Smartwatches -Accessory or Tool

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Abstract:

Although still in the early stages of diffusion, smartwatches represent the most popular type of wearable devices. Yet, little is known why some people are more likely to adopt smartwatches than others. To deepen the understanding of underlying factors prompting adoption behavior, the authors develop a theoretical model grounded in technology acceptance and social psychology literature. Empirical results reveal perceived usefulness and visibility as important factors that drive intention. The magnitude of these antecedents is influenced by an individual's perception of viewing smartwatches as a technology and/or as a fashion accessory.

1. **Introduction**:

    In particular, the question of what drives the adoption of smartwatches[1] remains unanswered. Thus, research is desperately needed to more comprehensively understand this gap of a technology that is still in the beginning stages of its product lifecycle. For managers, understanding what contributes to the adoption of a new innovation can aid in the design process of highly successful products. While Kim and Shin (2015) have studied smartwatches adoption from the perspective of technology acceptance model (TAM), they include users of several wearables, such as Fitbit Flex and Samsung Galaxy Gear in their sample. Here, the primary purpose of these devices is collection of data that a user can analyze on a different device (e.g. laptop computer or smartphone). Furthermore, smart wristbands do not offer the possibility to install applications (apps). In contrast, smartwatches have a larger screen than smart wristbands[2], making it possible to present relevant information (e.g., Facebook notifications, Emails) to the users when they are connected to the Internet (Wifi, mobile Internet or Bluetooth). Examples are Apple Watch, LG G Watch, and Samsung Gear Live. Thus, to bridge the knowledge gaps and to increase diffusion speed of smartwatches, this study examines factors that drive adoption behavior among non-users of smartwatches and identifies how consumers [3]classify this new technology. While smartwatches could be categorized as a smaller version of existing devices (e.g., smartphones or organizers), they could also represent a fashion [4]accessory that consumers can wear on their wrists.

2. **Literature review and model development:**

    The current research model derives its theoretical foundations from technology acceptance and social psychology literature: the TAM (Davis, 1989) and visibility (Fisher & Price, 1992). TAM is one of the most commonly used models to understand the individual acceptance of emerging information and communication technologies and it has been successfully applied in related mobile and wearable technology studies Traditionally[5], perceived usefulness is defined as "the extent to which a person believes that using particular technology will enhance his/her job performance" (Davis, 1989, p.320). However, since the new technology is studied from a

potential consumer's perspective, we redefine perceived usefulness of smartwatches as the extent to which a consumer believes that using smartwatches increases his or her personal efficiency, such as being more organized and more productive (adapted from Kulviwat et al., 2007; Park & Chen, 2007).
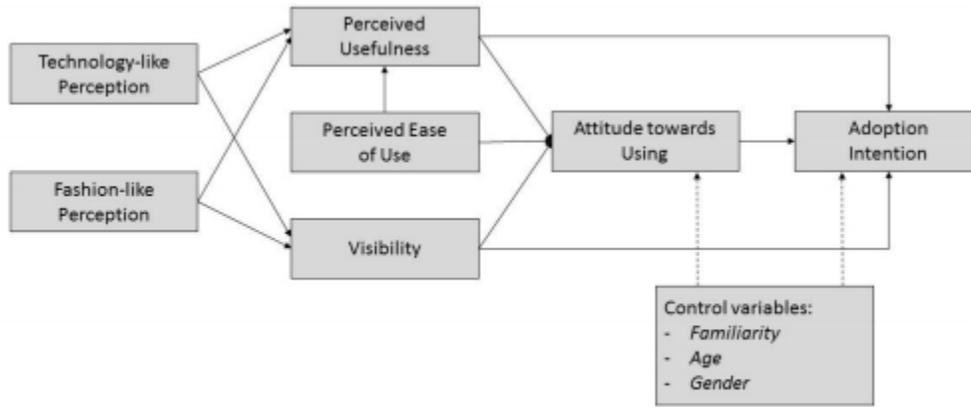

Fig. 1. The research model

3. Methodology and research design:

A survey was administered to business students at a Malaysian University in November 2015. Furthermore, a relatively homogenous student sample allows the exclusion of additional exogenous variables. The sample of respondents is representative of the student population of the university with 77.9% females and an average age of 20 years. The survey began with a short outline of the purpose of the survey (e.g., "research project on new technologies") and guaranteed anonymity. Then, a brief description of smartwatches [6]was added ("Smartwatches are small wearable computers that are worn like traditional watches on a user's wrist. Smartwatches run mobile apps and have similar as well as additional features like smartphones. Examples: Apple Watch, LG G Watch, and Samsung Gear Live An overview of the research constructs, measurement scales, and sources are presented in Appendix. We surveyed demographic variables and thanked the respondents for their participation

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4. Results:

The post hoc analysis focuses on whether smartwatches are perceived as a fashion item or a technology. Therefore, descriptive statistics of items measuring consumers' perception of smartwatches as a technology versus as a fashion are inspected.

5. Conclusion:

The objective of this research is to study a recent technological development – the use of smartwatches. Therefore, we aim at understanding drivers that influence the adoption of smartwatches among non-users while controlling for various factors and to shed additional light into mechanisms and categorizations of processing smartwatches.

6. References:

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[5]   S. S. A. Shimon, C. Lutton, Z. Xu, S. Morrison-Smith, C. Boucher, and J. Ruiz, "Exploring non-touchscreen gestures for smartwatches," in *Conference on Human Factors in Computing Systems - Proceedings*, 2016.

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