Chapter 4.2
Exploring the Use of Mobile Data Services in Europe:
The Cases of Denmark and Greece

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ABSTRACT

Mobile data services seem a promising revenue source for the stakeholders that have heavily invested in mobile communications infrastructures. However, in the Western world those services have not reached the mass markets yet. This chapter focuses on two markets that are representative of the European socioeconomic environment, Greece and Denmark, with the aim to investigate and compare mobile data services use through the means of an online survey. We depict two user groups and observe their behaviors in both countries. The results indicate differences in locations and frequency of services use that can be attributed to specific socioeconomic characteristics. However, certain similarities exist in the experience derived from mobile data service use since users believe that services cannot cater to their specific needs. We conclude by underlining the current challenges faced by mobile service providers in order to increase mobile data services use and summarizing user groups' characteristics.

INTRODUCTION

Mobile communications markets have been in the spotlight for the last decade due to the impressive increase of users in most countries around the world. This dynamic environment led practitioners and academics to numerous predictions and speculations for the industry's growth potential. Many mobile operators, in pursuit of high returns on investment, upgraded their network infrastructures (e.g., third generation [3G]). They expected that this would stimulate high demand for advanced mobile services similar to those used

on the Internet, such as infotainment content and e-commerce transactions. However, these hopes have not been materialized in the Western world yet. It seems that mobile users are not interested or willing to massively adopt and extensively use the mobile data services (MDS) offered.

In the IS research, there has been considerable attempts to explore, understand, and analyze diffusion of innovation and technology acceptance through models and theories that offer constructs or factors affecting adoption and use based on individuals' expectancies and attitudes (Venkatesh, Morris, Davis, & Davis, 2003). This research domain has inspired many academics who have applied these models and theories in mobile communications markets in order to interpret or predict future trends and identify drivers and inhibitors for MDS adoption. In these research efforts, consumer behavior has been analyzed using conceptual frameworks inspired by the *technology acceptance model* (TAM) (Davis, 1986) or *diffusion of innovation theory* (DoI) (Rogers, 2003). Moreover, it has been pointed out that a cross-disciplinary integration of the four research directions on diffusion, adoption, uses, and gratification as well as domestication, was needed for understanding individuals' mechanisms for adopting MDS (Pedersen & Ling, 2003).

Following the same reasoning, Carlsson, Carlsson, Hyvønen, Puhakainen, and Walden (2006) applied a modified TAM model as an explanatory framework for mobile devices/services adoption. In addition, Lu, Yao, and Yu (2005) extended the TAM for wireless Internet adoption by incorporating concepts such as social influences and personal traits. Similarly, Wu and Wang (2005) enriched TAM with constructs regarding perceived risk, cost, and compatibility, while Yang (2005) added individual characteristics, such as innovativeness, past adoption behavior, and knowledge about technology, as external antecedents of TAM constructs. Furthermore Kim, Chuan Chan, and Gupta (2005) developed the *value-based adoption model* including benefits as well as sacrifices in

the adoption process of mobile Internet, whereas Massey, Khatri, and Ramesh (2005) identified technology readiness and wireless Web site interface usability as key factors influencing the uptake of mobile commerce and services. This indicative, though non-exhaustive, listing of research efforts underpins how the domain of MDS adoption and diffusion has acquired an important position within the research agenda of IS researchers.

Overall, past research has mainly focused on investigating in detail the impact of several attributes on MDS adoption and use. However, in this emerging market landscape, it becomes pivotal to understand the types of existing users and their perceptions of MDS use. At this point, it is important to keep in mind that the MDS market is a voluntaristic setting, where the potential user chooses to adopt or not the service based on his/her individual perceptions about it. Thus, different behavioral characteristics and experiences of the users may affect usage patterns (Constantiou, Damsgaard, & Knutsen, 2007). Moreover, exploring different end-user types and behavioral patterns may provide a comprehensive market segmentation that can be used to improve matching of consumer needs to appropriate service offerings. In this line, there have been few research attempts to categorize mobile users based on characteristics such as their demographics and level of innovativeness (Constantiou, Damsgaard, & Knutsen, 2004).

In this chapter, we draw on earlier categorization research and focus on exploring users' perceptions and experiences from MDS. To this end, we adopt the categorization proposed by Constantiou, Damsgaard, and Knutsen (2005) and investigate MDS users in two European countries, namely Denmark and Greece. Our comparisons are based on the results from a global survey on MDS use that was conducted during November 2004. In particular, we apply the proposed categorization on two samples representing two countries with different information and communications technologies (ICT) market structures.

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