Understanding the Characteristics of Early and Late Adopters of Technology: The Case of Mobile Money

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ABSTRACT
Every year, thousands of new technological ideas are conceived. An ability to innovate these ideas continues to be critical in surviving the current business world. This study identifies and empirically assesses the characteristics of technological innovativeness. A research model based on the existing literature on consumer innovativeness is thus presented. The model is tested via a survey instrument from a population of earlier adopters of mobile money services in Ghana and analyzed using ANOVA and independent sample t-test techniques in SPSS. The results showed that early adopters of technology are younger, novelty seekers, and more likely to have good employment and opinion leadership than late adopters. The study contributes to diffusion literature by providing further empirical evidence on the distinctive characteristics of early and late adopters of technology and posits that contrary to past research, independent judgment making of an individual does not affect innovativeness.

Keywords: Adoption, Diffusion, Early Adopters, Innovativeness, Mobile Money

1. INTRODUCTION
Every year, thousands of new technological ideas are conceived. An ability to innovate these ideas has been and will continue to be critical in surviving the current business world. Hence, the diffusion of technological innovations and consumer adoption behavior persist as an important issue for researchers in the past few decades. Whereas some researchers have devoted significant research activities on developing theoretical models (Venkatesh, 2003; Davis et al., 1989) to explain the phenomenon, others have sought empirical support for the conceptualizations (Cheng et al., 2006; Chen, 2008). However, majority of these researches have been focusing on identifying the perceptions of the technology attributes (e.g., perceived usefulness), called innovation characteristics, that influence technology acceptance decisions. There is very little research that has been conducted to identify the distinctive characteristics
of early adopters and late adopters (Rijnsoever & Donders, 2009) within the mobile data services domain. Moreover, there is enough evidence in the literature to suggest that there are benefits to be gained from being able to identify and target early adopters of an innovation (Goldsmith & Flynn, 1992; Mcdonald & Alpert, 2007). The early adopters represent an important cash flow for the company eager to recover some of its product development cost and hence marketers will like to understand the basic characteristics of such people to target them.

Mobile money, which is generally referred to as a suite of financial services offered through mobile phones, is one of the newest forms of services resulting from the rapid convergence of communication technologies to be widely deployed in the developing economies (Dolan, 2009; Jenkins, 2008). The newness of this innovation provides an opportunity to make contributions to the innovation diffusion literature by examining the characteristics of its early adopters. It is thus both challenging and topical to explore the characteristics of Mobile Money users at this early market stage and to identify potential predictors of further adoption and, eventually, mass acceptance of this phenomenon.

Understanding the key characteristics of early adopters is obviously of theoretical and practical relevance to behavioral science (Bartels & Reinders, 2010). From a theoretical perspective, it will enable researchers to develop richer theoretical models to explain the adoption behavior across different types of consumer products (Agarwal & Prasad, 1998). It will also assist practitioners to target the relevant consumers to facilitate the diffusion of an innovation. Specifically, this study looks at its application to a mobile money service. The research question is thus formulated as follows: How do the early adopters of mobile money differ from its late adopters?

The study aimed at exploring this question through a novel analytic perspective drawing on literature from consumer innovativeness and innovation diffusion research. The general motivation of this study is to contribute to the existing discussions on the factors that affect the adoption of mobile data services. The study specifically focuses on the earlier adopters of technological innovations, attempting to uncover their unique characteristics and reveal their motivations, thereby investigating the innovativeness of early adopters of mobile money services. Finally the study also contributes towards the theoretical debate on what consumer innovativeness really is. A review of existing literature on consumer innovativeness indicates that the majority of studies have been conducted with target innovations that have been in existence for some time. A significant contribution of this study is empirically testing these constructs on a new innovation in the domain of mobile data services.

The rest of the paper is organized as follows; first we provide the theoretical framework of the study which contains a contextual description of mobile money, adopter categories, demographic variables and consumer innovativeness leading to our research model. Then, our research methodology as relates to data collection and measurement test and validity analysis is described. The section that follows outlines the results providing the demographic profile and the psychometric analysis. The discussions and conclusions of the results are then provided. Finally research limitations are identified.

2. BACKGROUND: MOBILE MONEY

The phenomenon of interest in this study is to explore the distinctive characteristics of early and late adopters of mobile money in Ghana. Mobile money can be defined as a suite of financial services offered through mobile phones and other handheld mobile devices (Dolan, 2009). The key services included in the mobile money domain are person-to-person money transfer (domestic and international remittances); phone top-up (paying of credit units); mobile payment for retail transactions (including payment of bills) and mobile banking (Hughes & Lionie, 2007; Ivatury, Gautam, & Mas, 2008).
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