Chapter 51
A Cross-Cultural Study of Smartphone Adoption in Uzbekistan and South Korea

Nodir Sanakulov
University of Jyväskylä, Finland

Heikki Karjaluoto
University of Jyväskylä, Finland

ABSTRACT

Smartphone technology has changed how mobile phones are perceived and used in daily life. In 2015, global smartphone sales reached 1.4 billion units, representing an increase of 14.4 percent from 2014. Despite this popularity, penetration rates vary significantly across countries, with a global median of 43%. The main purpose of this research is to examine smartphone adoption in Uzbekistan and South Korea based on the Unified Theory of Acceptance and Use of Technology (UTAUT) and to categorize constructs according to the Kano model. The findings indicate significant differences between South Korea and Uzbekistan in terms of technology adoption as a whole and perception of UTAUT constructs.

INTRODUCTION

Smartphone technology has changed how mobile phones are perceived and used in daily life. This technological revolution saw the convergence of mobile phone technology with functions native to consumer products such as digital video and stills cameras, personal digital assistants (PDAs), MP3 players, computers, and GPS tools. This development means that users can now access multiple functions within a single device (Okazaki & Mendez, 2013), and the range of functions is increasing rapidly. In addition to generic phone functions, the smartphone user can access Internet wirelessly, take pictures, perform financial transactions, stream or watch audiovisual content, use various tracking functions, and play high quality video games. With technological advances and an increasingly competitive market that includes newcomers such as Huawei, ZTE, Xiaomi, smartphone prices continue to fall, further increasing their popularity. According to Gartner (2016), 403 million smartphones were sold to end users in the fourth

quarter of 2015, representing an increase of 9.7% in the same period in 2014. In 2015 as a whole, smartphone sales reached 1.4 billion units—an increase of 14.4% from 2014 (Gartner, 2016)—and the total number of mobile subscriptions reached 7 billion (ITU, 2015). Increasing demand and new possibilities affected market size worldwide, prompting interest from many related industries, including video game developers, who had traditionally focused on PC, Sony PlayStation and Xbox game consoles. Among these, Sony announced an "aggressive" push into mobile gaming following its rival Nintendo's phenomenal success with the mobile game Pokémon Go (Financial Times, 2016). The advertising industry is also rushing to gain market share; according to eMarketer (2016), there will be more than 2 billion smartphone users in the world and 101.37 billion dollars will be spent on mobile advertising, accounting for more than 50% of all digital ad expenditure. Other industries such as banking, retail, travel, and healthcare are also following suit.

Despite this popularity, smartphone penetration rates vary significantly across countries, with a global median of 43% (Pew Research Center, 2016). While one might expect high penetration in Japan as a center for innovative technologies, Pew Research Center (2016) reports actual smartphone usage rate there of around 39% of the total population as compared to 88% in South Korea. Despite general similarities in culture and technology innovativeness, these neighbors differ hugely in terms of smartphone usage. This may involve many intrinsic and extrinsic factors, such as cultural differences (Straub, 1994), usage habits (Shin & Choo, 2012), uncertainty (Edison & Geissler, 2003), and technological availability. Cultural values are a set of guiding principles that affect formation of behaviors and attitudes (Homer & Kahle, 1988), and numerous past studies have reported the influence of culture on technology acceptance and usage (Sanakulov & Karjaluoto, 2017). For example, one comparison of office workers in the US and Japan found that the Japanese tend to prefer more socially present and information-rich channels (Straub, 1994).

Smartphones represent a useful context for this technology acceptance study mainly because the technology remains subject to an ongoing process of acceptance, as confirmed statistically by a number of sources (Gartner, 2016; Pew Research Center, 2016). A literature review conducted by the authors found few cross-cultural studies comparing smartphone adoption. To contribute to the understanding of the role of cultural factors and their effects, the present study investigates smartphone adoption in two different groups: Uzbeks and South Koreans. The results obtained from each group are compared and categorized in terms of each group's perceptions of the particular determinants of adoption.

As a theoretical base, the study employs a slightly modified version of Venkatesh and Morris's (2003) Unified Theory of Acceptance and Use of Technology (UTAUT). Over the past decade, UTAUT has been used increasingly in academic research for its relatively high explanatory power and convenience in use. After measuring the strengths of UTAUT drivers and identifying differences among the two groups, the study categorizes each driver according to Kano's theory to examine group differences in perception based on each construct's level of importance.

Uzbekistan and South Korea were chosen for several reasons. First, both countries represent Asian culture in general but differ significantly from each other in cultural, geographic, and economic terms; while South Korea is a developed country, Uzbekistan can be characterized as developing. Second, smartphone usage rates vary greatly across these countries (BuddeComm, 2017; Pew Research Center, 2016), and in all cases, smartphone adoption is still growing. Finally, the resources to conduct this research in these countries were available to the authors. As compared to South Korea, Uzbekistan remains unexplored in this context, and the comparison using extended UTAUT represents an opportunity to explore differences in adoption and perceptions, as well as testing the generalizability of UTAUT.

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