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Examining the effect of flow experience on online purchase: A novel approach to the flow theory based on hedonic and utilitarian value

Behcet Yalin Ozkara[a,*], Mujdat Ozmen[a], Jong Woo Kim[b]

[a] Business Administration, Eskisehir Osmangazi University, Eskisehir, Turkey
[b] School of Business, Hanyang University, Seoul, South Korea

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ABSTRACT

The literature indicate that when flow is approached as unidimensional, its effects on online purchase intention are always positively significant, however the results of the studies where the flow is approached as a multidimensional level, is far from indicating a general tendency. The inconsistent results appeared in the literature are regarded as a result of overlooking both the utilitarian and hedonic significance of research context and the hedonic and utilitarian characteristics of the flow's sub-dimensions. In this direction, the effects of flow on online purchase intention are examined upon consideration of those two factors. Research's data were gathered via e-mail survey from an online shopping website's database. A total of 490 samples obtained in this study were analyzed with structural equation modeling. The results indicates that the flow's most valuable antecedent is feedback in the context of online purchase. The dimensions of "enjoyment", "perceived control" and "merging of action and awareness" has positive and time distortion has negative significant effects on online purchase intention. However, no significant effects of the concentration and curiosity on online purchase intention were determined.

1. Introduction

Flow experience is described as the holistic sensation that people feel when they act with total involvement (Csikszentmihalyi, 1975). Over the years, flow-based explanations were posited pertaining to the phenomenon in the context of human-computer interaction such as positive perceptions of and attitudes towards websites (Huang, 2003), intention to use the web (Agarwal and Karahanna, 2000), revisit the website (Koufaris, 2002; Luna et al., 2003), increased learning (Skadberg and Kimmel, 2004), e-learning success (Guru and Nah, 2001), intentions to play online games (Hsu and Lu, 2004), satisfaction with websites (Deng et al., 2010), loyalty to websites (Siekpe, 2005) and online purchase intention (Hausman and Siekpe, 2009). Hoffman and Novak (1996) claimed that the flow can provide a novel framework toward understanding the consumer behavior in the computer environment. This seminal paper has drawn attention from consumer behavior researchers so that the number of flow-based consumer research paper has increased.

Online purchase manifests itself as one of the concepts, which is used most frequently explaining by the flow in the context of human computer interaction (Mahnke et al., 2014). The past research demonstrated that the flow provides significant explanation toward understanding the online purchase behavior of the consumers (Hsu et al., 2012b; Gao and Bai, 2014; Kim and Han, 2014).

The concept of flow has been examined either as a unidimensional construct or multi-dimensional construct. The previous research, which conceptualized the concept of flow as a unidimensional, showed that flow experience has a robust positive effect on online purchase intention (e.g. Luna et al., 2002; Korzaan, 2003; Animesh et al., 2011; Liu and Shiue, 2014). On the contrary, multidimensional evaluation of the concept of flow revealed that flow experience does not have robust positive effect on online purchase. In a detail, multidimensional flow led to conclusion that flow experience would have positive (Hausman and Siekpe, 2009), negative (Shang et al., 2005) or even nonsignificant (Mohd Suki et al., 2008) effect on online purchase. These results implicate that evaluation of the concept of flow as multidimensional created inconsistent results related to effect of flow experience on online purchase. To solve this contradiction, the current paper proposes that inconsistent results stem from the lack of separating the online purchase process into two different contexts, namely, utilitarian online purchase process (planned), hedonic online purchase process (compulsive) while considering the utiliatarian and hedonic characteristics of flow sub-dimensions.

Besides to solve aforementioned contradiction, the current paper

* Corresponding author.
E-mail addresses: bozkara@ogu.edu.tr (B.Y. Ozkara), mozmen@ogu.edu.tr (M. Ozmen), kjw@hanyang.ac.kr (J.W. Kim).

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also contributes to the literature on flow-based online purchase by examining the relationships between the antecedents of flow-experience (challenge, skill, goal clarity, feedback) and the sub-dimensions of the flow in online shopping context (enjoyment, perceived control, concentration, merging of action and awareness, curiosity, time distortion). Although previous research has contributed our understanding of flow-experience related to online purchase process (Domina et al., 2012; Mäntymäki et al., 2014), these past research is a lack of providing an accumulated analysis of the antecedents of the flow-experience which come from the original flow theory with the online purchase process. Put another way, past research examined this relationship by focusing on a certain part of the antecedents of the flow-experience (Koufaris, 2002; Hausman and Siekpe, 2009) rather than collapsing all the antecedents of the flow-experience into the research model.

Put more simply, this paper is a first systematic attempt to examine the relationships between the antecedents of flow-experience and the sub-dimensions of the flow in online shopping context.

2. Literature review

Despite being used so commonly, discussions in the literature concerning how flow should be constructed have continued for quite some time and the ambiguity concerning the topic remains (Finneran and Zhang, 2005; Guo and Poole, 2009; Guo and Poole, 2009; Hoffman and Novak, 2009; Esteban-Millat et al., 2014). It is observed that this ambiguity manifests itself as an important problem in the studies where the effects of the flow on online purchase is examined. Table 1[1] includes researches in the literature that have examined the effects of the flow on online purchase context. An examination of the table indicates that several studies approach the flow as a multidimensional second order factor (Siekpe, 2005; Hausman and Siekpe, 2009; Hsu et al., 2012a), while some of them approach it in a unidimensional way (Luna et al., 2002; Animesh et al., 2011; Huang, 2012; Liu and Shiue, 2014) and some of them examines the direct effects of dimensions of the flow (Koufaris, 2002; Bridges and Florsheim, 2008; Lee and Chen, 2010; Domina et al., 2012).

An interesting tendency regarding the issue manifests itself when the results of the study is examined regarding the flow construct. The results of all studies where the flow is approached as unidimensional, even though they are in different contexts, flow have positively significant effects on purchase (Luna et al., 2002; Korzaan, 2003; Animesh et al., 2011; Liu and Shiue, 2014) (13 out of 13 researches), however the results of the studies where the flow is approached in a multidimensional way is far from indicating a general tendency. While the researches that approach flow as multidimensional, in terms of sub-dimensions reach conclusions that it has positive effects on purchase (Siekpe, 2005; Hausman and Siekpe, 2009; Hsu et al., 2012a; Mäntymäki et al., 2014), some researches did not identify a significant effect (Shang et al., 2005; Mohd Suki et al., 2008) and some researches reached conclusions that some dimensions of the flow might have negative effects (Shang et al., 2005; Lee and Chen, 2010).

Addressing current studies in terms of their context also reveal inconsistent results. Primarily, it is seen that most of the studies confine themselves to consideration of online purchase processes within a broad framework within the context of online shopping by ignoring hedonic and utilitarian content and characteristics of the context (Lee and Chen, 2010; Hsu et al., 2012a; Zhou, 2013; Zanjani et al., 2016). Besides, the studies discussing the relevant purchase processes within a restrain specific process of buying laptop (Hausman and Siekpe, 2009), virtual goods (Animesh et al., 2011), clothes (Siekpe, 2005) or online travel (Wu and Chang, 2005) ignore the difference between hedonic and utilitarian characteristics of the processes. As a result, when the studies are considered unidimensionally, they manifest positive effects of flow on online purchases independent of their contexts (Ali and Ali, 2016; Liu et al., 2016; Zanjani et al., 2016). However, the findings of studies using flow multidimensionally are far from displaying a consistent tendency even when common contexts shared researches are considered together (Domina et al., 2012; Mäntymäki et al., 2014). This finding suggests that context itself cannot be used as a basis in explaining inconsistent results regarding flow when the utilitarian and hedonic characteristics are ignored.

This large conceptualization mostly results with the ignorance of whether the consumer has a purchase intention in his mind (utilitarian) or he is just browsing (hedonic). As stated by Hoffman and Novak (2009) as well, it is known that it is important to make those segregations while testing the effects of the flow, which has significant effects on the results. Furthermore, Bridges and Florsheim (2008) points out that the effects of the flow vary in hedonic and utilitarian processes in terms of the sub-dimensions of the flow and reached conclusions pointing out that, although some dimensions bear both hedonic and utilitarian characteristics, some dimensions may have significant effects only in hedonic processes and some in only utilitarian processes. Therefore, considering the fact that hedonic motivations are more dominant in browsing processes and utilitarian motivations in planned purchases, it can be stated that the studies on this process largely conceptualizing online shopping without overseeing this discrimination may ambiguate effects of the flow. In the context of our study, the effects of the flow experience is approached as a part of the online shopping process in which the consumer enters with the intention of purchasing a product in order to avoid this problem.

The second basic problem is thought to be based on a general opinion in the literature oriented to the fact that the flow is generally a mental issue only with positive outputs in terms of online purchase (Korzaan, 2003; Animesh et al., 2011; Zhou, 2013; Gao and Bai, 2014) despite the conclusions and discussions that it may have negative effects (Pace, 2004; Smith and Sivakumar, 2004; Lee and Chen, 2010). As a result of this, the sub-dimensions of the flow that may include negative and positive outputs in the related context may coexist within the second order factor constructs. Accordingly, this opposite outputs manifesting in sub-dimension basis may turn each sub dimension's effects neutral and the effects of second order factor insignificant. Considering the fact that not all aspects must occur simultaneously; the occurrence of at least one of the dimensions that can vary according to context may be sufficient to experience flow as stated by Novak et al. (2000), testing the direct effects of the flow in terms of its sub-dimensions is also theoretically significant. In addition, as stated by Lee and Chen (2010), there are still a limited number of studies consider the flow sub dimensions direct effects. Considering the discussions pointing out that the flow may have negative effects in terms of some dimensions (Pace, 2004; Smith and Sivakumar, 2004; Lee and Chen, 2010), it was discussed that the curiosity and time distortion dimensions, for which the hedonic characteristics of the flow is dominating in planned purchasing that is a utilitarian process, may have negative effects and related hypotheses were tested.

Some researchers in the literature note that the unidimensional measurement of the flow is a useful way to avoid these inconsistent results put forth by the flow approached in a multidimensional way (Huang, 2012, p.258). However, the literature includes claims that unidimensional measurement of the flow largely generalizes the mental state that flow creates in the individual and emotions and that the large and complex concept of the flow is comprehensively simplified in unidimensional studies (Chen et al., 2000). For these reasons, the researchers point out that the flow should be approached multidimensionally when possible (Hoffman and Novak, 2009; Hooker, 2010).

[1] Cognitive Absorption, defined as a state of deep involvement with software (Agarwal and Karahanna, 2000), based on the flow theory and stated to have similar structures with the flow by many researchers (Hoffman and Novak, 2009 p.27), is included in to the study with the acceptance of a kind of multidimensional flow construct.