Willingness to Pay and Disposition Toward Paying for Apps: 
The Influence of Application Reviews

Christopher P. Furner, Department of Management Information Systems, East Carolina University, Greenville, NC, USA
Robert Zinko, Texas A&M University -- Central, Texas, USA

ABSTRACT
This article describes how mobile application adoption is growing dramatically. However, only a small proportion of mobile apps are paid for. This leads to the question: which factors dispose an individual to be willing to pay for an app? Using uncertainty reduction theory as a framework, along with transaction cost economics, this study considers several individual level, app and app review characteristics which may influence willingness to pay. An experiment is conducted using a mobile application marketplace simulator and 4 application reviews are developed which vary in terms of information quality and app utility. Also measured are several individual characteristics. Findings suggest that individuals who have a disposition toward paying for apps and those who score low in terms of mobile computing self-efficacy are willing to pay more for apps. Also, individuals are willing to pay more for hedonic apps than utilitarian apps. Finally, there is a positive relationship between both history of paying for apps and trusting disposition on disposition toward paying for apps.

KEYWORDS
e-Word of Mouth, Mobile Applications, Mobile Commerce, Mobile Consumer Behavior

INTRODUCTION
Consumer behavior researchers have studied the topic of willingness to pay (WTP) in a number of contexts (e.g. Weaver & Luloff, 1992; Wertenbroch & Skiera, 2002). Researchers generally focus on individual, product and brand characteristics which foster WTP. For instance, Teller, Kotzab, and Grant (2006) explored WTP in the context of grocery retailing. In the e-commerce context Hinz, Hann, and Spann (2011) investigate dynamic pricing, in which e-tailers offer different prices to a variety of consumers based offers that the consumers make via name-your-own-price websites.

Although WTP has been studied in traditional commerce as well as e-commerce, very little attention has been paid to WTP in mobile commerce, or specifically WTP for mobile applications (apps). A limited number of app adoption studies are starting to emerge (e.g. Al-Jabri & Sohail, 2012; M. Keith, Babb, Furner, & Abdullat, 2015), however as of yet, they do not consider WTP. This is surprising, given the extensive interest in WTP by consumer behavior researchers, and the explosive growth of mobile computing based on a monetized application delivery system with over $85 Billion
in revenue in 2016 (Thompson, 2017). Understanding the factors (individual characteristics as well as app characteristics) that influence willingness to pay for mobile apps promises to not only provide valuable insight for app developers, but also could precipitate an extensive line of inquiry among marketing researchers.

Since the consumer is making an assessment of the ability of the app to meet a specific need, without having used the app before, they must act under uncertainty (M. J. Keith, Babb, Furner, Abdullat, & Lowry, 2016). Free apps provide the opportunity to try-before-you-buy, making them low risk, however, paid apps generally lack this ability and are thus higher risk purchases (Furner, Racherla, & Babb, 2015). Since app selection is an optimization problem fraught with uncertainty, consumers are expected to employ numerous uncertainty reduction strategies to better assess the extent to which an app might meet their needs. One uncertainty reduction strategy is passive observation via the consumer reviews facilitated by the application marketplace. These reviews provide the consumer with insight into how effectively the app met the needs of other consumers, serving as an important uncertainty reduction tool.

However, the uncertainty reducing effects of these reviews are mitigated by a number of factors. First, reviewers differ on a number of factors, including their needs and expectations from the app. This forces the consumer to evaluate the congruence between their needs and those of the reviewer. In addition, most apps have a substantial number of reviews, making it unrealistic for a consumer to read them all. This forces the consumer to attempt to narrow down the reviews that they read to those which are most relevant to the needs that they are attempting to meet. Finally, not all reviews are written by actual consumers (Ludwig et al., 2013), some reviews stem from individuals with a vested interest in the success or failure of the app. This forces the consumer to make a veracity assessment of the reviews that they read, and to consider those which they believe to be genuine.

The objective of this study is to better understand the factors that influence willingness to pay for mobile applications. Our research questions are as follows:

**RQ1:** Which individual level characteristics influence willingness to pay for mobile applications?
**RQ2:** Which application characteristics influence willingness to pay for mobile applications?
**RQ3:** Which review characteristics influence willingness to pay for mobile applications?

In order to answer these research questions, a model of WTP for mobile apps is developed. Also, a new individual level characteristic called disposition toward paying for apps is developed. This paper proceeds as follows: in the subsequent section, relevant literature related to WTP, decision making under uncertainty, and word of mouth in a product-review context is discussed. Next the model is outlined and the hypotheses which are tested to answer the research questions are developed. The methodology is then presented, followed by a discussion of results, limitations, implications and opportunities for further exploration. Summarizing remarks conclude the paper.

**LITERATURE REVIEW AND MODEL DEVELOPMENT**

Before outlining our model and hypotheses, relevant literature related to consumer decision making under uncertainty, as well as word of mouth as a means to overcome consumer uncertainty are discussed.

**Uncertainty and Word of Mouth**

When a consumer is evaluating competing products or services, they are engaged in an optimization problem under uncertainty (Malhorta, 1984). Consumers are rational agents bounded by limited information (Yong & Xinlin, 2012). Specifically, they must determine what their needs are and how well each alternative product or service will meet those needs. They must do this in the absence of
A Context-Based Performance Enhancement Algorithm for Columnar Storage in MapReduce with Hive
www.igi-global.com/article/a-context-based-performance-enhancement-algorithm-for-columnar-storage-in-mapreduce-with-hive/105509?camid=4v1a

Setting the Dutch E-Government Interoperability Agenda: A Public-Private Partnership
www.igi-global.com/chapter/setting-dutch-government-interoperability-agenda/45781?camid=4v1a