Predicting the Effects of Product Description on Purchase Intentions in Cross-border E-commerce: An Integration of Involvement Theory and Commitment-involvement Theory

Research-in-Progress

Jian Mou  
Wenlong Zhu

Morad Benyoucef

Abstract

Nowadays, cross-border e-commerce (CBEC) has become an important channel for promoting international trade. There are many factors that influence consumer participation in CBEC, including product description. An excellent product description can not only attract more consumers, but it can also increase product sales. However, little research has addressed product description in a CBEC setting. From the perspective of psychology, this study proposes a research model of purchase intention in CBEC based on the involvement theory and commitment-involvement theory. The research model will be tested using the covariance-based Structural Equation Modeling. Data will be collected from users of a popular CBEC platform in China. Results will have important theoretical and practical implications for CBEC researchers and practitioners.

Keywords: Cross-border e-commerce (CBEC), product description, purchase intention, involvement theory, commitment-involvement theory

Introduction

Cross-border e-commerce (CBEC) has become an important channel for promoting international trade (Mou et al. 2017). It provides opportunities to both developing and developed countries to achieve benefits from global transactions (Cui et al. 2019). In 2016, the total amount of CBEC transactions worldwide reached 13 trillion yuan (Ebrun 2017). In 2018, global business-to-consumer (B2C) CBEC transactions reached US$ 676 billion, which increased by 27.5% over the previous year. It is estimated that this number will reach US$ 994 billion in 2020 (Ebrun 2018). According to Forrester, 15% of global e-commerce sales will come from cross-border transactions by 2021, with a value close to US$ 424 billion (Ebrun 2017). In China, there were over 5,000 CBEC platforms, and more than 200,000 enterprises involved in CBEC through various platforms, including DHgate, LightInTheBox and AliExpress (Chen and Yang 2017). In 2017, the overall transaction scale of CBEC (including
B2C and business-to-business (B2B) reached 7.6 trillion yuan in China (Wang et al. 2018), which increased by 6.6% compared to 2016.

Since CBEC platforms are booming all over the world, it is important to understand, among other things, the role of product descriptions on such platforms. Generally, when customers search for a product online, a short description of the product will be displayed. Such description will be an important cue to help the consumer make further decisions (Resatsch et al. 2008). Hence, how to efficiently describe the product should become the focus of sellers on CBEC platforms. Efficient product description will have the following two consequences. Firstly, it will be easier for customers to find products at low costs using their own languages and know-how (Ng et al. 2000), and it can help customers better understand a product and its functions. Secondly, CBEC transactions reveal more barriers and distances between buyers and sellers, such as language, culture, history, trade agreements and so forth (Kim et al. 2017). Therefore, eye-catching product descriptions can break down barriers and shorten the distance between the two parties, which will be more likely to lead to positive outcomes.

So far, academic research on CBEC mainly focuses on the issues of delivery (Kim et al. 2017; Kawa 2017), dispute resolution (Ong and Teh 2016; Omoola and Oseni 2016; Clifford and Van Der Sype 2016), as well as law and regulation (Chen and Yang 2017). Little research has addressed product description on CBEC. On CBEC platforms, optimized product description is a comprehensive process involving marketing, consumer psychology, keyword principles and specific product characteristics. This is because product information will influence the purchase behaviors of potential customers (Chang and Wildt 1994). In light of that, from the perspective of psychology, this study proposes a research model of purchase intention in CBEC based on the involvement theory and commitment-involvement theory.

The anticipated contribution of this study is the integration of two involvement theories in studying CBEC. Based on the research model, we can analyze whether product description affects the purchase intention under the joint influence of two kinds of involvement factors. In addition, this study will enable sellers to optimize product descriptions in order to attract more buyers and generate more profits on CBEC platforms. Moreover, the study will help CBEC researchers understand the importance of product description by integrating involvement theory and commitment-involvement theory.

The remainder of this paper is organized as follows. First, we review the literature related to purchase intention in e-commerce. Second, we propose a research model and hypotheses based on the theoretical foundations found in the literature. Third, we describe the research methodology. Finally, we present the implications and further research directions.

**Literature Review**

**Purchase Intention in E-commerce**

Academic research on purchase intention in the field of e-commerce appeared around the year 2000. Nowadays, related research is relatively abundant. For instance, some studies demonstrated that trust had a significant positive impact on purchase intention in the context of e-commerce (Gefen 2000; Schlosser et al. 2006; Hsin Chang and Wen Chen 2008; Lu et al. 2010; Weisberg et al. 2011). Other research explored the role of various factors on purchase intention in e-commerce, such as perceived risk (Zhou et al. 2018; Lopez-Nicolas and Molina-Castillo 2008), perceived customer value (Chen and Dubinsky 2003) and perceived uncertainty (Yang et al. 2016).

With the increasing popularity and rapid development of CBEC came new research dedicated to purchase intention in CBEC. For instance, Yoon and Zhang (2018) validated the key factors affecting the cross-border adoption of arguments made on social media. An experimental study confirmed that the adoption of opinions on Korean cultural products indeed influenced Chinese consumers’ intention to purchase cultural products made in Korea. Han and Kim (2019) tested a research model to analyze the influence mechanism of purchase intentions in CBEC, and found that consumer informedness positively affected purchase intentions. In addition, Cho and Lee (2017) conducted an empirical study
using panel data from different countries to identify the various determinants associated with overseas direct purchases. The results showed that relative to the maritime network, the air transport network was negatively associated with the degree of overseas direct purchases. Moreover, globalization was positively associated with the degree of overseas direct purchases.

From our review of the literature on purchase intention we found that more studies were dedicated to domestic e-commerce than CBEC, and, more importantly, studies exploring the impact of product description on purchase intention were rather rare. Hence we decided to study the psychological mechanisms that explain the impact of product description on consumer purchase behavior in CBEC. The study contributes to the extant literature in the following two aspects. Firstly, based on the involvement theory, in terms of product description on CBEC platforms, we explore the involvement in products from both cognitive and affective aspects. Thereafter, we analyze the impact of such involvement on purchase intentions. Secondly, based on the commitment-involvement theory, in terms of product description on CBEC platform, we examine the involvement of consumers on CBEC platforms from both enduring and situational aspects, and in turn, the impact of the above involvement on purchase intentions. This research will analyze the psychological impact of product descriptions on consumers from the perspective of product involvement and platform involvement respectively.

**The Involvement Theory**

According to the research of Zaichkowsky (1986), involvement was a motivational construct which partly relied on the antecedent factor of the person’s values and needs. This is the most widely accepted definition of the involvement theory. The involvement theory was first proposed by Sherif and Cantril in 1947. They used ego-involvement to predict people’s attitudes, and believed that when people were stimulated or in a certain situation, they would feel a degree of relationship between the stimulation or situation and themselves, which would lead to interest (Sherif and Cantril 1947). Krugman (1966) first introduced involvement in marketing by stating that involvement was the number of “connections”, conscious bridging experiences or personal references per minute that the subject made between the content of the persuasive stimulus and the content of his own life. Afterwards, many scholars extended the involvement theory by conducting a series of empirical studies (Petty et al. 1983; Zaichkowsky 1985; Andrews et al. 1990).

In our research, we analyze the role of product involvement in product descriptions based on the involvement theory. Mitchell (1979, pp. 194) defined product involvement as “an individual level, internal state variable whose motivational properties were evoked by a particular stimulus or situation”. On CBEC platforms, consumers discern products on the basis of their involvement with them and on whether rational or emotional factors play the most prominent role in choice processes and the formation of behavior intentions. In this sense, product involvement is also associated with the cognitive and affective properties of the decision making process. Hence, we divide product involvement into cognitive involvement and emotional involvement. Cognitive involvement refers to customers’ relevance based on the functional and utilitarian performance of the products, while affective involvement refers to customers’ relevance based on feelings, emotions and moods evoked (Zaichkowsky 1994). Thus, cognitive involvement encompasses reasoning and factual information, whereas affective involvement is associated with emotion and mood (Drossos et al. 2014).

**The Commitment-involvement Theory**

The involvement theory had a major impact on the study of consumer behavior, but there were still some inconsistencies and ambiguities in the conceptualization of the involvement theory (Kahle and Homer 1988). Thereafter, academia put forward the commitment-involvement theory that combined the involvement theory with commitment. The concept of commitment has been used by sociologists to explain consistent behavior. It can be defined as “a variable which encompasses the ranges of allegiance an individual may be said to have for the social system of which he is member” (Hornback 1971, pp. 65). Initially, the commitment-involvement theory was used to solve the relationship between ego involvement and brand commitment (Kahle and Homer 1988). With the development of this theory, many studies regarded commitment-involvement as a different view of the relationship.
between attitudes and behavior (Albaum et al. 1998). According to the research of Helgeson et al. (2002), the commitment-involvement theory suggested that an individual who was strongly committed to a behavior or activity would be unlikely to terminate that behavior or activity. Recently, the commitment-involvement theory has been extended to explain consumers’ behavior in fields such as tourism (Ferns and Walls 2012) and social psychological activities (Havitz and Mannell 2005).

In our research, we also considered the role of CBEC platform involvement in product descriptions based on the commitment-involvement theory. Platform involvement refers to an individual’s perceived importance of a platform stimulus or situation. In CBEC, consumers’ involvement in pleasure shopping is an antecedent of their psychological commitment to associated CBEC platforms. When consumers engage in browsing activities on CBEC platforms, they focus on the products they want to buy on one hand, and pay attention to the situation of platforms that displays these products on the other hand. So consumers’ involvement in platforms is formed by intrinsically-motivated factors and extrinsically-motivated factors. Thus, this study divides platform involvement into enduring involvement and situational involvement. Enduring involvement reflects a sustained level of concern with this platform, as such, remains stable over long periods of time (Albaum et al. 1998). It is related to an individual’s long-term interest with this platform. Customers feel this platform is highly self-relevant and important when they have a high level of enduring involvement (Im and Ha 2011). In contrast to enduring involvement, situational involvement reflects temporary feelings for this platform that accompany a particular situation. It is the degree of involvement evoked by a particular situation on this platform. Customers’ perceived relevance and importance for this platform is an acute state that only occurs at certain times or in certain situations (Havitz and Mannell 2005).

Research hypotheses

Impacts of Product Description on Purchase Intention

Product information is the major decision variable used by marketers to help consumers evaluate a product and make purchase decisions (Chang and Wildt 1994). According to the research of Park et al. (2005), product presentation may produce an emotional response when purchasing online products. An appealing visual presentation of products may accelerate consumers’ intention to purchase products (Then and DeLong 1999). In addition, prior studies indicated that product type (Moon et al. 2008), product price (Chang and Wildt 1994), product search (Shim et al. 2001), and product image (Park et al. 2005) may generate higher purchase intention for potential consumers. It should be noted that the above factors are all related to product description. Product description is usually represented in the forms of product models (Kimura and Suzuki 1995). It is a synthesis of all elements related to the description of a product. High quality product description means that product description can meet or exceed consumer expectations (Kahn et al. 2002). Specifically, on one hand, product description should conform to the consumers’ specifications, and any consumer can understand the meaning and contents of all information. On the other hand, product description must be useful and add value to the tasks of information seeking. In other words, the information can eliminate consumers’ uncertainty about the product. The higher the quality of a product description is, the better the consumers’ psychological feelings towards the product are. In this case, consumers are more motivated to engage in all kinds of psychological activities related to the product, including purchase intention. We therefore hypothesize:

H1: Product description has a significant positive impact on purchase intention.

Impacts of Product Description on Product Involvement

The Elaboration Likelihood Model (ELM) posits that people go through a “central route” or “peripheral route” when processing information (Petty and Cacioppo 1983; 1984). Under “central route” situations, consumers will exert more cognitive effort in order to evaluate the issue. When product description is more detailed, interesting and attractive, consumers will go through a “central route” and tend to focus more on highly diagnostic cues such as attribute and performance information to evaluate products (Nkwocha et al. 2005). Thus, consumers will be more focused when viewing product information (Laurent and Kapferer 1985). For the introduction and publicity of
products, consumers are more rational and pay more attention to the professionalism and trustworthiness of product information (Dens and De Pelsmacker 2010), resulting in high product cognitive involvement.

In the field of advertising research, the language used for communication and its perceived status will influence the product and its service quality expectations through the halo effects (Bishop 2005). Using a high-perception language in an advertisement will create high product service quality expectations among its audience. Compared to a poor product description, product description with credibility, sincerity, professionalism and affinity will enhance the image of the product, and then improve consumers’ emotions towards the product (Krishna and Ahluwalia 2008). At this time, consumers have a relatively positive psychological attitude and performance towards the product. In addition, this positive psychology can enhance consumers’ purchase intention. The higher the quality of product description is, the better the product image in the minds of consumers is, and then the higher product affective involvement of consumers is (Noriega and Blair 2008). Accordingly, we attempt to test the following hypotheses:

H2a: High quality product description has a significant positive impact on product cognitive involvement.
H2b: High quality product description has a significant positive impact on product affective involvement.

**Impacts of Product Involvement on Purchase Intention**

Researchers argue that product involvement plays an important role in consumer behavior (Goldsmith and Emmert 1991; Wang et al. 2009). A consumer’s involvement with products sold by a web-based platform can affect the consumer’s experiences and behavior (Koufaris 2002). Consumers look for more personal, experimental and symbolic gain in high product involvement situations than they do in low involvement situations (Solomon et al. 1985). Hence, when product involvement is high, consumers are more likely to regard a commodity as a good product. This commodity will provide the personal pleasure, excitement, and status desired by consumers. Thus, consumers will have a higher level of purchase intention for this product. In this study, we consider two types of product involvement.

Product cognitive involvement is induced by functional, utilitarian aspects of products and therefore drives consumers to seek relevant types of information when forming product attitudes and intentions (Drossos et al. 2014). On CBEC platforms, functional and utilitarian information can be completely conveyed, which can lead to higher product cognitive involvement for consumers. In this case, consumers will improve their attitudes and motivations towards the product, and then form purchase intentions.

Product affective involvement, on the other hand, is induced by emotional aspects of products. For product affective involvement, affective cues and information play a prominent role (Drossos et al. 2014). On CBEC platforms, the images, audio, and emotional information on products can also be fully revealed through various product descriptions. Similar to the effect of product cognitive involvement, consumers also have a positive psychological reaction in this situation, which is beneficial in forming a purchase intention. Accordingly, we attempt to test the following hypotheses:

H3a: Product cognitive involvement has a significant positive impact on purchase intention.
H3b: Product affective involvement has a significant positive impact on purchase intention.

**Impacts of Product Description on Platform Involvement**

Involvement is a motivational construct (Zaichkowsky 1985). In terms of platform involvement, enduring involvement represents an ongoing concern with a product (Ferns and Walls 2012), and captures the potential of the product that causes personal relevance (Higie and Feick 1989). Such involvement will be intrinsically motivated by the degree to which the product is related to the consumer’s self-image or the pleasure received from using the platform (Huang 2006). Moreover, in
the context of consumer behavior, enduring involvement is high with a product related to centrally held values (Arora 1982). On CBEC platforms, high quality product descriptions can fully show the products and cause consumers to resonate with them. This resonance will change consumers’ thoughts, feelings and psychologies about the platform gradually, resulting in a higher level of enduring involvement.

Situational involvement in platform environments is a situation-specific and transitory state in which consumers are made personally relevant by the uncertainty aspect of platform environments (Huang 2006). In situations that involve uncertainty, consumers are more concerned about their behaviors in order to avoid negative consequences (Laurent and Kapferer 1985). Situational involvement increases if the consumer can foresee negative consequences during the shopping process (Hong 2015). On CBEC platforms, a high quality product description can improve the shopping situation for consumers. Therefore, consumers’ hedonic benefits will be enhanced due to the recreational nature of the shopping activity. Furthermore, hedonic benefits can psychologically reduce negative consequences in the shopping process, which can lead to higher platform situational involvement. Accordingly, we attempt to test the following hypotheses:

H4a: High quality product description has a significant positive impact on platform enduring involvement.

H4b: High quality product description has a significant positive impact on platform situational involvement.

**Impacts of Platform Involvement on Purchase Intention**

Previous research demonstrated that involvement affected online shoppers’ attitude and behavioral intentions towards the website (Eroglu et al. 2003; Kim et al. 2007). Consumers are motivated to acquire information that is relevant to their purchasing decisions (Jiang et al. 2010). High involvement suggests that consumers are actively processing product information on the website and are engaged in information gathering (Schlosser 2003). In this study, and as far as the two types of platform involvement are concerned, enduring involvement with products on the platform can be seen as the intensity with which a platform is embedded in and driven by the consumers’ value system (Ferns and Walls 2012). When enduring involvement in a platform is high, consumers are psychologically more confident in making decisions based on product information. Furthermore, purchase experience on the platform can increase enduring involvement, which in turn promotes purchase intention (Laaksonen 1994).

Additionally, situational involvement is typically created by purchase circumstances (Im and Ha 2011). Enhanced situational involvement will lead consumers to engage in extensive information processing (Petty et al. 1983), which can eliminate consumers’ uncertainties to some extent and reduce their costs and social risks in the shopping process. Therefore, consumers will spend more time on a platform, which will lead to higher purchase intentions on this platform. Accordingly, we attempt to test the following hypotheses:

H5a: Platform enduring involvement has a significant positive impact on purchase intention.

H5b: Platform situational involvement has a significant positive impact on purchase intention.

The research model of this study is shown in Figure 1.
Cognitive involvement
Purchase intention
H1
H2a-2b H3a-3b
Product description
Affective involvement
Platform involvement
Enduring involvement
Situational involvement
H4a-4b H5a-5b

Figure 1. Research Model

Methodology

For this research, we collaborated with DHGate.com, a well-known Chinese CBEC platform. DHGate.com was established in 2004 and it is the first online platform to provide B2B cross-border transactions for Chinese SMEs. According to PayPal data, in 2013, DHGate.com was the number one online foreign trade platform in Asia Pacific and the sixth in the world.

We collaborated with DHGate.com for the following three reasons. (1) DHGate.com is a global online trade website, which meets the basic requirements of CBEC platforms. (2) DHGate.com has been conducting global online trade for over 14 years and it is a successful example in the field of CBEC, which will enable us to test our research hypotheses reasonably. (3) DHGate.com has 19 million registered buyers from 222 countries and regions around the world. This gives us access to an appropriate population to survey for our research.

Scale Design

We designed 24 items related to the 6 variables of the theoretical model from the perspective of consumers. A 5-point Likert scale will be employed. Respondents will rate items from 1 (“completely disagree”) to 5 (“completely agree”). All the measurement items are adapted from prior validated measures. Example items are shown in Table 1.

Table 1. Example of Specific Items of the Questionnaire

<table>
<thead>
<tr>
<th>Variables</th>
<th>Example Items</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product description (PD)</td>
<td>PD1: The product descriptions were easy to understand.</td>
<td>Smith et al. (2008)</td>
</tr>
<tr>
<td>Cognitive involvement (CI)</td>
<td>CI1: Shopping on this platform is a very important decision.</td>
<td>Drossos et al. (2014)</td>
</tr>
<tr>
<td>Affective involvement (AI)</td>
<td>AI1: Shopping on this platform expresses one’s personality.</td>
<td>Drossos et al. (2014)</td>
</tr>
<tr>
<td>Enduring involvement (EI)</td>
<td>EI1: The pleasure of shopping on this platform is important.</td>
<td>Ferns and Walls (2012)</td>
</tr>
<tr>
<td>Situational involvement (SI)</td>
<td>SI1: The shopping activity on this platform interests me a lot.</td>
<td>Havitz and Mannell (2005)</td>
</tr>
<tr>
<td>Purchase intention (PI)</td>
<td>PI1: I intend to purchase products on this platform in the future.</td>
<td>Hsu et al. (2016)</td>
</tr>
</tbody>
</table>

The Plan for Data Collection

We will first conduct a pilot test to determine whether the survey instruments are understandable by participants and whether there are any ambiguous or confusing measurement items in the questionnaires, as well as to ensure that the survey items are appropriate in the CBEC context. Participation in the survey will be totally voluntary, and anonymity will be ensured by configuring the survey application to disregard respondents’ identification information. When invited to participate in
the survey, buyers (i.e., respondents) will be provided with three options, “participate now”, “maybe next time”, or “do not ask again”. There will be no loss of benefit whether or not a respondent chooses to participate. The survey will be originally compiled in English.

Conclusions

In this study, we propose a research model by employing the involvement theory and the commitment-involvement theory to investigate the potential psychological mechanisms by integrating product descriptions in consumer purchase behavior in CBEC. Our study can make both theoretical and practical contributions. Theoretically, we study the psychological mechanisms of product description on purchase intention from the perspective of product involvement and platform involvement respectively. In this regard, firstly, based on the involvement theory, we divide product involvement into cognitive involvement and affective involvement, and analyze the psychological measures of consumers’ involvement in product from the rational and sensible perspectives respectively. This study will find the consumers’ psychological responses to the product in the context of different product descriptions and the impact of these responses on purchase intentions on CBEC platforms. Secondly, based on the commitment-involvement theory, we divide platform involvement into enduring involvement and situational involvement, and analyze the psychological measures of consumers’ involvement in CBEC platforms from ongoing concern and situational state perspectives respectively. This study will discover the consumers’ psychological responses to CBEC platforms in the context of different product descriptions and the impact of these responses on purchase intentions. Practically, this research can help sellers to optimize product descriptions to attract more buyers and generate more profits on CBEC platforms, and help CBEC researchers understand the importance of product description.

References


Twenty-Third Pacific Asia Conference on Information Systems, China 2019


