



UNIVERSITI PUTRA MALAYSIA

***HIGH INVOLVEMENT PRODUCT INFORMATION SEARCH
ON THE INTERNET AMONG CONSUMERS IN YINCHUAN, CHINA***

ZHU BEIYU

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**HIGH INVOLVEMENT PRODUCT INFORMATION SEARCH
ON THE INTERNET AMONG CONSUMERS IN YINCHUAN, CHINA**

By

ZHU BEIYU

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy**

August 2016

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
Fulfilment of the requirement for the degree of Doctor of Philosophy

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ZHU BEIYU

August 2016

Chairman : Professor Ahmad Hariza Hashim, PhD
Faculty : Human Ecology

Consumers are armed with the most efficient ways to get information on product specifications, stores, and promotions due to the advance of the Internet. In China, consumers have increasingly depended on the Internet for pre-purchase information searching, especially for high involvement products. However, the extant research has only offered limited information on online information search behaviour for high involvement products among consumers in China and deficient findings. Therefore, this study focused on examining the extent and patterns of information search using the Internet for high involvement product among consumers in Yinchuan, China. This study also examined the predictors of information search on the Internet and mediating effect of motivation to search on the Internet on the relationships between the selected predictors and information search on the Internet. Based on this, a conceptual model to determine the relationships between the selected predictors (perceived search cost, product involvement, perceived risk, extent of offline information usage, product knowledge, information quality, system quality, and service quality) and information search on the Internet mediated by motivation to search was developed.

This is quantitative study, in which 402 consumers of automobile were selected using stratified sampling technique. They were selected from the local automobile administrative bureaus while applying for license plates. Data were collected using the self-administrated questionnaire and 390 valid responses were used for data analysis. SPSS and AMOS software were used for data analysis. Descriptive analysis, cluster analysis, and structural equation modeling were employed to analyze the data.

The results of descriptive analysis of this study showed that, in general, consumers in Yinchuan of China conducted moderate extent search on the Internet for high involvement product information. Specifically, retailers and manufacturers' websites, other consumers' online reviews, and ratings were the online sources that consumers consulted to a greater extent for information. A two-stage cluster analysis further

revealed that the heterogeneous respondents were composed of four homogeneous subgroups, which were the low search cluster (31.0%), selective search cluster (36.4%), moderate search cluster (18.5%), and high search cluster (14.1%). Consumer's age and experience with the Internet were found to be associated with the cluster membership of online information search. The analysis of SEM revealed an acceptable fitness between the proposed model and the data, which indicated the significant contribution of perceived risk, extent of offline information usage, information quality, and service quality to information search on the Internet. SEM also revealed that utilitarian motivation to search on the Internet was mediating the relationships between perceived search cost, product involvement, perceived risk, and information search on the Internet.

Based on the findings, it could be concluded that consumers in Yinchuan of China conducted moderate information search on the Internet; they were differentiated in terms of their online search behaviour; the integration of perceived risk, extent of offline information usage, information quality, and service quality functioned to regulate information search on the Internet; and utilitarian motivation to search mediated the relationships between perceived search cost, product involvement, perceived risk, and information search on the Internet. This study supports the importance of unique characteristics of the Internet in understanding information search behaviour among consumers.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

**PENCARIAN MAKLUMAT PRODUK PENGLIBATAN TINGGI DALAM
KALANGAN PENGGUNA DI YINCHAUN, CHINA**

Oleh

ZHU BEIYU

Ogos 2016

Pengerusi : Professor Ahmad Hariza Hashim, PhD
Fakulti : Ekologi Manusia

Pengguna dilengkapi dengan pelbagai medium yang berkesan untuk mendapatkan maklumat berkenaan dengan spesifikasi produk, penjual dan promosi jualan berikutan kemajuan Internet. Di negara China, pengguna didapati semakin bergantung kepada Internet untuk mendapatkan maklumat sebelum melakukan pembelian, terutamanya bagi pembelian yang melibatkan Produk Penglibatan Tinggi. Bagaimanapun, maklumat sedia ada tentang penyelidikan berhubung dengan pola tingkah laku pencarian maklumat secara dalam talian untuk Produk Penglibatan Tinggi dalam kalangan pengguna di China adalah terhad dan juga kekurangan hasil dapatan kajian. Sehubungan itu, kajian ini memberi tumpuan kepada penganalisan tahap dan corak pencarian maklumat bagi Produk Penglibatan Tinggi dalam kalangan pengguna di Yinchuan, China. Kajian juga dilakukan untuk menilai pengaruh angkaubah peramal pencarian maklumat di Internet dan kesan Pengantara Motivasi ke atas hubungan di antara prediktor terpilih dan pencarian maklumat di Internet. Berdasarkan ini, satu model konseptual bagi kajian ini telah dibangunkan untuk menentukan hubungan diantara prediktor terpilih (persepsi terhadap kos carian, penglibatan produk, persepsi terhadap risiko, tahap penggunaan maklumat di luar talian, pengetahuan mengenai produk, kualiti maklumat, sistem kualiti dan kualiti perkhidmatan) dengan pencarian maklumat di Internet dan kesan pengantaraan oleh motivasi mencari maklumat.

Kajian ini adalah berbentuk kuantitatif dan melibatkan seramai 402 pembeli kereta yang dipilih secara rawak dengan menggunakan teknik persampelan berstrata. Mereka ini dipilih dalam kalangan pembeli kereta ketika sedang memohon lesen plat kenderaan di tiga cawangan biro pentadbiran kenderaan tempatan. Data dikumpul dengan menggunakan borang soal selidik yang diisi sendiri dan seramai 390 responden yang sah telah dianalisis menggunakan perisian SPSS dan AMOS. Data yang diperolehi dianalisis dengan menggunakan kaedah analisis deskriptif, analisis berkelompok dan Model Persamaan Struktur.

Secara amnya keputusan analisis deskriptif menunjukkan pengguna di Yinchuan, China menggunakan Internet untuk mencari maklumat tentang Produk Penglibatan Tinggi adalah pada tahap sederhana. Laman sesawang penjual, pengilang, maklum balas dan

penilaian pengguna lain secara dalam talian merupakan sumber maklumat kepada pengguna. Analisis kelompok dua peringkat seterusnya mendapati bahawa responden yang pelbagai ini boleh dibahagikan kepada empat kelompok yang terdiri daripada kelompok carian rendah (31.0%), kelompok carian terpilih (36.4%), kelompok carian sederhana (18.5%), dan kelompok carian yang tinggi (14.1%). Umur dan pengalaman penggunaan Internet didapati mempunyai perkaitan dengan kelompok keahlian bagi pencarian maklumat di dalam talian. Analisis SEM mendapati terdapat keserasian antara model yang dicadangkan dengan data dan menunjukkan sumbangan yang signifikan untuk persepsi terhadap risiko, tahap penggunaan maklumat di luar talian, kualiti maklumat, dan kualiti perkhidmatan pencarian maklumat di Internet. SEM juga mendedahkan bahawa motivasi utilitarian untuk carian di Internet adalah faktor pengantara untuk hubungan antara persepsi terhadap kos carian, penglibatan produk, persepsi terhadap risiko, dan pencarian maklumat di Internet.

Berdasarkan kepada penemuan kajian, boleh disimpulkan bahawa pengguna di Yinchuan, China menggunakan Internet untuk mencari maklumat tentang Produk Penglibatan Tinggi pada tahap sederhana dan dapat dibezakan dari segi tingkahlaku pencarian maklumat secara dalam talian, integrasi persepsi terhadap risiko, tahap penggunaan maklumat di luar talian, kualiti maklumat, dan kualiti perkhidmatan yang mengawal pencarian maklumat di Internet, dan motivasi utilitarian untuk mencari maklumat menjadi pengantara hubungan antara persepsi kos carian, tahap penglibatan produk, persepsi terhadap risiko, dan pencarian maklumat di Internet. Kajian ini juga menyokong tentang kepentingan ciri unik Internet dalam memahami tingkahlaku pencarian maklumat dalam kalangan pengguna.

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I certify that a Thesis Examination Committee has met on 24 August 2016 to conduct the final examination of Zhu Beiyu on her thesis entitled "High Involvement Product Information Search on the Internet among Consumers in Yinchuan, China" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

Members of the Thesis Examination Committee were as follows:

Mohd Ibrani Shahrinin bin Adam Assim, PhD

Associate Professor
Faculty of Human Ecology
Universiti Putra Malaysia
(Chairman)

Ma'rof bin Redzuan, PhD


Associate Professor
Faculty of Human Ecology
Universiti Putra Malaysia
(Internal Examiner)

Laily binti Hj Paim, PhD

Professor
Faculty of Human Ecology
Universiti Putra Malaysia
(Internal Examiner)

Narasimhan Srinivasan, PhD

Associate Professor
University of Connecticut
United States
(External Examiner).



NOR AINI AB. SHUKOR, PhD

Professor and Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 26 January 2017

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the award of degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Ahmad Hariza Hashim, PhD

Professor
Faculty of Human Ecology
Universiti Putra Malaysia
(Chairman)

Syuhaily Bt Osman, PhD

Senior Lecturer
Faculty of Human Ecology
Universiti Putra Malaysia
(Member)

Elistina Binti Abu Bakar, PhD

Senior Lecturer
Faculty of Human Ecology
Universiti Putra Malaysia
(Member)

ROBIAH BINTI YUNUS, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date:

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LIST OF ABBREVIATIONS

χ^2	Chi-square
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMIN	Minimum Value of the Discrepancy Function, C
GFI	Goodness-of-fit Index
IFI	Incremental Index of Fit
IS	Information System
ISSM	Information System Success Model
RMESA	Root Mean Square Error of Approximation
SEM	Structural equation modelling
TLI	Tucker-Lewis Index

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

During decision making process, consumers consult to information, which includes original data, encoded characters, and any data representing reality (Heaney & Goldsmith, 1999), to underpin their evaluation, to lessen the anxiety of making a decision, and to make them convinced of a decision for the relevant product (Grant, Clarke, & Kyriazis, 2007). The advance of the Internet has certainly brought tremendous changes to every facet of modern human life. Foremost among all benefits derived from the Internet are quantity and quality of information (Bakos, 1997; Harrington Jr, 2001). The efficiency and effectiveness of information searching have been dramatically enhanced due to the rapid access to online information (Moon, 2004).

As of June 2014, approximately 3 billion people all around the world used the services of the Internet, among which nearly 45% resided in Asia (Internet World stats, 2014). China had the world's largest Internet user base, in which China National Net Work Information Center (2014) (2014) claimed that, as in 2014, there were about 618 million Internet users in China, which constituted 45.8% of its total population. By June of 2015, the scale of Internet users in China soared to 668 million with 18.94 million new users (China National Network Information Center, 2015). Nearly eighty percent of Internet users in China claimed to have resorted to the Internet for information before making a purchasing decision. The tendency of exploring online for product information has been developing steadily over recent years, which was especially strong for high involvement product categories, such as automobile (China National Network Information Center, 2013)(China National Network Information Center, 2013). High involvement products refer to those that are important or highly relevant to consumers, such as complex, expensive, risky & ego-intensive products (Martin, 1998). In the context of purchases of high involvement products, consumers are highly involved and expend extensive efforts in searching for information (Beatty & Smith, 1987; Kiel & Layton, 1981; Punj & Staelin, 1983; Srinivasan & Ratchford, 1991). Automobile typically represents crucial importance that a consumer attaches to and is commonly identified as high involvement product (Martin, 1998; Zaichkowsky, 1985). Consumers of automobile indeed conducted the most online information search among consumers of all product categories (Atsmon, Dixit, Magni, & St-Maurice, 2010). Nine out of ten Chinese consumers of automobile experienced information search through the Internet for automobile (J.D. Power, 2012). Armstrong (1999) once noted that a level playing field for automobile consumers and manufacturers has taken shape due to the wealth of information available online.

Considerable research has focused on its application to high involvement products, such as automobile (Beatty & Smith, 1987; Duncan & Olshavsky, 1982; Kiel & Layton,

1981; Newman & Staelin, 1973; Punj & Staelin, 1983; Srinivasan & Ratchford, 1991). This literature has achieved in the impressive findings in their ability to predict the extent to which a consumer dedicated to acquiring product information prior a purchase (Beatty & Smith, 1987; Punj & Staelin, 1983; Srinivasan & Ratchford, 1991) and indicated distinct patterns of information search characterizing consumers of high involvement products (Furse, Punj, & Stewart, 1984; Newman & Staelin, 1973; Westbrook & Fornell, 1979). However, when it comes to online information environment, search patterns among consumers, the direct effects of the unique characteristics of the Internet potential to affect online search, and the mediating effect of motivation to search on the Internet have not been adequately explored; somewhat inconclusive understandings of the direct effects of some predictors have been yielded.

The statistics on Chinese exploring online for product information highlighted the importance of knowledge of consumers' online search behavior in the setting of China. Especially, some small and medium-sized cities in China have showed vigorous growth and great potential regarding personal consumptions. Similarly, take automobile for example. Because of market saturation and automobile-purchase restrictions in metropolises in China, the expansion of automobile consumption in small and medium-sized cities was obviously impressive (Bo, 2015). Yinchuan, as the capital city of the Ningxia Hui Autonomous Region, had kept an average growth of 35.23% in automobile consumption from 2008 to 2013 (Statistics Bureau of Yinchuan, 2013, 2014). However, limited empirical work has focused on its application to consumers in small and medium-sized cities in China in an attempt to understand their high involvement product information search behavior using the Internet. To explore patterns of information search among consumers in China would contribute to an improved understanding of the process of pre-purchase information search (Westbrook & Fornell, 1979).

An examination of consumer information search literature revealed the direct effects of several predictors (perceived search cost on the Internet, product involvement, perceived risk, extent of offline information usage, product knowledge) on information search on the Internet varied greatly in terms of their directions and magnitudes. Perceived search cost was associated with the expenditure of personal resources for information search (Bettman, 1979). The effect of perceived search cost on information search in traditional environment has been consistently proved (Beatty & Smith, 1987; Punj & Staelin, 1983; Schmidt & Spreng, 1996; Srinivasan & Ratchford, 1991). However, its effect on information search in the online environment has been disputed because of the lower search cost in a virtual market than in brick-and-mortar markets (Kulviwat, Guo, & Engchanil, 2004; Maity, Hsu, & Pelton, 2012; Rose & Samouel, 2009). Product involvement was indicative of a consumer's interests, arousal, or emotion evoked by a product. As rather limited studies confirmed its predictive effect on information search on the Internet, its effect in online environment was an open question.

Perceived risk represented a consumer's uncertainty of purchasing a product. The positive relationship between perceived risk and information search demonstrated information search activity as a risk reduction strategy to reduce the perceived level of

risk (Dowling & Staelin, 1994). Nonetheless, the online environment was quite risky, consumers may fear for technology use and information overloads, and feel uncertain and confused (Bhatnagar, Misra, & Rao, 2000). In addition, the untruthful online information may discourage online information search. Thus, whether perceived risk was significantly positive related to online information search was in dispute.

Extent of offline information usage captured the degree of usage of offline information sources (Bei, Chen, & Widdows, 2004). The prior literature lent support to both negative (Klein & Ford, 2003; Ratchford, Lee, & Talukdar, 2003; Ratchford, Talukdar, & Lee, 2001; Ratchford, Talukdar, & Lee, 2007) and positive relationship (Bei et al., 2004) between offline and online information search. Product knowledge was related to how a consumer assessed his/her knowledge with a particular product class (Schmidt & Spreng, 1996). Similarly, whether a consumer's product knowledge was positively (Punj & Staelin, 1983), negatively (Lehto, Kim, & Morrison, 2006), or inverted-U shaped (Klein & Ford, 2003; Moorthy, Ratchford, & Talukdar, 1997) related to information search on the Internet has not been ascertained.

It is critical to take the unique characteristics of any consumer purchasing environment into account when modeling consumer behavior (Hodkinson & Kiel, 2003). However, research on online information search behavior has paid little regards to the unique characteristics of the Internet, which may have an impact on consumer information search behavior (Rose & Samouel, 2009).

The utilitarian aspect of motivation has been widely acknowledged while the hedonic aspect of motivation has drawn comparatively little attention, which highlighted the happiness, fun, and satisfaction derived from the search process (Punj & Staelin, 1983; Schmidt & Spreng, 1996). Motivation to search was suggested to mediate the relationships between information search and perceived search cost, product involvement, and perceived risk (Schmidt & Spreng, 1996). However, its indirect effect was not fully examined in the online information environment.

This study attempted to fill up the gaps that existed in the extant literature on consumer online information search behavior. Toward this end, the study pioneered the probing into information search on the Internet for high involvement product among consumers in the setting of Yinchuan of China. The study reported the extent of consumer online search before making a purchase decision of high involvement products and attended to the diversity of online search among consumers through exploration of search patterns. By proposing an applicable and reliable conceptual framework of high involvement product information search on the Internet, the study may help to reconcile the conflicting findings in the literature about the direct effects of the selected predictors on online information search; the study endeavored to determine the effect of the unique characteristics of the Internet and the mediating effect of motivation to search on the Internet on the relationships between perceived search cost, perceived risk, product involvement, and online information search.

1.2 Problem Statement

A range of research has attempted to respond to the fact that the significant differences between offline and online information search behavior exist and online search behavior remains crucial to the pre-purchase process. However, the insufficient investigation of search patterns of consumers in China, the effects of the unique characteristics of the Internet, and the indirect effect of motivation to search on the Internet, and the disputable findings of the direct effects of some predictors entail further research.

Extant research on consumer online information search behavior or information search for high involvement products has been mostly conducted in the West. According to Vuylsteke, Wen, Baesens, and Poelmans (2010), however, Chinese differed from Europeans in terms of their online information search behavior. The differences occurred in frequency, goal, types of information sought, types of websites used, search engine. It was inadequate that only very little research has been conducted to probe consumers' online information search behavior in China despite the boom in consumption and Internet usage in China, especially in small and medium-sized cities, such as Yinchuan.

Extant studies investigated consumer online search behavior either for non-specific product categories (Jepsen, 2007; Rose & Samouel, 2009) or for nondurables, such as athletic shoes and mobile phone (Bei et al., 2004; Huang, Lurie, & Mitra, 2009; Maity et al., 2012). The investigation into online search behavior for high involvement products has been insufficient. Due to the high costs and risks that high involvement products carried, it would be reasonable to assume that the same patterns of search identified with high involvement products would not be necessarily manifest with other types of products that were less involving (Furse et al., 1984). Some evidence suggested that the similar search patterns would appear across different high involvement products (Furse et al., 1984; Newman & Staelin, 1973; Westbrook & Fornell, 1979). To investigate patterns of consumers is a productive tool for gaining understanding of consumer behavior, by which a heterogeneous population could be decomposed into homogeneous subgroups or segments (Nayem & Casidy, 2013). A clearer view of a diverse and confusing number of consumers could be revealed by means of typologies (Barnes, Bauer, Neumann, & Huber, 2007). Consumers were distinguished in terms of their information search behavior and, accordingly, patterns of information search among consumers have been identified in both offline (Furse et al., 1984; Kiel & Layton, 1981) and online contexts (Bhatnagar & Ghose, 2004b), which have contributed to an improved understanding of the process of information search.

Since the relevant studies were mainly on student samples (Maity et al., 2012), the suitability of extant models of online information search for other type of consumers was unclear. In this regards, the researcher has examined in-depth to what extent that consumers in Yinchuan search on the Internet for high involvement products. This study also focused on classifying consumers in Yinchuan based on their high involvement product information search behavior on the Internet to gain a better

understanding.

Findings on the factors contributing to information search on the Internet were rather obscure, or controversial. Klein and Ford (2003) suggested that perceived search cost continued to drive online information search, which was also supported by Jepsen (2007) and Rha (2002). Nonetheless, the research of Maity et al. (2012) and Rose and Samouel (2009) revealed the reverse. They argued that the negative effect of search cost upon search behavior may be changing because the Internet was such an efficient and productive medium that it may lead to a reduction in search cost and lessen the concern for search cost. In addition, doubts have been cast upon the effects of product involvement, perceived risk, extent of offline information usage, and product knowledge on online information search as well. In line with this, therefore, there is a need to find out more in depth, what the unique predictors of information search on the Internet are.

Given the low explanatory power achieved in the previous models (R^2 of 14% achieved in Rose and Samouel's (2009) study, R^2 of 20% achieved in Maity, Hsu, and Pelton's (2012) study), other variables that may play a significant role upon online search have yet been examined (Rose & Samouel, 2009). An interaction of situational and individual difference characteristics shape distinctive search behavior (Bloch, Sherrell, & Ridgway, 1986; Punj & Staelin, 1983). Hodgkinson and Kiel (2003) strongly recommended to incorporate the unique characteristics of any consumer purchasing environment when developing of model of consumer behavior. The speed of access, flexibility, and other characteristics of the Internet have an impact on consumer behavior in general and consumer information search behavior in particular (Kim, Lehto, & Morrison, 2007). Information, system, and service quality were proposed to be important factors contributing to intention to use, use, and user satisfaction of the information system (Delone, 2003). Nevertheless, extant research in the field of consumer behavior shows little regards to the effects of service, information, and system quality on consumer information search on the Internet. In line with this argument, the researcher wanted to examine the contribution of service, information, and system quality on information search on the Internet.

Motivation has been usually regarded as goal-directed arousal (MacInnis, Moorman, & Jaworski, 1991). The primary motivation driving consumer conducting pre-purchase information search is to make desired purchase decision (Punj & Staelin, 1983). Although information search is often regarded as a highly utilitarian task, consumer increasingly diverse ways of using the Internet have generated more patterns of hedonic information search (Wang, Yang, Song, & Sia, 2014). Additionally, motivation to search was proposed to function as mediating variable on the relationships between information search and perceived search cost, product involvement, and perceived risk (Schmidt & Spreng, 1996). However, whether motivation to search on the Internet, including utilitarian and hedonic motivation, mediates the relationships between perceived search cost, product involvement, perceived risk, and online information search lacks empirical investigation and needs to be examined.

In regard to the above mentioned issues, the present study aimed to examine the extent and patterns of high involvement product information search on the Internet among consumers in Yinchuan of China, and to clarify the relationships between perceived search cost, product involvement, perceived risk, extent of offline information usage, product knowledge, information quality, system quality, service quality, and information search on the Internet, and the mediating effects of motivation to search on the Internet on the relationships between perceived search cost, product involvement, perceived risk, and information search on the Internet.

1.3 Research Questions

Based on the issues mentioned above, the researcher posed the following research questions:

1. What is the extent to which consumers search on the Internet for high involvement product information in Yinchuan of China?
2. What are the patterns of high involvement product information search on the Internet among consumers in Yinchuan of China?
3. Are there any significant relationships between selected predictors (perceived search cost, product involvement, perceived risk, extent of offline information usage, product knowledge, information quality, system quality, and service quality) and high involvement product information search on the Internet among consumers in Yinchuan of China?
4. Is there any mediating effect of motivation to search on the Internet (utilitarian and hedonic motivation) on the relationships between perceived search cost on the Internet, product involvement, perceived risk, and high involvement product information search on the Internet among consumers in Yinchuan of China?

1.4 Research Objectives

Based on the research questions of this study, the general objective of this study was to examine extent and patterns of high involvement product information search on the Internet among consumers in Yinchuan of China. Moreover, by developing a structural equation model, the study also attempted to examine the direct effects of the selected predictors and the unique characteristics on information search on the Internet and to test mediation effect of motivation to search on the Internet on the relationships between the selected predictors and information search on the Internet. The specific research objectives of this study are presented as below:

1. To describe the extent to which consumers searched on the Internet for high involvement product information among consumers in Yinchuan of China;
2. To describe the patterns of high involvement product information search on the Internet among consumers in Yinchuan of China;
3. To identify relationships between the selected predictors (perceived search cost, product involvement, perceived risk, extent of offline information usage, product knowledge, information quality, system quality, and service quality) and search on the Internet for high involvement product information among consumers in Yinchuan of China;
4. To determine the mediating effect of motivation to search on the Internet (utilitarian and hedonic motivation) on the relationships between perceived search cost on the Internet, product involvement, perceived risk, and search on the Internet for high involvement product information among consumers in Yinchuan of China.

1.5 Significance of the Study

Information search is an integral unit of consumer decision-making (Bettman, 1979). The ability to locate and process information shapes the selection of products and services to be bought, the resulting outcome or value derived from purchases, and the following satisfying of individual needs. Information search has been widely acknowledged to occur especially for high involvement products (Murray, 1991; Zaichkowsky, 1985). Despite the widespread use of the Internet for product information, the knowledge of information search behavior on the Internet has not been sufficient. Primarily, this study will provide a full view and classified patterns of consumers searching information on the Internet for high involvement product in the context of Yinchuan of China. In addition, the significance of the study can be derived from the fact that the data collected would be used to examine the relationships between some selected factors and information search on the Internet, and the mediating effect of motivation to search on the relationships between the selected factors and information search on the Internet, which are inconclusive or not fully explored in the existing literature. The significance of this study are demonstrated from the theoretical, methodological, and practical aspects.

1.5.1 Theoretical Significance

From the theoretical view, above all, it is anticipated that this study will expand the understanding of high involvement product information search behavior on the Internet for high involvement product and improve consumer behavior theory by the means of proposing and testing a conceptual framework of high involvement product

information search on the Internet. Vital clues of the applicability of the conceptual framework to consumers of high involvement product in Yinchuan of China will be offered. The justification of the introduction of the unique characteristics of the Internet is anticipated to afford to fill the theoretical gap. The differing views on some factors as antecedents to information search on the Internet could be verified on the premise that these constructs are properly defined and measured in the study. In addition, the integration of mediating effect of motivation to search on the Internet would attend to the utilitarian and hedonic aspects of online information search in response to increasingly diverse hedonic information search patterns and clarify the way in which motivation influences information search behavior on the Internet.

1.5.2 Methodological Significance

In terms of methodological significance, a valid and reliable measurement of high involvement product information search on the Internet is expected. In this study, an eight-item instrument of consumer information search on the Internet was adopted and trimmed according to China's context. Its initial reliability and validity will be examined through confirmatory factor analysis (CFA). In addition, the establishment of online search patterns would verify whether two-step cluster analysis functions as appropriate method and high involvement product information search on the Internet as criterion for consumer segmentation. Lastly, the inferential analysis method-SEM employed in this study, which assesses multiple indicators of each construct and takes measurement errors into consideration, would help to improve the statistical estimation of the proposed model of information search on the Internet for high involvement products.

1.5.3 Practical Significance

The discipline of consumer behavior has a history of expediting the fulfillment of marketing target by virtue of a better understanding of consumer behavior (Hodkinson & Kiel, 2003). A critical challenge for the operations of Web sites is serving information capable of satisfying consumers' needs in the purchasing process (Grant et al., 2013). This study will offer the full view and patterns of online search behavior for high involvement product information in Yinchuan of China, which is indicative of consumers' information needs. Moreover, the proposing and testing of the model of information search on the Internet for high involvement product are anticipated to expose influential factors driving consumer to search on the Internet. Therefore, this study will serve as a blueprint for marketers to design effective communication campaign.

1.6 Scope of the Study

Consumer in the study was restricted to personal consumer, which purchased goods and services for the sole purpose of personal, family or household use. On the other hand,

organizational consumers purchasing for operation of the firm or for business interests were excluded from this study. The process of organizational consumers' purchase was much more complicated and distinct from personal consumers' purchase, which usually involved more than one phase, many persons, departments, and objectives. Correspondingly, the factors influencing organizational buying behavior were different (Johnston & Lewin, 1996). In terms of the purpose of consumption, individual consumer was aiming to maintain or facilitate his/her livelihood instead of commercial advantages.

Automobiles in study were restricted to new automobiles sold by manufacturers and retailers, which included sedans, Sports Utility Vehicle (SUV), Multi-Purpose Vehicle (MPV), and minivans.

1.7 Definitions of Terms

1.7.1 Information Search on the Internet

Conceptual definition: Information search on the Internet is defined as consumer's conscious behavior whereby consumers obtain information from online sources to clarify or access to certain product category or brand (Beatty & Smith, 1987).

Operational definition: In the study, information search on the Internet is operationally defined as the degree of attention and efforts directed to actively acquire information prior to making a purchase decision of high involvement product using possible online information sources, including retailers or manufacturers' websites, web ads, automotive websites, other consumers' review or testimony about automobiles on the Internet, discussion with other consumers over the Internet, ratings of automobiles, and online articles. Information search on the Internet and online information search are used interchangeably in the study.

1.7.2 Perceived Search Cost on the Internet

Conceptual definition: Perceived search cost on the Internet is termed as the subjective estimate of the cost of resources, including financial expenses, time spent, physical and psychological loss for information search on the Internet (Bettman, 1979).

Operational definition: Perceived search cost on the Internet, in this study, is represented by the perceived time costs of undertaking the online search effort for high involvement products.

1.7.3 Product Involvement

Conceptual definition: Product involvement is defined as the perceived relevance to a product category, which is rooted in a consumer's inherent demands, values, and enthusiasm (Zaichkowsky, 1985).

Operational definition: In this study, product involvement is captured in terms of the interests with regards to searching information, comparing product attributes, perception of similarity among products, and desire for a brand. High product involvement means the high degree of personal relevance and high importance.

1.7.4 High Involvement Product

Conceptual definition: High involvement product is defined as the product that is highly relevant to the needs and values of a consumer (Zaichkowsky, 1985).

Operational definition: In this study, high involvement product is operationalized as automobile as it represents high capital value, the consumer's personality, status and justifying lifestyle.

1.7.5 Perceived Risk

Conceptual definition: Perceived risk is termed as the possibility of any loss occurring in defect of information multiplied by its importance (Srinivasan & Ratchford, 1991).

Operational definition: Perceived risk is operationally termed as consumer's perceived uncertainty associated with a purchase decision of high involvement products in terms of finance, performance, physical, and convenience. Participant who gets higher score in perceived risk questionnaire, which means he/she has a higher degree of perceived risk.

1.7.6 Extent of Offline Information Usage

Conceptual definition: Extent of offline information usage is termed as the degree of efforts expended on information associated with the potential purchase from offline environment (Bei et al., 2004).

Operational definition: In the study, extent of offline information usage is operationally termed as degree to which consumers make use of discussions with

friends or family members, viewing advertisements on newspaper/magazine/TV/radio, visits to stores or discussion with salespersons, and viewing articles in magazines for high involvement product information (Bei et al., 2004).

1.7.7 Product Knowledge

Conceptual definition: Product knowledge is termed as the knowledge with regard to a product category stored in memory before search begins (Smith & Park, 1992).

Operational definition: In the study, product knowledge is operationalized as subjective assessment on what consumer thinks she or he knows about high involvement product in consideration.

1.7.8 Information Quality

Conceptual definition: Information quality is defined as the perceived attributes of information (Webb & Webb, 2001).

Operational definition: Information quality is operationalized as the perception on characteristics and presentation of information on high involvement products on the Internet, including security, relevancy, understandability, interpretability, and consistency of the information.

1.7.9 System Quality

Conceptual definition: System quality is termed as the features of the information processing system itself that produces the output (Nelson, Todd, & Wixom, 2005).

Operational definition: System quality is operationalized as the desired features of the Internet in this study, including stability, availability, reliability, adaptability, and response time are typical of qualities that are valued by users of the Internet.

1.7.10 Service Quality

Conceptual definition: Service quality is termed as perceived performance of service provided through information system (Parasuraman, Zeithaml, & Berry, 1985; Zeithaml, Parasuraman, & Malhotra, 2002).

Operational definition: Service quality is operationalized the overall support delivered by the Web sites managers on the Internet aimed to facilitate consumers' efficient and effective information search.

1.7.11 Motivation to Search on the Internet

Conceptual definition: Motivation to search on the Internet is termed as the readiness to expend efforts in acquiring and processing information on the Internet (Schmidt & Spreng, 1996).

Operational definition: Motivation to search on the Internet is operationalized as utilitarian motivation and hedonic motivation to search on the Internet in this study. While utilitarian motivation is the desire to expand efforts in the collection of information on the Internet with an aim of improving the quality of the purchase outcome, hedonic motivation refers to the desire to expand efforts in the collection of information on the Internet for happiness, fantasy, awakening, sensuality, and enjoyment.

1.8 Limitations of the Study

Data accuracy depends on the honesty and willingness of respondents in answering questions in self-administered survey research. In addition, recall questions may cause some forgetting errors. In order to minimize errors and biasness in the study, multivariate measures were used to measure how consumer searched information on the Internet. Moreover, the sampling deployed in study helps to reduce data inaccuracy. Since it was compulsory to apply for license plates for new automobiles before their hitting on road, respondents were intercepted at the local automobile administrative bureaus to reduce the interval between searching and answering questionnaire as much as possible. Complete instruction included in each part of the questionnaire also helps to minimize errors.

1.9 Organization of the Thesis

This study consists of six chapters.

Chapter 1 presents an introduction to the study. The research background, problem statement, research objectives, significance of the study, and conceptual and operational definitions of terms. The scope and limitations of study are included as well.

Chapter 2 proceeds with a comprehensive review of extant studies related to the theoretical perspectives of the study, consumer information search on the Internet, the factors influencing consumers' information search on the Internet, and motivation to search on the Internet. The research framework of the study and proposed hypotheses are presented based the literature review.

Chapter 3 illustrates the methodology employed in the thesis. The discussion is organized according to the following sections: research design, location of study area, population of the study, sample size and sampling procedure, measurement instruments, pilot study, data collection procedure, data analysis techniques, validity and reliability, and measurement model.

Chapter 4 depicts the socio-demographics and socio-economics of the respondents. The extent and patterns of high involvement product information search on the Internet of consumers in Yinchuan are examined and discussed.

Chapter 5 outlines the findings and discussions of the inferential statistics addressing the research objectives of the study. Each section is followed by the discussion on the research findings.

Chapter 6 presents the summary, conclusion, and recommendations for future research. The chapter commences with the summary of the major findings in the study. The conclusions of the study are given in accordance with the research objectives of the study. The limitations and recommendations for the future research are also discoursed.

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BIODATA OF STUDENT

The student, Zhu Beiyu was born on 10th April, 1979, in Ning Xia Hui Autonomous Region in China. In 1997, she enrolled in Southwest University of Political Science and Law and acquired her first degree and Master's degree there. Since 2004, she was a lecturer at law school of Ning Xia University in China.



LIST OF PUBLICATIONS

- Zhu, B., Hashim, A. H. B., Osman, S. B., & Bakar, E. B. A. (2015). Factors Influencing Consumer Online Information Search in Yinchuan, China. *Journal of Humanities and Social Science*, 20(6), 65-70.
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