

A REVIEW OF ONLINE CONSUMER BEHAVIOR RESEARCH

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Abstract: As online consumer behavior is being paid more and more attentions from both managers and academic researchers, it is urgent to understand the whole landscape of the research field. Since then, this paper, based on knowledge metric analysis technique of mapping knowledge domains, reviews the literature of online consumer behavior research from three perspectives – the development of the research around the world, the theoretical foundations of the research and the focused topics, providing some insights for future studies.

1 INTRODUCTION

The exponential increases in online consumption and the unprecedented rate of growth in the number of commercial websites have created an extremely competitive marketplace where most internet companies are yet straggling to turn a profit. Obviously, acquiring more consumers and stimulating them to consume are the crucial key to the success of websites. As a consequence, not only managers but academic researchers are paying more and more attentions to the research of online consumer behavior. For such a newly-evolving but rapidly-developing interdisciplinary area of research, it is urgent to understand the whole picture of the research, such as what are the theoretical foundations it is established on? And what are the key topics being heavily focused on? And how about the development of the research around the world is? However, there is still no study making efforts to answer these questions. In order to make up this void, this study, based on knowledge metric analysis, is attempting to give a review of online consumer behavior research.

2 DATA AND METHODOLOGY

2.1 Data

Through ISI Web of Science, we find 1584 recordings related to online consumer behavior and the date range of them is from 1995 to 2011. (The results were obtained on 13th Jan. 2011.) As the documents published in 2010 and 2011 are not completed, only recordings from 1995 to 2009 are collected and the total number is 1348.

2.2 Mapping Knowledge Domains

The technique of knowledge metric analysis employed here is mapping knowledge domains aimed at easing information access and making evident the structure of knowledge through charting, mining, analyzing, sorting, enabling navigation of, and displaying knowledge. (Shiffrin and Borner, 2004) Based on the core conceptions from bibliometrics, social network analysis and so on, this method could identify important authors and works contributing to the foundations of a research area by citation analysis; also, it could reveal the key topics drawing most attentions in a research area by keyword analysis. Different from traditional knowledge metric methods, mapping knowledge domains is characterized of dealing with massive

information and visualizing the results. In this study, analysis tool CitespaceII developed by Chaomei Chen in 2006 is employed.

3 RESULTS AND ANALYSIS

3.1 Development of Online Consumer Behaviour Research

After importing bibliographic information of those collected documents into CitespaceII, we run the country analysis function. A time-zone view of network about the countries the researchers of online consumer behavior are belonging to is shown as in Figure 1.

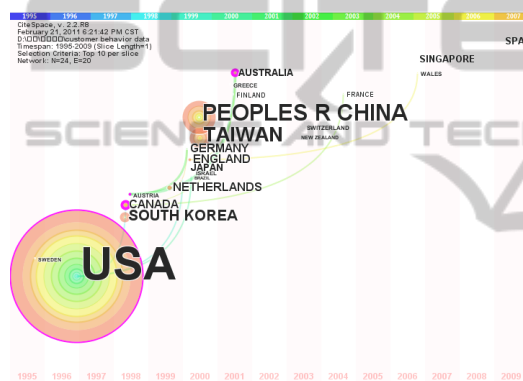


Figure 1: Network of main countries in online consumer behavior research.

As Figure 1 is presented, it is found that the USA takes an essential position in the field of online consumer behavior research, for it has not only started the research at an early stage but also produced the major achievements. Meanwhile, it should be noted that later round the year of 2000 when dot-com companies were exploded, numerous countries are involved into the research area, such as Canada, South Korea and Austria in 1998, Netherlands and Chile in 1999, Peoples’ Republic of China, Taiwan, Germany, England, Japan, Israel and Brazil in 2000. Among them, Peoples’ Republic of China has made the second most achievements in this field. As China has the most net users in the world and is advancing the network construction, it should be not difficult to anticipate that in later years there would be a boom of online consumer behaviour research in China.

3.2 Theoretical Foundations of Online Consumer Behaviour Research

With the cited reference analysis function of CitespaceII, a network of cited references is generated as shown in figure 2. There are several big nodes covering the center of the network, meaning that these high-cited references establish most of the foundation of online consumer behaviour research. And they could be classified into three groups: research origin, research model, and research tool.

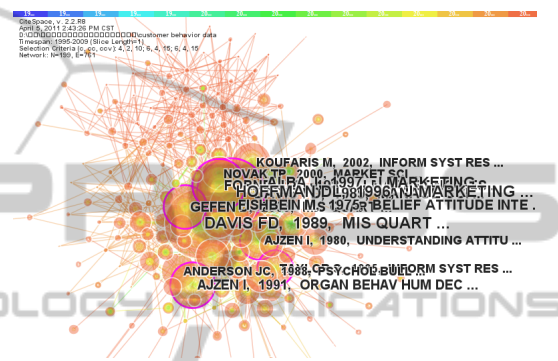


Figure 2: Network of cited references in online consumer behavior research.

3.2.1 Research Origin

Consumer behavior research is derived from and has a long history in the science of marketing. The changes in the marketing environments where internet is becoming a powerful and promising marketplace, of course, entice some pioneer researchers of marketing science to reexamine the consumer behavior, which becomes the research origin of online consumer behavior research. Hoffman (1996) proposes hypermedia computer-mediated environments (hypermedia CMEs) where the traditional one-to-many marketing communications model for mass media is changed into a many-to-many one, and develops a process model of consumers’ network navigation in hypermedia CMEs by employing the flow construct. From a different aspect, Alba (1997) examines the effects of consumer, retailer and manufacturer behavior on the diffusion of interactive home shopping (IHS) and the impact this new retail format could have on the retail industry, concluding that the growth of IHS is dependent on the consumer needs of vast selection, screening, reliability and product comparison, and that a successful IHS retailer must seek one or more competitive advantages such as

distribution efficiency, assortments of complementary merchandise, and so on. Those early studies provide useful enlightenments for later studies.

3.2.2 Research Model

As consumer behavior is human behavior in consumption settings, lots of literature of Psychology about human behaviours are drawn to develop research models in online consumer behavior research, such as the theory of reasoned action (TRA) which suggests that a person's behavioral intention depends on the person's attitude about the behavior and subjective norms (Fishbein and Ajzen, 1975), and the theory of planned behavior (TPB) which argues that behaviour intentions can be predicted from attitudes toward the behavior, subjective norms, and perceived behavioral control which accounts for variance in actual behaviour together with those intentions. Based on the two models, researchers develop a variety of measurement scales to explain and predict consumers' intentions to take online behaviors, and the most widely used model scale might be technology acceptance model (TAM) proposed by Davis et al. (1989) from the respective of information system, within which perceived usefulness and perceived ease of use are considered to be the fundamental determinants of user acceptance of information technology. Later, the TAM has been continuously studied and expanded, such as TAM 2, UTAUT, TAM 3 and so on. (Venkatesh and Davis, 2000; Venkatesh, 2000; Venkatesh et al., 2003; Venkatesh and Bala, 2008) Meanwhile, some studies combine the TAM with other theories to present a more comprehensive picture of online consumer behaviors. Gefen et al. (2003) creatively introduces trust theory into the TAM to examine not only the interface between consumer and website but also the relationship between consumer and e-vendor similar to traditional business settings.

3.2.3 Research Tool

Structural equation models (SEMs) with unobserved constructs and measurement error are considered to be a powerful tool of analysis in theory testing and model building for online consumer behavior research, for its unique characteristic of bringing together psychometric and econometric analyses. However, it had several severe limitations and could

give misleading results. To overcome the problem, Fornell (1981) proposes a more comprehensive testing system based on explanatory power for structural model, measurement model and overall model, leading to a wide application in online consumer behavior research.

3.3 Focused Topics in Online Consumer Behaviour Research

As running the keyword analysis function of CitespaceII, we get a network of keywords in online consumer behavior research as shown in figure 3. In the network of keyword, it is clear that "behavior" and "internet" the two biggest nodes in the center link to numerous smaller nodes around, due to their direct relation with the core topic online consumer behavior. Apart from them, there are still other high-frequency keywords mainly revealing the following five topics: "consumer trust", "consumer satisfaction & service quality", "acceptance of information technology", "consumer choice & consumer decision-making", and "consumer loyalty".

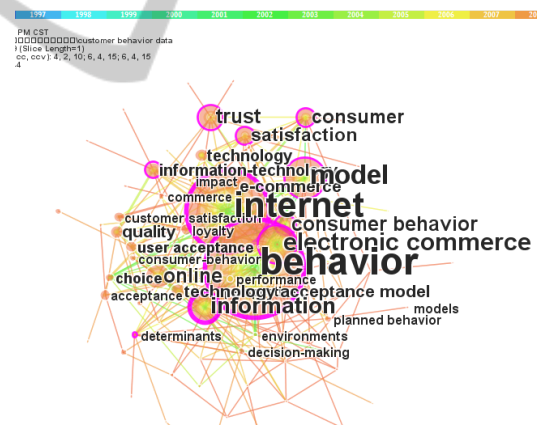


Figure 3: Network of keywords used in online consumer behavior research.

3.3.1 Consumer Trust

Lack of interpersonal communication on the Internet, online consumers face even more uncertainties and risks in the electronic environments as the problems of asymmetric information between consumer and e-vendor and undesirable opportunistic behaviors become worse than those in traditional business settings. Thus, consumer trust is a critical issue in the context of E-Commerce. Chircu

et al. (2000) empirically find that trust has a significant positive impact on intention to take online behavior. Cho (2006) investigates the way consumers' evaluations of an e-vendor's business operations relate to their judgments of trustworthiness in the context of B2B internet exchange relationships. Understanding the impact of trust on online behavior is obviously important, but it is also important to understand how to build trust online. Hoffman et al. (1999) suggest a short-term solution of giving consumers the opportunity to be anonymous or pseudonymous when engaging in information exchanges and online transactions, and a long-term one of allowing the balance of power to shift toward a more cooperative interaction between an online business and its customers.

3.3.2 Consumer Satisfaction & Service Quality

Similar to the research in traditional marketing, consumer satisfaction and service quality are also critical topics in the field of online consumer behavior research. Regularly, service quality has great impact on consumer satisfaction while consumer satisfaction is an important index of service quality, so they are often discussed jointly. Szymanski and Hise (2000) examine the role that consumer perceptions of online convenience, merchandising, site design, and financial security play in e-satisfaction assessments. On the other side, Garrity et al. (2005) argue that the three fundamental user satisfaction components of task support satisfaction, decision support satisfaction and interface satisfaction have a good explanation for web-based information systems success. Besides, some researchers are engaged in developing different scales to measure the quality of a website or the services provided by a website. Yoo and Donthu (2001) provide SITEQUAL to measure the perceived quality of an internet shopping site. Loiacono, Watson and Goodhue (2002) present a Web site quality measure with 12 core dimensions and refine it using two successive samples.

3.3.3 Acceptance of Information Technology

Since the primary interface with an online consumer is a website or an e-commerce system, essentially an information technology, a consumer on the internet, before taking any online behaviors, should firstly be willing to use the technology. Hence, extensive efforts are put into explaining and predicting

consumers' acceptance of information technology, with fundamental disciplines from psychology and technology, such as TRA, TPB and TAM. Gefen, Karahanna and Straub (2003) join the theory of trust into the TAM to examine online consumer behavior from an integrated perspective. Considering some unique characteristics of the internet, Vijayarathy (2004) incorporates additional constructs like compatibility, privacy, security, normative beliefs and self-efficacy into the TAM. Pavlou and Fygenon (2006) extend TPB to explain and predict the process of e-commerce adoption by consumers. Hsu and Lu (2007) combine the TRA and the TAM to bring out a research model for examining consumer behavior in online game communities.

3.3.4 Consumer Choice & Consumer Decision-making

Either visiting or returning to a website, a consumer should make a choice or a decision, so understanding the online consumer behavior of choosing or decision-making is crucial. Some studies have investigated the factors influencing consumer choice or decision-making from different perspectives. Choi and Geistfeld (2004) examine how cultural values affect consumer decision-making with respect to e-commerce like online shopping. Constantinides (2004) attempts to identify the Web experience components and understand their roles as inputs in the online consumer's decision-making process. Some researchers have approached the topic under particular settings. Ariely and Simonson (2003) propose an analytical framework including a series of propositions relating to the auction entry decision, bidding decisions during the auction for studying online bidding behavior. Dholakia and Simonson (2005) examine the effect of explicit reference points on consumer choice in online auctions.

3.3.5 Consumer Loyalty

With the increasingly intense competitions and the awareness that attracting new consumers is considerably more expensive than retaining consumers in electronic commerce, researchers are paying more and more attentions to consumer loyalty. Reichheld and Scheffer (2000) find that online consumers exhibit a clear proclivity toward loyalty which could be reinforced by correct web technologies and explain the enormous advantages of retaining online consumers at length through analyzing the strategies and practices of many

leading Internet companies and surveying thousands of their customer. Then a series of studies have investigated the factors that affect online consumer loyalty. Wang, Pallister and Foxall (2006) propose a consumer Website loyalty model to describe how consumer transfer their existing brand loyalty in the traditional retail market to the same brand's website in the B2C e-commerce market and how their perceived risk at the brand's Website mediates this loyalty transformation. Kim, Shin and Lee (2006) find that three key variables – customer satisfaction, attractive alternatives and switching cost, are strongly associated with intention to switch email services.

4 CONCLUSIONS & IMPLICATIONS

Though the online consumer behavior research is a newly evolving research field with less than two decades history, more and more countries, especially China, have been contributing increasing efforts to it. And it is also an interdisciplinary area based on the science of marketing, information system and psychology. In the past, researchers are focused on the topics of “consumer trust”, “consumer satisfaction & service quality”, “acceptance of information technology”, “consumer choice & consumer decision-making”, and “consumer loyalty”.

With the unending innovation in the electronic marketplaces, like micro-blogging, group-buying and so on, there would be new issues need to address. Therefore, a review of online consumer behavior research describing the whole picture of the field would help researchers better understand and deal with the current and future online consumer behavior.

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