# Chapter 16
# An Investigation of the Adoption of Online Game Technologies in Indonesia

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## ABSTRACT

*This study examines influences on an individual's intentions to use online game technologies. Data was collected by the questionnaire from a sample of 895 individuals of age 12 – 26 years in Indonesia. A theoretical model extending the Unified Theory of Acceptance and Use of Technology included causal effects on intentions as well as moderating effects due to the individual's gender, age, and experience. The model was analyzed using structural equation modeling techniques and the results confirmed several findings from previous studies respected especially with the positive effects of enjoyment, ease of use, and the availability of infrastructure on the individual's intentions. New findings showed that gender, age, and experience moderated the effects on the individual's intention due to social influences, feelings of involvement, and perceptions of personal attainments, respectively. Moreover, new findings emerged for differences and similarities in the significant effects in the theoretical model among the groups defined within the scales of gender, age, and experience.*

## INTRODUCTION

The adoption of online game technologies is an important issue for governments, users, developers, parents, teachers, and those who are concerned about the economic, social, and personal implications of the use of online games. In Indonesia, in line with the increased availability and use of technologies such as smartphones and tablets, the use of online games has continued to increase especially among younger individuals. Based on BPS-Statistics Indonesia (2014) there are approximately 59 million individuals in Indonesia in the age range 12-26 years. In 2014, approximately 82 percent of online game players were less than 24 years of age and 10 percent were of age 25-34 years (Baskoro, 2015). Although, the adoption of online game technologies in Indonesia has been extensive, there has been very limited research conducted on this topic (Rakhmani, Darmawan & Iwatani, 2015) and this study addresses that issue.

Many studies of online gaming systems have proposed theoretical models derived from the Technology Adoption Model (TAM) (Davis, 1989; Davis, Bagozzi, & Warshaw, 1992), the Theory of Planned Behavior (TPB) (Ajzen, 1991), combinations of TAM and TPB, or to a lesser extent the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, G. Davis, & F. Davis, 2003). This study proposes a theoretical model which is closely related to the UTAUT model. It includes two additional variables (Perceived Enjoyment and Flow Experience) which were found to be important in several previous studies based on TAM, TPB, or combinations of TAM and TPB. One of the attractive features of the UTAUT is that it is one of only a few models that include moderating effects. Notably, there have not been any published studies on the adoption of online gaming technologies in Indonesia based on the UTAUT mod

The purpose of the study is to examine factors that influence an individual's intention to adopt online gaming technologies. In order to achieve this purpose a sequence four specific and related research questions are addressed: (a) Which factors have an influence on an individual's intention to adopt online gaming technologies? (b) What are the relationships among these factors? (c) Which relationships represent significant causal effects and which represent significant moderation effects? (d) What are the theoretical and practical implications of the answers to the preceding three questions? The outcomes of the study are expected to contribute to a theoretical understanding of the adoption of online gaming technologies and to provide practical guidance for those who have interests in online games.

Against this background, the article begins with a review of related literature and the formulation of a theoretical model. This is followed by a description of the research design and methodology used in the study. The next section presents the results of the data analyses and this is followed by a discussion of the findings of the study based on the results of the data analyses. The final section presents conclusions practical implications of the findings and a discussion of the limitations of the study and possible further related studies.

## RELATED LITERATURE AND THEORETICAL MODEL

The purpose of this review is to identify important variables and their causal or moderating effects on an individual's intention to use online gaming technology. The focus is on recent studies that used quantitative methods and empirical data to evaluate theoretical causal models. Based on the findings of previous studies, a theoretical model is developed with associated research hypotheses.

### Overview of Previous Studies

Table 1 summarizes the characteristics of previous related studies of the adoption of online gaming technologies. The studies are presented in two groups: studies of Behavioral Intention/Motivation in the context of online gaming; and studies of Behavioral Intention in the more general context of technology adoption.

From Table 1 it is seen that almost all of the studies of behavioral intention in the context of online gaming or technology adoption propose a theoretical model with hypotheses that are tested using quantitative data collected using a questionnaire. TAM, TPB, and models combining TAM and TPB are used extensively. However, there are a limited number of studies that investigate moderating effects and very few are based on UTAUT and in particular none of these have been conducted in Indonesia.

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