

# THE EFFECTS OF EXPERIENTIAL VALUES ON APPS CONTINUANCE USE INTENTION

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## ABSTRACT

This study adopts the perspective of Experiential Value Theory to uncover how users develop positive attitudes toward the APP and thus lead to the willingness of continuance use. We collected 178 empirical observations to test the proposed research model with SEM technique. The results showed that: (1) The perceived experiential value does have a positive impact on the APPs user's attitude toward the APP, which in turn positively drives the APPs user's continuance use intention; (2) The effects generated by experiential value upon continuance use intention is fully mediated by the user's attitude toward the APP; (3) The experiential value dimensions of aesthetics, user return of investment (user ROI), and service excellence are three significant positive antecedents for the user's attitude toward the APP, however, the dimension of playfulness is fail to generate significant impact. Detailed implications and recommendations are finally discussed.

**Keywords:** *APPs, Experiential Value, Continuance Use Intention, SEM, Full Mediation*

## INTRODUCTION

We are moving to a world equipped with handy smart devices accessing to several hundred thousand APPs or mobile services, however, very few of them are truly frequently used [6]. This raises a very serious issue that many designers or providers of these mobile services are currently facing problems of low profits and a high rate of discontinuation [6][7][9][11]. Research on continuous usage has emerged as a dominant issue in IS literature. Previous studies in IS domain have demonstrated that the eventual success of a developed system depends more on continued use rather than on the initial adoption [2]. Retaining the system users can reduce the operating costs and increase profits. It is important for the system provider to establish sustainable relationship with their existing users [3][16]. Retaining users is still important even without direct revenue from the paid fee for the application software on the smart devices, for their high potential of providing channels for marketers to generate business income, such as embedding any paid ads content or directly clicking through to vendors [15]. This study conducts an empirical study employing the Experiential Value Theory [12][13] to verify its potential of explaining the APP continuance psychological process. Specifically, we firstly investigate the overall path model

composed of APP user perceived experiential value, attitude toward the APP, and APP continuance use intention. We then plan to clarify the effects generated by each experiential dimension upon the attitude, in order to understand the roles that each experiential dimension plays. This investigation expects to provide both managerial and academic insights after the completion of an empirical survey on subjects with prior experiences of operating APP software on smart devices.

## **LITERATURE REVIEW AND HYPOTHESES**

Holbrook and Hirschman [5] firstly recognize the important experiential aspects of consumption. They regard the consumption experience as a phenomenon directed toward the pursuit of fantasies, feelings, and fun. Mano and Oliver [10] assessed the dimensionality and structure of the consumption experience. Babin and Darden [1] also addressed the perspectives of intrinsic and extrinsic views of consumption experiences. They all devoted to extracting different dimension of experiential aspects that consumers have in shopping occasions. Mathwick, Malhotrab, and Rigdonc [12] attempted to integrate the conventional marketing studies and proposed their experiential value scale composed of 4 experiential dimensions: return on investment, service excellence, aesthetics, and playfulness. They argued its potential of explaining contemporary consumers' responses toward consuming choices under online or offline circumstances. They also validated in their studies that people firstly experience some intrinsic and extrinsic values and then develop preferences or positive tendencies that eventually drive them to shop online or offline [12][13]. The process conceptual framework composed of experiential value dimension, psychological preference, and behavioral intent will be adopted as the theme logic of this investigation. Applying similar logic, we believe the Theory of Experiential Value shall be successfully deducted to explain the APP use behavior. Since the download cost is negligible, people often face crowded choices and then feel free to install APPs on their handy devices. However, most of these installed APPs are rarely used or quickly removed due to massive free options found on the APP market platform [9][11]. We believe the perspective of experiential values is even more important than traditional consuming context, for people do experience the installed APP mobile software to some extent. What is the core issue to make users decide to exercise continuance use? The answer might be uncovered by the Experiential Value Theory [12][13]. Instead of using vague variables like preference and patronage intent, we replace and extend the original work by employing user's attitude toward the APP and continuance use intention. Therefore, we propose the hypotheses below:

***H1: The perceived experiential value is positively related to APP user's attitude toward the APP***

***H1-1: The perceived user return on investment is positively related to APP user's attitude toward the APP***

***H1-2: The perceived service excellence is positively related to APP user's attitude toward the APP***

***H1-3: The perceived aesthetics is positively related to APP user's attitude toward the APP***

***H1-4: The perceived playfulness is positively related to APP user's attitude toward the APP***

***H2: The APP user's attitude toward the APP is positively related to APP user's continuance use intention***

Within the traditions of the attitudinal psychology, there has been a long-lived debate on arguing the necessities for the existence of the attitude construct, for its highly predicting power to the behavioral intentions or even actual behavior makes critical researchers challenge that the construct is virtually created for just academic games [4]. Combining the rationales of Experiential Value Theory and those IS continuance use studies, we propose a process model composed by the experiential value, attitude toward the APP, and continuance use intention. In order to clarify the process hierarchy, we will set up competing path models to validate the mediated path inside the research model. We finally posit H3 below:

***H3: The effect of experiential values on the continuance use intention is fully mediated by the user's attitude toward the APP***

## **METHODOLOGY AND DATA COLLECTION**

The perceived user ROI here refers to the tangible or intangible gain that the user receives relative to the total cost devoted through the use of APP, that can be measured by 3 items adapted from [8][12][13]. The perceived service excellence here refers to the APP provider's high level service standards with efficiency and professional quality satisfying customers' needs through the use of APP, that can be measured by 3 items adapted from [8] [12][13]. The perceived aesthetics here refers to the pleasantness exerted from the sensational elements and entertaining effects through the use of APP, that can be measured by 3 items adapted from [12][13]. The perceived playfulness refers to the fun enjoyed by the user, enabling that he or she can fully experience the joyful and escaping imaginations in using the APP. It can be measured by 3 items adapted from [12][13]. The APP user's attitude toward the APP here refers to the APP user's overall predisposition to respond favorably or unfavorably to the APP in use, that can be measured by 4 items adapted from [2]. The APP user's continuance use intention here refers to the willingness that the user expects to continuously use the APP in the future, that can be measured by 4 items adapted from [2]. All these scales detailed as above were designed into 5-point Likert scales distributed for self-completions of respondents. This research required respondent to report his or her mostly used APP and assess the following questionnaires according to this specific APP use experience. All the empirical data is analyzed with SPSS 19.0 and SmartPLS 2.0 M3 [14]. Using gifts as incentives, we totally collected 178 effective convenient questionnaires. These samples were skewed to male (68.5%), mainly in early twenty's (aged <20: 16.3%; aged 21~25: 42.7%), mainly well-educated

(college or above: 91.5%), less than a half are students (students: 44.9%). Their mobile platform in use are mostly based on ANDROID (62.9%), APPLE iOS (25.3%), and WINDOWS family (11.8%), and their most frequently used APP is instant communication software, including LINE, WHAT's APP, and WECHAT.

## RESULTS

The reliabilities of collected measures were good enough (Cronbach's Alpha: 0.809~0.919) and also well secured in both convergent and discriminant validity (standardized factor loading in first order factor structures: 0.817~0.905,  $t > 22.272$ ,  $p < 0.001$  \*\*\*; factor AVE: 0.724~0.770, and were greater than all the squared factor correlation expressing cross factor coupling). All the measures and governing factors were then specified in PLS according to our reflective factor structures and path model. Through using PLS algorithm and bootstrapping process within the analytic modules, an estimation for testing both the measurement and structural model was derived. The estimated path figures were further examined to test the hypothesized research model. Overall, in the APPs use context, our major arguments of hypotheses were supported. Experiential value was found to be positively related to user's attitude toward the APP (standardized path=0.820,  $t=32.367$ ,  $p < 0.001$ \*\*\*, H1 was supported), and attitude was in turn also found to be positively related to the continuance use intention (standardized path=0.798,  $t=23.393$ ,  $p < 0.001$ \*\*\*, H2 was supported). Since the process hierarchy model was firstly supported, we conduct another path analysis on the antecedent model composed of 4 experiential value dimensions. The perceived user return on investment (ROI) was found to be positively related to user's attitude toward the APP (standardized path=0.327,  $t=5.396$ ,  $p < 0.001$ \*\*\*, H1-1 was supported); the perceived service excellence was found to be positively related to user's attitude toward the APP (standardized path=0.174,  $t=3.293$ ,  $p < 0.001$ \*\*\*, H1-2 was supported); the perceived aesthetics was found to be positively related to user's attitude toward the APP (standardized path=0.380,  $t=5.689$ ,  $p < 0.001$ \*\*\*, H1-3 was supported); finally and surprisingly, the perceived playfulness was NOT found to be positively related to user's attitude toward the APP (standardized path=0.078,  $t=1.232$ ,  $p > 0.05$ , H1-4 was NOT supported). The explanatory capability of this antecedent view for attitude toward APP accounted for nearly 70% of the variance in the criterion variable. After understanding the specific effect that each experiential value dimension exerts, we expected to finally clarify the mediation path in our proposed research model. We attempted to validate the process hierarchy through setting up another competing model. In this rivalry model, we specified another direct influencing linkage from the experiential value to continuance use intention and found the additional direct path was fail to be significant ( $t=0.118$ ,  $p > 0.05$ ). We can also observed that inserting the direct effect of experiential value on continuance use intention could not effectively raise the variance explained ( $R^2$  comparison: 0.637 vs 0.637 ), suggesting that the effects exerted by experiential values do have impact on the continuance use intention through the full mediation of attitude, instead of being capable of bypassing the mediated path. Therefore, H3 was supported.

## CONCLUSION

It was found that, using Taiwanese APPs market as the empirical context for testing the Experiential Value Theory, the overall process model path composed of experiential value, attitude toward the APP, and continuance use intention has been preliminarily witnessed. It shows that people do count on those experiences of using the APP to develop the attitudinal judgment, which in turn leads to the decision of whether continuously using the APP. Among these experiential value dimensions, perceived aesthetics is the strongest one of the influencing factors in experiential values. User ROI is the second, and service excellence is the third. We recommend APP designers or providers could refer to the findings of this study and deploy their APPs more strategically. They should pay special attentions to designing an APP delivering visually fascinating elements and thus acquire users' positive attitudinal judgments the most. User ROI is the second issue. APPs designers should equip their mobile software with functionalities providing solutions satisfying various kinds of needs in people's daily lives. Those APPs should be useful and easy to ease without massive amount of download connections or other fees. Finally, providing sufficient and quality services still matters in the APPs market, for users still have service needs for version upgrading, user feedback, or trouble shooting. The conduction of this study successfully deducts the Experiential Value Theory built in the marketing discipline into the mobile context. We also extend the theory to predict the APP continuance use intention. We do believe there has been a chance for a parsimonious explanatory model toward explaining the APPs continuance behavior. We recommend future studies to re-test our proposed model under more specific APPs category. We also suggest successive researchers: to trace antecedents upward for attitude to explore more exogenous factors in order to provide more detailed insights for APP deploying strategy formulations, to extend further to link with actual continuance use behavior, to explore more contingency factors exerting significant moderating effects, or to set up more competing models portraying the influencing factors leading to the APPs use behavior. Hopefully, this study expects to contribute to the theoretical systems and practices of APP mobile technology deployment management, and also inspire more studies investigating the APPs use behavior.

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