### Adoption of Smart TV in UK and the Moderating Role of Viewer Classification

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#### **ABSTRACT**

The UK TV market is a dynamic and rapidly evolving industry. This article investigates the factors affecting adoption intention of Smart TV in UK, and whether the customer's perception varies according to their viewing behavior and motivation. The proposed research model is empirically verified through an online survey of early adopters. Previous research has highlighted the gap in Smart TV research which is the consumer behavior perspective. The current study addresses this gap by integrating different theoretical perspectives from IT adoption and mass communication literature, providing a better explanation of Smart TV adoption and viewing behavior by end users. The findings also provide practical insight for marketers and policymakers of Smart TV devices and content providers in order to develop successful segmentation strategy.

#### **KEYWORDS**

Accompanied Viewing, Smart TV, Technology Acceptance Model, UTAUT Model, Video on Demand

#### 1. INTRODUCTION

There has been a great deal of speculation about the impact of the digital media on conventional media particularly TV and some even predicted a sharp decline in TV viewing (Powers & Comstock, 2012). On the other hand, Knoche & McCarthy (2004) claimed the small screen size on smart phones, short battery life and the flawed quality of service will hinder subscribers from immersing themselves into Smart TV. It is important to understand the determinants driving or inhibiting adoption of Smart TV services and devices. So a question needing further investigation which is the focus of the current study is: How receptive are end users to Smart TV services and devices?

Smart TV is a collection of hardware and software running on its own operating system integrated with Internet broadband services (Evens, 2014; Jang & Noh, 2015). It not only provides the broadcasting function of conventional TV but also application stores, searching, game and social network services via internet (Kim, 2010; Jung, 2011). In other words, Smart TV can be viewed as an integral part of Internet of things (IoT) in which inter-networking of physical smart devices with web interfaces make it a vital component of Service Networks (SNs) (Wang, Taher, & van der Heuvel, 2015).

Smart TV was introduced to change the passive behavior of viewers. Conventional TV was a low-involvement device where viewers lean-back and relax while watching content (Jung, 2011). Viewers can now take an active role by acting as both consumer and supplier of contents and applications (Bae & Chung 2012). TV producers and sponsors are increasingly interested in understanding how

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Smart TV services and devices affect consumers' viewing behavior (Highfield, Harrington, & Bruns, 2013; Lim, Hwang, Kim, & Biocca, 2015).

This study focuses on video on demand (VoD) services, connected devices and accompanied viewing, and examines the adoption of these Smart TV services and devices through a quantitative study of early adopters. This paper also examines whether the adoption of the Smart TV services and devices has an additional unique moderator which is the consumer's viewing motivation and behavior. This construct has been used in marketing and mass communication literature (Lee & Lee 1995; Powers & Comstock 2012) but is new to information technology (IT) adoption literature. Smart TV is an evolving technology and can be regarded as entertainment-centric or Hedonic IT (Jung, Perez-Mira, & Wiley-Patton, 2009).

Previous research has focused on the content of smart TV, restructuring broadcasting industry, and changes in the competitive landscape and there is little research from consumer behavior perspective (Bae & Chang, 2012). Although there has been growth in terms of sales and diffusion of Smart TV, user experience and user behavior have has remained underdeveloped (Shin, Hwang& Choo, 2013; Shin & Kim 2015). The current study addresses these gaps by integrating different theoretical perspectives from IT adoption and mass communication literature, providing a better explanation of Smart TV adoption and viewing behavior by end users.

A comprehensive introduction to Smart TV services and devices has been undertaken in Section 2. The theories relating to IT adoption as well as why and how people watch TV was reviewed and discussed. The purpose of this study was twofold: 1) to explore the determinants driving or inhibiting adoption of Smart TV services and devices in UK, and 2) to investigate the moderating effect of viewer classification on the determinants of adoption intention and usage behavior. A quantitative study was designed and data was collected by an online survey presented in Section 3. Analysis of the collected data is presented in Section 4.

The findings of the study suggest that all of the Smart TV services and devices should not be treated the same and people may have different motivations for using different services and devices. The findings do suggest however, it is possible to group these services and devices into two categories which intrinsically share similar motivations: "Smart TV services and devices which are used publicly" and "Smart TV services and devices which are used privately." Out of home viewing and accompanied viewing are done publicly in the sense that other people may often know that the user is using this service or device (i.e. interact with TV shows via social media or watching TV on their phone on the commute home from work). Subscription video on demand and free video on demand services are used primarily at home (privately in the loose sense of the word) as are the in-home viewing devices measured: connected TVs and games consoles.

This finding is insightful for marketers and policymakers of the Smart TV services and devices, as it means that they can alter their segmentation strategies to incorporate the different needs of the two sections of the population identified. Theoretical and practical implications of the findings are discussed in Section 5 followed by concluding remarks in Section 6.

#### 2. THEORETICAL BACKGROUND

#### 2.1. Smart TV Services

The main areas of development in content distribution services have been in video on demand (VOD) and in accompanied viewing. The TV VOD market is split into two main sub-markets: subscription video on demand (SVOD) and free video on demand (FVOD) (Wiseman, 2011). Subscription video on demand services are subscription-based content delivery services where subscribers have unlimited access to specific content for a regularly charged fee. Netflix, Amazon Prime Instant (previously known as LoveFilm), and Now TV are among the big players in the UK market. Free video on demand also known as catch up services, such as BBC iPlayer, ITV Player, 4OD, and Demand 5 offer content for free on numerous devices. Sky Go can also be classified as FVOD as it is free for Sky Pay TV customer.

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