İSTANBUL TECHNICAL UNIVERSITY ★ INSTITUTE OF SCIENCE AND TECHNOLOGY

THE DETERMINANTS OF RADICAL VERSUS INCREMENTAL MOBILE SERVICE INNOVATION ADOPTION: MODEL DEVELOPMENT AND TESTING AT LOW VERSUS HIGH CONSUMER INVOLVEMENT LEVELS

M.Sc. Thesis by
Uygur GÜMÜŞLÜ

Department : Management Engineering

Programme : Management Engineering

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İSTANBUL TEKNİK ÜNİVERSİTESİ ★ FEN BİLİMLERİ ENSTİTÜSÜ

MOBİL SERVİSLERDE RADİKAL VE GELİŞTİRİLMİŞ YENİLİK TİPLERİNİN ADAPTASYONUNU ETKİLEYEN FAKTÖRLER: DÜŞÜK VE YÜKSEK TÜKETİCİ İLGİLENİM DÜZEYLERİNDE MODEL TASARIMI VE TESTİ

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FOREWORD

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ABBREVIATIONS

ANOVA : Analysis of Variance
BST : Bartlett Test of Sphericity
KMO : Kaiser-Mayer-Olkin
MSA : Measure of Sampling Adequacy
R&D : Research & Development
SPSS : Statistical Package for the Social Sciences
TAM : Technology Acceptance Model
TurkStat : Turkish Statistical Institute

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THE DETERMINANTS OF RADICAL VERSUS INCREMENTAL MOBILE SERVICE INNOVATION ADOPTION: MODEL DEVELOPMENT AND TESTING AT LOW VERSUS HIGH CONSUMER INVOLVEMENT LEVELS

SUMMARY

In the last years with the integration of internet access to mobile phones and the diffusion of smart phones among innovation adopters, the number of the services developed in the mobile service sector increased more rapidly than ever. Zaichowsky (1985, p.342) asserts that the individuals behave differently towards the objects, products and services dependent on the individuals' interest and involvement levels towards events and situations. Because of this fact, the need to measure how involved the consumers became in adopting service innovations had a significant role.

Thus, the aim of this study has been to analyze whether situational consumer involvement causes a major change over the determinants of service innovation adoption. Supplementary to perceived ease of use and relative advantage, the constructs that take place in Technology Acceptance Model (TAM) of Davis (1989), the consumer characteristics that were consisted of consumer capacity, consumer innovativeness, the perceptual characteristics involving perceived value and perceived risk, as well as the attitudinal characteristics encompassing attitude towards corporate brand and attitude towards substitute technology have been developed in a theoretical model.

With the purpose of enlightenment of differences among radical and incremental service innovations, a figurative research design was developed. During the study, convenience-sampling method was used to collect data. Therefore, the theoretical model along with proposed hypotheses has been tested via web-based surveys. Scenarios that were generated by crossing two levels of two independent variables (consumer's situational involvement and online mobile service innovation types) with the intention to test high and low involvement situations with radical and incremental service innovations have been placed at the beginning of each of the four

surveys. The electronic address that has been given to the participants has been designed to enable a random assignment of surveys to the respondents.

The key findings of this study can be categorized into three main groups. Firstly, it can be stated that adoption of mobile service innovations are not only affected by the perceived innovation attributes but also consumer characteristics (consumer capacity and consumer innovativeness), as well as attitude towards corporate brand. As a result of this fact it can be claimed that the validity of TAM still preserves its significance in recent world's markets allowing the researcher to extend its notion in different domain-specific studies.

Secondly, it has been found that under different consumer involvement levels there have been alterations in relationships, especially, regarding some of the constructs affecting mobile service innovation adoption. With this information, under which involvement levels for further positioning of the mobile services should be assured can be resolved. Finally, it can be stated that service innovations with different newness perceptions of consumers (radical versus incremental service innovations) cause a change in the relationships among perceptual characteristics and consumer's service innovation adoption attitude.

The contribution of this study to the literature has been the extension of Technology Acceptance Model (TAM) with consumer specific characteristics (consumer innovativeness and consumer capacity), perceptual attributes (perceived value and perceived risk) and attitudinal independent variables (attitude towards corporate brand). Moreover, this study has been one of the few works encompassing consumer involvement and adoption of service innovation.

The restrictions of the study can briefly be stated as, the utilization of convenience sampling method, the hypothetical scenarios and the difficulty of measuring radical services. Therefore, it can be necessary to replicate this study in order to ensure the validation and reliability of the theoretical model.

MOBİL SERVİSLERDE RADİKAL VE GELİŞTİRİLMİŞ YENİLİK TİPLERİNİN ADAPTASYONUNU ETKİLEYEN FAKTÖRLER: DÜŞÜK VE YÜKSEK TÜKETİCİ İLGİLENİM DÜZEYLERİNDE MODEL TASARIMI VE TESTİ

ÖZET

Son yıllarda internet erişiminin mobil telefonlara entegrasyonu ile akıllı telefonların inovasyon adaptörleri arasındaki yayılımı ve bu bağlamda geliştirilen mobil servislerin sayılarında geçmişe kıyasla oldukça hızla bir artış gözlemlenmektedir. Zaichowsky'nin çalışmasında (1985, s.342) sunduğu savına göre kişiler olaylar ve durumlar karşısında farklı ilgilenme düzeyleri sergiler (durumsal ilgilenim), ve bu sırada karşılaştıkları nesneler, ürünler ya da hizmetlere karşı farklı tutum ve davranışlar ortaya koyarlar. Bunun sonucunda tüketicilerin servis inovasyonlarını adaptasyonları sırasında ne derece ilgilenim gösterdiklerini incelemenin önemi görülmüştür.

Böylelikle, bu çalışmanın amacı, durumsal ilgilenim düzeyinin mobil servis adaptasyonunu etkileyen karar vericiler üzerinde bir değişim yaratıp yaratmadığını incelemektir. Davis'in Teknoloji Adaptasyon Modeli'nde (TAM) (1989) yer alan algılanan kullanım kolaylığı ve göreli avantaj kavramlarının yanı sıra, tüketici kapasitesi, tüketici yenilikçilik odaklılığı ve ikame teknolojilere karşı tutumun yeni teknoloji adaptasyonu ve kullanımına etkisi teorik bir modelde tanımlanmıştır.

Radikal ve geliştirilmiş servis inovasyonları arasındaki farklılığı açığa kavuşturma amacıyla, betimsel bir araştırma tasarımı kullanılmıştır. Çalışma sırasında kolayda örneklem metodundan yararlanılarak gerekli veriler toplanmıştır. Bu nedenle, teorik model, öne sürdüğü hipotezlerle birlikte web-tabanlı anketler yardımıyla test edilmiştir. İki bağımsız değişkenin (tüketici ilgilenim düzeyi ve çevrimiçi farklı yenilik düzeyleri) karşılıklı çaprazlanmasıyla yüksek ve düşük ilgilenim durumlarına ve radikal ile geliştirilmiş mobil servis inovasyonlarından oluşan senaryolar yaratılmış ve hazırlanan dört farklı anketin giriş kısmına konulmuştur. Anketi

cevaplamak için kullanılan elektronik adres katılımcıların senaryolara rassal olarak ulaşabilecekleri şekilde dizayn edilmiştir.

Bu çalışmadan elde edilen temel bulgular üç ana başlık altında ele alınabilir. İlk bulgu, mobil servis adaptasyonunun, sadece algılanan inovasyon özelliklerinden değil (kullanım kolaylığı veya göreli avantaj), tüketici merkezli unsurlar (tüketici kapasitesi ve tüketici yenilikçilik odaklılığı) ve tüketici eğilimine dayanan unsurlardan (kurumsal markaya karşı tutum) da etkileniyor olmasıdır. Sonuç olarak; araştırmacıya farklı alan-odaklı çalışmalarda geliştirilmek üzere imkân tanıyarak Teknoloji Adaptasyon Modeli'nin günümüz pazarlarında halen geçerliliğini koruduğu öne sürülebilir. İkincisi, farklı durumsal ilgilenim düzeylerinde, özellikle mobil servis adaptasyonunu etkileyen belli başlı kavramların geliştirilen teorik modelde ileri sürülen ilişkilerde farklılıklar yarattığı görülmüştür. Bu bilgiyle, mobil servislerin hangi ilgilenim durumlarının öne çıkarılarak konumlandırılması gerektiği konusunda karara varılabilir. Son olarak tüketicilerin farklı yenilik algılarına bağlı servis inovasyonlarının (radikal ve geliştirilmiş servis inovasyonları) kullanıcıların algılanan karakteristikler ve servis inovasyonlarını benimseme eğilimleri arasındaki ilişkide belirli değişikliklere neden oldukları sonucuna varılmıştır.

Bu çalışmanın literatüre temel katkısı Teknoloji Adaptasyon Modeli (TAM)'ne tüketici merkezli karakteristiklerin (tüketici kapasitesi ve tüketici yenilikçilik odaklılığı), algılanan niteliklerin (algılanan değer ve algılanan risk) ve kullanıcı eğilimine dayalı bağımsız değişkenlerin (ikame mobil servislere karşı tutum) eklenmesi ile genişletilmesidir. Ayrıca, durumsal ilgilenim ve servis inovasyonu adaptasyonu yazınlarının birleştirildiği hizmetler bağlamındaki az sayıdaki çalışmadan biridir.

Kolayda örneklem metodunun kullanımı, varsayıma dayanan senaryolardan yararlanma ve radikal servislerin ölçümündeki zorluk bu çalışmanın kısıtları olarak özetlenebilir. Modelin teorik geçerliliğinin ve güvenilirliğinin artması için, ilerideki yapılacak çalışmalarda rassal örneklem yöntemleri kullanılarak farklı mobil servisler için bu çalışmanın tekrarlanması önerilebilir.

1. INTRODUCTION

1.1 Purpose of the Thesis

As the service sector continues to develop with various online mobile services, the influence of consumers' involvement degree over their adoption behaviour fosters the need for new studies encompassing the issue thoroughly. Accordingly, the purpose of this thesis is defined to analyze the consumers' involvement in service innovation and to observe the factors affecting the adoption intention of consumers towards radical versus incremental innovations.

Considering this aspect, in this study these questions have emerged:

- *What are the attributes of adopters of mobile service innovations?*
- *Considering the online mobile services, which perceived innovation attributes influence consumers' adoption and intention to use?*
- *Do different consumer involvement levels influence the factors affecting the service adoption of consumers?*
- *Do different perceived newness levels of consumers towards radical versus incremental service innovations affect the determinants of the service adoption?*

1.2 Scope of the Study

The scope of the study encompasses services and customer behaviour literature, as well as a theoretical model adapted from Technology Acceptance Model (TAM) of Davis (1989) by extending it with some notions such as; consumer innovativeness, consumer capacity, perceived newness, perceived risk, attitude towards substitution and attitude towards corporate brand.

The thesis is organized as follows. First of all, as sources of secondary data, previous literature providing information about the definition and characteristics of services has been examined. Moreover, in the second chapter, since this study is focused on

consumers' adoption of online mobile services, service innovation literature has been scrutinized to demonstrate the dimensions and typologies of service innovation.

In the third chapter, to analyze the influence of consumers over innovation adoption, previous studies regarding innovation adopters and their characteristics have been reviewed. Considering the significance of consumer involvement degree in adopting service innovations, consumer involvement literature has been observed. Furthermore, innovation-specific attributes affecting innovation adoption decision have been collected from innovation diffusion theory literature and the conceptual model along with the proposed hypotheses has been presented.

In the following chapter, the research design has been depicted. In the fifth chapter, the analysis of this study's data can be seen. In the final chapter theoretical contribution and managerial implications have been stated, and the restrictions encountered during the study have been mentioned.

1.3 Hypotheses

This study constructed a new theoretical model with the contribution to services and innovation literatures, analyzed by an empirical study crossing different levels of consumer involvement with radical versus incremental mobile service innovations. To test the tentative work the following hypotheses have been proposed (See Table 1.1).

1.4 Key Findings and Managerial Implications

The key findings of this study can be summarized as the direct effect of domain-specific perceptual innovation attributes on the attitude of consumers towards service adoption behaviour along with internet usage in innovative mobile services field. Supplementary to this, it can be claimed that one of the essential findings of the study has been the acknowledgement of these perceptual characteristics of consumers, which have been asserted in many previous product-oriented innovation adoption studies in the literature.

Thus, specifically expanding Technology Acceptance Model of Davis (1989) in analyzing the adoption of radical versus incremental service innovations for high and

Table 1.1 : Proposed hypotheses of the theoretical model and the results

Hypotheses		Result
H1	Regarding the mobile service innovation; the higher the capacity consumers have, (a) the lower the risk consumers perceive about it, (b) the more the relative advantage consumers perceive about it, (c) the easier the use of mobile service consumers perceive, and (d) the more the value consumers perceive about it.	Supported
H2	The more innovative the consumers are, (a) the higher the value consumers perceive about mobile service innovation and (b) the more positive attitude consumers demonstrate towards the mobile service adoption.	Supported
H3	The higher the value consumers perceive regarding the mobile service innovation, the more positive attitude consumers demonstrate towards adopting it.	Supported
H4	The easier the use of mobile service innovation, the more positive attitude consumers demonstrate towards the mobile service adoption.	Supported
H5	The easier the use of mobile service innovation, the more the relative advantage consumers perceive.	Supported
H6	The higher the relative advantage of mobile service innovation, the more positive attitude consumers demonstrate towards the mobile service adoption.	Supported
H7	The higher the risk consumers perceive, the more negative attitude consumers demonstrate towards the mobile service adoption.	Supported
H8	The more the consumers pay attention to the attributes of substitute services, the more negative attitude they will have to adopt the mobile service innovation.	Rejected
H9	The more the attributes of a corporate brand have importance for customers, the more likely they are to adopt mobile service innovation.	Supported
H10	The more positive attitude consumers demonstrate towards mobile service adoption, the more likely they are to use the mobile service innovation.	Supported
H11	(a) Different levels of consumer involvement, (b) different levels of service innovations cause changes among the factors of service innovation adoption model.	Supported

low involved situations has been supportive, enlightening the certain differences among consumers.

Moreover, in this study, it has been achieved that certain consumer characteristics also have significant effect on the perceptions of the consumers regarding their situational involvement, and perceived newness level towards mobile service innovation types.

The main model has showed that under certain levels of involvement situations, consumers' perception mediated by specific variables affecting their mobile service innovation adoption are influenced but continued supporting the hypotheses. Akin to that, service innovation adoption for radical versus incremental innovations also supported most of the hypotheses with few differences stemming from the natural uncertainties that radical innovations set forth.

Considering the enhancing mobile services market, in order to differentiate among the other players present in the market, the opportunities enabling companies to develop innovations should be utilized by maintaining the different consumer involvement levels regarding certain situations.

2. SERVICES AND SERVICE INNOVATIONS

The services literature has broadly expanded since its first emergence as a result of developing technologies, internet environment and their derivatives. Thus, enforcing it, is essential to focus on technology and web oriented services. But, before exploring the new service types and the service innovation literature in this chapter, firstly, fundamentals of services, its major characteristics and typology of services as well as services innovation literature will be covered outright.

2.1 Services and Major Characteristics

During the past years, the service concept has been defined in many ways, demonstrating competing meanings. Many different institutes and researcher generated definitions from a narrow approach to a broader one. The first attempt for defining services was made by the Definitions Committee of the American Marketing Association (1960, p.21):

"Activities, benefits, or satisfactions which are offered for sale, or are provided in connection with the sale of goods. Examples are amusements, hotel service, electric service, transportation, the services of barber shops and beauty shops, repair and maintenance service, the work of credit rating bureaus."

There is another definition by the U.S. Government Standard Industrial Classification (SIC) (1972, p.295):

". . primarily engaged in providing a wide variety of services for individuals, business and government establishments, and other organizations. Hotels and other lodging places, establishments providing personal, business, repair, and amusement services; health, legal, engineering, and other professional services, educational institutions; membership organizations, and other miscellaneous services are included." These definitions can be considered as insufficient; however, with the help of these definitions the borders of services can be determined.

With respect to the previous definitions, Quinn, Baruch, and Paquette (1987, p.24) defined services as following:

"[Services] include, all economic activities whose output is not a physical product or construction, is generally consumed at the time it is produced, and provides added value in forms (such as convenience, amusement, timeliness, comfort, or health) that are essentially intangible concerns of its first purchaser."

Another definition by Murdick, Render, and Russell (1990, p.4) is:

"Services can be defined as economic activities that produce time, place, form, or psychological utilities. A maid service saves the consumer's time from doing household chores himself or herself. Department stores and grocery stores provide many commodities for sale in one convenient place. A database service puts together information in a form more useful for the manager. A "night out" at a restaurant provides psychological refreshment in the middle of a busy workweek."

In summary, the need for obtaining essences of services has been overcome by Kuepper (2001, p.3) by inferring the following four major characteristics retrieved from previous researches:

- "Offering of performance abilities of personal, factual and immaterial kinds", which means services are generally dependent on personal performance.
- "A high degree of immateriality", which implies intangibility.
- "Need of synchronous contact of customer and service supplier" as the performance preparation and performance delivery are similar.
- "Integration of an external factor", which means an external factor is involved during the preparation of the service.

The definitions of services emphasizes that services are not concrete things and they cannot be touched, seen or smelled. As services require goods to operate functionally, it can be claimed that they are inseparable. For instance a health service or a mobile service can never be adequately supplied without the required technological or physical infrastructure.

2.2 Electronic and Mobile Services

With the rise of rapid technological growth, the information that is being transferred online became more and more important in the daily life of customers, so did online services. According to de Ruyter, Wetzels and Kleijnen (2001, p.186);

"E-service is an interactive, content-centred and Internet-based customer service, driven by the customer and integrated with related organizational customer support processes and technologies with the goal of strengthening the customer-service provider relationship."

As a result of this fact, online services started to support or substitute the traditional services by improving the relationship between the customers and service providers. In line with the definition above, Rowley (2006, p.341) has defined e-services as "deeds, efforts or performances whose delivery is mediated by information technology (including the web, information kiosks and mobile devices)".

Briefly, the main characteristics of e-services can be sorted as followed (Scupolo, 2008):

- The level of the customer or customer interaction in involving in the delivery of services.
- Accessibility to services via internet or other electronic networks
- Consuming services via internet or other electronic networks
- Paying of a fee to the provider for using the e-service by consumers or receiving e-services offered by government.

Also, specifically, when the customers have the chance to reach services independent of the constraints regarding time and space via mobile handset (mobile phone, PDA, smartphone, GPS etc.), they can be called as mobile services (Heinonen and Pura, 2006). Thus, if the services are offered over internet by the service provider and the access via mobile devices are available, then these services are evenly online.

2.3 Service Innovations and Typologies

The simple meaning of the service innovation is to create a new service or make changes on an existing one to comfort the people who need or use it. According to

Gadrey, Gallouj and Weinstein (1994, p. 4), "…certain recent theories of industrial innovation are particularly valuable for understanding services." and Lagrosen (2005) states that the success and growth of international industrial companies are intensely dependent on their ability for innovation and creating novel ideas. Briefly, it can be claimed that for service companies analyzing the fundamentals of innovations and working to design innovations are crucial in the search for a sustainable existence in the services market.

In their work, de Ruyter et al. (2001) have found six independent innovation attributes to have an impact on customer perceptions of innovations, surpassing other types of adoption predictors, such as customer characteristics and situational variables. Four of these are similar with Rogers' previous work (2003), consisting of relative advantage, compatibility, complexity, and trialability; and complement to these; communicability which can be defined as the extent to which the use of the innovation is observable by others, and perceived risk which is the degree to which innovation performance and/or psychological (concern regarding others' opinions of one's decision) risks are attributed to the innovation take place.

Dimensions of service innovations

As there has been an ongoing-debate considering the technological dependence/independence of service innovations (de Jong and Vermeulen, 2003), innovation in the service sector can be described in terms of technological innovation leading to new products or services of some form or non-technological innovation, focusing on organizational issues and processes (Chapman, Soosay and Kandampully, 2003). Evidently, there are innovations with strong technological constituents such as tracing and tracking systems, facilitating transport service providers by screening the progress of their fleet and accordingly managing their transport services more strictly (de Jong and Vermeulen, 2003).

In literature, innovation has been categorized into three types, which are continuous innovations, dynamically continuous innovations, and discontinuous innovations. A continuous innovation has little disruption in behavioural patterns involving the introduction of a modified product or service. A dynamically continuous innovation has some disruption in behavioural patterns, but does not change them significantly involving the creation of a new product/service or the modification of an existing

one, whereas a discontinuous innovation is a new product/service that requires the establishment of new behavioural patterns (Robertson, 1967).

To understand the difference in the structure fully, specific for service innovations this categorization can be defined (van der Have, Toivonen and Tuominen, 2007):

Target of renewal: The innovation of a service stems from an idea targeting renewal of a service by covering the question regarding "what can be changed". Therefore, firstly three basic titles entailing service concept, service process, and service system should be evaluated to determine the potential targets for alteration.

Nature of renewal: This dimension describes how a company renovates a service with the principal of change. The renewal can be seen through improvement of some constituents in the service, addition/subtraction of some elements, substitution of some components or the rearrangement of some components of various services. For instance, addition of a specific phase of quality assessment in the service process can be given.

Radicalness of renewal: The relativity of change depicts the extent of the renewal comprising the dissimilarity/difference of the new service and by which area (region or industry) it affects, is perceived new. The innovations that can be claimed as radical only if they are new to the world, on the other hand if they are new to only a specific area/region they can be called as incremental innovations.

Typology of innovation

Gallouj & Weinstein (1997) have stressed that innovation can be defined as any alteration affecting one or more conditions of one or more vectors of features (of any kind - technical, service or competence). Regarding this, many innovation methods appear.

According to their study; if an innovation involves major changes that can be seen as new paradigm (Stierand and Lynch, 2008), viz. each constituent of the characteristics are unconnected with the previous ones by redefining the way consumers imagine, and utilize a product or service (Chapman et al., 2003), this is called *radical innovation.* However, from another perspective it can be claimed that, if it is the majority in size or scope that identifies the newness of an innovation, the radicalness of the innovation will be much more widely accepted (Johannessen, Olsen and Lumpkin, 2001).

On the other hand, if certain characteristics are improved without any change to the constitution of the system or in other words, certain qualities of the product or process are enhanced without any change to its characteristics, it is called improvement innovation. Also by keeping the general construction of the system, some elements can be substituted with some others or added up to the existing ones. This type of innovation entailing low degree of alteration from existing practices is called as *incremental innovation* (Stierand and Lynch, 2008).

In case of a specific problem subject to one particular client, the available knowledge and experience accumulated over time might be exploited and put to work synergistically, to create fresh solutions and new knowledge that forms ad hoc innovation. One other form of innovation is the utilization of promise exposed by new arrangements of various characteristics that is called architectural innovation.

Last but not least apart from the various models of innovation outlined above based on qualitative or quantitative variation in technical or service characteristics or competences formalization model explained by Gallouj & Weinstein (1997) emphasizes the degree of standardization of the various characteristics by clarifying the correspondence between the technical characteristics and the service characteristics.

Differences between service innovations and product innovations

According to Celuch and Taylor (1999), services are intangible compared to products. Moreover, services may be produced and consumed simultaneously; as a consequence, production and consumption can be undividable. Today the service sector is quite large with lots of different branches and a large share of innovative efforts in business is related to the development of new services (de Jong and Vermeulen, 2003).

In service innovation as the service production occurs concurrently, new services have close contact with alterations of the service delivery process and changes in proficiency of frontline employees. As a result, the relations between new service development and service delivery becomes high, and stronger than the association between new product development and production in a product-manufacturing environment (Nijssen et al., 2006).

In addition, new service development requires the integration of the needs of new service operations and processes with those of existing business activities. Therefore, the correspondence between the new service and existing systems becomes more essential than in a product-manufacturing context. Regarding the fact that, front-office is designed to satisfy customer needs and back-office's emphasis is on making the most of operational efficiency and productivity; in order to overwhelm differences in objectives and time horizon among them, the operations of the front- and back-office should be more converged (Nijssen et al., 2006).

Finally, Research and Development expenditures have an important share in service and manufacturing firms' budgets. Thus, it has been suggested that R&D investments are more strongly related with successful manufacturing than service innovation. However, in opposition to manufacturing firms, most of the service firms are not categorized by major R&D departments. Underlying reason is that rather than novel core technology, service innovation requires the development of new procedures and concepts (Nijssen et al., 2006).

In summary, with the increase of mobility in today's consumption markets, the consumers are more apt to use new service technologies. However, the services that are to be presented to the market need much more focus on the innovation that will differentiate them with the existing ones. Thus, in this study in order to sustain a sound background for the service innovation literature and present managerial implications for the service firms, the focus has been to enlighten the adoption attitudes of consumers towards radical and incremental mobile services.

3. CONSUMER BEHAVIOUR TOWARDS INNOVATION ADOPTION

3.1 Categories and Characteristics of Adopters

Making innovations and generating ideas for new products or services are necessities for companies operating in today's competitive world. Nevertheless, the consumer factor has always been crucial for companies in creating innovative products. Hence, the categorization of the adopter types of consumers has brought a new way of comprehension towards the consumer traits affecting adoption of new products and services.

Roger (2003, p.280), has defined five ideal adopter types which have been subjected to consumer innovativeness, "the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a social system". These categories can be listed in the time scale as; innovators, early adopters, early majority, late majority and laggards, respectively (See Figure 3.1).

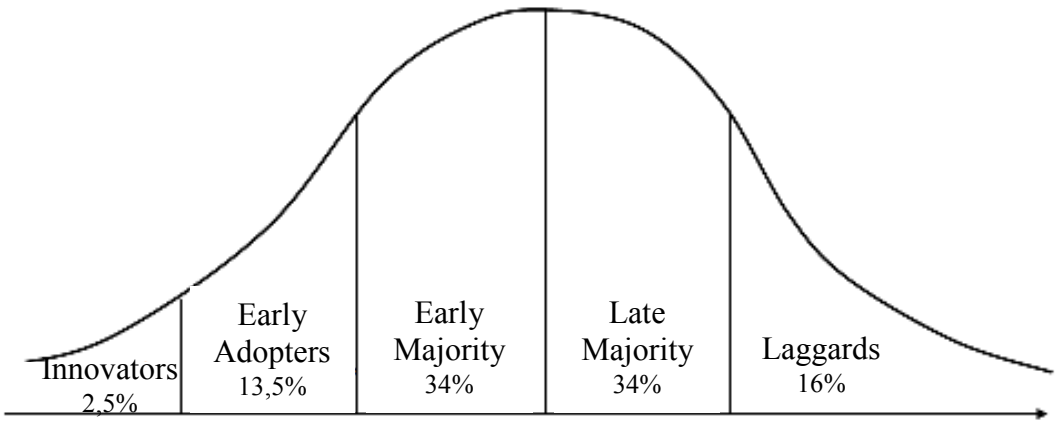

Figure 3.1 : Adopter categories by innovativeness and their share of the total population. [Rogers, E. M., 1983. Diffusion of innovations, 3rd ed., The Free Press, New York.]

Innovators, who represent 2,5% of the individuals lying to the left of the mean time of adoption of an innovation, have the ability to deal with the high-level ambiguity about the innovation at the time of adoption.

Early adopters, who are the next 13,5% in the timeline adopting the new idea right after the innovators, serve as respected opinion leaders giving advice and information

to the potential adopters about the innovation. Also, Eric von Hippel (1986, p.796) has defined early adopters of innovation as put forth below:

"Lead Users face needs that will be general in a marketplace, but face them months or years before the bulk of that marketplace encounters them, and Lead Users are positioned to benefit significantly by obtaining a solution to those needs."

Early majority and late majority of the adopters have equal 34% share among total individuals. While former has a cautious eagerness in adopting a new idea and hardly ever lead, latter has a sceptical approach towards the adoption and should be convinced by the assurance of the elimination of risks and seeing others adopt the new idea.

The final adopter category called laggards consists of 16% of the total individuals whose innovation-decision process are longer and awareness degree considering the knowledge about the new idea is way far behind when compared with previous ones.

Lead User theory, which was created by von Hippel in 1986 mainly focused on the Lead Users existing in manufacturing sector. de Jong and Vermeulen (2003) state that "the intangible and simultaneous nature makes the impact of service innovations harder to trace than in manufacturing". They also mentioned the fact that instead of being tangible like a product innovation, service innovations are abstract and they cannot be detected as fast as the others (de Jong and Vermeulen, 2003).

To make an innovation in service sector someone does not need as much source and knowledge as in manufacturing sector. Services can be generated by not only professionals or experts but also by ordinary end-users. Triggered by a special need, anyone can think about a service solution. If this idea is a novel one, he or she becomes a Lead User.

In characterizing overall the consumers, a thorough comprehension about the personal traits of earlier adopters become especially significant since they become a crucial link to later adopters and instigate diffusion among others (Lüthje, 2000).

Although the literature about the characteristics of service lead users is limited, according to the current literature knowledge, researches in the field show that some specific characteristics of service lead users do not differ across consumer groups or different areas of services. These users are normally not very satisfied with an existing service or they have a specific need for a specific service. It is essential that

lead users make benefit from their innovations (von Hippel, 1986). Sometimes this benefit might be commercially huge like in Google case, but generally, the first aim of the fact is to come up with a solution for a certain problem and become satisfied with the resolution contrary to the commercial benefit it may bring out afterwards.

As it can be seen in the Figure 3.1, lead users take place at the earliest phase of the market trend, while the need or interest for the new services is least. Service lead users have solid background regarding the information exchange between customers and the service provider, thus utilizing this resource they adopt new services easily. As a result of being customer of a specific service, they also have an idea about both what customers demand from this service and how they can improve the service quality.

However presenting information about the characteristics of innovation adopters is not adequate to explain the overall structure of the consumer behaviour. In order to find more evidences regarding the appraisal of external factors affecting adoption, consumer-specific attributes should be examined.

3.2 Consumer-Centred Factors Affecting Innovation Adoption

In the technology adoption literature, there has been many factors mentioned about consumer characteristics, however few have been tested in a single study concurrently. There has been sound evidences regarding the effect of consumer capacity and consumer innovativeness on the determinants of adoption behaviour of consumers in previous studies (e.g. Manning, Bearden and Madden, 1995; Wang, Dacko and Gad, 2008).

Consumer Capacity

The knowledge and experience a consumer has accumulated within years of time on a specific subject can lead to many indications towards consumer capacity. For instance, consumer's capacity for action during the online navigation process can be seen as a detailed description for skill (Novak, Hoffman and Yung, 2000). Where this capacity is high, the lead to a satisfying consumer experience on the internet might be possible (Jee and Lee, 2002).

Also the self-efficacy of the individuals defines whether the users can successfully perform procedures to reach the outcome (Chen, Yen and Chen, 2009). According to Greenhalgh et al. (2004) perceived complexity can be abridged by practical experience and demonstration. Depending on this statement it can be hypothesized that consumers' perception regarding the complexity of the service is dependent on their prior knowledge (Wang et al., 2008), experience and skills.

Consumer Innovativeness

Innovativeness is an inherent unobservable characteristic of individuals through innovative personality, tendency, and openness to new ideas (Lockett and Littler, 1997) and interpretation and combination of information in new ways and/or create solutions that vary from conventional ones (Im, Mason and Houston, 2007). Consumer innovativeness also concentrates on the features that distinguish how fast or eager consumers are to adopt new products Wang et al., 2007) but this time notion is not alone adequate to measure innovativeness of an individual; as consumers' interest on any topic could only be measured reliably with a multi item self-report scale (Goldsmith and Hofacker, 1991).

Consumer Involvement

When the literature is reviewed, it is obvious that there has been a consensus regarding the definition of involvement proposed by Zaichkowsky (1985, p.342) for the purposes of scale development which was: "A person's perceived relevance of the object based on inherent needs, values, and interests.". Its wide coverage has enabled us to understand its both affective and cognitive significance; recognize prior definitions of involvement with advertising; and the cognitive and affective advertising involvement applications (Zaichkowsky, 1994).

In addition, Celuch and Taylor (1999) described involvement (perceived importance) in their study as the significant influence of consumer behaviour. Emphasizing the significance of personal relevance of the decision to the individual, Gabbott and Hogg (1999) have described involvement as a motivational variable in terms of basic goals, values, and self-concept.

Further, the degree of personal relevance of message contents or issue can be classified into two types of motives, one of which lead to cognitive involvement

based on the brand's functional performance (utilitarian motive). Moreover, the other, affective involvement is based on emotional or aesthetic appeals to one's motive to express an actual or ideal self-image to the outside world (value-expressive motive) (Park & Young, 1986, Zaichkowsky, 1994). Moreover, Zaichowsky has also stated the significance of situational factors enforcing the person's attention towards the related object for the moment, causing differences for the same product in search and evaluation, thus increasing the level of involvement (situational involvement) (Zaichowsky, 1985).

Akin to that aspect, Stell and Donoho (1996) defining the level of involvement as "the amount of importance or interest which the consumer attaches to the type of service" have stated in their research that by classifying services regarding consumer involvement, purchase effort and risk, service marketers may accordingly develop segmentation, targeting, and positioning strategies.

According to Blomer and Ruyter (1999), involvement is a reflection of consumers' intrinsic interest towards the service; thus, the service relates the customer highly. Similarly, Good (1990) claims that the level of involvement or participation consumers have with the specific service creates the key difference between services and products. The higher involvement services require, the higher levels of participation will be gained from users and vice versa (Good, 1990).

Regarding the intensity of the involvement, it has been affirmed that high involvement messages have greater personal relevance and consequences or bring more personal connections forth compared to low involvement messages. Moreover when involvement is higher, the true virtues of an issue or product can be evaluated more by commitment of motivated people through cognitive effort, careful consideration, a more extended decision process and information-processing activity (central route) (Petty, Cacioppo and Schumann, 1983; Chang and Hsieh, 1997). Whereas under low involvement conditions, users that are being poorly affected by argument quality (peripheral route) indicate simple acceptance and rejection prompts (Petty et al., 1983).

Consequently, the service adoption of a consumer can also be effected by the involvement of the consumers in the service, based on the situation that occurred. This consumer specific attribute may lead to unexpected results even in adoption of completely new services as the level of involvement may cause an alteration

regarding the choices of consumers. For instance, a condition causing high level of interest may force a low innovation adopter to ignore the fact that he/she has inadequate knowledge regarding the issue.

3.3 Innovation Attributes, Diffusion of Innovation and Service Adoption

As a fundamental source in the literature, Technology Acceptance Model of Davis suggests that when users are presented with a new technology, a number of dynamics have significant role during the decision-making process about how and when they will use it (Davis, 1989). In the model, behavioural intention is determined together with the attitude and perceived usefulness, the latter of which also influences attitude directly (See Figure 3.2).

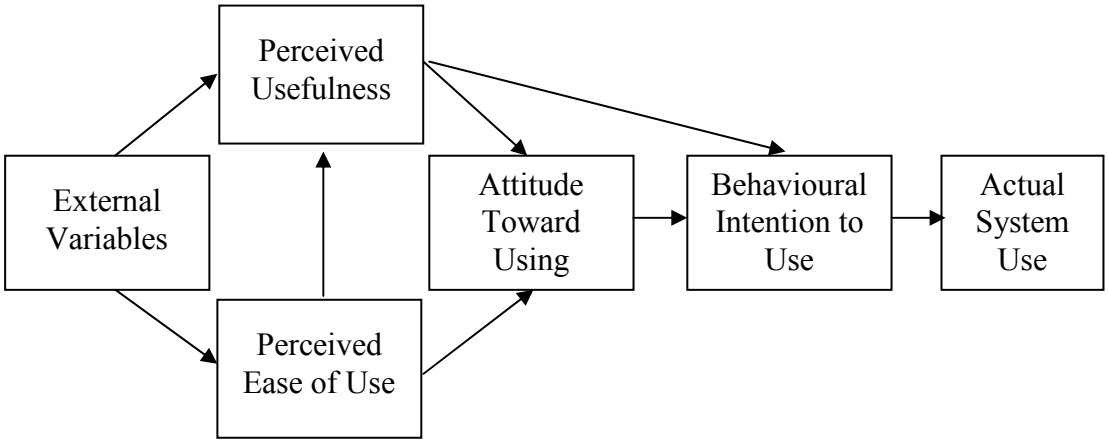

Figure 3.2 : Technology Acceptance Model [Davis, F. D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology, MIS Quarterly, Vol. 13, No. 3, pp. 319-340.]

Perceived usefulness has been defined by Davis as: "the degree to which a person believes that using a particular system would enhance his or her job performance" and perceived ease-of-use as: "the degree to which a person believes that using a particular system would be free from effort" (Davis, 1989). In earlier studies on the adoption of innovations also suggested a notorious role for perceived ease of use (Perez et al, 2004). Several scholars have replicated Davis's (1989) original study to provide empirical evidence on the relationships that exist between usefulness, ease of use and system use on the other hand others have extended the model with different technology adoptions (e.g. Perez et al.; 2004 Sandhu, 2008).

Dependant on the information retrieved from Rogers' study (1995), Parthasarathy and Bhattacherjee (1998) have shown theoretically and empirically sound differences between early and late adopters. According to innovation diffusion theory (Rogers, 1995), earlier adopters, because of their exceptional technological skills and capability to mobilize effort and resources to learn the innovation, are able to utilize it better than later adopters. And most significantly, while earlier adopters are primarily affected by mass media and other forms of external impact in making their initial adoption decision, later adopters count more on interpersonal information.

Complementary to Technology Acceptance Model, innovation diffusion theory of Rogers (2003) associates initial adoption decisions to five innovation-specific attributes:

- Relative advantage: the degree to which an innovation is perceived as being superior to the overtaken idea. This has also been defined as 'perceived usefulness' in various studies (Davis, 1989; Perez et al., 2004; Gao et al., 2008; Sandhu, 2008);
- Complexity: degree to which it is perceived as being relatively difficult to comprehend and utilize. This has also been used as 'ease of use' regarding inverse of complexity in aforementioned studies (Davis, 1989; Perez et al., 2004; Gao, Krogstie & Gransæther, 2008; Sandhu, 2008);
- Compatibility: degree to which it is consistent with the adopter's existing values, past experiences, and needs;
- Trialability: degree to which the innovation can be experimented with on a restricted basis.
- Observability: the degree to which the results of an innovation are noticeable to others. This has also been mentioned by Ruyter et al. (2000) as communicability and described as the extent to which the innovation is vividly available for communication, covering the notion of observability.

Supplementary to these attributes, while Ruyter et al. (2000) and Polatoglu & Akin (2001) have proposed perceived risk: the degree to which innovation performance and/or psychological (concerning others' opinions of one's decision) risks are attributed to the innovation; Gao, Krogstie & Gransæther (2008) have claimed trust

as a significant attribute defining the degree of a user's beliefs or faiths towards a mobile service without perceiving any security and privacy threats stemming from it. In literature, many researchers have studied these perceptual innovation attributes in their works accordingly (See Table 3.1).

The reason behind the dissatisfaction of adopters has been accentuated as a direct function of the "expectation-reality gap" which can be explained as the incapability of adopters to reach expected levels of benefits from the service. Moreover, the individuals discontinue an innovation for at least two reasons: to replace it with another innovation perceived as being better than the first (replacement), or because of dissatisfaction with the innovation (disenchantment).

Regarding the findings of the study (Parthasarathy & Bhattacherjee, 1998, pp.367-368), "discontinuers of online services perceive the service as being less useful, less compatible with their work habits and rely less on complementary products during their initial adoption decision than continuing adopters, however they do not perceive the service as being less easy to use during their initial adoption decision than continuing adopters."

Moreover, it has also been found out that "disenchantment discontinuers of online services are more influenced by interpersonal influence during their initial adoption decision than replacement discontinuers and replacement discontinuers of online services utilize the service more extensively during their initial adoption period than disenchantment discontinuers."

In their study, Frambach et al. (1998) have stated that in diffusion theory several variables have been associated to shape the adoption and diffusion of innovations. However, diffusion models have been used to scrutinize the significance of both adopter-side and supply-side variables on the form of the diffusion process as a whole. It has been acknowledged from the previous researches that adoption of innovation by consumers will be mostly driven by the desire to fulfil individual needs, where on the other hand business firms embrace innovations in order to complete value-adding activities.

Owing to the differences in product characteristics between tangible products and service products, it is not clear that results from studies on the adoption of tangible products can be generalized to settings where services are considered. In conclusion,

Table 3.1 : Taxonomy of perceived attributes affecting innovation adoption.

Dimensions	Studies												
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
Perceived Usefulness	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
Perceived Ease of Use	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓
Compatibility	✓		✓	✓	✓		✓				✓		
Observability	✓		✓	✓	✓		✓				✓		
Trialability	✓		✓	✓	✓		✓				✓		
Perceived Risk	✓			✓	✓	✓	✓	✓	✓		✓		
Costs				✓									
Organizational Reputation						✓							
User Capacity											✓		✓
Trust						✓						✓	
Perceived Value									✓				

Legend		
Studies	Author(s)	Year
I	Ostlund	1974
II	Davis	1989
III	Rogers	1995
IV	Locket, Littler	1997
V	Frambach et al.	1998
VI	Ruyter, Wetzel, Kleijnen	2000
VII	Polatoglu, Ekin	2001
VIII	Howcroft, Hamilton, Hewer	2002
IX	Lee, Allaway	2002
X	Perez et al.	2004
XI	Greenhalgh et al.	2004
XII	Gao, Gransæther, Krogstie	2008
XIII	Sandhu	2008

according to Johannessen et al. (2001), the success of an innovation depends on degree of its adoption and diffusion more than advance of its technology.

For these abovementioned reasons, as a different approach the technology acceptance model can be used to study specifically in mobile services field focusing on the determinants of mobile service innovation adoption to set forth a theoretical model to fill this gap in the literature.

3.4 Theoretical Model on Service Innovation Adoption

With the aim of finding factors affecting the adoption of mobile service innovations, Technology Acceptance Model (Davis, 1989) has been extended to have a thorough comprehension regarding cognitive and affective consumer traits and equally their effect over adoption and behavioural intention to use (See Figure 3.3).

As a part of the study, in order to distinguish the effects of high and low consumer involvement degree and radical versus incremental service innovation over mobile service innovation adoption, these two variables have been assigned as control variables, as well as compatible device ownership.

Consumer Capacity

Website activities offer challenges and skills that lead users in achieving the task of any activity that facilitates user's involvement in interface process. However, the consumers with higher experience and knowledge regarding internet based services feel more confident with the increased perceived sense of control in using a similar service on a web-based platform (Sandhu, 2008), and have relatively low risk perception. Similarly perceived ease of use and relative advantage depend highly on web-oriented self-efficacy resulting in the attempt and persistence in behaviour that consumers are capable of using the service (Hsu and Chiu, 2004). According to Lee and Allaway (2002), the consumers perceive higher value regarding the service innovation under the situation of high level of controllability, which is possible for mobile services dependent on the consumers' prior knowledge and experience.

H1: Regarding the mobile service innovation; the higher the capacity consumers have, (a) the lower the risk consumers perceive about it, (b) the more the relative advantage consumers perceive about it, (c) the easier the use of mobile service consumers perceive, and (d) the more the value consumers perceive about it.

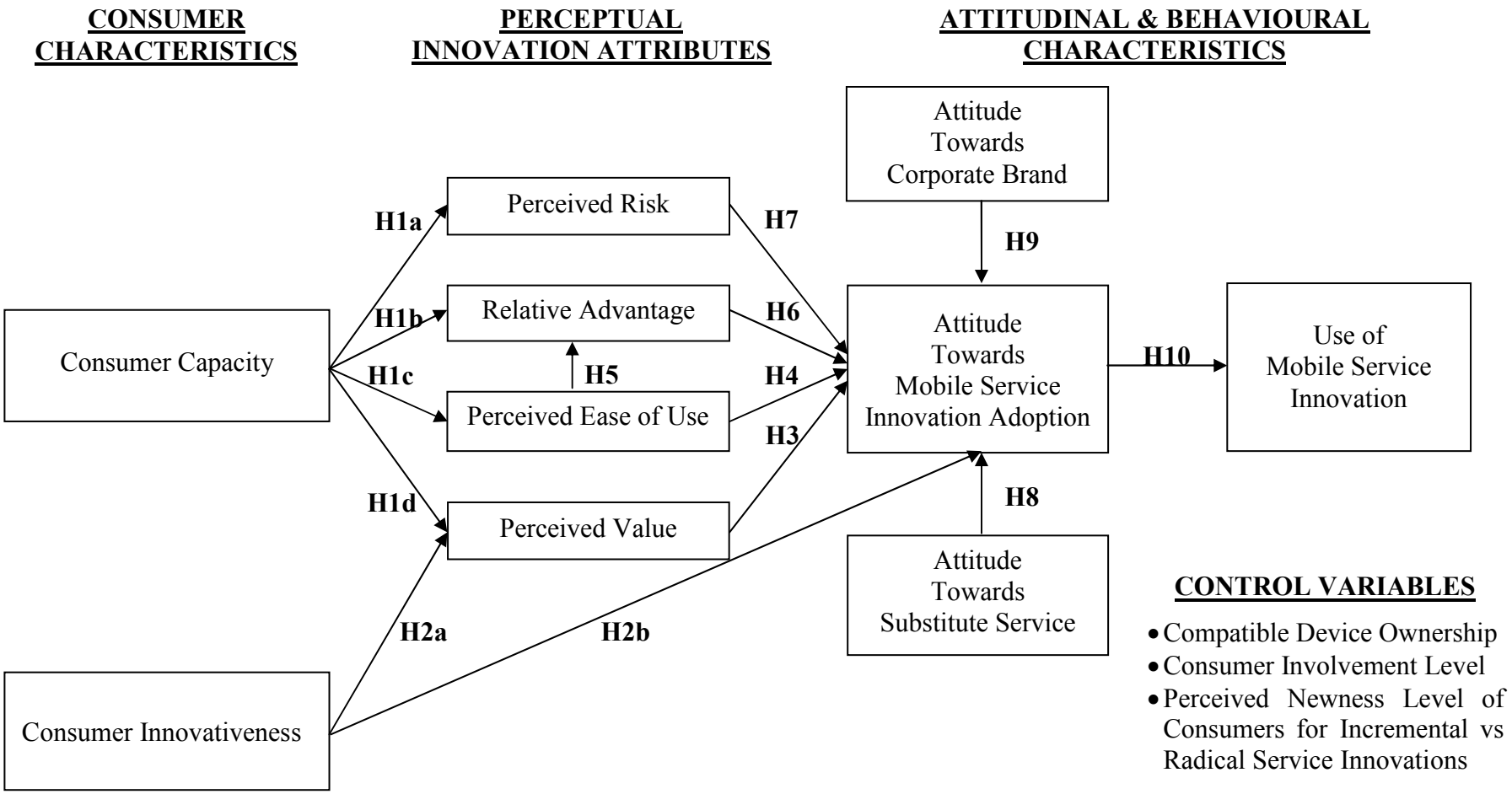

Figure 3.3 : Theoretical model: Factors affecting adoption of mobile services.

Consumer Innovativeness

Consumer innovativeness, mostly affective in the earlier phases of service adoption, (Manneing et al., 1995) affects the perception of the consumers towards the perceived benefits (Wang et al., 2008) obtained from the completely new services and moreover has a direct effect on the consumers' attitude towards service innovation adoption. Especially it has been found in previous studies that domain-specific consumer innovativeness is strongly related with the adoption of electronic innovations (Im et al., 2003).

H2: The more innovative the consumers are, (a) the higher the value consumers perceive about mobile service innovation and (b) the more positive attitude consumers demonstrate towards the mobile service adoption.

Perceived Value

During the purchase of a completely new product or service the expectation of the consumers are towards higher monetary benefit over possession cost. In other words, innovation adoption tendency depends on the perceived value of a new product or service where consumers weigh the monetary benefit against the monetary cost of adoption. In case that the benefits are relatively higher than the costs, the consumers become more likely to adopt the innovations (Wang et al., 2008).

This cognitive trade-off between expected benefits and expected forfeit associated with the adoption (Lee and Allaway, 2002) defines the intention of the consumers about innovation adoption. Dependent on the background and being only available in a certain situation, conditional value can be defined as a value perceived considering "any information that characterizes a situation related to the interaction between humans, applications, and the surrounding environment" (Pura, 2005, p.517).

H3: The higher the value consumers perceive regarding the mobile service innovation, the more positive attitude consumers demonstrate towards adopting it.

Perceived Ease of Use

Innovations that are more straightforwardly adopted are the ones that have been perceived as uncomplicated to use by key players (Greenhalgh et al., 2004). Effectiveness of navigation tools promoting service usage and the full utilization of superior features without confronting steep learning curves can be gained from the

definition of ease of use (Pagani, 2004). Effortlessness in using technology and user friendliness (Weijters et al., 2007; Gao, et al., 2008) are major factors affecting the perception of the consumers.

In previous research studies (Gefen and Straub, 2000; Pagani, 2004; Perez et al., 2004; Gao et al., 2008; Sandhu, 2008; Chen et al., 2009) it has been argued that the level of relative advantage gained from a product or service increases with the ease of its usability by the consumers.

H4: The easier the use of mobile service innovation, the more positive attitude consumers demonstrate towards the mobile service adoption.

H5: The easier the use of mobile service innovation, the more the relative advantage consumers perceive.

Relative Advantage

Innovations that offer an advantage over the existing products or services are exactly what customers look for (de Ruyter et al., 2000). The adoption of mobile applications by their consumers is dependent on their usefulness. This perceived usefulness affects directly and positively the adoption intention of the consumers (Gao et al., 2008). In their study Black et al. (2001) has found that regarding accessibility, the use of a mobile phone has been seen as leaving a person more freedom relating to where the transaction takes place (e.g. from a bus), thus by creating relative advantage to its user. Moreover, on-line service providers see convenience as a relative advantage to be leveraged for the consumers and achieve this by trading time for monetary (de Ruyter et al., 2000), and non-monetary benefits.

H6: The higher the relative advantage of mobile service innovation, the more positive attitude consumers demonstrate towards the mobile service adoption.

Perceived Risk

Risk is a combination of financial, physical, or social risks relating the trial of an innovation (Polatoglu & Akin, 2001) and it can be considered as a multidimensional concept demonstrating a consumer's uncertainties just before purchasing, such as; financial, performance, social, psychological, security, and time/convenience loss (Lee and Allaway, 2002). Due to the nature of services being intangible and simultaneous in producing and consuming, the perception of consumers towards risk

during service decisions become more significant (Im et al., 2007). However, when the risk levels are lower, the endorsement of trust, perceived quality and intention to use services that are offered online emerge. Otherwise if the consumers perceive high risk, they construe the situation as the likelihood of not gaining the expected relative advantage and as lacking of trust in receiving the promised benefits (Ruyter et al., 2000); moreover, they become less likely to adopt (Greenhalgh. et al., 2004).

H7: The higher the risk consumers perceive, the more negative attitude consumers demonstrate towards the mobile service adoption.

Attitude Towards Substitute Service

According to Flavian and Gurrea (2007, p.796) substitutability is "the tendency of people to switch from one product to another that fulfils the same purpose". Thus, a consumer's behaviour to use a new mobile service may easily be affected by a substitute service. According to Johnson and Bhatia (1997, p.386), technological substitution is simply "the displacement of an older established technology by a newer technology whether from a related technology family or a new use of a different technology." As the newer technology becomes able to sustain a superior way of delivering [expected benefit], the displacement of one technology by another takes place (Lin, 2004).

H8: The more the consumers pay attention to the attributes of substitute services, the more negative attitude they will have to adopt the mobile service innovation.

Attitude Towards Corporate Brand

In measuring the influence of brands' personalities on consumer preferences, Aaaker (1997) has proposed a list of traits entailing a set of human characteristics from different facets associated with a brand that may direct consumers' choices. Considering this study, it is obvious that, especially during the analysis of a new service adoption and use by consumers, the influence of a corporate's brand on the service that it offers is equally significant.

Correspondingly, Chen and Corkindale (2008) state that the reputation of a company affects the first impression of a user regarding the online new services. Also considering the findings of de Ruyter et al.'s study (2000), the better the reputation of an organization is, the more conducive it becomes for the consumers in adopting e-services. Evidently, in their study Corkindale and Belder (2009) has found that the

probability of adopting the new innovative service of a company by its potential consumers can be influenced by the power of corporate reputation.

H9: The more the attributes of a corporate brand have importance for customers, the more likely they are to adopt mobile service innovation.

Attitude Towards New Mobile Service Use

"New product (service) adoption behavior as the degree to which a person adopts innovative products (services) relatively earlier than other members of his or her social system" (Im et al., 2007, p. 67). The degree to which an innovative channel is consistent with the individual's past experiences and values influences the consumers' willingness to adopt (Black et al., 2001); contribution to that, the probability of the potential adopter to use it or the exhibition of the willingness or likelihood to use a service defines the adopter intention (Lee and Allaway, 2002).

H10: The more positive attitude consumers demonstrate towards mobile service adoption, the more likely they are to use the mobile service innovation.

Effects of High and Low Consumer Involvement and Radical versus Incremental Service Innovations

Though most of the previous studies (Zaichowsky, 1985; 1994) have examined product involvement, a comprehension of the level of involvement experienced by service customers via both cognitive and affective determinants of services may actually be constructive (Longfellow & Celuch, 1992; Celuch & Taylor, 1999), in service innovation adoption. Moreover considering Technological Acceptance Model of Davis, radical versus incremental innovation technologies may have an effect on model.

H11: (a) Different levels of consumer involvement, (b) different levels of service innovations cause changes among the factors of service innovation adoption model.

4. METHODOLOGY AND RESEARCH DESIGN

The major purpose of this research was to achieve the validation of the hypotheses mentioned in the previous section. In this part, the phases of research design entailing the methods used in retrieving data, and the determinants of chosen sample, as well as the construct of the model and the scenarios can be explored. In Section 4.2 data collection methods and the reasoning of the construct measurement have been explained. In the following section, the facts behind the design and choice of sample have been demonstrated with the statistical data. In the final section, the development of the scenarios for radical versus incremental service innovation types along with consumer involvement level has been depicted.

4.1 Aim and Scope of the Study

The objective of this study is to examine the factors affecting consumer intentions in adopting the new mobile services under two different degrees (high and low) of situational involvement.

4.2 Data Collection Instrument and Construct Measurement

Primary approach in preparing the questionnaire has been to review the service and technology adoption literature broadly and define the borders considering the domain of the construct.

As in this study the determinants of radical versus incremental mobile service innovation adoption has been aimed to be developed, the literature regarding the subject has been scrutinized and the framework has been limited to the effects of consumer characteristics and perceptual innovation attributes towards mobile service innovation adoption.

Table 4.1 : Measurement items of consumer characteristics.

Variable	Construct	Measurement Items (7 point scale)	Measurement Scale Source
Consumer Capacity	CC	1. I know about a service like this. 2. I am familiar with a service like this. 3. I am experienced in using a service like this. 4. I am skilled at using a service like this. 5. I am skilled at using a service like this, compared to other mobile services.	Novak et al. (2000), Wang et al. (2008)
Consumer Innovativeness	CI	1. I often seek out information about new products and brands. 2. I like to go to places where I will be exposed to information about new products and brands. 3. I like magazines that introduce new brands. 4. I frequently look for new products and services. 5. I seek out situations in which I will be exposed to new and different sources of product information. 6. I am continually seeking new product experiences. 7. I take advantage of the first available opportunity to find out about new and different products.	Manning et al. (1995)

Table 4.2 : Measurement items of perceptual innovation attributes.

Variable	Construct	Measurement Items (7 point scale)	Measurement Scale Source
Perceived Risk	RISK	1. This service may cause security issues. 2. This service may make me lose money. 3. This service may result in sharing personal life without your own accord. 4. This service may make me lose time.	Lee and Allaway (2002)
Relative Advantage	ADV	1. I think that this service is very efficient. 2. This service makes me save time. 3. This service is useful. 4. This service is effective. 5. This service is worthwhile.	Dahl et al. (1999), Pagani (2004), Weijters et al. (2007)
Perceived Ease of Use	PEOU	1. The service will require less effort to learn how to use. 2. The service will offer user-friendly interface. 3. The service will encourage service usage and the full exploitation of enhanced features.	Weijters et al. (2007), Pagani (2004)
Perceived Value	VAL	1. The monetary benefits that this service offers will overweigh its monetary cost. 2. The conditional benefits that this service offers will overweigh its conditional cost. 3. This service will be overall cost-effective. 4. This service will create overall high value.	Pagani (2004)

Consistent with the developed theoretical model, consumer characteristics with two components (consumer capacity and consumer innovativeness) and perceptual attributes (perceived value, perceived ease of use, relative advantage and perceived risk) of consumers towards radical vs. incremental service innovations with four components and attitudinal and behavioural characteristics with four components as well (attitude towards mobile service innovation adoption, attitude towards substitute service and attitude towards corporate brand and use of mobile service innovation) have been characterized (See Table 4.1 and Table 4.2).

Secondly, the items representing the constructs have been generated via existing literature with highly reliable items. In this study, multi-item seven point Likert type scales have been used and while some items were adapted from previous studies, some has been derived from the relevant studies without any major change.

First of all, the items measuring consumer capacity have been adapted from the studies of Novak et al. (2000) and Wang et al. (2008). Measurement items for consumer innovativeness have been taken as it is from the study of Manning et al. (2005) (See Table 4.1). Perceived risk has been measured by the items adapted from Lee and Allaway (2002) and the items for perceived value scale were adapted from Pagani (2004). The items for perceived ease of use and relative advantage (See Table 4.2 have been gathered from studies of Weijters et al. (2007) and Pagani (2004) where, additional three items for relative advantage have been adapted from the study of Dahl, Chattopadhyay and Gorn (1999).

As a result of this process, 12 items for consumer characteristics (consumer capacity – 5 items, consumer innovativeness – 7 items) and 16 items for perceptual innovation attributes (perceived risk – 4 items, relative advantage – 5 items, perceived ease of use – 3 items and perceived value – 4 items) have been generated.

Then, the measurement items of attitudinal characteristics (See Table 4.3) have been reviewed and the items for attitude towards mobile service innovation adoption have been adapted from the studies of Weijters et al. (2007) and Wang et al. (2008). The items used for measuring attitude of consumers towards corporate brand have been collected from the studies of Aaker (1997) and Corkindale and Belder (2009). Attitude towards substitute service has been measure by the items retrieved from Rodini, Ward and Woroch (2003) and Lin (2004).

In this process 18 items (attitude towards mobile service innovation – 5 items, attitude towards corporate brand – 10 items, attitude towards substitute service – 3 items, use of mobile service innovation – 1 item) for measuring attitudinal characteristics of consumers have been generated.

Evidently, demonstrating the relative difference of manipulations, a question has been asked to test the level of consumer involvement via six-item revised PII scale of Zaichowsky (1994).

The perceived attributes of a product or service such as originality, novelty and uniqueness define the newness of the service relative to the consumers (Wang et al., 2008). Akin to that; Stierand and Lynch (2008, p.345) state: "perceived newness and change is related to the notion of adoption and diffusion, because it is relevant who considers an innovation as new". Regarding the findings of their study, Johannessen et al. (2001), also supported the other works advocating the solid linkage between the newness degree of a service innovation and the person that perceives it so. Briefly, the higher in size or scope the economic unit accepting the newness of an innovation, the more radical the innovation is perceived to be. Consistent with the above stated literature, the level of perceived newness for radical versus incremental service innovations has been measured by items adapted from Dahl et al. (1999), Weijters et al. (2007) and Wang et al. (2008).

Finally yet importantly, one item has been generated to measure the compatibility of the mobile phones that respondents own with the services aforementioned in the scenarios (See Table 4.4).

4.3 Sample Design and Selection

Before deciding upon which sample our framework can be tested, some external sources have been searched for reasonable facts in building a solid background. According to Information and Communication Technologies Authority, it has been found that in Turkey at the end of 2008 there were more than 65 million subscribers of mobile telephones with an increase of 6,2% compared to previous year, becoming the fastest-growing sector in consumer electronics within the country (TurkStat & Euromonitor). In 2009, 87,6% of the households have owned mobile phones with a slight - 0,5 point - decrease in the ownership compared to 2008. On the other hand,

Table 4.3 : Measurement items of attitudinal and behavioural characteristics.

Variable	Construct	Measurement Items (7 point scale)	Measurement Scale Source
Attitude Towards Mobile Service Innovation Adoption	ATA	1. I would be interested in subscribing to this service. 2. I would be interested in being one of the early subscribers of this service. 3. I support the usage of this service. 4. I like this service. 5. I think this service is very good.	Weijters et al. (2007), Wang et al. (2008)
Attitude Towards Corporate Brand	ATB	Please indicate how significant you find the following attributes of an ideal firm: • Familiar to me • Innovative • Sophisticated • Well-known • Honest • Competitive • Dependable • Creative • Rugged • Reputable	Aaker (1997), Corkindale & Belder (2009)
Attitude Towards Substitute Service	ATS	1. The price of the other services that may substitute this service is important for me. 2. The superiority of the other services that may substitute this service is important for me. 3. The quality of the other services that may substitute this service is important for me.	Rodini et al. (2003), Lin (2004)
Use of Mobil Service Innovation	USE	• I think about using a service like this in three months time.	The researcher

Table 4.4 : Measurement items of control variables.

Control Variable	Construct	Measurement Items (7-point scale)	Measurement Scale Source
Compatible Device Ownership	CDO	• Is this service compatible with the device you own?	The researcher
Consumer Involvement Level	INV	To me, selecting a mobile service in an identical situation (is very): • Important • Valuable • Interesting • Involving • Means a lot (to me) • Needed	Zaichkowsky (1994)
Perceived Newness Level of Consumers Towards Radical versus Incremental Service Innovations	NEW	1. This service is a unique service. 2. This service is a pioneer service. 3. This service is a brand new service.	Dahl et al. (1999), Weijters et al. (2007), Wang et al.(2008)

the number of households that have access to internet have increased 4,6% and reached to 30,1%, 86% of which have ADSL, the most common connection type in Turkey. (TurkStat, 2009).

By examining the internet usage shares declared by TurkStat, it is obvious that in 2009 individuals within the ages of 16-24 and 25-34 have the highest respective shares: 59,4% and 45,1%. Whereas, this share varies also according to education levels and employment situations and amounts to 87,7% for higher education and 88,2% for students.

Considering these significant facts and the nature of the online mobile services that our study entails, target group of the study has been selected as mobile phone users between the ages of 18 and 35 who are currently studying or have a degree from a university

4.4 Scenario Development for Innovation Types and Situational Involvement

The experiment conducted in this study was structured with a 2 (consumer's situational involvement) x 2 (online mobile innovative service) between-subjects factorial design. During the study, the primary data collection method has been utilized. The conceptual framework along with proposed hypotheses has been tested via web-based surveys which started by reading a scenario right after confirming to participate the survey. Respondents were randomly assigned to one of the four situations that were created by crossing two levels of these two independent variables. (Elmadag, 2006)

An online mobile context was used for this figurative study because the services context had to let customers share certain data on the move to go to a destination. As a result of the need to distinguish the effect of perceived newness on the adoption, two different service types have been chosen, so that a clear identification of the innovativeness degree of the two online mobile services could be demonstrated. After reading one of the four scenarios (two mobile service innovation types x two consumer involvement levels) that has been randomly assigned to each respondent, their level of situational involvement has been measured via six-item revised PII scale (Zaichowsky, 1994) in 7 point Likert type scales.

But, before launching the main survey research, a pre-test has been run among the university students from different grades to measure the indifference of the scenarios to each other. The responses of this small sample size (N=120) have demonstrated crucial results for the reliable continuation of the study. According to the results, respondents had the same level of consumer involvement towards the scenarios. In one of them low consumer involvement had been managed to be manipulated by the invitation to a party of a friend whom you do not see often, and in the other one regarding the high consumer involvement, a call for an interview from a company in which you had always desired had been demonstrated. Unfortunately the situational involvement level of the consumer was indifferent compared to each other after having t-test analyses.

Regarding the young profile of the sample size, it has been assumed that attending a party to which you have been invited from a person whom you have just met could not be enough to create a low involvement situation. Therefore, party concept has been abandoned and displaced with the concept of attending to a wedding ceremony.

The main survey has been prepared according to the following structure. First, an approval of the respondents in participating the research have been received and right after that, they have been asked to read a specific scenario. Then, another answer has been directed in order to learn whether they use mobile phone and as a control variable the compatibility status of their phone with the service innovation aforesaid in the scenario have been enquired. Afterwards the respondents were asked to answer related questions measuring various items for each variable. Finally, at the end of the survey some personal information involving mobile phone and internet usage statistics and the demographics of the respondents have also been collected.

5. ANALYSIS

SPSS 15.0 (statistical package for social sciences) was used during the descriptive analysis, outlier examination, missing data analysis, exploratory factor analysis, reliability analysis and the normal distribution assessment (Elmadag, 2006).

5.1 Initial Data Analysis

According to Hair et al. (1998) in case that the outliers that are regarded as non-representatives of any remarks in the population decrease the scope of the multivariate analysis, they should be eliminated from the retrieved data.

Hence, the questionnaires with missing answers for more than 10% of the items were removed from the samples of all. According with that prior statement, the number of the questionnaires that were excluded from each scenario can be seen in Table 5.1. As a result, the total valid sample size was 288 on which the item refinement, scale validation and model testing stages of data analysis were based. Missing value analysis has been conducted and missing values higher than 0,10 has been excluded from the analysis.

Table 5.1 : Sample size validation.

Scenarios	Degree of Consumer Involvement	Type of Innovation	Number of Questionnaires		
			Received	Excluded	Valid
I	High	Navigation	96	22	74
II	Low	Navigation	95	26	69
III	High	4G	91	18	73
IV	Low	4G	93	21	72
			N=375	N=87	N=288

5.1.1 Sample characteristics

According to the demographics of the respondents, the target population has been successfully reached as anticipated. 91,4% of the respondents are between the ages of 18 and 35. The ones younger than 25 amount 51,6% of all. Also the profile of the participants demonstrates that they are highly educated. 59,5% of all is studying at a university on bachelor's level and 34,8% is at master's degree. The sample can be characterized as highly familiar with innovative mobile services and accordingly half of it uses mobile services and their applications at least once in a month. The percentages of the respondents that have been using mobile phones and internet more than 7 years are 85,2% and 76,6%, respectively; demonstrating a solid evidence of consumer capacity for technological and mobile services (See Table 5.2 and Table 5.3).

Table 5.2 : Mobile phones, services and internet usage statistics (N=282).

Category	Variables	Freq.	%
Mobile services usage	More than once in a month	125	44,3
	Once in a month	43	15,2
	2-3 times a year	42	14,9
	Almost not	72	25,5
Mobile phone usage	More than 10 years	131	46,5
	7-10 years	109	38,7
	5-7 years	36	12,8
	3-5 years	4	1,4
	1-3 years	1	0,4
	Less than a year	1	0,4
Internet usage	More than 10 years	136	48,2
	7-10 years	80	28,4
	5-7 years	43	15,2
	3-5 years	16	5,7
	1-3 years	3	1,1
	Less than a year	4	1,4

Table 5.3 : Demographic profile of the sample (N=279).

Category	Variables	Freq.	%	Category	Variables	Freq.	%
Age	Under 18	1	0,4	Education level	College	166	59,5
	18 - 25	144	51,6		Graduate	97	34,8
	26 - 35	111	39,8		PhD	11	3,9
	36 - 49	17	6,1		High School	5	1,8
	50 - 65	5	1,8				
	Over 65	1	0,4				
Gender	Female	151	54,1	Employment	Employed	162	58,1
	Male	128	45,9		Unemployed	117	41,9
Household size	1	45	16,1	Occupation*	Engineers	111	41,1
	2	60	21,5		Students	75	27,8
	3	68	24,4		Managers & Consultants	43	15,9
	4	72	25,8		Academics & Educators	20	7,4
	5	27	9,7		Others	21	7,8
	6	6	2,2				
	7 and more	1	0,4				
Marital status	Single	231	82,8	Income	Under 1000 TL	12	4,3
	Married	48	17,2		1000 - 3000 TL	101	36,2
					3000 - 5000 TL	77	27,6
					5000 - 7000 TL	49	17,6
					7000 - 1000 TL	19	6,8
					Over 10000 TL	21	7,5

Note: *. For Occupation, N=270.

To have a more detailed profile of the respondents, their adoption intention has been categorized regarding the estimated means retrieved from the questionnaires via one-way ANOVA analysis (See Table 5.4). According to the results, the following statements can be claimed:

- 73% of high adopters use mobile phone services frequently and 81% of respondents (59,6%) that use mobile phone services very frequently are highly likely to adopt mobile service innovations. 67% of medium adopters use services rarely.
- Respondents that use mobile phones more than 10 years (46,5%) show high attitude of adopting mobile service innovations with a rate of 71%.
- Although there has been a heterogeneity among groups with a significance at the 0,74 level, it has been found that the relationship among internet usage and adoption types is not very significant(sig.=0,14).
- However, it can be stated that low adopters are mostly aged under 25, whereas 67,2% of respondents higher than 25 and 66,2% of respondents under 25 are very likely to adopt mobile service innovations.
- Due to the young target sample, age cannot be taken as a significant variable for differentiating adopter types.
- Similarly, gender does not have a significant effect on the adoption attitude of respondents.
- Due to the intentional choice of highly educated target sample, the education level cannot be taken as a significant factor affecting adoption.
- Accordingly, 64,9% of students that are at college and below (61,3%) and 69,4% of graduates and above (38,7%) have high likelihood of adopting services.
- Employment and occupation type are not effective on attitude towards adoption as well.
- Income levels of the respondents are not effective on attitude towards have not been found significant among adopters.

Table 5.4 : Consumer characteristics and demographics of low, medium and high adopters

Consumer Characteristics		Adopter Types			Total % of Demographics	Chi-Square Test
		Low (8,9%)	Medium (24,8%)	High (66,3%)		
Mobile phone services usage frequency	Low (40,4%)	14,0%	41,2%	44,7%	100,0%	0,00
		64,0%	67,1%	27,3%		
	High (59,6%)	5,4%	13,7%	81,0%	100,0%	
		36,0%	32,9%	72,7%		
	Total % of Adopters	100,0%	100,0%	100,0%		
Mobile phone usage duration	Less than 7 years (14,9%)	11,9%	40,5%	47,6%	100,0%	0,08
		20,0%	24,3%	10,7%		
	7-10 years (38,7%)	9,2%	22,9%	67,9%	100,0%	
		40,0%	35,7%	39,6%		
	More than 10 years (46,5%)	7,6%	21,4%	71,0%	100,0%	
		40,0%	40,0%	49,7%		
	Total % of Adopters	100,0%	100,0%	100,0%		
Internet usage duration	Less than 7 years (23,4%)	12,1%	30,3%	57,6%	100,0%	0,51
		32,0%	28,6%	20,3%		
	7-10 years (28,4%)	7,5%	25,0%	67,5%	100,0%	
		24,0%	28,6%	28,9%		
	More than 10 years (48,2%)	8,1%	22,1%	69,9%	100,0%	
		44,0%	42,9%	50,8%		
	Total % of Adopters	100,0%	100,0%	100,0%		
Age	Under 25 (52%)	9,7%	24,1%	66,2%	100,0%	0,80
		58,3%	50,7%	51,6%		
	Higher than 25 (48%)	7,5%	25,4%	67,2%	100,0%	
		41,7%	49,3%	48,4%		
	Total % of Adopters	100,0%	100,0%	100,0%		
Education level	College and below (61,3%)	9,9%	25,1%	64,9%	100,0%	0,56
		70,8%	62,3%	59,7%		
	Graduate and above (38,7%)	6,5%	24,1%	69,4%	100,0%	
		29,2%	37,7%	40,3%		
	Total % of Adopters	100,0%	100,0%	100,0%		
Employment	Employed (58,1%)	7,4%	25,3%	67,3%	100,0%	0,70
		50,0%	59,4%	58,6%		
	Unemployed (41,9%)	10,3%	23,9%	65,8%	100,0%	
		50,0%	40,6%	41,4%		
	Total % of Adopters	100,0%	100,0%	100,0%		
Income levels	Less than 3000 TL (40,5%)	7,1%	32,7%	60,2%	100,0%	0,13
		33,3%	53,6%	36,6%		
	3000 - 5000 TL (27,6%)	10,4%	16,9%	72,7%	100,0%	
		33,3%	18,8%	30,1%		
	More than 5000 TL (31,9%)	9,0%	21,3%	69,7%	100,0%	
		33,3%	27,5%	33,3%		
	Total % of Adopters	100,0%	100,0%	100,0%		

- 79,5% of the respondents that own a compatible device with the aforementioned services has a high attitude towards adopting mobile service innovations.
- In addition, 60% of the respondents that do not own a compatible mobile phone are highly willing to adopt mobile service innovations as well.
- More than 80% of low and medium adopters do not own a compatible mobile phone. Surprisingly, 65,1% of high adopters do not own a compatible device. (See Table 5.5)

Table 5.5 : Compatible device ownership profiles of adopters.

Control Variable		Adopter Types			Total % of Demographics	Chi-Square Test
		Low (8,9%)	Medium (24,8%)	High (66,3%)		
Compatible Device Ownership	Positive (28,8%)	4,8%	15,7%	79,5%	100,0%	0,01
		15,4%	17,8%	34,9%		
	Negative (71,2%)	10,7%	29,3%	60,0%	100,0%	
		84,6%	82,2%	65,1%		
	Total % of Adopters	100,0%	100,0%	100,0%		

5.2 Descriptive and Factorial Analyses on Main Constructs

In order to ensure the reliability of the constructs and to demonstrate whether they were one-dimensional and/or multi-dimensional an exploratory factor analysis has been carried out via SPSS. Consistent with the statements of Nunnally towards this direction (1978), the validity of empirical measures has been checked.

Although most of the items have been adapted from empirical studies in order to sustain scale refinement and validation (Aaker, 1997) exploratory factor analysis has been conducted in the early stages. By doing so, the relationships between the indicators and their relevant constructs could initially be comprehended.

The items which had less than 0.50 factor loadings were excluded in each run (Hair et al., 1998) and the items that were either loaded to more than two factors or loaded to unexpected factors of the theoretical model, were eliminated (Karaosmanoglu, 2006).

Regarding aforementioned issues, first item of consumer capacity scale (I know about a service like this.), second item of perceived value scale (The conditional

Table 5.6 : Construct validation of theoretical model.

Factors and Related Items	Factor Loadings	Cronbach Alpha
Consumer Capacity		
I am familiar with a service like this.	0,807	0,890
I am experienced in using a service like this.	0,791	
I am skilled at using a service like this.	0,882	
I am skilled at using a service like this, compared to other mobile services.	0,791	
Consumer Innovativeness		
I often seek out information about new products and brands.	0,787	0,927
I like to go to places where I will be exposed to information about new products and brands.	0,827	
I frequently look for new products and services.	0,858	
I seek out situations in which I will be exposed to new and different sources of product information.	0,838	
I am continually seeking new product experiences.	0,799	
I take advantage of the first available opportunity to find out about new and different products.	0,804	
I like magazines that introduce new brands.	0,723	
Perceived Risk		
This service may cause security issues.	0,873	0,750
This service may result in sharing personal life without your own accord.	0,870	
Relative Advantage		
I think that this service is very efficient.	0,664	0,920
This service makes me save time.	0,584	
This service is useful.	0,657	
This service is effective.	0,685	
This service is worthwhile.	0,612	
Perceived Ease of Use		
The service will require less effort to learn how to use.	0,795	0,797
The service will offer user-friendly interface.	0,788	
The service will encourage service usage and the full exploitation of enhanced features.	0,737	
Perceived Value		
The monetary benefits that this service offers will overweigh its monetary cost.	0,763	0,871
This service will be overall cost-effective.	0,775	
This service will create overall high value.	0,657	

Table 5.6 : Construct validation of theoretical model (contd.).

Factors and Related Items	Factor Loadings	Cronbach Alpha
Attitude Towards Adoption		
I would you be interested in subscribing to this service.	0,652	0,907
I would you be interested in being one of the early subscribers of this service.	0,651	
I am in favour of this service.	0,708	
I like this service.	0,702	
I think this service is very good.	0,648	
Attitude Towards Corporate Brand		
Dependable	0,615	0,832
Reputable	0,699	
Innovative	0,766	
Honest	0,630	
Creative	0,727	
Sophisticated	0,674	
Competitive	0,552	
Rugged	0,686	
Attitude Towards Substitute Service		
The price of the other services that may substitute this service is important for me.	0,891	0,915
The superiority of the other services that may substitute this service is important for me.	0,872	
The quality of the other services that may substitute this service is important for me.	0,888	
Attitude Towards Substitute Service		
The price of the other services that may substitute this service is important for me.	0,891	0,915
The superiority of the other services that may substitute this service is important for me.	0,872	
The quality of the other services that may substitute this service is important for me.	0,888	
Consumer Involvement Level (Control Variable)		
Important	0,889	0,953
Interesting	0,820	
Means a lot	0,884	
Valuable	0,830	
Involving	0,875	
Needed	0,842	
Perceived Newness Level (Control Variable)		
This service is a unique service.	0,850	0,874
This service is a pioneer service.	0,867	
This service is a brand new service.	0,863	

Kaiser-Mayer-Olkin (KMO)=0,878 Total variance explained = 74,45%
Bartlett Test of Sphericity = 10978, p = 0.000 <0,05
Methods: Principal Component Analysis / Varimax with Kaiser Normalization

benefits that this service offers will overweigh its conditional cost.), second (This service may make me lose money) and fourth (This service may make me lose time.) items of perceived risk scale and respective first and second items measuring attitude towards corporate brand (familiar to me and well known) have been excluded from the model.

With this revision, evidently, all of the constructs – consumer capacity, consumer innovativeness, perceived risk, relative advantage, perceived ease of use, perceived value, attitude towards adoption, attitude towards corporate brand and attitude towards substitute service – received high reliability assessments by Cronbach alpha measures which are, 0,89, 0,93, 0,75, 0,92, 0,80, 0,87, 0,91, 0,83, and 0,92, respectively (See Table 5.6).

Also the control variables consisted of consumer involvement and perceived newness had these respective highly reliable percentiles: 0,95 and 0,87

The sample was adequate for the factor analysis in which the Kaiser-Mayer-Olkin measure of sampling adequacy (MSA) was 0.88, which is considered as meritorious (Kaiser, 1974), and The Bartlett Test of Sphericity (BTS) has been found significant for all factor analyses run, providing the existing correlations among variables (Hair et al., 1998) and suggested that the bivariate correlations among the scales' items were significantly different from zero (BTS= 10978, p=0.000). Evidently, these 12 factors captured an acceptable level of 74,5% of the variance (Hair et al., 1998).

When the correlations among the constructs are examined in Table 5.7, it can be seen that all of the relationships are parallel to the propositions of the hypotheses except for the correlations belonging to attitude towards substitute services. More will be explained about this issue in the following section while defending the hypotheses.

In order to ensure the indifference of the manipulated groups t-test for equality of means have been run. Regarding that the scenario development was based on between-subjects factorial design, the results demonstrating the low level of significance for equality of means are satisfying.

There are significant differences between high involved consumers regarding their perception towards radical versus incremental service innovations, resembling the outcome retrieved from the low involved consumers about the same discrimination (See Table 5.8). Also the respondents that were given the scenarios with the same

Table 5.7 : Pearson correlation matrix of constructs (N=288).

Construct	Variable	CC	CI	VAL	PEOU	ADV	RISK	ATA	ATS	ATB	USE
CC	Consumer Capacity	**0,890**									
CI	Consumer Innovativeness	,379**	**0,927**								
VAL	Perceived Value	-,168**	-0,078	**0,871**							
PEOU	Perceived Ease of Use	,339**	,269**	-,123*	**0,797**						
ADV	Relative Advantage	,299**	,215**	-0,053	,409**	**0,920**					
RISK	Perceived Risk	,217**	,207**	-,128*	,603**	,163**	**0,750**				
ATA	Attitude Towards Adoption	0,006	,225**	0,042	,148*	,285**	0,084	**0,907**			
ATS	Attitude Towards Substitute Service	,318**	,458**	-,181**	,663**	,340**	,593**	,235**	**0,915**		
ATB	Attitude Towards Corporate Brand	0,052	,164**	0,046	,361**	,260**	,217**	,244**	,291**	**0,832**	
USE	Use of Service	,394**	,371**	-,166**	,472**	,196**	,495**	,122*	,651**	0,114	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Reliabilities are demonstrated in bold.

Table 5.8 : T-test results for manipulation check.

Manipulations	Involvement Degree	Service Type	Number of Scenario	Sample Size (N)	Means	T-test for Equality of Means
Perceived Newness Level Towards Radical versus Incremental Service Innovation	High	Navigation	I	74	3,21	0,001<0,05
		4G	III	73	4,10	
	Low	Navigation	II	69	3,04	0,000<0,05
		4G	IV	72	4,27	
	Service Type	Involvement Degree	Number of Scenario	Sample Size (N)	Means	T-test for Equality of Means
Consumer Involvement Level	Navigation	High	I	74	5,36	0,000<0,05
		Low	II	69	4,39	
	4G	High	III	73	5,26	0,000<0,05
		Low	IV	72	3,55	

service type could demonstrate the characteristics of high involvement situation compared to low involvement situation with a significant difference in the means.

In brief, all of the manipulations that were utilized have been successfully applied to the scenarios sustaining a reliable background for the analyses of the hypotheses stated in the theoretical model.

5.3 Model Testing and Results

The research hypotheses were tested on the basis of regression analysis run on SPSS 15.0 and multiple affects of constructs have been analyzed by selection and elimination of multiple variables via stepwise selection method. All of the regression analyses have been subjected to ANOVA (Analysis of Variance) and all results have been found significant statistically.

5.3.1 Results of the main model

First of all, consumer characteristics have been subjected to regression analysis to reveal its relationship with the dependent variables. These dependent variables are perceived risk, relative advantage, perceived ease of use, perceived value for consumer capacity and perceived value and attitude towards mobile service innovation adoption for consumer innovativeness. Being dependent to both consumer characteristics and consumer innovativeness perceived value has been further analyzed for both of these independent variables.

Then, the relationships among attitudinal characteristics and perceptual innovation characteristics have been analyzed via regression. Here, the main aim of the study, search for the determinants of mobile service innovation adoption, has been represented with the results obtained in the regression analyses. The effects of perceived value, perceived ease of use, relative advantage and perceived risk over attitude towards mobile service innovation have been scrutinized.

Finally, the relationship between the attitude towards mobile service adoption with independent variables, attitude towards corporate brand and attitude towards substitute service has been searched, as well as the effect of adoption intention on mobile service innovation use.

As it has been depicted on Table 5.9, the negative effect of consumer capacity on perceived risk (β=-0,17) can be seen. Also consumer capacity positively affects relative advantage (β=0,34), perceived ease of use (β=0,30) and perceived value (β=0,22). Moreover the each effect of consumer innovativeness on perceived value (β =0,21) and attitude towards mobile service adoption (β=0,46) can be explained Also, it has been found that both consumer capacity (β=0,16) and consumer innovativeness (β=0,15) affects perceived value significantly. Furthermore, consumer innovativeness (β=0,35) and perceived value (β=0,52) affects attitude towards mobile service adoption, significantly.

The positive and negative changes in the attitude of consumers towards mobile service innovation adoption can be explained independently by the following determinants; perceived value (β=0,59), perceived ease of use (β=0,34), relative advantage (β=0,66) and perceived risk (β=-0,18). Besides, in certain situations and for services from different innovation levels more than one of these factors may affect accordingly. The whole effect of these determinants can be explained statistically (β=0,31, β=0,11, β=0,42, β=-0,08) with 52%. As it can be seen, when all the factors are present and the perception towards other factors except perceived risk is dominant, the concerns towards uncertain issues decrease slightly.

During the development of theoretical modern last concern has been whether consumers' attitude towards mobile service adoption can be affected by their attitude towards corporate brands and substitute services available in the service market. Similar to the proposed hypothesis, attitude towards corporate brand positively affects consumers' adoption (β=0,24). However, it has been found that attitude towards substitute service has a positive effect on adoption in an adverse approach with the proposed hypothesis which has been rejected accordingly. Supposedly, this result may be explained by the learning ability of consumers towards mobile services present in the market.

Last but not least it has been found consistent with the proposed hypotheses that attitude towards mobile service innovation adoption positively affects the use of mobile services by consumers.

All in all, all of the hypotheses developed during the quest for an answer for research problem have been supported except for the effect of attitude towards substitute on adoption, as it has been explored in the abovementioned analysis results.

Table 5.9 : Regression analysis of hypotheses.

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
CC	– H1a →	RISK	-0,17	0,06	-0,17	-2,88	0,04	8,30	0,04	0,03	0,03	S
CC	– H1b →	ADV	0,27	0,04	0,34	6,09	0,00	37,13	0,00	0,11	0,11	S
CC	– H1c →	PEOU	0,20	0,04	0,30	5,29	0,00	27,99	0,00	0,09	0,09	S
CC	– H1d →	VAL	0,17	0,05	0,22	3,76	0,00	14,17	0,00	0,05	0,04	S
CC	Step 1	VAL	0,17	0,05	0,22	3,76	0,00	14,17	0,00	0,05	0,04	
CC	Step 2	VAL	0,13	0,05	0,16	2,62	0,01	9,97	0,00	0,07	0,06	S
CI			0,15	0,06	0,15	2,35	0,02					
CI	– H2a →	VAL	0,21	0,06	0,21	3,58	0,00	12,82	0,00	0,04	0,04	S
CI	– H2b →	ATA	0,47	0,05	0,46	8,71	0,00	75,77	0,00	0,20	0,20	S
CI	Step 1	ATA	0,47	0,05	0,46	8,71	0,00	75,77	0,00	0,21	0,21	
CI	Step 2	ATA	0,36	0,05	0,35	7,93	0,00	125,76	0,00	0,47	0,47	S
VAL			0,53	0,05	0,52	11,80	0,00					
VAL	– H3 →	ATA	0,61	0,05	0,59	12,46	0,00	155,14	0,00	0,35	0,35	S
PEOU	– H4 →	ATA	0,41	0,07	0,34	6,11	0,00	37,36	0,00	0,12	0,11	S
PEOU	– H5 →	ADV	0,47	0,06	0,41	7,58	0,00	57,50	0,00	0,17	0,16	S
ADV	– H6 →	ATA	0,68	0,05	0,66	14,98	0,00	224,29	0,00	0,44	0,44	S
RISK	– H7 →	ATA	-0,15	0,05	-0,18	-3,12	0,02	9,74	0,02	0,03	0,03	S

Table 5.9 : Regression analysis of hypotheses (contd.).

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff.		Std. Coeff.			Anova		R^2	Adj. R^2	Result
			β	Std. Err.	β	t	Sig.	F	Sig.			
VAL	Step 1	ATA	0,61	0,05	0,59	12,46	0,00	155,14	0,00	0,35	0,35	
VAL	Step 2	ATA	0,56	0,05	0,55	12,00	0,00	100,08	0,00	0,41	0,41	
PEOU			0,30	0,05	0,25	5,44	0,00					
VAL	Step 3	ATA	0,33	0,05	0,32	6,07	0,00	98,13	0,00	0,51	0,50	
PEOU			0,14	0,05	0,11	2,50	0,01					
ADV			0,44	0,06	0,42	7,47	0,00					S
VAL	Step 4	ATA	0,32	0,05	0,31	5,95	0,00	75,41	0,00	0,52	0,51	
PEOU			0,14	0,05	0,11	2,49	0,01					
ADV			0,43	0,06	0,42	7,40	0,00					
RISK			-0,07	0,03	-0,08	-2,02	0,04					
ATS	– H8 →	ATA	0,35	0,07	0,29	5,14	0,00	26,421	0,00	0,09	0,08	R
ATB	– H9 →	ATA	0,39	0,10	0,24	4,09	0,00	16,76	0,00	0,06	0,05	S
ATA	– H10 →	USE	0,90	0,06	0,65	14,50	0,00	210,27	0,00	0,42	0,42	S

Note: S: Supported R: Rejected

5.3.2 Comparison of the overall regression results

Apart from deciding the determinants of service adoption, another significant part of this study has been aiming to contribute to the consumer involvement and service innovation literatures. It has been regarded as essential to analyze the differences between the factors affecting the decisions of high and low involved consumers in adopting mobile service innovations considering radical versus technological innovation types (See Table 5.10).

Therefore, regression analyses that have been run for the main model have been executed for the data manipulated by consumer involvement and perceived newness factor measuring the innovativeness level of the service types.

According to the result retrieved from the analyses, for consumers with higher perception regarding newness of the services (See Table A.4); otherwise stated, perceiving the service as a radical innovation, the hypothesis regarding the effect of perceived risk towards mobile service adoption has been rejected. Moreover the effects of consumer capacity on perceived risk and perceived value have been weakly supported (Significant at the 0,10 level.). These results might have stemmed from the immature perception towards the radical innovation and inadequate knowledge of consumers about the radical mobile service innovation.

For consumers perceiving the mobile service as incremental service innovation (See Table A.3), as expected, the hypotheses had no significant difference from the main model. Because in that service type, there had not been major alterations by the means of innovation, it can be assumed that consumers have found associations between this service type and the one that they had been using lately.

When the regression analysis of high involved consumers is examined (See Table A.1), it can be seen that the effect of perceived risk of consumers on attitude towards mobile service innovation adoption is weakly supported (sig.=0,13). This is an expected outcome supporting the behavioural notion that the consumers that are highly involved in a specific situation have relatively lower concerns towards being exposed to risk.

On the other hand, regarding the low involved consumers (See Table A.2), another significant outcome was the weakly supported hypothesis proposing the idea that perceived ease of use can affect attitude towards mobile service adoption. Again, this

is a reasonable consequence, since low involved consumers have low interest in the service and its features involving the interface of the application related with its ease of use.

As the diffusion of smart mobile phones increase in Turkey within these days, it was essential to have information regarding the compatibility degree of the users mobile phones with the services presented in the scenarios.

According to the analysis run among the data of consumers owning compatible devices (See Table A.5), it has been expectedly found out that perceived ease of use weakly affects their mobile service innovation adoption (sig.=0,13). This might arise from the apathy of users towards ease of use of the service, since they count on the device they own by assuming that it will be compatible.

Similar with the results demonstrating the categorization of adopter types, it has been found that for respondents that do not own a compatible device (See Table A.6), the effect of perceived risk on attitude towards mobile service adoption is weakly supported (sig.=0,13). According to the overall results, as 60% out of 72,1% (percentage among ownership criteria) consumers without owning a compatible device respondents are high adopters of mobile service innovation, they are more indifferent to the risk (Table 5.5). Another reason for that issue can be claimed as their lower knowledge and experience with respect to these kinds of services and their inability to judge the risks that they may appear during the use of these kinds of mobile service innovations.

Table 5.10 : Comparison of regression analyses.

Hypotheses	Main Model	Perceived Newness Level for Radical vs. Incremental Service Innovations		Consumer Involvement Level		Compatible Device Ownership	
		High	Low	High	Low	Positive	Negative
H1a	S	WS	S	S	R	R	S
H1b	S	S	S	S	S	S	S
1c	S	S	S	S	S	S	S
H1d	S	WS	S	S	R	S	R
H1d, H2a	S	R	R	R	R	R	R
H2a	S	S	S	WS	WS	R	S
H2b	S	S	S	S	S	S	S
H2a, H2b	S	S	S	S	S	S	S
H3	S	S	S	S	S	S	S
H4	S	S	S	S	WS	WS	S
H5	S	S	S	S	S	S	S
H6	S	S	S	S	S	S	S
H7	S	R	S	WS	S	S	WS
H3, H4, H6, H7	S	-	S	-	-	-	-
H3, H4, H6	-	WS	-	S	-	-	S
H3, H6, H7	-	-	-	-	S	S	-
H8	R	R	R	R	R	R	R
H9	S	S	S	S	R	S	S
H10	S	S	S	S	S	S	S

Notes: S: Supported R: Rejected WS: Weakly Supported (Significant at the 0,10 level.)

6. DISCUSSION AND IMPLICATIONS

The answers of the following questions constructing a base for this study have been explained thoroughly in the previous chapters:

- *What are the attributes of adopters of mobile service innovations?*
- *Considering the online mobile services, which perceived innovation attributes influence consumers' adoption and intention to use?*
- *Do different consumer involvement levels influence the factors affecting the service adoption of consumers?*
- *Do different perceived newness levels of consumers towards radical versus incremental service innovations affect the determinants of the service adoption?*

Considering the results of the analyses, it can be briefly stated that all of the hypotheses proposed in the theoretical model have been supported except for the relationship between the effects of substitute services on mobile service innovation adoption. As before mentioned, it has been assumed that the adverse effect found in the study might have been caused by the learning effect obtained from the substitute services during the adaptation period towards service innovations.

- ✗ *The more the consumers pay attention to the attributes of substitute services, the more negative attitude they will have to adopt the mobile service innovation.*

Apart from this unexpected result, it has been theoretically supported that mobile service innovation adoption is affected not only by certain perceptual innovation attributes such as relative advantage and perceived ease of use but more extensively, by perceived value and perceived risk, two vital constructs especially for mobile services, as well as by attitude towards corporate brand of accessed service.

- ✓ *The higher the value consumers perceive regarding the mobile service innovation, the more positive attitude consumers demonstrate towards*

adopting it.

- ✓ *The easier the use of mobile service innovation, the more positive attitude consumers demonstrate towards the mobile service adoption.*
- ✓ *The easier the use of mobile service innovation, the more the relative advantage consumers perceive.*
- ✓ *The higher the relative advantage of mobile service innovation, the more positive attitude consumers demonstrate towards the mobile service adoption.*
- ✓ *The higher the risk consumers perceive, the more negative attitude consumers demonstrate towards the mobile service adoption.*

In addition, it has been found that, consumer capacity involving prior experiences, knowledge and abilities towards the service and consumer innovativeness degree revealing how innovation-centred an individual is have significant influences in the model.

- ✓ Regarding the mobile service innovation; the higher the capacity consumers have, (a) the lower the risk consumers perceive about it, (b) the more the relative advantage consumers perceive about it, (c) the easier the use of mobile service consumers perceive, and (d) the more the value consumers perceive about it.
- ✓ The more innovative the consumers are, (a) the higher the value consumers perceive about mobile service innovation and (b) the more positive attitude consumers demonstrate towards the mobile service adoption.

Consumers' attitude towards corporate brand has also been supported despite the notion of high number of items measuring its validity.

- ✓ The more the attributes of a corporate brand have importance for customers, the more likely they are to adopt mobile service innovation.

As expected, the attitude towards service innovation adoption strongly affects use of mobile service innovation supporting the following hypothesis:

- ✓ The more positive attitude consumers demonstrate towards mobile service adoption, the more likely they are to use the mobile service innovation.

Considering the quest for the effects of consumer involvement and perceived newness of consumers towards radical and incremental services, some evidences could be obtained. But, in order to decide whether their influence is broader over service innovation adoption, further studies for service innovations from different domains should be implemented.

- ✓ (a) Different levels of consumer involvement, (b) different levels of service innovations cause changes among the factors of service innovation adoption model.

6.1 Theoretical Contribution

The major contribution of this study has been to three main domains: the mobile service innovation literature, Technology Acceptance Model and consumer involvement literature.

Although there have been many studies on product innovation adoption, there have been few studies focusing on consumers' attitude towards service adoption, especially in mobile service sector, encouraging the researcher to have a thorough study revealing the factors affecting the consumers' attitudinal choices.

Akin to that, the encountered gap found in the primary research has been aimed to be filled by extending the model tentatively regarding the adaptation of TAM to mobile services. Although Davis' model has been widely accepted by the researchers, since then, there have not been any further improvements or extensions in the mobile service area, especially contributing to the service innovation literature.

Further, also in services literature, the effect of consumer involvement levels and innovation types over adoption of services has been regarded relatively unexplored overall as a core subject.

Therefore, two different levels of situational consumer involvement and two types of innovation have been tested by constructing a basis for the descriptive scenarios developed for the analysis of the theoretical model. With this measurement, during the study, concurrently, a comparision demonstrating differences between consumer

involvement levels and innovation types could be presented.

Consequently, this study has been one of the few studies encompassing consumer involvement and adoption of service innovation and has put forth a significant contribution to the literature within this specific domain.

6.2 Managerial Implications

Considering the alterations of the relationships among constructs, under different consumer involvement degrees, it can be suggested that the mobile service providers should pay much more attention on the interest of their consumers, during the development of certain situational and location based service innovations.

As nowadays people, consistent with their involvement level, are more willing to share visual content, information and suggestions about a location, which they have visited, some new marketing promotions or product/service introductions can be carried out via word of mouth marketing initiated by customers instantly from that place by adding virally higher values to the service or product.

Since 81% of the respondents that use their cell phones very frequently, being categorized as high adopters in this study, have higher tendency to adopt new services, the service firms can position their services with respect to the characteristics of these consumers that use their services. They might reach early adopter or high adopters of service innovations, analyze their needs and wants, and let them contribute to new service development process by utilizing their productivity. Along with this, the companies may also develop some new strategies to target certain adopter types, in new service segments where they can position their new service innovations.

Further, with the help of the innovation context of this study, companies may discover the determinants of the radical services that have not become evident in the market yet and react proactively during the launch phase of the similar service innovations. Thus, the firms can have evident information by looking at this study about the projections for the up-coming promotions, as more than half of the respondents that do not own a compatible device are among the group of high service innovation adopters.

Finally, it can be suggested that companies may develop some descriptive scenarios before launching them to pre-test the effectiveness and comprehensibility of the service innovation by the consumers. So that, there can be some adequate time to revise the necessary service development processes according to the opinions and/or suggestions gathered from the outputs of the test.

6.3 Research Limitations

The restrictions of the study can briefly be stated as, the utilization of convenience sampling method, the hypothetical scenarios and the difficulty of measuring radical services. Because the surveys were conducted via web-based surveys, a trade-off between broader accessibility to target sample and low control over respondents emerged.

The scenarios that have been developed to depict the hypothetical conditions might have been less effective than intended. Customers that would come across with certain situations like those that have been described in the scenarios in real life could have approached in a more sensitive and interested manner. Therefore, this might have restricted the results in a way, fostering the need for further research.

Also as the radical services are the ones that are completely new to the market, the low amount of information about them may cause a misevaluation and misperception hindering the actual benefits that will be gained during the usage.

Though in this study, the service innovations that were developed were managed to be explained in detail and as clear as possible, due to the concerns regarding lengthening the scenarios might have caused distraction of attention, some features might not have been explained fully. Thus, that might have caused some insufficiency for the participants of the surveys while evaluating their choices.

Therefore, it can be necessary to replicate this study by different service types from the mobile service innovation sector in order to ensure the validation and reliability of the theoretical model.

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APPENDICES

APPENDIX A.1

1. Are you a mobile phone user?

   □ Yes □ No (If you have replied as "No", please skip the next question.)

2. Is a mobile service like this compatible with your mobile phone?

   □ Yes, compatible. □ No, incompatible.

3. Please assume that you are about to come to a decision of selecting a mobile service consistent with the reasons stated in the scenario.

To me, selecting a mobile service in an identical situation (is):

	Strongly Disagree						Strongly Agree
very important.	1	2	3	4	5	6	7
very interesting.	1	2	3	4	5	6	7
means a lot.	1	2	3	4	5	6	7
very valuable.	1	2	3	4	5	6	7
very involving.	1	2	3	4	5	6	7
very needed.	1	2	3	4	5	6	7

4. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
I know about a service like this.	1	2	3	4	5	6	7
I am familiar with a service like this.	1	2	3	4	5	6	7
I am experienced in using a service like this.	1	2	3	4	5	6	7
I am skilled at using a service like this.	1	2	3	4	5	6	7
I am skilled at using a service like this, compared to other mobile services.	1	2	3	4	5	6	7

5. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
This is a unique service.	1	2	3	4	5	6	7
This is a pioneer service.	1	2	3	4	5	6	7
This is a brand-new service.	1	2	3	4	5	6	7

6. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
This service may cause security issues.	1	2	3	4	5	6	7
This service may make me lose money.	1	2	3	4	5	6	7
This service may result in sharing personal life without your own accord.	1	2	3	4	5	6	7
This service may make me lose time.	1	2	3	4	5	6	7

7. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
I think that this service is very efficient.	1	2	3	4	5	6	7
This service makes me save time.	1	2	3	4	5	6	7
This service is useful.	1	2	3	4	5	6	7
This service is effective.	1	2	3	4	5	6	7
This service is worthwhile.	1	2	3	4	5	6	7

8. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
The service will require less effort to learn how to use.	1	2	3	4	5	6	7
The service will offer user-friendly interface.	1	2	3	4	5	6	7
The service will encourage service usage and the full exploitation of enhanced features.	1	2	3	4	5	6	7

9. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
The monetary benefits that this service offers will overweigh its monetary cost.	1	2	3	4	5	6	7
The conditional benefits that this service offers will overweigh its conditional cost.	1	2	3	4	5	6	7
This service will be overall cost-effective.	1	2	3	4	5	6	7
This service will create overall high value.	1	2	3	4	5	6	7

10. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
I would you be interested in subscribing to this service.	1	2	3	4	5	6	7
I would you be interested in being one of the early subscribers of this service.	1	2	3	4	5	6	7
I am in favour of this service.	1	2	3	4	5	6	7
I like this service.	1	2	3	4	5	6	7
I think this service is very good.	1	2	3	4	5	6	7

11. How would you evaluate an ideal firm offering a service like this? Please indicate how significant you find the following attributes of an ideal firm:

	Not Significant at all						Very Significant
Familiar to me	1	2	3	4	5	6	7
Well-known	1	2	3	4	5	6	7
Dependable	1	2	3	4	5	6	7
Reputable	1	2	3	4	5	6	7
Innovative	1	2	3	4	5	6	7
Honest	1	2	3	4	5	6	7
Creative	1	2	3	4	5	6	7
Sophisticated	1	2	3	4	5	6	7
Competitive	1	2	3	4	5	6	7
Rugged	1	2	3	4	5	6	7

12. Please indicate your level of agreement with the items below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
The price of the other services that may substitute this service is important for me.	1	2	3	4	5	6	7
The superiority of the other services that may substitute this service is important for me.	1	2	3	4	5	6	7
The quality of the other services that may substitute this service is important for me.	1	2	3	4	5	6	7

13. Please indicate your level of agreement with the statement below regarding a mobile service like the one stated in the scenario.

	Strongly Disagree						Strongly Agree
I think about using a service like this in three months time.	1	2	3	4	5	6	7

14. Please indicate your level of agreement about the following statements about yourself.

	Strongly Disagree						Strongly Agree
I often seek out information about new products and brands.	1	2	3	4	5	6	7
I like to go to places where I will be exposed to information about new products and brands.	1	2	3	4	5	6	7
I like magazines that introduce new brands.	1	2	3	4	5	6	7
I frequently look for new products and services.	1	2	3	4	5	6	7
I seek out situations in which I will be exposed to new and different sources of product information.	1	2	3	4	5	6	7
I am continually seeking new product experiences.	1	2	3	4	5	6	7
I take advantage of the first available opportunity to find out about new and different products.	1	2	3	4	5	6	7

15. To me, the purpose of this study is,
a) To evaluate the attitudes of consumers towards mobile service adoption
b) Other (Specify.)

_____

c) Don't know.

16. How frequently do you use mobile phone services (via applications or internet services)?

□ Hardly at all □ 2-3 times a year □ Once a month
□ More than once a month

17. How long have you been a mobile phone user?

□ Less than a year □ 1-3 years □ 3-5 years
□ 5-7 years □ 7-10 years □ More than ten years

18. How long have you been an internet user?

□ Less than a year □ 1-3 years □ 3-5 years
□ 5-7 years □ 7-10 years □ More than ten years

19. How old are you?

□ Under 18 □ 18-25 years □ 26-35 years
□ 36-49 years □ 50-65 years □ Over 65

20. What is your gender?

□ Male □ Female

21. What is your education level?

□ Elementary □ High School □ College Degree
□ Graduate Degree □ PhD Degree

22. Are you employed?

□ Yes □ No
(If you have replied as "No", please skip the next question.)

23. What is your profession?

Please specify
_____

24. How many people live in your household?

□ 1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 and more

25. How much is your household's level of income?

□ Less than 1000 TL □ 1000-3000 TL □ 3000-5000 TL
□ 5000-7000 TL □ 7000-10000 years □ More than 10000

26. What is your marital status?

□ Married □ Single

APPENDIX A.2

Context: Innovative Services

Scenario I –

Customer Involvement: **High**
Innovation Type: **Incremental**
Service Type: **Location Based Mobile Service**

Consider that you have received a phone call from a company that you really wished to work for, for a long time and one of the employees of the human resources department have stated that they would like to have an interview with you. You have been given the address of the headquarters and informed about the exact date and time of the appointment. Because you did not know that area very well, you asked for a detailed explanation and drew the sketch of the address on your agenda. After you finished the conversation, you saved the address on your phone, too.

One week later, on the meeting day, while you were on your way to the interview and stuck in the traffic jam, you recognized that you have forgotten to take your agenda on which you had sketched the directions. You became even more stressed. At once, you looked for a solution and decided to call the company and get the detailed explanation again. Nevertheless, you could not call the company back as their number was disguised.

On that time all you had was a mailing address that you had saved on your mobile phone. “Yenievler Caddesi Ata Plaza No:10 Maslak-İstanbul”. This meant that if you started asking people on the way for directions or decide to go back home to get the sketch, you would lose at least half an hour. Consequently, you would be late to the interview that you had been looking forward to for a long time and even more it would be very likely to lose the job.

Just at that time, you remembered that you already had a location-based service that could get the directions navigating you to the address, after you typed the address on your phone and gave permission to the device to locate your current address.

Scenario II –

Customer Involvement: **Low**
Innovation Type: **Incremental**
Service Type: **Location Based Mobile Service**

Consider that you have received an invitation to a wedding ceremony from a friend whom you have just met and do not know very well. You learned the time, date of the party, and got the address of the meeting place. Because you did not know that area very well, you asked for a detailed explanation and drew the sketch of the address on your agenda. After you finished the conversation, you saved the address additionally on your phone.

One week later, on the wedding day, although you hesitated participating, you thought to do so. While you were on your way to the interview and stuck in the traffic jam, you recognized that you had forgotten to take your agenda on which you had sketched the directions. Because you had just met and his/her number was not saved on your phone, you could not call your friend back.

On that time, all you had was a mailing address you had saved on your mobile phone. “Yenievler Caddesi Ata Plaza No:10 Maslak-İstanbul”. This meant that if you started asking people on the way for directions or decided to go back home to get the sketch, you would lose at least half an hour and be late to that wedding for which you did not see your attendance that much important.

Just at that time, you remembered that you already had a location-based service that could get the directions navigating you to the address, after you typed the address on your phone and gave permission to the device to locate your current address.

Scenario III –

Customer Involvement: **High**
Innovation Type: **Radical**
Service Type: **4G (LTE-Long Time Evolution) Mobile Service**

Consider that you have received a phone call from a company that you really wish to work for, for a long time and one of the employees of the human resources department have stated that they would like to have an interview with you. You have been given the address of the headquarters and informed about the exact date and time of the appointment. Because you did not know that region very well, you asked for a detailed explanation and drew the sketch of the address on your agenda. After you finished the conversation, you saved the address additionally on your phone.

One week later, while you were on your way to catch a plane for a business issue and stuck in traffic jam, you realized that the interview was that day! You called the company and explained your situation that you would not be in the city for a while. They understood your excuse but the problem was that they would be ending their recruitment process soon. However, they asked you whether you could send them a visual CV in an hour.

First, you thought that the size of the video you had to share would be very large and would not be sent via email or MMS* and you did not have the time to record it via your laptop. But suddenly you remembered that you had recently renewed your contract with your mobile service supplier to be able to use 4G (LTE-Long Time Evolution) mobile service utilizing broad bandwidths to share high quality/high definition video instantly.

You asked the company whether they had the same service. Luckily they did. One hour later, you recorded a video involving the answers of the questions they had directed to you. You sent the video to the company by pushing the "Send" button appearing right after you recorded the video and typing in the phone number. They received it instantly as easy as a delivery of SMS.

** Though it varies depending on the service providers, present maximum data delivery via MMS has been limited to 500-1000 kb, and maximum data attachment via email has been limited to 10-25 MB. With 4G, data transmission is way beyond these services.*

Scenario IV –

Customer Involvement: **Low**
Innovation Type: **Radical**
Service Type: **4G (LTE-Long Time Evolution) Mobile Service**

Consider that you have received an invitation to a wedding ceremony from a friend whom you have just met and do not know very well. You learned the time, date of the party, and got the address of the meeting place. Because you do not know that region very well, you asked for a detailed explanation and drew the sketch of the address on your agenda. After you finished the conversation, you saved the address additionally on your phone.

One week later, while you are on your way to catch a plane for a business issue and stuck in traffic jam, you realized that the wedding of your friend is today! Although you are not sorry for not attending the wedding ceremony that you have already hesitated participating, you think about sending a video in which you greet them.

First, you thought that the size of the video you had to share would be very large and would not be sent via email or MMS* and you had not the time to record it via your laptop. But suddenly you remembered that you had recently renewed your contract with your mobile service supplier to be able to use 4G (LTE-Long Time Evolution) mobile service utilizing broad bandwidths to share high quality/high definition video instantly.

You asked one of the mutual friends whether he/she had the same service. Luckily, he/she had. One hour later, you recorded a video involving the greeting. You sent the video to your friend by pushing the "Send" button appearing right after you recorded the video and typing in the phone number. They received it instantly as easy as a delivery of SMS.

** Though it varies depending on the service providers, present maximum data delivery via MMS has been limited to 500-1000 kb, and maximum data attachment via email has been limited to 10-25 MB. With 4G, data transmission is way beyond these services.*

APPENDIX A.3

Table A.1: Regression analysis of hypotheses for high involved consumers

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
CC	– H1a →	RISK	-0,20	0,07	-0,20	-2,84	0,01	8,05	0,01	0,04	0,04	S
CC	– H1b →	ADV	0,18	0,04	0,30	4,27	0,00	18,19	0,00	0,09	0,09	S
CC	– H1c →	PEOU	0,12	0,04	0,22	2,99	0,00	8,94	0,00	0,05	0,04	S
CC	– H1d →	VAL	0,17	0,05	0,26	3,61	0,00	13,01	0,00	0,07	0,06	S
CC	Step 1	VAL	0,17	0,05	0,26	3,61	0,00	13,01	0,00	0,07	0,06	R
CC	Step 2	VAL	0,16	0,05	0,24	3,11	0,00	6,78	0,00	0,07	0,06	R
CI			0,05	0,07	0,06	0,76	0,45					R
CI	– H2a →	VAL	0,13	0,07	0,14	1,93	0,06	3,71	0,06	0,02	0,01	WS
CI	– H2b →	ATA	0,38	0,06	0,43	6,38	0,00	40,71	0,00	0,18	0,18	S
CI	Step 1	ATA	0,38	0,6	0,43	6,38	0,00	40,71	0,00	0,18	0,18	S
CI	Step 2	ATA	0,33	0,05	0,37	6,06	0,00	43,77	0,00	0,32	0,32	S
VAL			0,37	0,06	0,38	6,21	0,00					S
VAL	– H3 →	ATA	0,42	0,06	0,43	6,53	0,00	42,62	0,00	0,19	0,18	S
PEOU	– H4 →	ATA	0,46	0,08	0,41	6,08	0,00	36,96	0,00	0,17	0,16	S
PEOU	– H5 →	ADV	0,41	0,07	0,40	5,92	0,00	35,02	0,00	0,16	0,16	S
ADV	– H6 →	ATA	0,64	0,07	0,58	9,68	0,00	93,72	0,00	0,34	0,33	S
RISK	– H7 →	ATA	-0,08	0,05	-0,11	-1,54	0,13	2,36	0,13	0,013	0,01	WS

Table A.1 : Regression analysis of hypotheses for high involved consumers (contd.)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
VAL	Step 1	ATA	0,42	0,06	0,43	6,53	0,00	42,62	0,00	0,19	0,18	
VAL	Step 2	ATA	0,37	0,60	0,39	6,25	0,00	41,84	0,00	0,31	0,31	
PEOU			0,40	0,70	0,36	5,79	0,00					S
VAL	Step 3	ATA	0,21	0,06	0,22	3,40	0,00	42,50	0,00	0,41	0,40	
PEOU			0,25	0,07	0,23	3,63	0,00					
ADV			0,43	0,08	0,39	5,52	0,00					
ATS	– H8 →	ATA	0,40	0,09	0,33	4,65	0,00	21,63	0,00	0,11	0,10	R
ATB	– H9 →	ATA	0,52	0,10	0,35	5,03	0,00	25,34	0,00	0,12	0,12	S
ATA	– H10 →	USE	0,87	0,10	0,56	9,08	0,00	82,41	0,00	0,31	0,30	S

Note: S: Supported
R: Rejected
WS: Weakly Supported

Table A.2: Regression analysis of hypotheses for low involved consumers

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
CC	– H1a →	RISK	-0,08	0,11	-0,07	-0,69	0,49	0,48	0,49	0,01	-0,01	R
CC	– H1b →	ADV	0,25	0,09	0,27	2,79	0,01	7,754	0,01	0,07	0,06	S
CC	– H1c →	PEOU	0,32	0,08	0,36	3,87	0,00	14,98	0,00	0,13	0,12	S
CC	– H1d →	VAL	-0,02	0,09	-0,03	-0,26	0,80	0,07	0,80	0,00	-0,01	R
CC	Step 1	VAL	-0,02	0,09	-0,03	-0,26	0,80	0,07	0,80	0,00	-0,01	
CC	Step 2	VAL	-0,06	0,09	-0,07	-0,62	0,54	0,64	0,53	0,01	-0,01	R
CI			0,11	0,10	0,12	1,10	0,28					
CI	– H2a →	VAL	0,09	0,10	0,09	0,94	0,35	0,89	0,35	0,01	0,00	R
CI	– H2b →	ATA	0,37	0,09	0,37	4,00	0,00	16,02	0,00	0,14	0,13	S
CI	Step 1	ATA	0,37	0,09	0,37	4,00	0,00	16,02	0,00	0,14	0,13	
CI	Step 2	ATA	0,32	0,08	0,32	4,20	0,00	37,77	0,00	0,44	0,42	S
VAL			0,57	0,08	0,55	7,17	0,00					
VAL	– H3 →	ATA	0,60	0,09	0,58	7,03	0,00	49,37	0,00	0,33	0,33	S
PEOU	– H4 →	ATA	0,18	0,10	0,18	1,77	0,08	3,13	0,08	0,03	0,02	WS
PEOU	– H5 →	ADV	0,37	0,10	0,35	3,68	0,00	13,51	0,00	0,12	0,11	S
ADV	– H6 →	ATA	0,55	0,08	0,56	6,78	0,00	45,98	0,00	0,32	0,31	S
RISK	– H7 →	ATA	-0,21	0,08	-0,25	-2,55	0,01	6,52	0,01	0,06	0,05	S

Table A.2 : Regression analysis of hypotheses for low involved consumers (contd.)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
VAL	Step 1	ATA	0,60	0,09	0,58	7,03	0,00	49,37	0,00	0,33	0,33	
VAL	Step 2	ATA	0,40	0,10	0,38	4,16	0,00	35,45	0,00	0,42	0,41	
ADV			0,34	0,09	0,35	3,83	0,00					
VAL	Step 3	ATA	0,35	0,10	0,34	3,66	0,00	26,78	0,00	0,45	0,44	S
ADV			0,37	0,09	0,38	4,18	0,00					
RISK			-0,16	0,06	-0,19	-2,43	0,02					
ATS	– H8 →	ATA	0,13	0,1	0,13	1,26	0,21	1,6	0,21	0,02	0,01	R
ATB	– H9 →	ATA	0,05	0,15	0,03	0,30	0,76	0,09	0,76	0,00	-0,01	R
ATA	– H10 →	USE	0,66	0,09	0,58	7,11	0,00	50,61	0,00	0,34	0,33	S

Table A.3 : Regression analysis of hypotheses for consumers with low perceived newness level (for incremental service innovation)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
CC	– H1a →	RISK	-0,20	0,07	-0,20	-2,84	0,01	8,05	0,01	0,04	0,04	S
CC	– H1b →	ADV	0,18	0,04	0,30	4,27	0,00	18,19	0,00	0,09	0,09	S
CC	– H1c →	PEOU	0,12	0,04	0,22	2,99	0,01	8,94	0,01	0,05	0,04	S
CC	– H1d →	VAL	0,22	0,06	0,28	3,87	0,00	14,96	0,00	0,08	0,07	S
CC	Step 1	VAL	0,22	0,06	0,28	3,87	0,00	14,96	0,00	0,08	0,07	
CC	Step 2	VAL	0,20	0,06	0,26	3,26	0,00	7,62	0,00	0,08	0,07	R
CI			0,05	0,08	0,05	0,59	0,56					
CI	– H2a →	VAL	0,16	0,08	0,16	2,09	0,04	4,35	0,04	0,02	0,02	S
CI	– H2b →	ATA	0,38	0,06	0,43	6,38	0,00	40,71	0,00	0,18	0,18	S
CI	Step 1	ATA	0,43	0,07	0,40	5,76	0,00	33,21	0,00	0,16	0,16	
CI	Step 2	ATA	0,34	0,06	0,32	5,44	0,00	60,98	0,00	0,41	0,41	S
VAL			0,54	0,06	0,51	8,64	0,00					
VAL	– H3 →	ATA	0,42	0,07	0,43	6,53	0,00	42,62	0,00	0,19	0,18	S
PEOU	– H4 →	ATA	0,46	0,08	0,41	6,08	0,00	36,96	0,00	0,17	0,16	S
PEOU	– H5 →	ADV	0,41	0,07	0,40	5,92	0,00	35,02	0,00	0,16	0,16	S
ADV	– H6 →	ATA	0,64	0,07	0,58	9,68	0,00	93,72	0,00	0,34	0,33	S
RISK	– H7 →	ATA	-0,21	0,06	-0,25	-3,41	0,00	11,61	0,00	0,06	0,06	S

Table A.3 : Regression analysis of hypotheses for consumers with low perceived newness level (for incremental service innovation) (contd.)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
VAL	Step 1	ATA	0,42	0,06	0,43	6,53	0,00	79,32	0,00	0,31	0,31	S
VAL	Step 2	ATA	0,55	0,07	0,51	8,46	0,00	53,47	0,00	0,38	0,38	
PEOU			0,31	0,07	0,27	4,39	0,00					
VAL	Step 3	ATA	0,32	0,07	0,30	4,41	0,00	52,94	0,00	0,48	0,47	
PEOU			0,14	0,07	0,12	1,96	0,05					
ADV			0,42	0,08	0,42	5,70	0,00					
VAL	Step 4	ATA	0,29	0,07	0,28	4,14	0,00	43,18	0,00	0,50	0,49	
PEOU			0,14	0,07	0,12	2,01	0,05					
ADV			0,42	0,07	0,42	5,72	0,00					
RISK			-0,12	0,05	-0,15	-2,78	0,06					
ATS	– H8 →	ATA	0,35	0,08	0,31	4,37	0,00	19,08	0,00	0,10	0,09	R
ATB	– H9 →	ATA	0,35	0,12	0,22	2,93	0,00	8,58	0,00	0,05	0,04	S
ATA	– H10 →	USE	0,91	0,08	0,66	11,54	0,00	133,07	0,00	0,43	0,43	S

Table A.4 : Regression analysis of hypotheses for consumers with high perceived newness level (for radical service innovation)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
CC	– H1a →	RISK	-0,13	0,09	-0,14	-1,46	0,15	2,13	0,15	0,02	0,01	PS
CC	– H1b →	ADV	0,24	0,06	0,36	4,01	0,00	16,08	0,00	0,13	0,12	S
CC	– H1c →	PEOU	0,15	0,06	0,23	2,52	0,01	6,35	0,01	0,06	0,05	S
CC	– H1d →	VAL	0,13	0,07	0,18	1,88	0,06	3,52	0,06	0,03	0,02	WS
CC	Step 1	VAL	0,13	0,07	0,18	1,88	0,06	3,52	0,06	0,03	0,02	
CC	Step 2	VAL	0,07	0,07	0,09	0,92	0,36	3,52	0,06	0,03	0,02	R
CI			0,24	0,09	0,27	2,79	0,01	5,75	0,00	0,10	0,08	
CI	– H2a →	VAL	0,26	0,08	0,30	3,27	0,00	10,67	0,00	0,09	0,08	S
CI	– H2b →	ATA	0,51	0,07	0,58	7,53	0,00	56,73	0,00	0,34	0,33	S
CI	Step 1	ATA	0,51	0,07	0,58	7,53	0,00	56,73	0,00	0,34	0,33	
CI	Step 2	ATA	0,40	0,06	0,45	6,48	0,00	57,64	0,00	0,51	0,51	S
VAL			0,43	0,07	0,44	6,24	0,00					
VAL	– H3 →	ATA	0,57	0,08	0,57	7,30	0,00	53,34	0,00	0,33	0,32	S
PEOU	– H4 →	ATA	0,31	0,11	0,27	2,89	0,01	8,34	0,01	0,07	0,06	S
PEOU	– H5 →	ADV										S
ADV	– H6 →	ATA	0,71	0,08	0,64	8,65	0,00	71,14	0,00	0,41	0,40	S
RISK	– H7 →	ATA	-0,05	0,07	-0,07	-0,68	0,50	0,47	0,50	0,00	-0,01	R

Table A.4 : Regression analysis of hypotheses for consumers with high perceived newness level (for radical service innovation) (contd.)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
VAL	Step 1	ATA	0,57	0,08	0,57	7,30	0,00	53,34	0,00	0,33	0,32	WS
VAL	Step 2	ATA	0,55	0,08	0,56	7,33	0,00	33,01	0,00	0,38	0,37	
PEOU			0,27	0,09	0,23	2,98	0,00					
VAL	Step 3	ATA	0,33	0,09	0,33	3,85	0,00	33,40	0,00	0,48	0,47	
PEOU			0,13	0,09	0,11	1,54	0,13					
ADV			0,46	0,10	0,42	4,65	0,00					
ATS	– H8 →	ATA	0,25	0,13	0,18	1,90	0,06	3,60	0,06	0,03	0,02	R
ATB	– H9 →	ATA	0,35	0,15	0,22	2,31	0,02	5,32	0,02	0,05	0,04	S
ATA	– H10 →	USE	0,88	0,11	0,61	8,03	0,00	64,41	0,00	0,37	0,36	S

Table A.5 : Regression analysis of hypotheses for consumers owning compatible devices

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
CC	– H1a →	RISK	-0,10	0,10	-0,11	-0,98	0,33	0,96	0,33	0,01	0,00	R
CC	– H1b →	ADV	0,27	0,07	0,4	3,97	0,00	15,74	0,00	0,16	0,15	S
CC	– H1c →	PEOU	0,16	0,07	0,26	2,45	0,02	5,99	0,02	0,07	0,06	S
CC	– H1d →	VAL	0,18	0,08	0,24	2,21	0,03	4,88	0,03	0,06	0,05	S
CC	Step 1	VAL	0,18	0,08	0,24	2,21	0,03	4,88	0,03	0,06	0,05	R
CC	Step 2	VAL	0,20	0,10	0,26	2,06	0,04	2,47	0,09	0,06	0,04	R
CI			-0,05	0,14	-0,04	-0,33	0,74					R
CI	– H2a →	VAL	0,10	0,13	0,09	0,82	0,41	0,67	0,41	0,01	0,00	R
CI	– H2b →	ATA	0,58	0,10	0,52	5,54	0,00	30,72	0,00	0,28	0,27	S
CI	Step 1	ATA	0,58	0,10	0,52	5,54	0,00	30,72	0,00	0,28	0,27	S
CI	Step 2	ATA	0,53	0,09	0,48	6,01	0,00	38,44	0,00	0,49	0,48	S
VAL			0,45	0,08	0,47	5,81	0,00					S
VAL	– H3 →	ATA	0,50	0,09	0,51	5,33	0,00	28,40	0,00	0,26	0,25	S
PEOU	– H4 →	ATA	0,20	0,13	0,17	1,54	0,13	2,4	0,13	0,03	0,02	WS
PEOU	– H5 →	ADV	0,42	0,11	0,39	3,79	0,00	14,35	0,00	0,15	0,14	S
ADV	– H6 →	ATA	0,56	0,11	0,50	5,20	0,00	27,05	0,00	0,25	0,24	S
RISK	– H7 →	ATA	-0,26	0,09	-0,31	-2,95	0,00	8,72	0,00	0,10	0,09	S

Table A.5 : Regression analysis of hypotheses for consumers owning compatible devices (contd.)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff.		Std. Coeff.			Anova				Result
			β	Std. Err.	β	t	Sig.	F	Sig.	R^2	Adj. R^2	
VAL	Step 1	ATA	0,50	0,09	0,51	5,33	0,00	28,40	0,00	0,26	0,25	S
VAL	Step 2	ATA	0,34	0,10	0,35	3,38	0,00	20,97	0,00	0,34	0,33	
ADV			0,37	0,12	0,33	3,21	0,00					
VAL	Step 3	ATA	0,32	0,10	0,33	3,36	0,00	19,15	0,00	0,42	0,40	
ADV			0,37	0,11	0,33	3,41	0,00					
RISK			-0,24	0,07	-0,28	-3,25	0,00					
ATS	– H8 →	ATA	0,32	0,13	0,27	2,53	0,01	6,40	0,01	0,07	0,06	R
ATB	– H9 →	ATA	0,41	0,18	0,25	2,32	0,02	5,40	0,02	0,06	0,05	S
ATA	– H10 →	USE	1,079	0,11	0,72	9,421	0,00	88,76	0,00	0,52	0,52	S

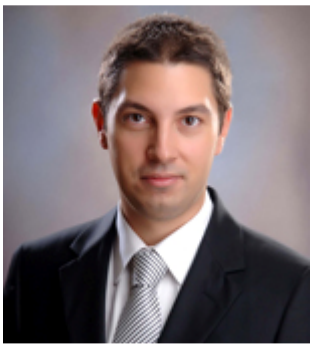
Table A.6 : Regression analysis of hypotheses for consumers not owning any compatible devices

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff. β	Un-std. Coeff. Std. Err.	Std. Coeff. β	t	Sig.	Anova F	Anova Sig.	R^2	Adj. R^2	Result
CC	– H1a →	RISK	-0,20	0,09	-0,16	-2,36	0,02	5,56	0,02	0,03	0,02	S
CC	– H1b →	ADV	0,25	0,07	0,26	3,75	0,00	14,08	0,00	0,07	0,06	S
CC	– H1c →	PEOU	0,22	0,06	0,26	3,90	0,00	15,24	0,00	0,07	0,07	S
CC	– H1d →	VAL	0,09	0,07	0,09	1,30	0,19	1,70	0,19	0,01	0,00	R
CC	Step 1	VAL	0,09	0,07	0,09	1,30	0,19	1,70	0,19	0,01	0,00	
CC	Step 2	VAL	0,04	0,07	0,04	0,57	0,57	4,41	0,01	0,04	0,03	R
CI			0,18	0,07	0,19	2,66	0,01					
CI	– H2a →	VAL	0,19	0,07	0,20	2,92	0,00	8,53	0,00	0,04	0,04	S
CI	– H2b →	ATA	0,39	0,06	0,40	6,22	0,00	38,74	0,00	0,16	0,16	S
CI	Step 1	ATA	0,39	0,06	0,40	6,22	0,00	38,74	0,00	0,16	0,16	
CI	Step 2	ATA	0,29	0,05	0,29	5,42	0,00	77,53	0,00	0,43	0,43	S
VAL			0,55	0,06	0,53	9,89	0,00					
VAL	– H3 →	ATA	0,61	0,06	0,59	10,50	0,00	110,21	0,00	0,35	0,35	S
PEOU	– H4 →	ATA	0,42	0,08	0,37	5,61	0,00	31,41	0,00	0,13	0,13	S
PEOU	– H5 →	ADV	0,47	0,08	0,40	6,12	0,00	37,44	0,00	0,16	0,15	S
ADV	– H6 →	ATA	0,68	0,05	0,70	13,85	0,00	191,83	0,00	0,49	0,48	S
RISK	– H7 →	ATA	-0,09	0,05	-0,12	-1,67	0,10	2,82	0,10	0,01	0,01	WS

Table A.6 : Regression analysis of hypotheses for consumers not owning any compatible devices (contd.)

Indep. Variables	Hyp.	Dep. Variables	Un-std. Coeff.		Std. Coeff.			Anova		R^2	Adj. R^2	Result
			β	Std. Err.	β	t	Sig.	F	Sig.			
VAL	Step 1	ATA	0,61	0,06	0,59	10,50	0,00	110,21	0,00	0,35	0,35	S
VAL	Step 2	ATA	0,56	0,056	0,54	9,86	0,00	71,72	0,00	0,42	0,41	
PEOU			0,30	0,06	0,26	4,68	0,00					
VAL	Step 3	ATA	0,27	0,06	0,27	4,36	0,00	78,39	0,00	0,54	0,53	
PEOU			0,14	0,06	0,12	2,34	0,02					
ADV			0,47	0,06	0,48	7,35	0,00					
ATS	– H8 →	ATA	0,34	0,08	0,29	4,39	0,00	19,24	0,00	0,09	0,08	R
ATB	– H9 →	ATA	0,34	0,11	0,22	3,14	0,00	9,84	0,00	0,05	0,04	S
ATA	– H10 →	USE	0,74	0,07	0,58	10,11	0,00	102,26	0,00	0,34	0,33	S

CURRICULUM VITA



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