0.13	0.27	0.07	0.03	0.10	-0.12	0.22	-0.10	0.16
RENG1b	0.04	0.11	0.09	-0.08	0.09	-0.08	-0.14	-0.07	0.09	0.09	0.17	0.17	-0.01	0.20	0.08	0.13	0.04	0.23	0.20	0.18	0.22	0.09	0.13	**1.00**	0.07	0.15	0.04	0.13	-0.01	-0.12	0.17	0.19
SAPP3	-0.04	-0.21	-0.09	-0.03	0.25	-0.15	-0.07	0.02	0.16	-0.15	0.06	0.00	-0.12	-0.05	-0.16	-0.06	0.21	-0.08	-0.04	-0.28	0.16	0.15	0.27	0.07	**1.00**	-0.33	0.00	-0.17	0.16	0.00	-0.31	0.17
SFUNC1b	0.15	0.14	0.24	0.17	-0.17	0.07	0.09	0.02	-0.14	0.28	0.07	0.04	0.01	0.21	0.20	0.18	0.07	0.13	0.24	0.36	0.06	-0.01	0.07	0.15	-0.33	**1.00**	0.19	0.10	-0.05	0.10	0.39	-0.01
SINF1b	0.16	0.14	0.15	-0.06	-0.23	-0.11	0.06	-0.02	-0.18	0.08	0.21	0.00	0.10	0.06	-0.05	0.22	-0.02	0.16	0.25	0.36	0.02	0.17	0.03	0.04	0.00	0.19	**1.00**	0.22	0.13	-0.09	0.11	-0.11
SLORG1b	0.02	0.16	0.16	-0.10	-0.19	-0.01	0.02	-0.13	-0.24	0.27	0.24	0.27	0.02	-0.02	0.19	0.30	-0.02	0.16	0.23	0.19	0.26	0.21	0.10	0.13	-0.17	0.10	0.22	**1.00**	0.04	0.09	0.24	0.12
SNOR3b	0.18	0.09	0.18	-0.03	0.03	-0.09	0.12	-0.09	-0.04	-0.04	0.02	0.23	0.22	0.30	-0.04	0.13	-0.15	0.05	-0.08	0.15	0.07	0.17	-0.12	-0.01	0.16	-0.05	0.13	0.04	**1.00**	0.04	0.10	0.17
SORTP1	0.09	0.07	0.18	0.21	-0.02	0.35	0.42	0.10	-0.02	0.09	0.13	-0.01	-0.19	-0.12	0.23	0.08	0.34	-0.29	-0.04	-0.19	0.01	-0.13	0.22	-0.12	0.00	0.10	-0.09	0.09	0.04	**1.00**	-0.19	0.04
SPEC1b	0.21	0.26	0.17	0.05	-0.07	-0.04	-0.08	-0.14	-0.21	0.16	0.20	0.11	0.35	0.19	0.14	0.17	-0.23	0.44	0.27	0.48	0.25	0.02	-0.10	0.17	-0.31	0.39	0.11	0.24	0.10	-0.19	**1.00**	0.11
WARR1b	-0.01	0.13	0.18	0.13	0.25	-0.06	0.14	-0.01	0.11	0.15	0.12	0.18	0.05	0.06	0.14	-0.04	0.09	0.05	0.18	-0.04	0.37	0.04	0.22	0.21	0.18	0.03	-0.06	0.02	0.16	0.11	0.01	**0.86**
WARR3b	0.02	0.02	0.05	0.06	0.26	-0.14	-0.11	-0.01	0.03	0.06	0.08	0.25	0.04	0.06	0.03	0.07	-0.09	0.04	0.05	-0.04	0.35	0.12	0.05	0.10	0.12	-0.04	-0.13	0.19	0.14	-0.04	0.17	**0.85**

TABLE 23 FACTOR ANALYSIS (A) ALL WEBSHOPS

Indicators	Constructs																															
	ACTP	ADPR	AEST	CATE	CRRAT	CS	DCO	DISC	DSP	ELOOK	ENAV	FRR	HSTB	INTP	LANG	PAPP	PCOMP	PIC	PINF	PRAN	PRI	PSTB	PYMO	RENG	SAPP	SFUNC	SINF	SLORG	SNOR	SORTP	SPEC	WARR
ACTP1	**1.00**	-0.17	-0.08	-0.12	0.03	-0.08	-0.03	0.13	0.01	0.31	0.27	0.13	-0.02	0.17	0.15	0.13	0.09	0.11	0.07	0.17	-0.05	-0.04	0.17	0.17	0.17	0.22	0.29	0.04	0.10	0.03	0.08	0.27
ADPR3	-0.17	**1.00**	0.06	0.11	-0.03	-0.04	0.18	-0.03	0.18	0.01	-0.04	0.02	0.01	0.12	0.09	0.03	0.02	0.00	0.06	-0.08	0.15	-0.05	0.14	-0.05	0.05	-0.10	-0.08	-0.04	-0.01	0.15	0.19	-0.20
AEST1	-0.09	0.05	**0.90**	0.02	0.16	0.16	0.01	0.05	0.04	0.11	0.12	0.05	0.06	-0.13	-0.03	0.06	0.11	-0.03	0.11	0.06	0.03	-0.06	0.23	0.07	0.19	0.26	0.02	0.06	0.06	0.03	0.03	0.06
AEST3	-0.03	0.06	**0.81**	0.10	0.15	0.06	-0.02	-0.24	-0.09	0.11	0.14	0.12	-0.07	-0.09	-0.17	0.31	0.17	0.16	0.16	-0.02	0.08	0.16	0.23	0.03	0.30	0.37	0.04	0.02	0.08	0.04	0.05	-0.02
CATE3	-0.12	0.11	0.06	**1.00**	-0.09	0.12	-0.01	-0.16	0.08	0.04	0.06	0.11	0.02	-0.05	0.05	0.06	0.15	0.14	-0.05	-0.12	0.12	0.07	-0.01	0.03	0.01	0.14	0.13	0.13	0.01	0.21	0.05	-0.15
CRRAT3	0.03	-0.03	0.18	-0.09	**1.00**	-0.05	-0.10	-0.14	0.09	0.04	-0.15	-0.11	-0.28	0.26	-0.02	0.03	0.11	-0.13	0.10	0.07	-0.17	0.01	0.15	0.25	0.05	-0.08	-0.10	0.01	0.09	-0.19	0.02	0.09
CS2	-0.01	0.03	0.16	-0.03	0.10	**0.70**	0.30	0.23	0.04	-0.15	-0.03	-0.15	0.15	-0.03	0.16	-0.02	0.02	0.03	-0.01	0.14	-0.03	-0.27	0.23	0.02	0.03	0.07	-0.20	0.03	-0.02	0.29	0.17	-0.03
CS3	-0.09	-0.06	0.11	0.15	-0.10	**0.97**	0.20	0.25	-0.05	-0.11	-0.04	-0.09	0.27	-0.10	0.16	-0.08	0.17	0.05	0.11	0.12	-0.04	-0.09	0.20	-0.06	0.12	0.20	-0.11	0.04	0.06	0.16	-0.01	-0.13
DCO2	-0.03	0.18	0.00	-0.01	-0.10	0.25	**1.00**	0.18	0.01	0.05	0.13	0.10	0.13	-0.22	-0.01	0.00	0.00	0.12	-0.02	0.11	0.11	-0.08	0.22	0.15	0.11	0.07	0.04	0.09	0.23	0.42	0.17	0.09
DISC3	0.13	-0.03	-0.09	-0.16	-0.14	0.27	0.18	**1.00**	0.14	0.04	-0.01	0.13	0.16	-0.18	0.06	-0.19	-0.11	0.02	-0.08	-0.03	0.00	-0.15	0.10	-0.09	-0.10	0.10	0.06	0.10	0.24	0.10	0.13	0.08
DSP1	0.01	0.18	-0.01	0.08	0.09	-0.03	0.01	0.14	**1.00**	0.28	-0.19	-0.14	-0.09	-0.09	-0.08	0.04	-0.14	-0.12	-0.21	-0.17	0.18	-0.10	0.08	0.22	0.08	-0.08	0.31	-0.14	-0.02	-0.02	-0.11	0.05
ELOOK1	0.31	0.01	0.13	0.04	0.04	-0.13	0.05	0.04	0.28	**1.00**	0.23	0.21	-0.05	-0.03	-0.08	0.06	0.18	0.05	0.21	-0.05	0.18	0.13	0.14	0.31	0.06	0.16	0.33	0.02	0.20	0.13	-0.11	0.23
ENAV3	0.27	-0.04	0.15	0.06	-0.15	-0.04	0.13	-0.01	-0.19	0.23	**1.00**	0.32	0.18	-0.13	0.02	0.18	0.11	0.25	0.33	-0.03	0.19	0.04	0.17	0.02	0.03	0.27	0.31	0.38	0.08	0.31	0.19	0.28
FRR1	0.14	-0.03	0.12	0.10	-0.09	-0.05	0.08	0.14	-0.13	0.22	0.36	**0.95**	0.10	-0.16	-0.20	0.06	0.17	0.30	0.15	-0.07	0.30	0.17	0.08	-0.05	0.00	0.26	0.24	0.51	0.36	0.29	0.28	0.37
FRR3	0.09	0.09	0.03	0.10	-0.12	-0.20	0.12	0.09	-0.12	0.13	0.20	**0.87**	0.07	-0.10	-0.23	0.05	0.06	0.22	-0.05	-0.26	0.19	0.18	0.07	-0.14	0.00	0.18	0.09	0.31	0.23	0.22	0.17	0.16
HSTB1	-0.02	0.01	0.00	0.02	-0.28	0.27	0.13	0.16	-0.09	-0.05	0.18	0.10	**1.00**	-0.08	0.08	0.16	0.01	0.28	0.20	-0.05	0.18	0.06	0.14	-0.08	0.00	0.02	-0.06	0.11	0.01	0.02	0.07	-0.03
INTP1	0.17	0.12	-0.13	-0.05	0.26	-0.09	-0.22	-0.18	-0.09	-0.03	-0.13	-0.15	-0.08	**1.00**	0.10	-0.06	0.03	-0.09	0.09	0.17	-0.19	-0.09	0.16	0.13	0.06	-0.14	-0.14	-0.08	0.12	-0.13	-0.14	-0.10
LANG2	0.15	0.09	-0.11	0.05	-0.02	0.17	-0.01	0.06	-0.08	-0.08	0.02	-0.23	0.08	0.10	**1.00**	0.01	-0.10	-0.02	0.11	0.21	-0.06	-0.01	-0.02	0.01	-0.09	-0.01	-0.02	-0.11	-0.13	0.03	0.05	-0.08
PAPP3	0.13	0.03	0.19	0.06	0.03	-0.07	0.00	-0.19	0.04	0.06	0.18	0.06	0.16	-0.06	0.01	**1.00**	-0.03	0.26	0.15	-0.13	0.10	0.27	0.17	0.20	0.31	0.18	0.09	0.19	0.06	0.01	0.07	0.09
PCOMP1	0.09	0.02	0.16	0.15	0.11	0.14	0.00	-0.11	-0.14	0.18	0.11	0.14	0.01	0.03	-0.10	-0.03	**1.00**	0.00	0.25	0.04	0.16	0.08	0.03	0.17	-0.05	0.10	0.13	0.08	0.23	0.18	0.11	0.10
PIC1	0.11	0.00	0.06	0.14	-0.13	0.05	0.12	0.02	-0.12	0.05	0.25	0.29	0.28	-0.09	-0.02	0.26	0.00	**1.00**	0.14	-0.09	0.07	0.23	0.24	0.05	0.19	0.24	0.11	0.27	0.09	0.13	0.14	0.22
PINF1	0.07	0.06	0.15	-0.05	0.10	0.08	-0.02	-0.08	-0.21	0.21	0.33	0.08	0.20	0.09	0.11	0.15	0.25	0.14	**1.00**	-0.09	0.04	0.15	0.12	0.08	0.02	0.22	0.06	0.11	0.11	0.01	0.20	0.18
PRAN3	0.17	-0.08	0.03	-0.12	0.07	0.14	0.11	-0.03	-0.17	-0.05	-0.03	-0.16	-0.05	0.17	0.21	-0.13	0.04	-0.09	-0.09	**1.00**	-0.11	-0.09	0.17	0.01	0.04	-0.02	-0.09	-0.04	0.08	-0.02	0.04	0.02
PRI3	-0.05	0.15	0.06	0.12	-0.17	-0.04	0.11	0.00	0.18	0.18	0.19	0.28	0.18	-0.19	-0.06	0.10	0.16	0.07	0.04	-0.11	**1.00**	0.08	0.00	0.12	-0.17	-0.13	0.30	0.12	0.00	0.32	0.30	0.14
PSTB1	-0.04	-0.05	0.03	0.07	0.01	-0.16	-0.08	-0.15	-0.10	0.13	0.04	0.19	0.06	-0.09	-0.01	0.27	0.08	0.23	0.15	-0.09	0.08	**1.00**	-0.12	-0.01	0.19	0.11	0.02	0.07	0.12	-0.13	0.02	0.13
PYMO2	0.17	0.14	0.26	-0.01	0.15	0.23	0.22	0.10	0.08	0.14	0.17	0.08	0.14	0.16	-0.02	0.17	0.03	0.24	0.12	0.17	0.00	-0.12	**1.00**	0.12	0.14	0.30	0.02	0.11	0.23	0.12	-0.04	0.19
RENG5	0.17	-0.05	0.06	0.03	0.25	-0.05	0.15	-0.09	0.22	0.31	0.02	-0.09	-0.08	0.13	0.01	0.20	0.17	0.05	0.08	0.01	0.12	-0.01	0.12	**1.00**	-0.04	0.09	0.17	0.06	0.00	0.11	-0.08	0.19
SAPP1	0.17	0.05	0.27	0.01	0.05	0.10	0.11	-0.10	0.08	0.06	0.03	0.00	0.00	0.06	-0.09	0.31	-0.05	0.19	0.02	0.04	-0.17	0.19	0.14	-0.04	**1.00**	0.23	0.03	0.15	0.13	-0.04	0.11	-0.02
SFUNC1	0.22	-0.10	0.35	0.14	-0.08	0.19	0.07	0.10	-0.08	0.16	0.27	0.25	0.02	-0.14	-0.01	0.18	0.10	0.24	0.22	-0.02	-0.13	0.11	0.30	0.09	0.23	**1.00**	0.10	0.25	0.04	0.23	0.12	0.20
SINF3	0.29	-0.08	0.03	0.13	-0.10	-0.15	0.04	0.06	0.31	0.33	0.31	0.20	-0.06	-0.14	-0.02	0.09	0.13	0.11	0.06	-0.09	0.30	0.02	0.02	0.17	0.03	0.10	**1.00**	0.05	0.07	0.13	0.09	0.24
SLORG1	0.04	-0.04	0.05	0.13	0.01	0.05	0.09	0.10	-0.14	0.02	0.38	0.47	0.11	-0.08	-0.11	0.19	0.08	0.27	0.11	-0.04	0.12	0.07	0.11	0.06	0.15	0.25	0.05	**1.00**	0.34	0.34	0.19	0.33
SNOR1	0.10	-0.01	0.08	0.01	0.09	0.04	0.23	0.24	-0.02	0.20	0.08	0.34	0.01	0.12	-0.13	0.06	0.23	0.09	0.11	0.08	0.00	0.12	0.23	0.00	0.13	0.04	0.07	0.34	**1.00**	0.16	0.11	0.21
SORTP1	0.03	0.15	0.04	0.21	-0.19	0.22	0.42	0.10	-0.02	0.13	0.31	0.29	0.02	-0.13	0.03	0.01	0.18	0.13	0.01	-0.02	0.32	-0.13	0.12	0.11	-0.04	0.23	0.13	0.34	0.16	**1.00**	0.29	0.11
SPEC3	0.08	0.19	0.05	0.05	0.02	0.04	0.17	0.13	-0.11	-0.11	0.19	0.26	0.07	-0.14	0.05	0.07	0.11	0.14	0.20	0.04	0.30	0.02	-0.04	-0.08	0.11	0.12	0.09	0.19	0.11	0.29	**1.00**	0.07
WARR3	0.27	-0.20	0.03	-0.15	0.09	-0.12	0.09	0.08	0.05	0.23	0.28	0.32	-0.03	-0.10	-0.08	0.09	0.10	0.22	0.18	0.02	0.14	0.13	0.19	0.19	-0.02	0.20	0.24	0.33	0.21	0.11	0.07	**1.00**

FIGURE 22 FACTOR ANALYSIS (B) PARTICULAR WEB SHOP (DIGICAMSHOP)

APPENDIX E: COMMON METHOD VARIANCE

Construct	Subtantive Factor Loading (R1)	R1	Method Factor Loading (R2)	R2
ADPR	0.7321**	0.536	0.156	0.024
AEST	0.7431**	0.552	0.021	0.000
CATE	0.7501**	0.563	0.080	0.006
CRRAT	0.7821**	0.612	0.084	0.007
CS1	0.8126**	0.660	0.056	0.003
CS2	0.7566**	0.572	0.067	0.004
CS3	0.8702**	0.757	0.043	0.002
DCO	0.3715**	0.138	-0.138	0.019
DISC	0.6608**	0.437	-0.129	0.017
DSP	0.8473**	0.718	-0.009	0.000
ELOOK	0.7681**	0.590	0.0498*	0.002
ENAV	0.762**	0.581	-0.0237*	0.001
FRR	0.6685**	0.447	-0.031	0.001
HSTB	0.8599**	0.739	0.066	0.004
LANG	0.8696**	0.756	0.102	0.010
PAPP	0.8152**	0.665	0.010	0.000
PCOMP	0.8091**	0.655	-0.051	0.003
PIC	0.7575**	0.574	-0.042	0.002
PINF	0.7565**	0.572	-0.021	0.000
PRAN	0.567**	0.321	0.092	0.008
PRI	0.678**	0.460	-0.026	0.001
PSTB	0.7823**	0.612	-0.081	0.007
PYMO	0.7829**	0.613	-0.052	0.003
RENG	0.8394**	0.705	0.188	0.035
SAPP	0.8382**	0.703	0.043	0.002
SFUNC	0.4873**	0.237	0.036	0.001
SINF	0.7804**	0.609	0.0475*	0.002
SLORG	0.6681**	0.446	-0.002	0.000
SORTP	0.7988**	0.638	-0.1177*	0.014
SPEC	0.8052**	0.648	-0.092	0.009
WARR	0.8209**	0.674	0.009	0.000
AVERAGE	**0.750**	**0.574**	**0.011**	**0.006**

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I have always been curious with the electronic commerce world, as this is one of the *next best things*, in terms of how people make their purchase decision and prefer to choose go online rather than purchase in traditional channel.

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Tettri Nuraini