Comparing Potential and Actual Mothers in Platform Adoption

Research-in-Progress

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Abstract

China’s recent shift to a two-child policy has important implications for the mother and baby industry in China. E-commerce platforms of pregnancy and parenting are likely to see substantial growth in the coming years. This paper looks at mothers’ adoption of e-commerce platforms of pregnancy and parenting. We develop a theoretical model to explain the joint effects of content, social, and process gratifications and mother characteristics on their platform adoption. The model will be tested using survey data from e-commerce platforms of pregnancy and parenting in China. This study will enrich our understanding of mothers’ adoption of e-commerce platform of pregnancy and parenting and should be of interest to IS researchers as well as practitioners who want to further develop their e-commerce platform.

Keywords: e-commerce platforms, pregnancy and parenting, platform adoption, uses and gratifications theory, construal level theory

Introduction

China shifted to a two-child policy in 2016. This new policy is expected to create a surge in demand for baby products, with the number of newborns in China predicted to reach 19 million per year. Given the steady increase in the number of Chinese active users of e-commerce platforms of pregnancy and parenting - numbering 56 million as of January 2018 - the Electronic Commerce Research Center of China (ECRC) (http://www.100ec.cn) estimates that annual online sales of baby products will increase by more than RMB 30 billion (approximately USD $4.5 billion).

The users of pregnancy and parenting e-commerce platforms are predominately women who are pregnant or who have given birth to at least one child (Lupton and Pedersen 2016). Most use these platforms to request and provide emotional support, share information and facilitate learning (Drentea and Moren-Cross 2005). Mothers find these kinds of platforms helpful, particularly for providing information, monitoring fetal or child development, and providing reassurance (Lupton and Pedersen 2016).
Like the e-commerce market as a whole (Guo et al. 2017), the online market for pregnancy and parenting-related products is very competitive. The total spend for online childcare and parenting was approximately RMB 387 billion in 2017, representing an increase of 32.3% from the previous year (http://www.100ec.cn). However, while some e-commerce platforms have prospered, others have failed and gone out of business (http://www.100ec.cn).

The lack of success of some e-commerce platforms in what is a booming market in China motivates us to study this problem. Since mothers are the main users of e-commerce platforms of pregnancy and parenting, we assume that mothers’ purchasing power is critical to the success of the mother and baby retail industry (Minahan and Huddleston 2013). Hence we aim to explore the factors contributing to mothers’ adoption of e-commerce platforms of pregnancy and parenting. Although much IS research has focused on the factors that contribute to the user’s intention to choose or adopt IT platforms (Karahanna et al. 1999), few studies have looked at mothers’ adoption of e-commerce platforms of pregnancy and parenting, especially in the context of China’s new two-child policy.

Mothers are unique for a few reasons. Firstly, mothers differ from users in general given their need to receive social and emotional support from peer mothers after having a baby (Lowe et al. 2009). Depression, anxiety and perceived stress are common complications during pregnancy and the childbearing years (Rallis et al. 2014), and this drives the demand for sharing experiences with others, connectivity and professional consultation and reassurance (Tripp et al. 2014). Because of the anonymity and intimate nature of problems and concerns associated with pregnancy, childbirth and parenting, mothers can obtain knowledge through the open and free sharing processes of social interaction (Young et al. 2012), and can receive support from mother and baby websites (Drentea and Moren-Cross 2005), helping them with their maternity care and pregnancy experiences (Tripp et al. 2014).

Secondly, mothers are more likely to be primary caregivers than fathers; thus, they may have greater interest to seek out childcare and parenting information (Radey and Randolph 2009). Almost 95% of mothers use the Internet to find pregnancy-related information (Bjelke et al. 2016).

These differences in user characteristics along with the unique situation in China motivated us to conduct research on the motivations of mothers’ adoption of e-commerce platforms of pregnancy and parenting. Drawing upon uses and gratifications theory (U&G) and construal level theory (CLT), we develop a theoretical model to answer the following research questions: How do mothers’ perceived content gratifications, social gratifications and process gratifications jointly affect their adoption of the e-commerce platforms of childcare and parenting? Will potential and actual mothers value these features differently? Specifically, we draw on U&G theory to examine the effects of content gratifications, social gratifications, and process gratifications on mothers’ adoption of e-commerce platforms of childcare and parenting. According to U&G theory, users choose one medium over others because of its ability to better serve their gratifications (Xu et al. 2012). This theory proposes that consumers use the Internet to gain process, content and social gratifications (Stafford et al. 2004).

Construal level theory (Trope and Liberman 2010) from the field of social psychology (Reyt and Wiesenfeld 2015) suggests that people traverse different psychological distances by using similar mental construal processes (Trope and Liberman 2010). Psychological distance refers to the egocentric perception of the extent to which an object or event is close or far away from the dimensions of time, space, social distance, and hypothetical (Trope and Liberman 2010). As psychological distance increases, construals would become more abstract (higher construal) where behavioral intentions are increasing and vice versa (Trope and Liberman 2010). Based on this theory, we propose the moderation effect of the number of children on mothers’ adoption of e-commerce platforms of pregnancy and parenting.

Our model, based on both U&G and CLT, will be tested using survey data from mothers using the e-commerce platforms of Babytree.com and Kidswant. We hope our study will contribute to the
literature of user’s adoption behavior on e-commerce platforms of pregnancy and parenting. Our proposed theoretical model should help to explain the impacts of mother characteristics and perceived platform gratifications on mother’s adoption of e-commerce platforms of pregnancy and parenting. The findings of this study also will provide insights to practitioners on how perceived platform gratifications can be managed to enhance mothers’ adoption of their e-commerce platforms.

**Conceptual Background**

*Uses and Gratifications Theory*

The theory of U&G was proposed by Katz et al. (Katz 1959) and has been applied in the context of the Internet. Consumers use the Internet to gain gratifications of process and content, as well as social gratifications (Stafford et al. 2004). Content gratifications concern the content (e.g., information) carried by the medium (Jahn and Kunz 2012; Stafford et al. 2004). Process gratifications refer to the experience of the actual usage process (e.g., browsing, surfing, site navigation) (Eighmey and Mccord 1998). Social gratifications value interpersonal connection and conversation (Stafford et al. 2004).

Given the inherent interactive and user-directed nature of e-commerce platforms, U&G is particularly appropriate for investigating consumer e-commerce platform use (Huang 2008), specifically in the consumer market (Shang et al. 2017), and smartphone use (Sutanto et al. 2013). E-consumers’ use intention is motivated by the gratifications of their surfing experience and perceived usefulness of the web (Huang 2008). For people on social network sites, their purchase intention is motivated by three aspects of gratifications, including content gratification (utilitarian value), social-relation (social tie) gratification, and self-presentation gratification (Shang et al. 2017). For smartphone users, process and content gratifications are two distinct types of gratifications (Sutanto et al. 2013).

Drawing on U&G theory (Xu et al. 2012), we propose that mothers play an active role in adoption of e-commerce platforms of pregnancy and parenting based on the types of gratifications they seek (Shang et al. 2017; Sutanto et al. 2013). Building upon previous research on U&G (Stafford et al. 2004), we define content gratifications as the enjoyment of the specific informational and site-related content of the e-commerce platforms of pregnancy and parenting, while process gratifications reflect the pleasure mothers gain from their usage of the site (e.g. presenting, projecting and posting of pregnancy and parenting experiences). According to Stafford et al. (2004), we define social gratifications as mothers’ motivation to adopt the e-commerce platforms of pregnancy and parenting for interpersonal communication and social interaction.

*Construal Level Theory*

We employ CLT to explain the comparison effect of potential and actual mothers’ adoption behavior in our model. Research grounded in CLT suggests that construal level is the degree of the perceived abstractness of an object or event (Freling et al. 2014). Near objects and events are represented by people in concrete and low-level construals, and distant objects and events in abstract and high-level construals (Trope and Liberman 2010). For example, the activity of “children playing catch with a ball” could be interpreted as a low-level construal with such details as the age and number of the children and the color of the ball, whereas it could be a high-level construal as “having fun” by omitting some detailed features (Trope et al. 2007).

There are four primary psychological distance dimensions: temporal (“when”), spatial (“where”), social (“who”), and hypothetical (real/imaginary) (Freling et al. 2014; Trope and Liberman 2010). Temporally distant, spatially distant, socially distant, and unlikely objects or events are presented in more abstract, high-level construals than their corresponding proximal alternatives (Trope et al. 2007). Beyond these four dimensions, additional distance dimensions that could also affect construal level are informational distance (novel/unique) (Freling et al. 2014), and experiential distance...
Mothers’ adoption of e-commerce pregnancy and parenting platforms

(Experience/no experience) (Kankanhalli et al. 2015). Informational distance refers to the knowledge or relevant data the consumer possesses about the decision options (Fiedler 2007). Experience or experiential signifies knowledge gained through participation or observation (Weinberger et al. 2017).

CLT expects that an object or event is psychologically distant whenever it is not part of people’s direct experience (Trope et al. 2007). On this basis, potential mothers in our study context would have more psychological distance, and thus a higher-level construal about the adoption of e-commerce platforms of pregnancy and parenting respectively, in contrast with actual mothers, who have had more direct experience of the activity. Further, from the perspective of experiential distance, we could classify the differences respectively between the two groups. In other words, the adoption of e-commerce platforms of pregnancy and parenting activity has been less experienced by potential mothers, compared with actual mothers. Based on the findings that construal levels affect people’s perceptions of the objects or events and thus influence their choice behaviors (Fiedler 2007), we expect that the antecedents of adoption of e-commerce platforms of pregnancy and parenting would be weighted differently between potential and actual mothers.

Research Model and Hypotheses

The intention to adopt or use the IT (behavioral intention) is assumed to be a predictor of adoption or usage behavior (Huang 2008; Karahanna et al. 1999). Thus, platform adoption is defined as a decision made by a mother about using a pregnancy and parenting e-commerce platform. Drawing upon CLT, we expect that content, social and process gratifications would play different roles in potential and actual mothers’ adoption behavior. The proposed model is shown in Figure 1.

![Figure 1. Initial Research Model](image)

Note: p = potential mother; a = actual mother; c = comparison

Content Gratifications

Many previous studies identify that content is one key characteristic of high quality websites (Wolfinbarger and Gilly 2003), where content refers to the information, features or services offered in a website (Huizingh 2000). Content gratifications are gained from the utilitarian value of content such as useful or beneficial information and site-related content (e.g., convenience, customization) (Jahn and Kunz 2012; Shang et al. 2017; Xu et al. 2012). Effectiveness is a dimension of performance
referring to the extent to which a user has attained the goals (Burton-Jones and Grange 2013). Efficiency refers to the extent of goal attainment for a given level of input (such as effort or time) (Burton-Jones and Grange 2013). In addition, perceived usefulness has been identified as one key driver of people’s actual adoption or usage behavior (Huang 2008; Song et al. 2018). As suggested by a previous study (Palmer 2002), information content, interactivity (customization and interactivity) and responsiveness are significantly associated with website success. Gratifications from information seeking is important for users’ selection of a particular type of medium rather than alternatives (Jahn and Kunz 2012; Xu et al. 2012). In addition, system reliability and perceived tracking fulfillment are important factors when people seek and contribute knowledge in online communities (Phang et al. 2009). Moreover, whether users’ needs can be understood (Clemeś et al. 2014), navigability of the website (Lee and Kozar 2012), and firmness and convenience are important factors as well (Gordon et al. 2018). Therefore, we hypothesize that for both potential and actual mothers’ content gratifications is positively related to adoption of e-commerce platforms of pregnancy and parenting (H1a, p).

**Social Gratifications**

People gain social gratifications from socializing (Lee and Ma 2012). Chatting and interacting with people over the Internet are dimensions of social gratifications (Stafford et al. 2004). Social interaction has a positive effect on gratification and subsequently website continuance usage intention (Chiu and Huang 2015). Interaction with other users (social interactivity) is found to be a major motivation for using a social networking site (Jahn and Kunz 2012; Phang et al. 2009). Further, people are more likely to communicate and interact with those who share similar attributes (Mouw 2006) or have the same socio-demographic characteristics (Gilly et al. 1998). Thus, female-dominated websites are much more likely to be supportive for mothers (Drentea and Moren-Cross 2005). Women use their own experiences of mothering to help themselves and one another (Drentea and Moren-Cross 2005), which are important in forming connections with other mothers dealing with or suffering similar issues (e.g. postnatal depression or toddler tantrums). They interact with each other to obtain social support, which is positively related to their behaviors (Zhang et al. 2014). In addition, women’s purchasing decision is strongly influenced by their evaluation of personal interaction processes (Homburg and Giering 2001). Therefore, we hypothesize that for both potential and actual mothers social gratifications are positively related to adoption of e-commerce platforms of pregnancy and parenting (H2a, p).

**Process Gratifications**

Mothers are motivated by process gratification to present their own pregnancy and parenting related experiences on e-commerce platforms of pregnancy and parenting (Shang et al. 2017). People tell their stories, share their photos, present personal information, and express their opinions in their posts in an online community, which positively affect their satisfaction with the platform (Ma and Agarwal 2007). Online self-presentation acts as a key motivator for the purchase on virtual community websites (Kim et al. 2012; Shang et al. 2017), or user participation (Feng et al. 2018). Specifically, self-presentation value is positively associated with online community engagement and usage (Jahn and Kunz 2012). Previous studies confirm the positive role of social presence in shaping online purchase and usage intentions (Lu et al. 2016; Xu et al. 2012; Zhang et al. 2014). Self-presentation theory explains why people engage in such projecting activities (Kim et al. 2012). Moreover, people will contribute their knowledge when they have the experience to share (Wasko and Faraj 2005). Based on self-presentation theory, mothers can influence other mothers and gain rewards through projecting baby and family images and pregnancy and parenting related experiences on the e-commerce platforms of pregnancy and parenting, where they can find similar mothers and build relationships as well, and thus create and enhance their role of motherhood. Hence, we hypothesize that for both potential and actual mothers process gratifications is positively related to adoption of e-commerce platform of pregnancy and parenting (H3a,p).
Comparison Effect

Previous studies have demonstrated that individual characteristics such as experience and related knowledge play a significant moderating role in users’ behavioral intention (Song et al. 2018). Compared with previous generations, new mothers are less familiar with child-bearing and rearing (Drentea and Moren-Cross 2005). A virtual community of mothers with young children increases information-giving for new mothers (Drentea and Moren-Cross 2005). Previous experience with older children is frequently used as a source of pregnancy, childcare, and parenting information (58.5%) (Baker et al. 2017), which is in line with the findings in CLT that people would generalize from a familiar, previously experienced object or event (Trope and Liberman 2010) to a new one.

Based on CLT, novel objects are perceived as more psychologically distant (Trope and Liberman 2010). The higher the construal level, the more exploratory learning activities are performed (Reyt and Wiesenfeld 2015). Further, Freling et al. (2014) found that if an event was perceived as novel, people’s decision response should be stronger if the information is construed at a high level. This finding was demonstrated among subjects who had higher behavioral intentions when the information was broadly interpreted (high construal level) about an unfamiliar concept (high informational distance) (Chan and Mukhopadhyay 2010). When an object or event was presented as novel versus old, people would assign greater weight to its high-level features and less weight to its low-level features (Trope and Liberman 2010). Distance can be considered as the numerosity of available facts, experiences, details, and knowledge (Fiedler 2007). The nearer the distance to an object or event, the denser the amount of information (Fiedler 2007). In addition, consumers often make decisions based on one single dominant attribute of the product (Fiedler 2007), such as first-hand information (e.g., consumer’s own prior experience) or second-hand information (e.g., literature or the media) (Fiedler 2007). Thus, for potential mothers the adoption of e-commerce platforms of pregnancy and parenting is newer to them as compared with actual mothers with prior experience. Therefore, we assume that potential mothers will have a higher construal level of this activity and will value more the utility functions of the platform, social relationship and enjoyment they get from the process of using the platform, in contrast with actual mothers. Thus, we hypothesize that content gratifications, social gratifications, and process gratifications respectively are a stronger driver for potential mothers’ adoption than for actual mothers (H1c, H2c, and H3c).

References


