EXPLORING DRIVERS OF SUCCESS IN PUSH-TYPE MOBILE MARKETING

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Exploring Drivers of Success in Push-Type Mobile Marketing

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Thesis Abstract

Kaan Varnalı, "Exploring Drivers of Success in Push-Type Mobile Marketing"

Technological innovations, when they reach a critical threshold level of penetration, may cause tremendous impact on various aspects of daily life. As it was the case in color TV, landline telephone, and PC-based Internet, mobile technology also had a similar effect and caused fundamental shifts in the communication patterns, the temporal and spatial constraints, and the expectations of people. The mobile medium cannot be conceived as an extension to the PC-based wired Internet because it has a unique essence of its own. When a new technology represents such a discontinuity in the marketplace it draws mounting interest from both academic and business circles.

Research in mobile marketing is rapidly growing, but the accumulated academic knowledge is fairly fragmented and inconsistent. The relevant body of literature lacks a comprehensive framework that adequately explains and predicts consumers' experience through mobile advertising and mobile service encounters, especially in push-type mobile marketing campaigns. Furthermore, there exist few, if any, theories that this new prospering research stream can call its own. The purpose of this dissertation is to contribute to the understanding of central theoretical and pragmatic issues related to the application of push-type mobile marketing in consumer markets through critically assessing the state of the art, and exploring drivers of success in push-type mobile marketing via a field experiment.

Tez Özeti

Kaan Varnalı, "İtme-Tipli Mobil Pazarlama Uygulamalarında Başarı Kriterlerinin Araştırılması"

Teknolojik yenilikler kritik bir yaygınlık seviyesine ulaştıklarında günlük hayatın birçok farklı alanı üzerinde çok büyük etki yaratırlar. Renkli televizyon, sabit telefon ve PC-bazlı internet vakalarında olduğu gibi mobil teknoloji de benzer bir etki yarattı ve insanların iletişim kalıpları, zamansal ve mekansal kısıtları ve beklentileri üzerinde köklü değişikliklere neden oldu. Mobil mecra, kendine özgü benzersiz bir doğası olduğu için PC-bazlı internetin bir uzantısı olarak düşünülemez. Mobil teknolojiler pazarda böylesi bir uçurum yarattıkları için hem bilimsel hem de iş odaklı çevrelerin ilgisini çekmektedir.

Mobil pazarlama alanında yapılan araştırmalar giderek artmaktadır, ancak biriken bilimsel bilgi oldukça dağınık ve tutarsızdır. Konu ile alakalı yazın, tüketicilerin mobil hizmet tüketimi süresince ve mobil reklam uygulamalarına maruz kaldıklarında yaşadıkları deneyimi açıklayan ve öngörebilen kapsamlı bir kuramdan yoksundur. Buna ilaveten, bu yeni gelişmekte olan araştırma akımının kendisine ait olduğunu ileri sürebileceği çok az teori bulunmaktadır. Bu tezin amacı, tüketici pazarlarında itme-tipli mobil pazarlama uygulamaları ile ilgili temel teorik ve pratik meselelerin anlaşılmasına katkıda bulunmaktır. Bunun için önce alakalı yazın eleştirel olarak gözden geçirilmiştir; sonra da itme-tipli mobil pazarlama uygulamalarında başarı kriterleri bir saha deneyi ile araştırılmıştır.

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CONTENTS

CHAPTER 1

INTRODUCTION

Recent transformation of mobile handsets from technologically limited mobile phones into true hybrid mini-computers, and the transition to 3G networks, converted the mobile medium into an attractive value delivery channel for business entities. Thanks to the inherent characteristics of mobile handsets such as “exceptionally personal”, “always on”, “always connected”, and “always with the user”, the mobile medium presents an unprecedented opportunity to establish a direct link with the customer, which makes it the ultimate tool of one-to-one marketing and customer relationship management. According to Juniper Research (2008) the penetration rate of mobile handhelds exceeded 100% in Europe and in several Middle-Eastern and Asia-Pacific countries. It is also rising steadily and is currently above 80% in America. Globally, the total number of mobile-network subscribers was three billion by the end of 2007. The proliferation of the mobile technology and the use of personal mobile and wireless devices as a medium for communicating with and delivering value to consumers by business entities gave birth to “mobile marketing”, which quickly became an emerging research stream within the marketing discipline. Its relative novelty, rapid growth, unique features, and growing business potential made mobile marketing an attractive area of research for the last couple of years.

Firms have already realized the importance of mobile medium in terms of establishing a virtual presence alongside their customers. They use the mobile medium for various marketing oriented purposes such as delivering promotional

offers and personalized advertisements, providing value generating services, facilitating word of mouth, awarding customer loyalty, collecting feedback and engaging with customers through incentive-based interactive campaigns. Mobile marketing encapsulates a large set of applications and has the potential to create exceptional value to both consumers and business entities if and only if its true essence and unique properties are truly understood by all members of the mobile value chain. Prior academic research on mobile marketing has identified an extended set of factors that may have an influence on the acceptance and adoption of mobile marketing practices by consumers. However, most of the existing research in mobile marketing view the mobile user mainly as a technology user and hence attempt to explain and predict success by employing modified versions of the Technology Acceptance Model. In fact, the mobile user should be conceived as a service consumer who is wandering in a very special medium which has unique properties. Based on this foundation, the central argument of this study is that the essence of success in mobile marketing is extending the value proposition of a brand in a way that fits the requirements of the mobile medium, and hence the theories related with mobile marketing should bring forward the distinctive features of the mobile medium. Modified versions of existing models that were originally developed to explain and predict consumer behavior in brick-and-mortar and PC-based online environments could only provide a limited understanding of the phenomenon. Consequently, the relevant body of literature lacks a comprehensive framework that adequately explains and predicts consumers' experience through mobile advertising and mobile service encounters, especially in push-type mobile marketing campaigns.

Furthermore, the accumulated academic knowledge on mobile marketing is fairly fragmented and inconsistent; and research papers are scattered across various journals of several disciplines. These make it quite difficult and impractical for practitioners and students of marketing to identify and track the growing body of literature on mobile marketing, and to translate their findings into strategic implications.

As the preceding discussion illustrates, despite the growing number of articles, the academic research in mobile marketing is still embryonic and the phenomenon offers many unsolved research questions. The purpose of this dissertation is to contribute to the understanding of central theoretical and pragmatic issues related to the application of push-type mobile marketing in consumer markets. In order to do so, a comprehensive review of mobile marketing research stream will be presented, the state of the art will be critically assessed, and drivers of success in push-type mobile marketing will be explored via a field experiment. In particular, the present research has three objectives: 1) identifying the constructs that adequately capture consumer experience through push-type mobile marketing practices and predict behavioral campaign outcomes, 2) identifying predictors for those constructs and 3) assessing the nature of relationships among components of the theoretical framework via a field experiment. The experiment conducted within this study will be the first field experiment that aims to explore mobile consumer behavior in which treatment variables are being actively manipulated, and the behavioral response is actually observed. A few prior similar attempts, in which all treatment variables had only one level, have assessed attitudinal/ intentional outcomes via self-report

questionnaires. What differentiates the methodology of the present research from regularly employed methodologies is the fact that the actual response (both in terms of response occurrence and response timing) is observed within a realistic context.

CHAPTER 2

CONCEPTUALIZATION AND LITERATURE REVIEW

Conceptualization of Mobile Marketing

The premature conceptualizations of mobile marketing as being another technological vehicle of customer contact were proved to be insufficient when the tremendous impact of mobile technology on the universe of marketing became apparent. The use of mobile technologies in marketing relaxed the independent and mutual constraints of space and time, which are among the most valuable resources of consumers (Balasubramanian et al., 2002). Most of the activities became completely spatially and temporally flexible in a world with mobile technologies. The space-time paradigm on which traditional marketing is based implodes into the "virtual-now" of the network age (Berthon, Pitt & Watson, 2000) and mobile technology is the ultimate catalyst of this transition process. Historically, the location of the consumer has been treated as a static input in marketing models. However, mobile technology makes it possible to know or infer the location of the consumer with great precision and communicate location-specific, personalized information at the time when it is most needed. Further, the personal nature of mobile devices allows for a much finer control over the dissemination of information in the marketplace, which was neither possible in the traditional brick-and-mortar markets nor in the hypercompetitive PC-based online markets (Balasubramanian et al., 2002). Watson et al. (2002) suggested that the convergence of information technology will

lead to u-commerce, where u- stands for network ubiquity, uniqueness, and universality. And they predicted that u-commerce has the potential to create undreamed opportunities in industries that, if capitalized on, will change the nature of those industries, structure of firms and give birth to new forms of marketing. Watson et al. (2002) invited academicians to revalidate even the major marketing theories and notions of best practice because the evolution of communication technology continually changes the dynamics of the marketplace.

Although there is a consensus about the significance of the impact of mobile technology on the universe of marketing (Balasubramanian et al., 2002; Barnes, 2002; Mort & Drennan, 2002; Shugan, 2004; Steinbock, 2006; Sultan & Rohm, 2005; Watson et al., 2002), there is a huge controversy about whether mobile marketing represents an extension of electronic marketing or does it have such unique characteristics that make it a brand new modality which only shares the underlying technology with e-marketing. Each author attempting to conceptualize the mobile marketing phenomenon, either intentionally or unintentionally contributes to one of these two conceptual stances. A group of scholars consider mobile marketing as the next evolutionary stage of electronic marketing that allows users to interact with other users or businesses in a wireless mode, anytime and anywhere. Some go further and use the term “m-commerce” as a synonym for “mobile e-commerce” (Dholakia & Dholakia, 2004; Frolick & Chen, 2004; Li, 2005; Siau et al., 2001), or consider m-commerce as an “e-commerce innovation” (Wu & Hisa, 2008). On the other hand, another group of scholars argue that features of mobile marketing are fundamentally different from those of electronic marketing and regard it as a new

wave of technology-driven marketing which creates unique value propositions through the specific dimensions of ubiquity, convenience, flexibility, localization, and personalization (Clarke, 2001; Mahatanankoon et al., 2005; Swilley & Hofacker, 2006; Tsalgatidou & Pitoura, 2001).

This dissertation adopts the latter view and suggests that mobile marketing is a disparate entity from conventional e-marketing which presents unique benefits and challenges through a novel set of value propositions. The ubiquitous connectivity and convenience provided by mobile services provide superior value-for-time offering that PC-based wired Internet marketing cannot achieve. Mobile marketing enables distribution of personalized information to the consumer at the most effective time, place and in the right context (Mort & Drennan, 2002) and provides an unprecedented opportunity to establish a direct link with the consumer. The devices that are used for mobile communications are almost always with the consumer and are always on. Therefore, unlike any other existing media, mobile marketing has the ability to create "a pervasive electronic presence that senses and responds not only to who the customer is, but where she is and what she is doing" (Kenny & Marshall, 2000: p.120). Mobile medium offers a new and much more powerful way to speak with all stakeholders (Nohria & Leestma, 2001).

Although the literature lacks a commonly accepted definition of mobile marketing, it can be conceptualized as the ability to create, communicate and deliver value to customers through a mobile, wireless medium that allow for location-specifity, time-specifity, and interactivity, as well as the ability to build and manage personalized customer relationships, thereby benefiting all stakeholders.

To sum up, the mobile medium should not be conceived as an extension to the PC-based wired Internet because it has a unique essence of its own. It presents unique benefits and challenges through an original set of value propositions. Therefore, academic research should not entirely rely on models developed and validated in the realm of PC-based wired Internet to explain and predict mobile consumer behavior. Given the common notion that the Mobile represents the future of technology, those models will need to be augmented for sufficient explanatory power, and the proposed research strives to take a step towards this direction and aims to establish a consumer-centric model of success for push-type mobile marketing.

A Typology for Mobile Marketing Practices and Mobile Applications

Mobile marketing encapsulates a large set of applications, including short messages, multimedia messages, interactive voice systems, mobile payment systems, mobile Internet, mobile commerce, mobile tagging, mobile barcodes, ring-back tone customization, location based services, mobile games, mobile TV, and various types of functional applications that are downloaded to mobile handhelds (see table 1 below for definitions). The pool of mobile applications that can be used for marketing purposes will continue to grow as the enabling technology proliferates. Although all of these applications are ultimately tools for delivering digital content to mobile handsets, mobile marketing practices that use either one or a combination of these mobile applications can be grouped under two main categories based on the initiator of the communication as pull-type and push-type practices. In pull-type mobile marketing practices, the communication is initiated by the user and mobile content is sent to users' mobile devices upon their explicit request, on a one time basis. In push-type mobile marketing practices, the communication is initiated by the marketer and content is sent to users' mobile devices without their explicit request. Often the mobile channel is used as a component of a multimedia marketing campaign which includes both push- and pull-type content delivery.

Table 1. Mobile applications and their uses for marketing related purposes

Application	Definition
Short Message Service (SMS)	160 character text-only message format. Push-type Uses: Delivery of simple passive brand advertisements, interactive and response seeking messages, personalized special offers, timely teasers, CRM-based messages, sponsored updates. Pull-type Uses: Micro-payments with premium message sending, votes, polls, campaign participation, feedback submission.
Multimedia Messaging Service (MMS)	Messages that can incorporate pictures, audio and video clips. Push-type Uses: Richer, more compelling and better customized branded content delivery. Pull-type Uses: Participation to competitions and polls.
Interactive Voice Response (IVR)	An automated communications system over the phone. An IVR system prompts users with a prerecorded script. Then it requires a response from the user either verbally or by pressing a touchtone key, and provides the user with information based on responses made. Push-type Uses: Mobile marketers use IVR systems to interact with subscribers in incentive-based marketing campaigns with the purpose of automated consumer data collection, market research, or promotion.
Mobile Internet	Websites that are specifically tailored to address medium specific characteristics and limitations of mobile handsets such as small screens, input/output difficulties. Pull-type Uses: Using mobile portals, downloading of digital content and mobile applications, visiting mobile websites through clicking mobile banners, giving permission to marketers, mobile banking, engaging with various kinds of interactive services provided by mobile websites.
Mobile TV	Delivery of TV content to mobile handhelds. Pull-type Uses: Watching TV on the move.
Mobile Payment	In a mobile payment scheme, the mobile network operator assumes the responsibility for billing, mimicking the role of a credit card provider. It basically replaces the use of change and credit cards in routine micro payments and digital content purchases. Payment is completed by placing a call, sending a premium SMS, or visiting a mobile website. Pull-type Uses: paying for parking lots, public transportation, vending machines.
Mobile Commerce	Applications and mobile websites that allow users to engage in commercial transactions on the move. Pull-type Uses: Mobile shopping and engaging with all kinds of charged interactive mobile services.

Table 1. continued.

Ringback tone Customization	A ringback tone is the audible ringing sound that is heard on the telephone line by the calling party after dialing and prior to the call being answered at the receiving end. This tone is an indication for the calling party that the phone of the called party is ringing. Pull-type Uses: Personalization of the ringback tone with a brand's jingle.
Location-based Services	Mobile networks allow marketers to locate users with a great precision. Push-type Uses: location-sensitive special offers and ads, warning notifications. Pull-type Uses: "What's near me?" services allowing identification of nearby buyers and sellers, route guidance, roadside assistance, weather/traffic information, accessibility information for disabled users.
Mobile Barcodes	Digital barcodes embedded in messages that are delivered to mobile handsets which can be identified by barcode readers at stores. Push-type Uses: Delivery of customized and timely discount coupons, mobile tickets.
Mobile Tagging	Mobile tags are indicators placed on objects that can be scanned by built-in cameras of mobile phones. Upon scanning, the tagging software launches the browser and shows the mobile website that has been coded in the mobile tag. This process is unique in terms of providing quick, precise and customer-driven access to information. Pull-type Uses: Getting additional information about products (e.g., the nutrient content in packaged food) or events (e.g., concerts, parties, conferences), initiating direct downloads, easy-to-use links to specific mobile sites, saving data automatically in contact list.
Branded Mobile Games	Interactive single player or multiplayer games that can be either downloaded to the mobile handheld device as an application or played over a mobile Internet portal. Branded mobile games can be used for advertising or community building purposes. Pull-type Uses: Playing games, interacting with other gamers.
Downloaded Applications	Applications and widgets (programs designed to minimize the interface of existing websites and applications to fit small screens, and maximize their usability on tiny devices) that are downloaded to handhelds to facilitate the delivery of content and services to mobile handsets. Pull-type Uses: Gaming, gambling, messaging, mobile social networking.

This typology of pull-type and push-type is fundamentally important in theory development, and has often been overlooked by prior studies in mobile marketing research stream. What makes it crucial is the fact that these two categories have two distinct sets of factors that drive their acceptance and success, and hence there can be no universal model that explains both types of mobile marketing practices. Pull-type mobile marketing practices require users to take a particular action, such as visiting a mobile website, sending a text-message, downloading a program to their mobile handsets and using it, prior to being exposed to the content delivered to their mobile devices. Hence, success in pull-type mobile marketing is significantly contingent upon consumers' awareness about the existence of the application/campaign. Also, the use of pull-type mobile applications tend to be more sophisticated than receival of passive push-type messages, which makes ease-of-use and design issues more important in driving consumer adoption and engagement process in pull-type mobile marketing practices. Push-type mobile marketing practices, on the other hand, require no particular action on behalf of the user prior to content exposure. Therefore, success is highly related with the concept of intrusiveness, which refers to the mechanism that invokes feelings of resentment and irritation as a result of unexpected exposure to advertisements (Godin, 1999). This dissertation will focus on the latter category of mobile marketing applications and will determine factors that drive consumer acceptance and engagement processes in push-type mobile marketing practices.

Review of Prior Research in Mobile Marketing

In order to identify articles that focus on the domain of mobile marketing, a literature review was conducted by searching the following online databases: ABI/INFORMS, EBSCOhost, Emerald, IEEE Xplore, Science Direct and Wiley InterScience. The literature search was limited to peer-reviewed journals and was based on keywords: "mobile marketing", "mobile commerce", "mobile advertising", "mobile consumer", "mobile business" and "mobile services". The abstract of each article was reviewed to eliminate those that were not actually related to the consumer side of mobile marketing. Eliminated articles either focused on technical aspects of wireless network infrastructure, underlying technologies or engineering aspects of developing mobile applications. The review showed that articles on mobile marketing have appeared in various business and IS journals. Furthermore, almost all major e-commerce journals and several business journals have published special issues on the topic. Extant research on the consumer side of mobile marketing appears to be highly scattered and fragmented. One of the purposes of this dissertation is to present this literature in an organized framework.

The overall process of mobile marketing can be organized into four stages as: Targeting/Personalization Stage, Communication Stage, Consumers' Black Box, and Response Stage. The first stage, namely Targeting/Personalization Stage is about preparing the marketing stimuli. Targeting involves establishing consumer segments having distinct profiles based on various explicit and implicit data, and selecting some of them in order to deliver the marketing communication. Personalization is the fine-tuning of various features of marketing stimuli according to the characteristics

of the target customer segment. Personalization and targeting are closely intervened with each other, such that one cannot produce the desired outcome without the other. When the message is ready, the next stage, namely Communication Stage, involves execution of the mobile marketing campaign and communication with the target users. This stage involves important strategic decisions on behalf of the mobile marketer regarding message delivery time and location, the level of user control provided, and the level of viral marketing elements to be included. These message related strategic decisions and other target, medium and source related facilitators determine consumers' experience with mobile marketing. The third stage, namely Consumers' Black Box Stage, includes consumers' perceptions and attitudes which collectively predict behavioral outcomes of a mobile marketing campaign. Measurement and assessment of consumer response constitutes the last stage of a mobile marketing campaign. The rest of this section will present the accumulated academic knowledge on mobile marketing based on this four stage framework.

Personalization/Targeting Stage

Customers may perceive the value of an offering differently based on their personal values, needs, perceptions, interests and financial resources (Ravald & Gronroos, 1996). Therefore, personal characteristics and predispositions of mobile users are important predictors of how mobile marketing practices will be evaluated by different segments of consumers. Personalization is the degree to which a service/message is tailored to meet the needs and wants of a target segment of

consumers. It increases relevance, which is one of the most important factors affecting consumer attitudes toward mobile marketing initiatives. Relevance does not only make marketing messages more interesting and useful, but also attenuate their intrusiveness (Krishnamurthy, 2000). Rettie, Grandcolas and Deakins (2005) found that people who find mobile marketing campaigns relevant are more likely to take actions such as visiting a web site, visiting a shop, replying to the message, providing personal information, engaging in word of mouth, or buying the product.

Personalization schemes typically involve four stages: 1) collecting data through various customer interfaces and by recording users' activities, 2) establishing consumer segments having distinct profiles based on the collected data, and 3) customizing the content, design and delivery terms of services/messages based on the characteristics of target segments. Effectiveness of personalization depends on the richness of data available in customer databases and the adequacy of profiling techniques. Since each mobile handset is typically used by a sole individual, mobile operators can track and store high levels of personal behavioral data. When this data is combined with expressed preferences, and demographics of the customers, the resulting database allows for advanced customer profiling, and hence precise targeting.

Explicit customer data includes demographics (e.g., age, gender, income, education, occupation, marital status), expressed preferences (e.g., favorite sports club, leisure activities, holidays, music and media interests, gadget consciousness, community memberships, type of Internet access), mobile device characteristics (e.g., brand, model, device capabilities), and consumer history (e.g., prior

transactions, responses to marketing efforts, participation in campaigns, navigational patterns). In some instances, external enhancement data provided by advertiser brands, market research companies and strategic partners are also used as inputs. Although the use of explicit data suffices in most of the real market cases and generates acceptable return rates, more innovative and comprehensive targeting and personalization schemes may also utilize implicit data that is derived from explicit data by using conjunctive rules such as association and classification rules to identify need-based or personality-based customer segments (Germanakos et al., 2008). Effective personalization significantly increases the likelihood of acceptance and the effectiveness of mobile marketing practices (Xu, 2006/2007).

A majority of the existing academic literature suggests that an individual's demographic profile has a significant influence on adoption and usage of mobile services and effectiveness of mobile marketing practices (Anckar & D'Incau, 2002; Barnes & Scornavacca, 2004; Karjaluoto et al., 2008; Mort & Drennan, 2005; Nysveen, Pedersen & Thorbjørnsen, 2005; Oh et al., 2008; Okazaki, 2004; Suoranta & Mattila, 2004; Yang, 2005). For example, Grant and O'Donohoe (2007) found that young people use mobile phones primarily for socialization and convenient entertainment rather than informational and purchasing reasons, which are more appealing to older and more educated users. Nysveen, Pedersen and Thorbjørnsen (2005) investigated the moderating effects of gender in explaining intention to use mobile chat services and found that social norms and intrinsic motives such as enjoyment are important determinants of intention to use among female users, whereas extrinsic motives such as usefulness and expressiveness are key drivers for

men. Several other individual based characteristics such as prior non-store shopping experience, prior usage of mobile services, and prior usage of the Internet are also influential in willingness to engage in and accept mobile marketing (Barutçu, 2007; Bauer et al., 2005; Bigne, Ruiz & Sanz, 2005; Yang, 2005). For instance, individuals with different experience levels with the mobile medium differ considerably in terms of their attitude towards mobile advertising, mobile entertainment, and mobile shopping (Suoranta & Mattila, 2004).

Mobile marketers can also make accurate strategic predictions about the interests of a target user by collecting and evaluating information regarding attitudinal and behavioral characteristics of the other members of the social community that the target user is a member of. The essence of social communities rests on the principle that they are formed among individuals who share common goals, values and interests. It is highly likely that an individual would be interested in "What" his peers are doing? "With whom" they are doing it with? "Where" and "when" they are doing it? Such information would not only let them keep track of their social communities (hedonic motive), but also let them know about latest offerings in the market that would appeal to them (utilitarian motive) (Weinberg, 2009). Members of certain social networks tend to engage in same activities, buy same products and services, and behave similarly in particular situations. Therefore, to the extent that they can identify community memberships of individual users, mobile marketers can synthesize group-level profiles through the up-to-date information available in mobile social networking sites, such as Twitter, Facebook, FriendFeed, and MySpace.

Cross-cultural research consistently shows that consumers' behavioral patterns in different cultural contexts show considerable differences, and mobile consumers' behavior is no exception (Lee et al., 2002; Harris, Rettie & Kwan, 2005; Weitenberner et al., 2006). For instance, Muk (2007) found that American consumers' decisions on accepting SMS ads are based solely on attitudinal considerations, whereas Taiwanese consumers are influenced by both social norms and attitudinal factors. Since users in individualist societies rely more on their own experiences when forming their attitudes, trialability of mobile services should be more influential on their intention to adopt mobile services when compared to their counterparts in collectivist societies. Similarly, individualist societies are more concerned about privacy issues and thus perceive SMS advertising as more intrusive than their counterparts in collectivist cultures, who do not place a high value on them. Haghirian, Madlberger and Inoue (2008) examined the influence of perceived entertainment and perceived informativeness on consumer attitudes toward mobile advertising in Japan and Austria and found that both contrsucts are significant antecedents in both samples, but with different strengths of relationship. These findings suggest that understanding the orientation of cultural values in a specific market and capturing those aspects within personalization schemes is an important prerequisite for successful mobile marketing.

Communication Stage

The communication stage of a mobile marketing campaign is about delivering the marketing stimuli (created through the personalization) to the target consumer group (identified through targeting). The literature has identified an array of facilitating factors which collectively determine the success of the communication stage. These facilitating factors can be grouped under four main categories, namely target-related, source-related, message-related, and medium-related.

Target Related Facilitators

Personality traits of consumers usually moderate the relationship between success factors of mobile marketing and behavioral/attitudinal outcomes. People with different tendencies and personalities may have divergent perceptions regarding the utility, emotional appeal or relevance of the same mobile marketing initiative. The academic literature have identified a long list of relatively enduring and stable personality traits that may influence an individual's perceptions regarding various components of a mobile marketing campaign and intention to accept and use mobile services. For instance, mobile users who have a higher level of utilitarian tendency are found to have more negative perceptions on mobile Internet service quality (Kim & Hwang, 2006). Other personality traits that have been found to influence mobile consumer behavior include time-consciousness (Kleijnen, Ruyter, & Wetzels, 2007), innovativeness (Mort & Drennan, 2005), information seeking behavior (Okazaki, 2004), opinion leadership, optimism, confidence in technology (Marez et al., 2007),

playfulness (Fang et al., 2005/2006), optimum stimulation level (Mahatanankoon, 2007) and personal attachment to the mobile phone (Rohm & Sultan, 2006).

Another target related facilitator is the perceived critical mass, which refers to the minimum amount of people who have already adopted the innovation necessary for adoption. Perceived critical mass is a reflection of social influence. Many researchers have successfully validated extended versions of Theory of Planned Behavior in the mobile context and found empiric support for the predictive power of social/peer influence on adoption of mobile services and acceptance of mobile advertising (Bauer et al., 2005; Bhatti, 2007; Khalifa & Shen, 2008; Rohm & Sultan, 2006; Wang, Lin, & Luarn, 2006; Yang, 2007).

Message and Message Delivery Related Facilitators

Design of the message content is the outcome of personalization process. Personalization increases the fit between the message content and characteristics of the target consumer segment. Wording of the text, the length of the message, inclusion of graphical elements, inclusion and the extent of "how to" directions, use of humor, informativeness of the message and inclusion of socialization and entertainment elements are all very important strategic message design issues that influence the acceptance and effectiveness of a mobile marketing communication. Consumers with different personality traits and expertise levels will perceive different message designs as more appealing and enjoy different types of message content. So there is no global best way of designing a mobile marketing message.

The most effective design depends on the characteristics of the target audience of the mobile marketing message. Nevertheless, empiric studies and market-based evidence suggest that mobile marketing messages should be short and to the point, be interesting and relevant for the target group, call to action, include incentives, and include elements to facilitate viral effect (e.g., incentives for sharing, seem as little as advertising as possible, and include self-expressive aspects) (Michael & Salter, 2006; Sadeh, 2002; Wais & Clemons, 2008).

The literature unanimously agrees on the importance of the prior explicit permission of the consumer for the acceptance and success of a marketing message (Godin, 1999; Barnes & Scornavacca, 2004; Carroll et al., 2007). Prior permission is even more critical in the mobile context because in all other marketing channels, consumers may simply choose to ignore or get away from marketing effort if they are not interested in it or do not like it, which is not possible when the message is delivered to the personal mobile handset of an individual. Permission-based mobile marketing requires that consumers have to 'opt in' before they receive mobile advertising messages of any kind, have the ability to control timing and frequency of message delivery and the content of the message, and have the option to 'opt out' at any stage. Prior empiric studies found support for the claim that user control has a significant effect on consumers' attitudes toward mobile marketing and willingness to receive mobile advertising messages (Kleijnen, Ruyter, & Wetzels, 2007; Maneesoonthorn & Fortin, 2006; Tsang, Ho, & Liang, 2004).

The situational context, especially the time and the location in which a mobile ad is received by a consumer is of crucial importance to how he/she reacts to

it (Barnes & Scornavacca, 2004; Pura, 2005). Mobile marketing presents an unprecedented opportunity to deliver contextually congruent marketing messages. Location sensing ability and immediate message delivery features of the mobile medium enable marketers to communicate with their customers exactly at the time when the communication is most needed and when it is most likely to be effective. Therefore, an important success factor of mobile marketing is timing of message delivery (Chae et al., 2002). A mobile marketing message should be contextually congruent both with the situation the user is in and the role the user plays at that particular time. A dimension of contextual congruence is cognitive intensity. A consumer who is experiencing increased levels of cognitive intensity may not be as receptive to marketing messages as he might be when he is in a relaxed mood (Edwards, Li, & Lee, 2002). Therefore, marketers should aim to maximize the possibility that the target user is not cognitively busy to determine the timing of message delivery. Although the task is challenging, it can be accomplished by an aggregate level analysis of daily routines and likely peek points of cognitive intensity of the target consumer segment.

The mobile medium has a strong inherent viral element. Anything that has a conversational value with a peer has a strong potential to be used by a person as a basis to interact with others in his or her social network. It may be considered as a convenient way to remind others that he or she is an active member of that community. Therefore, people basically engage themselves in disseminating, receiving or responding to socially relevant pieces of information to be a part of their peer community, and the most convenient way to engage in such activity is through

the mobile medium because the mobile phone is ubiquitously connected to others. Mobile marketers can take advantage of this inherent viral element by designing and optimizing the content of mobile marketing messages to be passed on by users (e.g., increasing its relevance, providing incentives for sharing, etc.), which would multiply the reach of the campaign exponentially at almost no additional cost (Wais & Clemons, 2008).

Medium Related Facilitators

Evidence suggests that attitudes toward mobile services improve as mobile devices and the underlying infrastructure proliferate in terms of usability, connection speed, quality and reliability. Nevertheless, there still exist technologically inferior handset models in the market, and regions in the world which have not yet deployed 3G telecommunication technologies. Therefore, technological capability of one's mobile device, and the speed, quality, and reliability of the connection are still among important facilitators of mobile marketing adoption (Chae et al. 2002; Marez et al., 2007). In order to increase likelihood of compatibility, mobile marketers should deliver messages selectively to those handsets that can attractively display the marketing message and support the elicited consumer response.

Brand-medium fit is another medium related facilitator of campaign success. For example, SMS has proved to be particularly successful in promoting frequently purchased low-budget items. SMS and MMS are useful for targeting younger users to announce events or to introduce product launches (Scharl,

Dickinger, & Murphy, 2005). Statistics show that housewives are more likely to listen to IVR sound clips promoting fast moving consumer products until the end of the message than any other consumer segment (Michael & Salter, 2006). The challenge is to choose the appropriate mobile application type for different marketing purposes, brands, messages, and target customers.

The last medium related facilitator is media cost. Anil et al. (2003) found that low costs and improved connection speeds were primary factors that would facilitate and encourage adoption of mobile commerce. Bauer et al. (2007) identified cost and time related issues as decisive in adoption of mobile ticketing applications. Although the fierce competition in telecommunication industry lowered prices from their ever high levels, the cost for consumers to engage in mobile marketing practices remains relatively high. Practices such as offering discounts on monthly bills on the basis of acceptance of mobile advertising or by providing incentives for participation may lower the perceived expensiveness of engagement in mobile marketing practices.

Source Related Facilitators

The substantial importance of the source of the message for its effectiveness has been long accepted within the marketing literature. It has been found that message effectiveness depends chiefly on the perceived credibility, trustworthiness (Sternthall, Dholakia & Leavitt, 1978), familiarity, likability, and/or similarity of the source (McCracken, 1989). It has also been found that the recognition of the sender

induces trust (Palka et al., 2009), such that if the sender is someone known, for example a friend, it is assumed that the message comes from a reliable source. In contrast, the receipt of a mobile message from an unknown source is viewed critically. Gilly et al. (1998) added expertise of the communicator, and perceptual affinity as other dimensions of source related consumer perceptions. They found that consumers are more inclined to seek advice from, and be influenced by experts than by non-experts; and the fact that the communicator and the message recipient have similar tastes serves as a cue for the recipient that the message content may be of interest.

In mobile marketing, consumers can attribute positive or negative feelings to both the actual source of the message (sender of the message) and the operator who provides the medium for the message to be sent. Perceptions regarding both types of sources are equally important for the success of mobile marketing. Mobile operators' credibility depends on beliefs regarding their integrity, benevolence, competence, and predictability (Karjaluoto et al., 2008; Zhang & Mao, 2008). Therefore, in order to provide its subscribers positive experiences, and hence establish a trust based reputation, it is important for a mobile operator to improve its connection quality (Chae et al., 2002) and ensure their subscribers that their personal information and privacy is being protected.

The identity of the actual sender of the message exerts significant influence on the acceptance of mobile marketing messages. Wais and Clemons (2008) found that people prefer to receive promotional messaging from another person rather than a company, and would be more likely to perceive promotional messaging positively

if it came from another person than if it came from a company. The same study also found evidence which suggests that the risk of brand damage is attenuated if promotional messaging comes from another person within one's community instead of a company.

Consumers' Black Box Stage

The first two stages of the mobile marketing process include variables that can either be controlled or observed by marketers. The fourth stage includes behavioral outcomes that can be directly measured and assessed. Although these three stages sufficiently illustrate the mobile marketing process, they do not provide any explanation as to why and how the aforementioned factors result in observed user responses. The literature categorized under this stage, namely the Consumers' Black Box Stage, aim to shed light on this relationship, specifically by focusing on user perceptions and attitudes. Academic research in mobile consumer behavior suggests that intention to adopt and engage in mobile marketing practices is significantly affected by user perceptions about the mobile marketing message, application and the medium itself. These perceptions predict consumers' attitude towards mobile marketing, which together with social/peer pressure are the most important direct drivers of willingness to engage in and accept mobile marketing.

User perceptions regarding the message content include perceived informativeness, entertainment, enjoyment, credibility, interactivity, simplicity, and usefulness. Informativeness and usefulness represent utilitarian benefits of a

marketing message, whereas entertainment and enjoyment represent hedonic benefits. Although it is the value tendency of the individual or the purpose of usage that determines the relative importance of these benefits in influencing the intention to use mobile services (Fang et al., 2005/2006), generally both have been found to have significant impact on consumer attitudes (Bauer et al., 2005; Okazaki, 2004; Park, 2006; Tsang, Ho, & Liang, 2004). Users who engage in mobile marketing in pursuit of a specific outcome (e.g., participating for a monetary gain, making an urgent transaction, booking a ticket, looking for a destination) would value informativeness, usefulness and simplicity of the marketing message more than its entertainment and enjoyment.

Perceived credibility of the message content is related with trust towards the mobile marketer or towards the promoted brand, and has a direct positive and significant influence on consumer attitude toward mobile ads (Chowdhury et al., 2006). The credibility of the source is an important antecedent of attitude toward the advertising message and hence its effectiveness (Lutz, MacKenzie, & Belch, 1983; Sternthal, Dholakia, & Leavitt, 1978).

Perceived interactivity is related to the perceived quality of interaction and navigational ergonomics, which can be improved by designing an easy to use, simple interaction interface, in which relevant information is in immediate reach and how to navigate is easy to understand (Chae et al., 2002; Shin, 2008). Design aesthetics of the mobile interface is another important predictor of perceived quality of interaction. It refers to the balance, emotional appeal, and aesthetic of the user

interface and may be expressed through colors, shapes, fonts, music or animation (Cyr, Head, & Ivanov, 2006).

User perceptions regarding the appropriateness of message delivery include perceived user control over frequency, timing and delivery of the message (Carroll et al., 2007; Kleijnen, Ruyter, & Wetzels, 2007). If the user perceives that he/she is controlling what is being received as mobile marketing, he/she would have more positive attitudes toward the marketing effort (Maneesoonthorn & Fortin, 2006; Tsang, Ho & Liang, 2004). Due to the personal nature of handheld mobile devices mobile marketing campaigns should be ultimately permission-based. Unsolicited message delivery increases perceived intrusiveness of the message which drastically reduces the attractiveness of the marketing message and cause feelings of resentment (Li, Edwards, & Lee, 2002).

Application or service specific user perceptions include perceptions regarding technical excellence (performance expectancy), ease-of-use (effort expectancy), cost and trialability. Perceived technical excellence refers to the degree to which a mobile service is perceived as being technically excellent in the process of providing promised benefits (Kim, Chan, & Gupta, 2007). Perceived ease-of-use refers to the degree to which a person believes that engaging with a mobile service would be free of effort. Performance expectancy and effort expectancy, together with perceived connection quality and reliability determine the perceived convenience of a mobile service, which in turn has a strong impact on the intention to engage in and accept it (Chae et al., 2002; Knutsen, 2005). In order to promote positive attitudes towards mobile marketing practices, marketers need to design mobile services that

ubiquitously serve and support day-to-day individual and social practices which require very little prior experience and effort on behalf of the users.

Perceived trialability, which refers to the extent to which potential adopters can try out mobile applications and return to their prior conditions without incurring great cost reinforces adoption of new mobile services (Marez et al., 2007), through reducing perceived risk and perceived cost.

Perceived risk is a major inhibitor of mobile marketing acceptance (Kleijnen, Ruyter & Wetzels, 2007). It refers to the subjective expectation of suffering a loss in pursuit of the desired outcome of using a mobile service. It includes monetary risks, privacy considerations (Rohm & Sultan, 2006), and security considerations (Fang et al., 2005/2006). Security considerations refer to the security of the transaction, whereas privacy considerations refer to the extent to which users perceive having control over sharing personal information with others. Methods to reduce perceived risk in mobile marketing include strengthening the trust towards the network operator via mass marketing and word of mouth marketing, establishing necessary technical protection measures against malicious third parties and making these measures visible to subscribers, explicitly stating the commitment of the mobile marketer for the protection of customer privacy, and increasing the trialability of offered mobile services. Prior research provides empirical support for the positive influence of trust on attitudes toward mobile advertising and intentions to receive messages (Karjaluoto et al., 2008). In addition to its direct effects, trust also seems to increase positive dispositions toward mobile marketing indirectly through increasing perceived usefulness of mobile advertising (Zhang & Mao, 2008).

Perceptions regarding the mobile medium itself include perceived connection quality, perceived risk, and perceived expensiveness of subscription. Perceived connection quality refers to the degree to which users perceive that the connection between the mobile device and the internet is satisfying in terms of speed and reliability (Chae et al., 2002). Such perceptions are expected to improve significantly together with the transition to 3G networks.

Consumer Response Stage

Consumer behavior in general is defined as "the behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs" (Schiffman & Kanuk, 2007, p.3). Mobile consumers' behavioral response is measured by click through rate, which counts the number of visitors that actually click on a particular banner advertisement, respond via SMS or IVR, or download mobile content. It is the ultimate success measure used in the context of mobile marketing. The other indicator of success in mobile marketing is exposure rate, which reveals the reach of the marketing communication and is usually measured by the number of times a visitor is exposed to the wireless ad. It simply measures the visibility of an ad, and its reach. Exposure and click through measures are related to consumer awareness and attention, but they do not say much about consumers' like or dislike of the marketing communication, or attitude change toward the marketed brand or service.

On the other hand, interactivity data provides information about consumer behavior patterns and hints about consumers' like or dislike of the ads, the mobile application or the campaign as a whole. Through logging and tracking consumer response and navigational patterns (e.g., frequency of page visits, the number of repeat visits, external pages from which the visitors come from, the duration of their stay, the average number of pages they visit, most popular navigation patterns through the site, the most and least popular pages, etc.) marketers can understand the extent to which mobile users actively engage with their mobile content.

Prior literature in mobile marketing often contented with measuring behavioral intentions instead of directly measuring actual user response. A behavioral intention is defined as the strength of intention to try performing a certain behavior (Ajzen, 1988). The relationship between behavioral intention and actual behavior is well established in marketing literature (Ajzen, 1991; Davis, 1989; Fishbein & Ajzen, 1975). "As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance" (Ajzen, 1991, p.181). Corroborative evidence for this link has also been found in the context of mobile marketing (Karjaluoto et al., 2008; Tsang, Ho, & Liang, 2004). Since mobile marketing encapsulates a large set of applications which offer different types of interactivity to mobile users, there are a multitude of intention-related constructs available in the relevant literature, such as the intention to open a mobile marketing message (Palka, Pousttchi, & Wiedemann, 2009), the intention to receive mobile advertising (Hanley, Becker, & Martinsen, 2006; Jun & Lee, 2008; Lee, Tsai, & Jih, 2006; Muk, 2007; Tsang, Ho, & Liang, 2004; Xu, 2006/2007; Zhang & Mao, 2008),

the intention to use mobile internet (Kim, Chan, & Gupta, 2007; Park, 2006), the intention to adopt a new type of mobile application or service (Kleijnen, Ruyter, & Wetzels, 2004; Wang, Lin, & Luarn, 2006), the intention to participate in a mobile marketing campaign (Karjaluoto & Alatalo, 2007; Rohm & Sultan, 2006), the intention to reuse a particular mobile service (Kim, Lee, & Kim, 2008; Lim & Kumar, 2008; Pihlström, 2007), and the intention to engage in mobile commerce (Bhatti, 2007; Bigne, Ruiz, & Sanz, 2007; Lee, 2005; Lee & Jun, 2007; Mahatanankoon, 2007). They were all found to be influenced by a subset of aforementioned user perceptions and attitudes toward a mobile marketing campaign.

Summary of Chapter 2

The mobile medium is praised for its unprecedented capability to deliver highly personalized messages to target consumers with great precision, at the time and place when it is most likely to be effective. In order to exploit this exceptional capability of the mobile medium, prior research suggests that marketers should employ meticulous targeting, and personalize the message both in terms of content and delivery terms to make them increasingly relevant and contextually congruent for their selected recipients. Relevance of the message depends on the involvement of the consumer with the content of the message. Therefore, the first step of increasing relevance is targeting which involves identifying those users who would be interested in the subject of the mobile marketing message. The second step is personalization of the message which involves inclusion of right incentives within the message body that would motivate the recipient, finding an appropriate source for the message that will be perceived as familiar, likeable and credible by the recipient, and using a language that is suitable for the target group of consumers. Personalization and targeting go hand in hand, such that one can not produce the desired outcome without the other. The final stage is message delivery, which involves strategic decisions as to the extent of user control provided (prior permission), and the timing and location of delivery. Combined with consumer involvement, these factors highly influence consumers' experience through the use of mobile services and mobile marketing campaigns.

This chapter provided an original conceptualization of the mobile marketing phenomenon and presented comprehensive review of prior research in mobile marketing in an organized account. The literature review revealed that research in the domain of mobile consumer behavior is abundant, yet the field lacks substantial theory development. Researchers have repeatedly tried applying modified versions of existing theories (e.g., Diffusion of Innovations, Technology Acceptance Model, Theory of Planned Behavior) to explain and predict acceptance and attitude towards mobile marketing practices. Furthermore, researchers have either adopted an overly abstract approach to explain the adoption of mobile services in general (one model fits all approach), or adopted an excessively narrow focus by concentrating on a single type of mobile application at a time (a model for each application approach). This fact produced two undesired outcomes: 1) there exist severe discrepancies among empirical findings regarding relative importance of adoption determinants, and 2) the boundaries of the applicability of these findings are unclear. Consequently, none of the existing frameworks have gained widespread recognition and hence the literature still lacks commonly accepted theories of success for mobile marketing. The next chapter of this dissertation aims to establish a consumer-centric success model for push-type mobile marketing, and assess its validity via a field experiment.

CHAPTER 3

THE FIELD EXPERIMENT

Experiment Design

The literature review presented above, encapsulates a bewildering array of constructs, which makes it practically impossible to test the validity of all possible relationships among them via a single causal research. Therefore, several essential constructs from each stage of the aforementioned conceptual framework that are deemed as suitable for the planned experimental scenario were selected as experimental variables. The present experimental research model differs from the existing models in mobile marketing literature in two major aspects. First, it is developed with an exclusive focus on the unique characteristics of the mobile medium and push-type mobile marketing practices. In other words, it is not a modified version of existing technology acceptance and diffusion models that were originally developed in the realm of brick-and-mortar and PC-based environments. Therefore, it brings forward the distinctive features of the mobile medium. Due to the very personal nature of handheld devices, "perceived intrusiveness" was given central importance in the proposed framework. One of the central arguments of the present study is that "perceived intrusiveness" is a distinct construct, and its effect can not be fully captured by sole measurement of the overall attitude toward the campaign. It is conceptualized as an important driver of consumers' feelings and attitudes toward a push-type mobile marketing stimulus. It is argued that "perceived intrusiveness" will have an independent and significant influence on post-campaign

attitudes and behaviors such as campaign participation, reinforced or deteriorated brand image, and the willingness to make word of mouth referrals. In simplest words, the experiment is constructed to identify antecedents and consequents of "perceived intrusiveness" and "post-encounter attitude toward the campaign" in push-type mobile marketing. It is argued that it is possible to boost the positive intentional and behavioral outcomes of a push-type mobile marketing campaign by minimizing "perceived intrusiveness" and maximizing "post-encounter attitude toward the campaign". Mobile marketing is unlikely to become fully recognized as a research area until it has a solid theoretical foundation. And this research aims to contribute to the relevant literature in this respect.

Second, in the present research the target mobile users are conceived as service consumers instead of mere technology adopters, and hence results of this study should provide more meaningful implications for brand building and consumer relationship management by explaining and predicting consumers' experience through push-type mobile marketing practices.

In order to assess the validity of the hypothesized relationships among the components of the theoretical framework a field experiment is designed, in which all treatment variables are actively manipulated and the real response behavior is observed. Prior research has not examined real response behavior in a mobile setting yet. A few prior similar attempts, in which all treatment variables had only one level, have assessed attitudinal/intentional outcomes via self-report questionnaires. What differentiates the present research from regularly employed methodologies is the fact that it allowed observation of actual response in a realistic context.

The experiment consists of two consecutive studies designed to assess the predictors and consequents of "perceived intrusiveness" and "post-encounter attitude toward the mobile marketing campaign", which are proposed to be the two constructs that adequately explain and predict consumer experience through push-type mobile marketing practices. An SMS voting scheme was created in which students were called to take a solicited action which required them to send an SMS in order to participate in a voting. Students were called for voting with SMS in order to help the Department of Management to select the companies to be summoned for the upcoming Career Days event. Respondents of the experiment received an SMS from the Office of the Dean of Students which asked them to text the name of the company that they want the Department of Management to summon for the upcoming Career Days event to an SMS number which was rented for use by the experimenter throughout the experiment. Treatment variables were prior permission, delivery timing of the SMS, and existence of an explicit statement within the message body. Behavioral response was observed. Covariates and other dependent variables were measured by asking respondents to fill out a follow-up questionnaire after the experiment in return of a monetary incentive.

The experiment involved two studies. Samples of the two studies were independent and respondents were assigned to one of the studies in a random fashion. Sample recruitment process and sample characteristics are reported in a forthcoming section (pg. 68). In the first study, a 2 x 3 factorial design was used. The first treatment variable was existence of an explicit incentive within the message body. Two types of messages were created (see Table 2): one included a statement

about a non-monetary incentive, while the other provided no information regarding any explicit incentives. The incentive was as follows: “Those who vote will be given priority in one-to-one meetings with company representatives.” The second treatment variable was prior permission, which had three levels: “permission was asked and it was granted”, “permission was asked but no response was given”, and “permission was not asked”. Via e-mail, a group of students were asked for their explicit permission for the receiving the announcements of the Office of the Dean of Students with SMS messages. Some of those students granted their explicit permission, while others gave no response. There was no student who explicitly rejected receiving SMS messages from the Office of Dean of Students by sending an email that includes a rejection notice. Therefore, a possible fourth level which is “permission was asked but rejected by the user” had zero sample size. The rest of the students were not asked for their prior permission and received the experimental stimulus with no prior notice. Experimental conditions are shown in Table 3.

Table 2. SMS messages used in experimental conditions:

With Incentive	Isletme Bolumu staj ve ise alma gorusmeleri yapmak uzere hangi firmayi davet etsin? 1 firma yaz 8103 e gonder. Gorusmelerde oy verenlere oncelik taninacaktir.
Without Incentive	Isletme Bolumu staj ve ise alma gorusmeleri yapmak uzere hangi firmayi davet etsin? 1 firma yaz 8103 e gonder.

Table 3. Study 1 – Experimental conditions

Incentive / Permission	Incentive Included	Incentive Not Included
Permission asked and granted	1	2
Permission asked but no response	3	4
Permission not asked	5	6

In the second study, a 2 x 2 factorial design was used (see Table 4). The first treatment variable was the same as the first treatment variable used in study 1: existence of an explicit incentive within the message body. The second treatment variable was delivery timing of the SMS message, which was expected to manipulate the level of cognitive intensity and anxiety at the time of message delivery. The message was delivered at two points in time, one during the finals when students are expected to experience a high level of cognitive intensity and anxiety, and the other was delivered a week before the finals, just after the new year holiday, when students are expected to experience a lower level of cognitive intensity and anxiety.

Table 4. Study 2 - Experimental conditions

Delivery Timing / Incentive	Delivery: January 02, 2010 After the new-year holiday, a week before finals, no school Low level of Cognitive Intensity and Anxiety	Delivery: January 10, 2010 During the finals High level of Cognitive Intensity and Anxiety
Incentive	1	2
No Incentive	3	4

Consumer response in the form of text message sending, and the willingness to make word of mouth referrals were chosen as the two behavioral outcomes of the field experiment. Perceived intrusiveness and the post-encounter attitude toward the mobile marketing campaign were at the focal point of this research. They are regarded as the two most important criteria for campaign success in push-type mobile marketing in the sense that they predict post campaign user actions such as participation in the campaign and willingness to make WOM referrals. The construct "post-encounter attitude towards the mobile marketing campaign" was used as a substitute for satisfaction, and similar to satisfaction it has crucial importance for marketers due to the fact that it drives post-campaign user attitudes and actions. While choosing the predictive constructs, in other words treatment variables and covariates, the priority was given to those which bring forward the unique characteristics of the mobile medium. These variables are proposed to be highly influential on consumer perceptions regarding the intrusiveness and the utility of the push-type marketing message. Covariates were trust and attitude towards the source of the message and the advertised brand, mobile affinity, involvement with the message content, conscientiousness, prior experience with the mobile medium, and the perceived medium-fit.

Experimental Constructs and Hypotheses

Incentive

It has been widely claimed that explicit statement of an incentive placed within a mobile marketing message should exert a positive impact on the return rate of a mobile marketing campaign (Barwise & Strong, 2002; Hanley, Becker & Martinsen, 2006; Wang, 2007). Explicit incentives have been found to be effective in enhancing communication activities within online communities (Bartol & Srivastava, 2002; Beenen et al., 2004; Hummel et al., 2005). However, all prior studies in mobile marketing have refered to incentives in the form of generic monetary gains, such as lotteries, discounts, prepaid credits, and gifts. A growing number of studies on volunteerism and pro-social behavior in general provide evidence for a detrimental effect of generic explicit incentives (Bénabou & Tirole, 2006; Bolton & Katok, 1998; Brown, 1997; Chan et al., 2002; Day & Devlin, 1996; Frey, 1999). The impact of non-monetary incentives on mobile message effectiveness has never been tested, nor has been discussed before. In this experiment, two types of messages were created: one included a statement about a non-monetary incentive, while the other provided no information regarding any explicit incentives. The incentive was as follows: "Voters will be given priority in one-to-one meetings with company representatives." This incentive should only be appealing for those who are highly involved with the message content, because it will be motivating only for those who actually plan to participate in the upcoming Career Days event. Others, on the other hand, will perceive no gain associated with this incentive. It is argued that instead of providing generic small monetary gains, personally-relevant incentives should provide more

positive impact on reinforcing positive consumer attitudes. Therefore, may it involve monetary gains or not, the challenge is to deliver only relevant incentives to consumers, which are expected to reduce intrusiveness, and hence increase post-encounter attitude toward the campaign. Highly relevant incentives may also represent a chunk of information that has social value for members of a target social community, and hence recipients may use it as a conversational material among their peers.

H1: Those who receive a message including an *explicit statement of an incentive* will

a) perceive the message as less intrusive than those who receive a message that does not include an explicit statement of an incentive.
b) have more positive post-encounter attitude toward the campaign than those who receive a message that does not include an explicit statement of an incentive.
c) be more willing to make WOM referrals about the campaign than those who receive a message that does not include an explicit statement of an incentive.
d) be more responsive.

Permission

Permission marketing, a term popularized by Godin (1999), has emerged as a serious idea with the commercialization of the Internet, which aims to give consumers the control over the terms of their relationship with marketers. Although the general idea of permission has appeared in the literature much earlier, in the context of direct marketing (e.g., Milne & Gordon, 1993), the difference is that those prior studies treated permission as a means to establish privacy rights rather than to enhance effectiveness of marketing campaigns (Krishnamurthy, 2000). In the context of digital marketing, permission-based marketing requires that consumers have to 'opt in' before they receive messages of any kind, have the ability to control timing and frequency of message delivery and the content of the message, and have the option to 'opt out' at any stage. The literature unanimously agrees on the importance of the prior explicit permission of the consumer for the acceptance and success of push-type marketing messages (Godin, 1999; Barnes & Scornavacca, 2004; Carroll et al., 2007; Krishnamurthy, 2000). Prior permission is even more critical in the mobile context because in all other marketing channels, consumers may simply choose to ignore or get away from marketing effort if they are not interested in it or do not like it, which is not possible when the message is delivered to the personal mobile handset of an individual. This fact makes prior explicit permission so critical that, without it, mobile marketing messages could even reduce brand equity by causing resentment and irritation (Barwise & Strong, 2002). It has been found that a great majority of mobile users are concerned about unsolicited text messages and they would generally like to receive messages only after giving permission (Rettie &

Brum, 2001). Prior empirical studies found support for the claim that user control has a significant effect on consumers' attitudes toward mobile marketing and willingness to receive mobile advertising messages (Kleijnen, Ruyter, & Wetzels, 2007; Maneesoonthorn & Fortin, 2006; Reyck & Degraeve, 2003; Tsang, Ho, & Liang, 2004; Yunos et al., 2003).

Although industry self-regulation maintains that all push-type mobile message sending should be permission-based, it is not always the fact. Unfortunately, mobile spamming, especially bulk SMS sending through easy-to-use online interfaces, exists and it damages the overall attitude toward push-type mobile marketing practices as a whole. A mobile phone is an intimate object of an individual's personal sphere. Uninvited messages are intrusions into the personal sphere and are likely to be regarded as intrusive. Since intrusiveness is related to the utility and expectedness of the interruption (Li, Edwards, & Lee, 2002), prior user permission would mitigate intrusiveness, and hence result in more positive post-encounter attitudes toward the mobile campaign.

H2a: Perceived intrusiveness will be lowest for those who granted their prior permission when asked, and highest for those who were asked for their permission but gave no response. Those who were not asked for their prior permission will have an intrusiveness score in the middle.

H2b: Those who granted their prior permission when asked will have more positive post-encounter attitude toward the campaign than those who were not asked for their

prior permission, whom will have more positive post-encounter attitude toward the campaign than those who were asked for their permission but gave no response.

Prior permission results in perceived user control which increases the likelihood of positive feelings and confidence about the outcome of engaging in any kinds of activities (Caroll et al., 2007). Therefore, through increasing perceived user control, prior permission is expected to increase participation in the campaign.

H2c: Those who granted their permission will be more responsive than both those who were not asked for their permission and those who were asked for their permission but gave no response.

Delivery Timing: Manipulating Cognitive Intensity and Anxiety

Cognitive intensity has previously been identified as an antecedent of perceived intrusiveness. Edwards, Li and Lee (2002) have conceptualized cognitive intensity as the degree to which an audience is mentally engaged in an activity, and found significant relationship between cognitive intensity and perceived intrusiveness. In that study, cognitive intensity was manipulated by the timing of exposure to rich media ads during surfing sessions on the Web. Cognitive intensity was assumed to be higher when respondents were viewing a content page than when taking a cognitive pause to switch pages or closing the browser. Consequently, ads were found to be more intrusive when they are displayed within the content page than when they are

displayed between breaks in content pages. Ads were found as least intrusive when they are displayed upon closing the browser. Controlling the effect of cognitive intensity through adjusting the timing of exposure according to an ad's position within a content page is possible in web-based banner and pop-up ads. However, marketers may not be able to infer temporal cognitive intensity that precisely when delivering push-type mobile marketing messages, especially via SMS, MMS, and IVR. Nevertheless, temporal cognitive intensity can be inferred to some extent at an aggregate level by analyzing and tracking target consumers' life styles and daily routines. For instance, users' cognitive intensity is likely to be higher during working hours, weekdays, and social and/or sports events than during after-work, weekends, holidays, and idle hours. Therefore, message delivery timing can be controlled to minimize the average cognitive intensity of a target user group in order to maximize effectiveness of push-type mobile marketing messages.

Besides cognitive intensity, another temporal condition, namely moods of individuals may also be influential on perceived intrusiveness. Mood is described as transient feeling states that are subjectively perceived by the individuals. The line between an emotion and a mood is difficult to draw. Moods are more general and pervasive than emotions. Moods are longer in duration but weaker in intensity. Also moods are not directly coupled with action tendencies and explicit actions as are many emotions. Finally one is almost always aware of his/her emotions and their effects, but may or may not be aware of his/her mood and especially their effects (Gardner, 1999). Oatley (1992) came forward with one of the neatest distinctions between emotions and mood: "Emotions occur in response to transitions from one

sequence of action to another, but moods occur when the cognitive system is maintained in an emotion mode for a period." It is known that mood state has a significant influence on cognitive processes (Gardner, 1999; Wegener, Petty, & Smith, 1995), cognitive capacity (Isen, 1987; Mackie & Worth, 1989), and perceptions (Batra & Stayman, 1990; Schwarz & Clore, 1983). In general, mood states are found to influence the extent to which arguments in a communication become elaborated and bias consumer perceptions and judgments in mood-congruent directions. Based on this premise, negative mood may increase perceived intrusiveness of push type mobile marketing messages.

Although it is practically impossible to remotely identify moods of people at personal level at any given time, it is possible infer mood to some extent at an aggregate level. For instance, people who are driving in rush-hour, residents of a region that has been recently hit by a natural disaster, students who are going to take an important test within the week, or sports fans who are watching a national game will more likely to be experiencing a heightened level of anxiety. In general, existence of potential stressors for a segment of consumers can be identified by marketers and this information can be used to deliver messages to those who are more likely to be in a pleasant mood.

In the present experiment, delivery timing of the call-to-action message was actively manipulated. One group of respondents received the experimental stimulus during the finals when students are expected to experience a high level of cognitive intensity and anxiety, while the other group received the message a week before the finals, just after the New Year's holiday, when students are expected to experience a

lower level of cognitive intensity and anxiety. It was expected that those who receive the call-to-action message during a low level of cognitive intensity and anxiety should perceive the message as less intrusive, have more positive attitudes toward the campaign and be more responsive than those who receive the call-to-action message during a high level of cognitive intensity and anxiety.

H3: Those who receive the message under *high cognitive intensity and anxiety* will

a) perceive the message as more intrusive than those who receive the message under low cognitive intensity.
b) have more negative post-encounter attitude toward the campaign than those who receive the message under low cognitive intensity.
c) be less responsive.

Involvement with the Message Content

The concept of involvement is a complex construct that characterizes a state of motivation and of interest specific to an individual, which is widely conceptualized in the marketing literature as a function of three factors: Individual characteristics (e.g. needs, interests, goals), situational factors (e.g., purchase occasion or perceived risk associated with the purchase decision), and characteristics of the stimulus (e.g. the type of media or the product class) (Bloch & Richins, 1983; Andrews & Shimp, 1990; Laurent & Kapferer, 1985; Zaichowsky, 1986). To date, there exists no common conceptual framework for the explication of the construct (Broderick &

Mueller, 1999; Jain & Srinivasan, 1990; Laaksonen, 1994; Rothschild, 1984). Nevertheless, the unifying theme across the literature has always been personal relevance (Celsi & Olson, 1988; Houston & Rothschild, 1978; Park & Young, 1986; Petty & Cacioppo, 1981; Richins & Bloch, 1986; Zaichowsky, 1985; 1994). Bloch and Richins (1983) further categorized involvement as either enduring or situational. Although, both situational and enduring involvement relate to the feeling of self relevancy towards a product category, enduring involvement is based on the relationship of a product category to a consumer's centrally held values and goals across all purchase situations. Situational involvement, on the other hand, describes the temporary feelings that accompany a situation (Houston & Walker, 1996). This study adopts a perspective on involvement similar to that of Celsi and Olson (1988) and Broderick and Mueller (1999). This perspective allows conceptualizing involvement as a subject-centered construct which emphasizes a consumer's subjective experience or feeling of personal relevance towards a subject. It does not contradict with the situational nature of involvement; instead it recognizes the fact that involvement may become more salient at certain times and in certain situations. One of those situations could be receiving an SMS message about a subject that is highly involving for a person.

Career Days event is selected as the experimental scenario in order to make the content of the message more relevant for some of the students than it is for others. Since not everyone is equally involved in their careers and do not plan to start working as a full-time employee or an intern in a corporation in the short term, the expectation was that there would be an adequate degree of variance in students' level

of involvement in the subject. Those who are more involved with the message content should find it more relevant, and hence should perceive an increased level of utility associated with the message (Barwise & Strong, 2002; Heinonen & Strandvik, 2003; Kavassalis et al., 2003; Vatanparast & Asil, 2007). Therefore, involvement with the message content should increase perceived value of the delivered mobile marketing message. It is expected that increased involvement with the message content would result in reduced perceived intrusiveness and more positive perceptions regarding the message and the mobile marketing campaign, which in turn would drive a person to both participate in the campaign and also to do more than just use the mobile content for their own consumption and engage in WOM referrals.

H4: Those who are more involved with the message content will

a) perceive the message as less intrusive than those who are less involved with the message content.
b) have more positive post-encounter attitude toward the campaign than those who are less involved with the message content.
c) be more responsive than those who are less involved with the message content.
d) be more willing to make WOM referrals about the campaign than those who are less involved with the message content.

Trust and Prior Attitude toward the Message Source/ Advertised Brand

Trusting beliefs in the context of online marketing refers to a set of specific beliefs dealing primarily with the integrity, benevolence, competence, and predictability of a particular online service provider (Bhattacherjee, 2002; Chen & Dhillon, 2003; Cheung & Lee, 2006). Trust is usually regarded as a catalyst in general consumer-marketer relationships, especially in online relationships, because it provides expectations of successful transactions and facilitates the willingness to become vulnerable to a service provider after having taken its characteristics into consideration (Lee, 2005). In situations where individuals do not yet have credible and meaningful information about the service provider, initial trust formation occurs (McKnight et al., 1998). Usually, trust perceptions at the initial stages of a relationship are goal-based or calculative-based that relies on assessments of benefits versus costs. Gradually through experience and familiarity knowledge-based and respect-based trust develops and it offers the highest form of commitment in relationships (Koehn, 2003). In the context of mobile marketing, prior research provides empirical support for the positive influence of trust on attitudes toward mobile advertising and intentions to receive mobile messages (Karjaluoto et al., 2008). In addition to its direct effects, trust also seems to increase positive dispositions toward mobile marketing indirectly through increasing perceived usefulness of mobile advertising (Zhang & Mao, 2008). Trust is also found to improve customer loyalty through its positive impact on satisfaction with the mobile marketing campaign (Lin & Wang, 2006). Choi et al. (2008) found perceived credibility of the advertiser/advertising as the most important driver of satisfaction

with a mobile service. In push-type mobile marketing the trustee may be either the source of the message or the advertised brand. In many cases the source and the brand happen to be different entities. For instance, a network operator, an aggregator, or a membership-based application may deliver various kinds of messages regarding a brand, a person, a location, a new product, or an event. Therefore, trusting beliefs toward both the source of the message and the advertised brand are relevant in such cases. Based on the preceding discussion, trust towards the brands involved in the delivery of the experimental stimulus (the mobile marketing message) is expected to have a significant influence on the attitude toward the campaign, and the response rate.

The source-attractiveness model of McCracken (1989) suggests that message effectiveness depends chiefly on the familiarity, likability, and similarity of the source. Similarly, MacKenzie and Lutz (1989) found that attitude toward the advertiser is a significant predictor of attitude toward the ad. Hence, another dimension of message effectiveness that is related with brands involved with the delivered message (e.g., source of the message and/or advertised brand) is general attitude toward the source/advertised brand.

In the present experiment, the source of the message was the Office of the Dean of Students, which is expected to be recognized and perceived as familiar by a majority of the students. However, based on their prior experiences involving the Office of the Dean of Students some students may have differing perceptions regarding the trustworthiness and likeability of the source. The advertised brand (in other words the brand that sponsors the message) was the Department of

Management. Similar to the Office of the Dean of Students, the Department of Management is also expected to be recognized and perceived as familiar by a majority of the students, while perceptions regarding its trustworthiness and likeability may also show considerable differences among students based on various factors. Based on the relevant literature, general trust and attitude toward both the source of the message and the advertised brand are expected to have a strong influence on the perceived intrusiveness of the message and the effectiveness of the message both in terms of creating a positive attitude toward the campaign and generating responses.

H5: Those who perceive the message source as more trustworthy will

a) have more positive post-encounter attitude toward the campaign than those perceive the message source as less trustworthy.
b) be more responsive.

H6: Those who have more positive attitude toward the message source will

a) perceive the message as less intrusive than those who have more negative attitudes towards the message source.
b) have more positive post-encounter attitude toward the campaign than those who have more negative attitude towards the message source.
c) be more responsive.

H7: Those who perceive the advertised brand as more trustworthy will

a) have more positive post-encounter attitude toward the campaign than those perceive the advertised brand as less trustworthy.
b) be more responsive.

H8: Those who have more positive attitude toward the advertised brand will

a) perceive the message as less intrusive than those who have more negative attitudes towards the advertised brand.
b) have more positive post-encounter attitude toward the campaign than those who have more negative attitude towards the advertised brand.
c) be more responsive.

There is an important limitation regarding the use of the constructs "attitude toward the advertised brand" and "attitude toward the source" as predictive variables that should be spelt-out. An important proposition of this study is that "perceived intrusiveness" and "post-encounter attitude toward the campaign" explain and predict campaign success. A campaign can be considered as successful to the extent that it positively influences the overall attitude toward the advertised brand. Therefore, the attitude toward the brands involved in the campaign is both an antecedent and a consequent to the constructs "perceived intrusiveness" and "post-encounter attitude toward the campaign". On this basis, unless the attitude toward the brands involved in the campaign is measured both before and after the experiment, incorporating it into the research model would produce biased results. Due to operational difficulties and in order to preserve the realism of the experiment brand attitude could not have been measured prior to the experimental treatment; it was measured only after the experimental stimulus is administered. Since the difference between the attitude toward the advertised brand/message source before and after the campaign could not be calculated, the impact of post-encounter attitude toward the campaign on brand

attitudes could not be assessed. On the other hand, only-after measurement of attitude toward the advertised brand/message source as a predictive variable could provide only (at best) biased evidence regarding the impact of attitude toward the advertised brand/message source on experimental dependent variables.

Perceived Medium-Fit

Since intrusiveness is held as the central construct in the proposed model, identification of its antecedents and consequents is a major concern for this study. The literature falls short in providing a sound framework that explains and predicts perceived intrusiveness in push type mobile marketing. It has been conceptualized as a function of utility and expectedness of an interruption (Krishnamurthy, 2000). Expectedness can be controlled to some extent by acquiring prior permission (Carroll et al., 2007). On the other hand, literature has identified the use of incentives, delivering relevant messages, and establishing role/situational congruency by timely delivery as the three strategies to lower the utility of interruption (Barnes & Scornavacca, 2004; Barwise & Strong, 2002; Bauer et al., 2005; Heinonen & Strandvik, 2003; Kavassalis et al., 2003; Muk, 2007; Wehmeyer, 2007). This study, proposes perceived medium-fit as the fourth predictor of intrusiveness which may have an influence on both the utility and the expectedness of the interruption.

Perceived medium-fit is conceptualized to be a function of three factors: source-medium fit, brand-medium fit, and content-medium fit. The fit between the source and the medium represents respondents' perceptions regarding the

appropriateness of the fact that the message source is using the mobile medium to reach them. Similarly, the fit between the brand and the medium represents respondents' perceptions regarding the appropriateness of the fact that the brand is using the mobile medium to communicate with them. In most of the cases the brand and the source are the same entity. However, in some cases a branded mobile ad is delivered by the mobile network operator, an aggregator, a forum, a community-based application, or another person. In such cases, perceptions regarding the source and brand may have different valences or weights and hence should be investigated separately. Finally, the fit between the content and the medium represents respondents' perceptions regarding the appropriateness of the mobile medium for a particular purpose, or delivery of a particular kind of digital content.

People may have differing tolerance levels regarding what should be sent to their personal mobile handsets and what should not be sent, as well as who can communicate with them through their mobile devices and who cannot. Some people perceive their mobile devices as belonging to their very personal spheres and regard them as very intimate objects. On the other hand, some people are extremely efficiency-oriented and hence are very flexible in terms of their acceptance of a very broad range of mobile messages as long as their content is useful for them. Therefore, it is hypothesized that perceived medium-fit would be significantly related with perceived intrusiveness.

H9a: Those who perceive a lower level of fit between the message source and the medium will perceive the message as more intrusive than those who perceive a higher level of perceived source-medium fit.

H9b: Those who perceive a lower level of fit between the message content and the medium will perceive the message as more intrusive than those who perceive a higher level of perceived content-medium fit.

H9c: Those who perceive a lower level of fit between the advertised brand and the medium will perceive the message as more intrusive than those who perceive a higher level of perceived brand-medium fit.

Mobile Affinity

Affinity represents the importance of a medium for an individual. It is an affective construct which captures the extent to which an individual feels dependent on a medium in order to carry on with his or her daily life. It has been found that individuals who have more positive feelings toward computers are likely to find them easier to use and more useful (Schlenker, 1978; Scott, 1978; Scott & Yalch, 1980; Stern et al., 2008). It has also been found that Internet dependency has a positive influence on online purchase intentions (Ruiz & Sans, 2006). That is, if individuals feel that they are emotionally attached to things, they tend to be more willing to learn about them and incorporate them into their lives. Bigne, Ruiz and Sanz (2007) found corroborative evidence for the impact of affinity on attitudes and behavior within the context of mobile commerce. Therefore, it is expected that mobile affinity will be strongly related with perceived intrusiveness and post-encounter attitude toward the campaign.

H10: Individuals who score high on mobile affinity

a) will perceive the message as less intrusive than those who score low on mobile affinity.
b) will have more positive post-encounter attitude toward the campaign than those who score low on mobile affinity.

People who have higher levels of mobile affinity would be more likely to be involved with mobile related issues. When a department in their university launches a mobile campaign for the first time in its history to communicate with students, it might represent a major topic to talk about with peers for those who has higher levels of mobile affinity. Therefore it is also expected that:

H11: Individuals who have higher levels of mobile affinity will be more willing to make WOM referrals about the campaign.

Conscientiousness

The purpose of including conscientiousness as a predictive factor in this study is to provide empirical evidence to the claim that personality does have an influence on the value creation process of a mobile user through a push-type mobile campaign. Recent studies investigating the relationship between personality traits and users' perceptions, attitudes and behavior in various consumption domains found

significant results (e.g., Dabholkar & Bagozzi, 2002; Im et al., 2007; Jahng et al., 2002; Mooradian & Olver, 1997), especially in the computer mediated environments (e.g., Donthu & Garcia, 1999; Kwak, Fox, & Zinkhan, 2002; LaRose & Eastin, 2002; Ranaweera, Bansal, & McDougall, 2008; Ross et al., 2009). Findings of these studies provide support for the notion that consumers are dispositional entities, and more importantly that there exists a multitude of domain-specific traits relevant to consumer behavior.

The personality trait of conscientiousness, originally identified as one of the Big Five personality traits (Borgatta, 1964; Norman, 1963), refers to the propensity to follow socially prescribed norms and rules, be goal-directed, planful, organized, diligent, be able to prioritize tasks, think before acting, delay gratification, and control impulses (Harris & Fleming, 2005; John & Srivastava, 1999). It denotes the extent to which a person is purposeful, strongwilled and determined, thereby reflecting a will to achieve (Digman & Takemoto-Chock, 1981). It reflects an innate motivation to behave in ways that brings individual success, both off and on the job (Costa & McCrae, 1992). Conscientious people are often described by words like "dependable", "precise," "efficient," "orderly," and "persistent." Therefore, the trait of conscientiousness may have an influence on perceptions regarding the call-to-action message sent within the present experiment. Based on characteristics of conscientious people, such as being able to prioritize tasks, thinking before acting, being purposeful, planful, and goal-directed, those who score high on conscientiousness should perceive the message as less intrusive and have more positive attitudes toward the campaign, due to the fact that the message will be

giving them an opportunity to organize themselves and make plans for the future. These people may further appreciate the campaign due to the fact that it provides an opportunity for them to act towards achieving a desired end, which is meeting with company representatives.

H12: Those who score high on conscientiousness will

a) perceived the message as less intrusiveness, and
b) have more positive post-encounter attitudes toward the campaign.

Since conscientious people are more inclined to make plans and be goal-directed, they may be motivated by the opportunity to take an active role in the selection of the companies that will be called to the upcoming Career Day event. Furthermore, since they are efficiency driven people, they may view sending SMS as an efficient and convenient way to participate in a university-wide decision making process. Therefore, conscientiousness may be related with responsiveness in this particular campaign.

H13: Those who score high on conscientiousness will be more responsive than those who score low on conscientiousness.

It is important to note that, since different personality traits may become salient in different types of usage situations, it is not possible to claim that a single personality trait would definitely have an explanatory power over all kinds of push-type mobile marketing campaigns. The purpose of including conscientiousness as a predictive factor in this study was to provide empirical evidence to the claim that

personality does infact have an influence on the value creation process of a mobile user through a push-type mobile campaign, noting the fact that the personality trait that is most relevant to the value creation process would depend on both the type of the application used (e.g., SMS, MMS, IVR, mobile Internet, etc.), and the theme of the particular mobile marketing campaign (e.g., donation raising, increasing awareness, response generating, voting, feedback collection, etc.).

Prior Experience with the Mobile Medium

Prior research in consumer behavior has shown that experience and knowledge regarding a particular phenomenon has a significant impact on various information processing activities, such as decision making (Bettman & Park, 1980), recall and recognition (Brucks, Mitchell, & Staelin, 1984), ad processing and product judgments (Maheswaran & Sternthal, 1990). Experience does not only cause differences in terms of the way messages are processed (Alba & Hutchinson, 1982), but it also alters perceptions regarding various features of an innovation and attitudes towards it (Sheth, 1968). More recently, Bauer et al. (2005) has shown that people who have higher levels of prior experience with the mobile medium are more likely to adopt a new mobile-based service. Therefore, it can be suggested that as consumers become more familiar with the mobile medium in general, their perceptions regarding the complexity and riskiness of using mobile services would be attenuated, and hence they would feel more comfortable with participating in a mobile based voting scheme.

H14: Individuals who are more experienced with the mobile medium will

a) perceive the message as less intrusive than those who are less experienced with the mobile medium.
b) have more positive post-encounter attitude toward the campaign than those who are less experienced with the mobile medium.
c) Be more responsive than those who are less experienced with the mobile medium.

Perceived Intrusiveness

The inherent characteristics of mobile handsets such as being "highly personal, sometimes very intimate", "always-on and connected", and "always with the user", present marketers with both unprecedented opportunities to establish one-to-one basis close relationships with their customers and provide pervasive personalized customer service, and at the same time risks such as annoying, frustrating, irritating, and alienating customers. Irritation in response to marketing practices, which is defined as feelings of provocation, displeasure, and momentary impatience (Aaker & Bruzzone, 1985), has been defined as more negative than dislike (Aaker & Bruzzone, 1985; Bauer & Greyser, 1968). When consumers are irritated by marketing practices, which is more likely to happen in mobile marketing due to the aforementioned inherent characteristics of mobile devices, psychological reactance is believed to take place (Brehm & Brehm, 1981) which produces a desire to maintain attitudinal or behavioral freedom, and therefore, reduces the effect of persuasive communication

(Shen & Dillard, 2005), causes ad avoidance (Kennedy, 1971; Krugman, 1983; Park & McClung, 1986; Soldow & Principe, 1981), and in worse cases results in negative reactions or attitudes towards the marketing campaign and the medium through which marketing stimulus is delivered (Morimoto & Macias, 2009; Okazaki, 2004). Since attitudes toward advertising are known to influence attitudes toward brands (Batra & Ray, 1986; MacKenzie et al., 1986), misuse of push-type mobile marketing may result in brand suicide. What makes perceived intrusiveness in the context of push-type mobile marketing even more dangerous is the fact that users can not simply avoid intrusive messages delivered to their handheld devices as they can avoid online banners and TV commercials. They are notified when the message is delivered to their devices, which forces them to suspend their current tasks and take a look at the message since the mobile device is their primary means of communication with their social circles. Then, they need to take an action to delete the message from the memory of their devices. Furthermore, there are no spam filters available in the market that can filter out unsolicited mobile messages. That's why this study places perceived intrusiveness at the heart of push-type mobile marketing success.

Perceived intrusiveness is first defined by Ha (1996, p. 77) as "the degree to which advertisements in a media vehicle interrupt the flow of an editorial unit." It is important to distinguish perceived intrusiveness from the negative emotions and reactions that may result from exposure to push-type marketing stimuli. Perceived intrusiveness is the construct which captures the mechanism by which marketing practices evoke negative emotional reactions, such as irritation or annoyance, but not

the negative emotional reactions themselves. Perceived intrusiveness has been characterized by three dimensions in the context of advertising: intrusion into consumer privacy (Milne & Rohm, 2004; Sheehan & Hoy, 1999), intrusion on task performance and cognitive processing (Edwards et al., 2002; Cho & Cheon, 2004), and media clutter (Ha, 1996; Elliott & Speck, 1998). Besides the inevitable effect of media clutter, other aspects of intrusiveness can be controlled by marketers to some extent. Edwards, Li, & Lee (2002) found that perceived intrusiveness is influenced by the congruence of the ad content with the current task and intensity of cognition at the moment. Ying, Korneliussen, and Gronhaug (2009) found empirical evidence suggesting that perceived intrusiveness of online ads can be controlled by aspects of ad value (e.g., usefulness and/or enjoyment), ad placement (e.g., too many or too frequent), and ad execution (message design). McCoy et al. (2008) added perceived user control as another factor that reduces perceived intrusiveness of web advertisements. Perceived user control has also been identified as an important predictor of consumers' acceptance of mobile advertisements (Barnes & Scornavacca, 2004; Carroll et al., 2007). Based on the prior literature, this study conceptualizes perceived intrusiveness of push-type mobile marketing practices as a function of message value (driven by message relevance, incentives, and the personality trait conscientiousness), prior user permission, perceived overall medium-fit, mobile affinity, prior experience with the mobile medium, valence and strength of prior perceptions regarding the source of the message and the advertised brand, and appropriateness of delivery timing (driven by the level of cognitive intensity and anxiety). In turn, perceived intrusiveness is hypothesized to predict post campaign user attitudes, intentions, and behavior, such that respondents who feel

anger, disgust, and contempt caused by the perceived intrusiveness of the message would be less likely to participate in the campaign and would be less willing to make WOM referrals about the campaign.

H15: Perceived intrusiveness of the message will negatively influence both

a) the actual participation in the campaign, and
b) the willingness to make WOM referrals about the campaign.

Post-encounter Attitude toward the Campaign

Post-encounter attitude toward the campaign has both theoretical and practical significance because, as a substitute for satisfaction in the experiment, it may drive important post-campaign consumer responses such as WOM referrals, complaint behavior, future intentions to engage in similar mobile campaigns, and most importantly may have a tremendous impact on the attitude toward the brands involved in the campaign (Mitchell & Olson, 1981; Shimp, 1981; Lutz, MacKenzie, & Belch, 1983). The construct, "post-encounter attitude toward the campaign" is generated in line with the parameters of the experimental scenario in order to represent the cognitive and affective state induced by the receipt of the marketing stimulus. Although it resembles the construct "satisfaction" as used within the consumption context, it is not the same, because it lacks the expectation-disconfirmation basis. The expectation-disconfirmation theory (Oliver, 1983), which represents the cognitive dimension of satisfaction, posits that consumers compare

perceived performance with some a priori standard and that the confirmation or disconfirmation of those expectations predicts satisfaction. Within the experimental scenario created for this research, there is an encounter with a push-type message delivered to each individual's handheld device, and there is an action taken by that individual in response to the call-to-action SMS message. Respondents are exposed to the delivered message without cognitively or impulsively deciding to receive it at that particular time and place. Therefore, only those who decide to participate in the campaign would be consuming a service, and hence, will have expectations regarding the outcome of their participation. Other respondents, on the other hand, may only develop an attitude toward the campaign depending on the affect induced by the receipt of the message and through the exposure to its content.

The preceding discussion may lead to the conception that the construct "post-encounter attitude toward the campaign" corresponds to the affective dimension of satisfaction. Although it has an affective basis, post-encounter attitude toward the campaign is mainly an evaluative construct. Although not in the form of expectancy-disconfirmation, it captures the extent to which the receiver feels he or she had benefited from the message. Such an evaluation requires thinking about the potential benefits of both receiving the information enclosed within the message and participating in the campaign. Respondents who perceive more benefits (both utilitarian and hedonic) associated with the campaign would have more positive post-encounter attitudes toward the campaign.

Post-encounter attitude toward the campaign is hypothesized to influence users' interaction with the mobile marketing message (e.g., campaign participation,

voting, providing feedback, visiting a mobile website, clicking a link, making a voice call, etc.) and post-campaign actions such as willingness to make word-of-mouth referrals.

H16: Post-encounter attitude toward the campaign will be positively related with

a) responsiveness, and

b) the willingness to make WOM referrals.

Unfortunately, measurement of consumer perceptions and attitudes retrospectively after the experimental stimulus is administered may produce biased results. Cognitive Dissonance Theory (Festinger, 1957) posits that any discrepancy between expectations and actual product performance will be assimilated by the consumer through the adjustment of his evaluations of the product congruent with his prior expectations. Therefore, respondents who have participated in the campaign may give more positive responses to the related questionnaire items, either because they have already augmented their attitudes toward the campaign in positive direction, or because they will be deliberately trying to look more happy with their decision to participate in the campaign. However, there is no practical way to measure consumer perceptions before their participation in the campaign without damaging the realism of the experiment. Hence, it is a limitation of this research design that we should submit and take into consideration while interpreting the results.

Research Sample

Selection of an appropriate sample has critical importance in causal research designs. Appropriateness of a sample depends on the research goal. When the goal is generalization, the preferred context for the experiment is a field study. In field studies causal relations are examined in a setting that represents the richness of the real world where the problem being investigated occurs. In such instances, the appropriateness of the sample depends on its representativeness of the population of interest. On the other hand, when the objective is to examine theoretical explanations, lowering inter-subject variance is desirable, and thus a homogeneous sample is the preferred option (Sternthal, Tybout, & Calder, 1994). Lowering inter-subject variance helps the researcher to minimize the chances that extraneous variables that are not being controlled might undermine observations of the theoretical relationships being investigated. On this basis, when the objective is theoretical explanation, researchers often use convenient student samples. Although such sampling enhances internal validity, which is the ability to attribute the effect that was observed to the experimental variable and not to other variables (Churchill & Iacobucci, 2005), findings of such studies usually have limited strategic implications due to the fact that average responses reported by homogeneous student samples often differ from those provided by a more representative sample (Ferber, 1977).

If the contexts in which experiments are conducted are represented on a continuum with laboratory setting at one end and field study at the other end, the context of the present experiment can be placed somewhere in the middle. Since the

aim of the present experiment is theoretical explanation, a homogeneous student sample was used. Nevertheless, its findings are generalizable to a great extent and are still interesting for practitioners due to the fact that the homogeneous sample used in this study happens to be representative of the population of interest for mobile marketers. It has been found that the penetration rate of mobile phones is above 90% in college students in the United States (Hanley, Becker, & Martinsen, 2006), and adoption rates of younger users for various types of mobile services are much higher than that of older users (Bigne, Ruiz, & Sanz, 2007; Okazaki, 2004; Suoranta & Mattila, 2004; Yang, 2005). In general, young consumers constitute the primary market for mobile devices and services (Sultan & Rohm, 2008; Zhang & Mao, 2008). That is why university students represent a big portion of the revenues generated through mobile marketing practices and hence is a population of interest for mobile marketers.

The sample of the present study consisted of undergraduate students of various departments of Boğaziçi University. They were recruited via emails in which they were asked whether they would like to participate in a survey that will take place in a predetermined classroom at a predetermined date in return of a small monetary incentive (10 TL). Respondents were not given prior information regarding the experiment. In other words, they did not know anything about the experimental stimulus before they were exposed to it. The research sample consisted of those students who volunteered to participate in the aforementioned survey, which actually was the after-experiment questionnaire designed to measure dependent variables and the experimental covariates. The questionnaire was administered in a classroom. In

order to get the monetary incentive, students were required to fill-out the entire questionnaire without leaving any missing questions, unless they have trouble in understanding the question or cannot come-up with an answer. Therefore, there were no missing data. In order to avoid selection bias, no department was given priority in recruitment process (students from 20 different departments received the recruitment email at the same time) and those who volunteered to participate were assigned to experimental conditions in a random fashion.

Sample characteristics of Study 1, which involves a two by three factorial design with the treatment variables incentive (two levels) and prior permission (three levels), is shown in Table 5; and sample characteristics of Study 2, which involves a two by two factorial design with the treatment variables incentive (two levels) and the level of cognitive intensity and anxiety at the time of message delivery (two levels), is shown in Table 6, below.

Table 5. Sample characteristics of Study 1

STUDY 1 Total N = 250			
Demographic	Category	Frequency	Percent of Sample
Age	19	31	12,4
	20	53	21,2
	21	63	25,2
	22	47	18,8
	23	39	15,6
	24+	17	6,8
Gender	Male	134	53,6
	Female	116	46,4
Class	1	51	20,4
	2	63	25,2
	3	68	27,2
	4	68	27,2
Department	Arts & Sciences	20	8,0
	Computer Engineering	9	3,6
	Electronic Engineering	21	8,4
	Industrial Engineering	11	4,4
	Civil Engineering	14	5,6
	Mechanical Engineering	15	6,0
	Economics	23	9,2
	Management	48	19,2
	Political Science	37	14,8
	MIS	12	4,8
	Tourism Administration	12	4,8
	International Trade	7	2,8
	Education	21	8,4

Table 6. Sample characteristics of Study 2

STUDY 2 Total N = 178			
Demographic	Category	Frequency	Percent of Sample
Age	19	19	10,7
	20	38	21,3
	21	50	28,1
	22	41	23,0
	23	22	12,4
	24+	8	4,5
Gender	Male	107	60,1
	Female	71	39,9
Class	1	32	18,0
	2	50	28,1
	3	62	34,8
	4	34	19,1
Department	Arts & Sciences	20	11,2
	Computer Engineering	8	4,5
	Electronic Engineering	12	6,7
	Industrial Engineering	6	3,4
	Civil Engineering	8	4,5
	Mechanical Engineering	10	5,6
	Chemical Engineering	6	3,4
	Economics	24	13,5
	Management	32	18,0
	Political Science	21	11,8
	MIS	7	3,9
	Tourism Administration	7	3,9
	International Trade	7	3,9
	Education	10	5,6

Measurement Theory

Scales

Actual response, in the form of campaign participation by SMS sending, was observed. The other three metric dependent variables, namely perceived intrusiveness, post-encounter attitude toward the campaign, and willingness to make WOM referrals, and experimental covariates (except prior experience with the mobile medium) were measured with 5-point Likert type scales in the follow-up questionnaire. Evaluation for each item ranged from 1 “totally disagree” to 5 “totally agree”.

Perceived intrusiveness is measured by a 7-item Likert type scale, which was originally created by Li, Edwards, and Lee (2002) to measure the intrusiveness of pop-up ads and found to be valid and internally consistent by several following studies (e.g., Edwards, Li & Lee, 2002; McCoy et al., 2008; Morimoto & Macias, 2009). Post-encounter attitude toward the campaign is measured by a 3-item Likert type scale, which is adapted from the scale used originally by Shimp and Kavas (1984) to measure overall attitude toward coupon usage. The willingness to make WOM referrals is measured by an adapted version of Verhoef, Franses and Hoekstra’s (2002) 3-item WOM intention scale.

Prior experience with the mobile medium is measured by asking respondents to provide their usage frequency for ten types of mobile applications, by using a scale as follows: 0 “never used before”, 1 “used once”, 2 “use occasionally”, 3 “use frequently”. The total experience score is calculated by taking the mean of the

squares of the responses. The purpose of taking squares of the responses is to amplify the scores of frequent users, due to the fact that occasional users are exponentially more experienced than those who use a mobile application for only once, and heavy users are exponentially more experienced than occasional users. This measurement method is very simple to understand on behalf of the respondents, and ensures that one-time users (trial use) of several applications cannot beat the score of heavy users of few applications; hence it provides a more realistic measure of prior experience with the mobile medium.

Literature offers various measures of conscientiousness (e.g., the Revised Neuroticism-Extroversion-Openness (NEO) Personality Inventory, the Abridged Big Five Dimensional Circumplex, the NEO Five-Factor Inventory, the Big Five Mini-Markers measure, the Big Five Inventory (BFI) scale, etc.) which use different types of measurement techniques such as trait adjectives, short phrases, or questionnaire items. Different measures of conscientiousness tend to emphasize different aspects of the conscientiousness domain (Roberts et al., 2005). When personality is not at the focal point of a research, the shortest and most convenient way to measure conscientiousness is to use 9-item BFI Scale that includes short phrases. The BFI does not use single adjectives as items because such items are answered less consistently than when they are accompanied by definitions or elaborations (Goldberg & Kilkowski, 1985). Instead, the BFI uses short phrases based on the trait adjectives known to be prototypical markers of the Big Five Personality Traits (John, 1989; 1990), and it adequately captures the extent of which a person is planful, efficient, goal-directed and organized. Thus, the BFI items retain the advantages of

adjectival items such as shortness and simplicity, while avoiding some of their pitfalls such as ambiguous or multiple meanings and salient desirability (John & Srivastava, 1999). Therefore, the BFI scale is used to measure conscientiousness in the present study.

Mobile affinity is measured by a 5-item scale which was originally developed to measure affinity with television by Rubin (1981) and later adapted to measure attachment to the mobile phone by Bigne, Ruiz and Sanz (2007). Source-medium fit, brand-medium fit, content-medium fit, the overall trust towards the source of the message and the advertised brand, and the overall attitude toward the source of the message and the advertised brand were measured with single-item scales.

Based on the perspective taken on involvement in this study, involvement with the message content was measured with a 5-item author-generated scale that involves questions regarding the personal relevance and importance of the subject of the SMS voting. Two of the items measured the importance of career for the respondents. Three of the items measured the relevance of the message content for the respondents by asking their level of interest in job and internship opportunities and whether they are willing to make job and internship applications in the short-term or not. Scale items are shown in Table 7, below.

Table 7. Scales used in the Follow-up Questionnaire

Construct	Item	Description	Reference
Perceived intrusiveness (Dependent Var.)	INT1	Distracting	Li, Edwards, & Lee (2002)
	INT2	Disturbing	
	INT3	Forced	
	INT4	Interfering	
	INT5	Intrusive	
	INT6	Invasive	
	INT7	Obtrusive	
Post-encounter attitude toward the campaign (Dependent Var.)	ATT1	I am glad that I have received the message.	Shimp & Kavas (1984)
	ATT2	I feel that receiving the message was pleasant.	
	ATT3	I appreciate receiving the message.	
Willingness to make WOM referrals (Dependent Var.)	WOM1	I would recommend my friends to participate in an interesting mobile-based campaign like this.	Verhoef, Franses, & Hoekstra (2002)
	WOM2	If I find an interesting mobile-based campaign like this, I want to tell my friends about it.	
	WOM3	If somebody asks me for advice about an interesting mobile campaign like this, I will encourage him or her to participate.	
Involvement with the message content (Covariate)	INV1	As soon as I graduate I want to begin my professional career.	Author-generated
	INV2	I plan to apply for a job/internship in the short term.	
	INV3	I am interested in events and news that may be related to my career.	
	INV4	I wouldn't miss the opportunity to make a job/internship interview with the representatives of a company that I like.	
	INV5	My professional career is important to me.	
Mobile Affinity (Covariate)	MAFF1	My mobile phone is important in my life.	Bigne, Ruiz, & Sanz (2007)
	MAFF2	Using my mobile phone is one of my main daily activities.	
	MAFF3	If my reach to the mobile medium is prevented I would really miss it.	
	MAFF4	I can't go for several days without using my mobile phone.	
	MAFF5	I would be lost without my mobile phone.	
Source-Medium Fit (Covariate)	FIT1	I think it is quite normal for the office of the Dean of Students to communicate with me via SMS.	Author-generated
Content-Medium Fit (Covariate)	FIT2	I think the mobile medium is perfect for running such voting-based campaigns.	
Brand-Medium Fit (Covariate)	FIT3R	I find it weird that the Department of Management has used SMS to solicit my ideas.	

("R" denotes reverse-scored items)

Table 7. continued.

Construct	Item	Description	Reference
Trust toward the source (Covariate)	SRCT	I trust the office of the Dean of Students.	Author-generated
Trust toward the advertised brand (Covariate)	BRDT	I am fully confident that the Department of Management would call the companies which got the most votes to the Career Days event.	Author-generated
Attitude toward the source (Covariate)	SRCAR	I don't have any negative feelings about the office of the Dean of Students.	Author-generated
Attitude toward the advertised brand (Covariate)	BRDAR	I don't have any negative feelings about the Department of Management.	Author-generated
Conscientiousness (Covariate)	CONS1	Does a thorough job.	John & Srivastava (1999)
	CONS2	Tends to be careful.	
	CONS3	Is a reliable worker.	
	CONS4R	Tends to be disorganized.	
	CONS5R	Tends to be lazy.	
	CONS6	Perseveres until the task is finished.	
	CONS7	Does things efficiently.	
	CONS8	Makes plans and follows through with them.	
	CONS9R	Is easily distracted	
Prior experience with the mobile medium (Covariate)	EXP1	SMS	Author-generated
	EXP2	MMS	
	EXP3	News/updates package membership	
	EXP4	Mobile e-mail	
	EXP5	Mobile internet	
	EXP6	Mobile games	
	EXP7	Mobile payment	
	EXP8	Mobile TV	
	EXP9	Location-based services	
	EXP10	Prior participation in SMS-based campaigns	

Note: "R" denotes reverse-scored items.

Reliability and Validity of the Measurement Theory

Since the measurement theory employed in the present study involves 6 multi-item constructs, its validity and reliability needs to be confirmed before moving to hypotheses testing. The two experiments shared the same covariates and dependent variables. The data, for both studies, was collected within a classroom, in the presence of the researcher, at the same time. Respondents were not allowed to share their ideas with each other. Therefore, combining the data of both studies for reliability and validity assessment of the measurement theory was appropriate. First, a principal components factor analysis was conducted using the Varimax rotation. When communalities were checked, 3 items, namely CONS2, CONS3, and CONS9, had noticeably low extraction values, 0.339, 0.450, and 0.332, respectively.

Communalities give information about how much of the variance in each item is explained by the factor solution. Low values (e.g., less than 0.5) indicate that the item does not fit well with the other items in its component (Hair et al., 2010). Therefore, a closer look to these three items was required to enhance internal validity of the scale. When the rotated component matrix was examined, it was seen that CONS9 had a loading value of 0.476, which is lower than the cut-off value 0.5. Before deciding to take action, Cronbach's Alpha of Conscientiousness scale was calculated by requiring SPSS to produce Cronbach's Alpha values if each item was deleted from the scale. Consistently, deletion of CONS9 promised an increase in Cronbach's Alpha from 0.754 to 0.791. Based on these statistics, CONS9 was eliminated. After CONS9 was eliminated from the scale, same steps were taken for first CONS2 and then for CONS3. In each step Cronbach's Alpha increased. When

these three items were removed from the scale, the resulting Cronbach's Alpha for the Conscientiousness scale was ultimately improved to 0.826, and all the remaining items had extraction values above 0.5 (see the communalities table shown in Table 8), except for CONS8 which had an extraction value of 0.493, just below the cut-off point. However, CONS8 had a factor loading of 0.686 and its deletion meant no improvement in Cronbach's Alpha, so it was kept in the scale. Consistent with the literature, the rest of the items loaded on their respective factors with factor loadings greater than 0.50, the cut-off recommended by Nunnally and Bernstein (1967) (the rotated component matrix is shown in Table 9). Cronbach's Alpha values for all the multi-item constructs were also calculated and were found to be above 0.75 (see Table 10), which is well above the generally acceptable cut-off point (Nunnally & Bernstein, 1967).

Table 8. Communalities Table

	Initial	Extraction
intrusiveness1	1.000	.633
intrusiveness2	1.000	.767
intrusiveness3	1.000	.702
intrusiveness4	1.000	.707
intrusiveness5	1.000	.642
intrusiveness6	1.000	.589
intrusiveness7	1.000	.606
campaignAttitude3	1.000	.704
campaignAttitude1	1.000	.763
campaignAttitude2	1.000	.740
WOM1	1.000	.738
WOM2	1.000	.743
WOM3	1.000	.635
involvement1	1.000	.671
involvement2	1.000	.598
involvement3	1.000	.721
involvement4	1.000	.776
involvement5	1.000	.637
mobileAffinity1	1.000	.580
mobileAffinity2	1.000	.657
mobileAffinity3	1.000	.702
mobileAffinity4	1.000	.717
mobileAffinity5	1.000	.665
conscientiousness1	1.000	.589
conscientiousness4	1.000	.531
conscientiousness5	1.000	.584
conscientiousness6	1.000	.640
conscientiousness7	1.000	.521
conscientiousness8	1.000	.493

Table 9. Rotated Component Matrix

	Component					
	1	2	3	4	5	6
intrusiveness4	.821					
intrusiveness2	.795					
intrusiveness3	.794					
intrusiveness5	.771					
intrusiveness1	.759					
intrusiveness7	.724					
intrusiveness6	.717					
involvement4		.810				
involvement1		.797				
involvement3		.776				
involvement2		.753				
involvement5		.734				
mobile affinity4			.835			
mobile affinity3			.813			
mobile affinity5			.790			
mobile affinity2			.790			
mobile affinity1			.737			
conscientiousness6				.778		
conscientiousness5				.749		
conscientiousness1				.728		
conscientiousness7				.707		
conscientiousness4				.696		
conscientiousness8				.686		
campaignAttitude3					.766	
campaignAttitude2					.757	
campaignAttitude1					.731	
WOM2						.819
WOM1						.753
WOM3						.674

Table 10. Cronbach's Alphas

Factor	Cronbach's Alpha
Intrusiveness	0.904
Involvement	0.868
Mobile Affinity	0.863
Conscientiousness	0.826
Campaign Attitude	0.824
WOM Intention	0.789

Next, a confirmatory factor analysis (CFA) was conducted by using AMOS 18.0 to confirm the validity of the measurement theory. CFA assesses how well the specification of the factors matches the actual data (Byrne, 2001). In that sense, CFA is a powerful statistical tool that enables establishment of construct validity (further elaborated below). The visual diagram of CFA, which depicts the measurement theory of the present research, was drawn in the input editor of AMOS 18.0 and is shown in Figure 1.

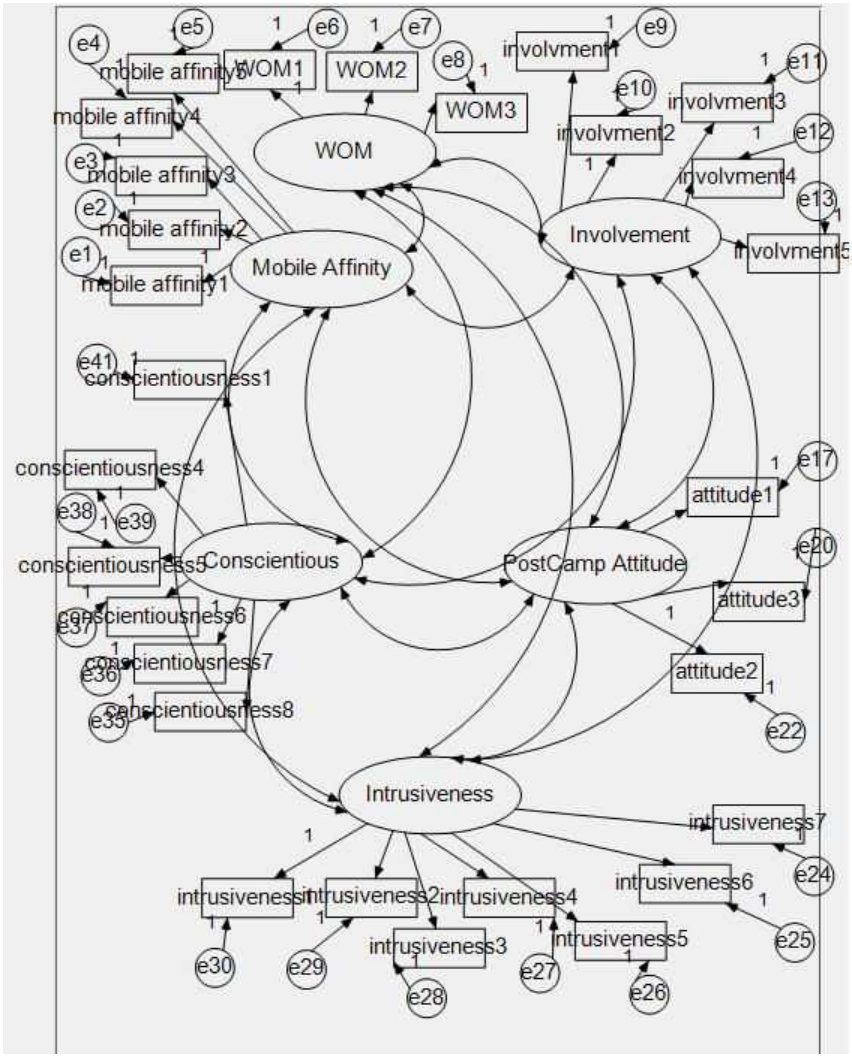

Figure 1. Visual depiction of the measurement model

Construct validity is the degree to which a measure assesses the construct it is purported to assess. It is made up of four components: reliability, convergent validity, discriminant validity and nomological validity (Hair et al., 2010). Reliability is the degree to which a measure is free from random error. It is established by either assessing the degree of consistency between multiple measurements of a construct at different points in time, or by internal consistency which assesses correlation of each indicator with the total score of the whole scale. Convergent validity is the extent to which an item correlates highly with other items measuring the same construct,

whereas discriminant validity is the extent to which a construct is unique and is not correlated with other constructs that are not supposed to be related with it. Finally, nomological validity refers to the degree that the relationships between summated scales in a measurement theory are explicable by theory or prior research (Hair et al., 2010). CFA offers means to assess all four components of construct validity.

The most straightforward way to estimate convergent validity in CFA is to examine factor loadings. All factor loadings should be statistically significant and standardized loading estimates should be 0.5 or higher (Hair et al., 2010). All the standardized loading estimates were significant ($p < 0.001$) and higher than 0.6 (see Table 11). A second indicator of convergent validity is the average percentage of variance extracted (AVE) among a set of construct items. This value is computed by dividing the sum of squared standardized loadings to number of items. AVE of 0.5 or higher suggests adequate convergence (Hair et al., 2010). All AVE values, except for Conscientiousness are well above 0.5 (see Table 11). Third indicator of convergent validity is reliability. Although Cronbach's Alphas shown in Table 10 suggested high reliability for all six constructs, CFA offers a slightly different measure for construct reliability, namely composite reliability (CR). It is computed from the squared sum of factor loadings (λ_i) and the sum of the error variance terms (δ_i) as follows:

$$\text{Composite Reliability} = \frac{\left(\sum_{i=1}^{n} \lambda i\right)^2}{\left(\sum_{i=1}^{n} \lambda i\right)^2 + \left(\sum_{i=1}^{n} \delta i\right)}$$

Table 11. Indicators of Convergent Validity

Construct	Item	Standardized Loading	Variance Extracted	Composite Reliability
Intrusiveness	INT1	0.747	0.589	0.874
	INT2	0.864		
	INT3	0.817		
	INT4	0.797		
	INT5	0.736		
	INT6	0.693		
	INT7	0.701		
Involvement	INV1	0.692	0.595	0.831
	INV2	0.665		
	INV3	0.848		
	INV4	0.891		
	INV5	0.737		
Mobile Affinity	MAFF1	0.654	0.567	0.832
	MAFF2	0.693		
	MAFF3	0.785		
	MAFF4	0.828		
	MAFF5	0.791		
Conscientiousness	CONS1	0.710	0.450	0.856
	CONS4R	0.664		
	CONS5R	0.673		
	CONS6	0.731		
	CONS7	0.627		
	CONS8	0.614		
Campaign Attitude	ATT1	0.711	0.616	0.748
	ATT2	0.776		
	ATT3	0.861		
WOM intention	WOM1	0.817	0.559	0.749
	WOM2	0.705		
	WOM3	0.716		

All indicators shown in Table 11, except for the AVE for Conscientiousness, suggest adequate convergent validity for the measurement model. Conscientiousness scale shows good internal consistency (Cronbach's $\alpha = 0.826$; CR = 0.856). However, it is quite difficult to state that it has convergent validity. First of all, Conscientiousness

items had the lowest extraction values in the communalities table of the EFA (Table 8, pg. 79), with one item, CONS8, having an extraction value of 0,493, which is just below the cut-off level. Then, the same problem was evident in the average variance extracted value ($AVE_{Conscientiousness} = 0.45$), as shown in Table 11. Since these figures are just below the cut-off point 0.5, and the scale has good internal consistency, the construct Conscientiousness was not removed from the theoretical model on the basis of poor convergent validity.

Discriminant validity is assessed by comparing each factor's variance extracted with the square of the correlation estimate between that factor and other factors (Fornell & Larcker, 1981). Discriminant validity exists when the variance extracted estimates are greater than the squared correlation estimates, which means that the latent construct explains its indicators better than it explains other constructs. Diagonal values in the matrix shown in Table 12, shows the variance extracted for each construct and the rest of the matrix includes squared correlation estimates between constructs. As seen in Table 12, for all the constructs, the variance extracted values are higher than the squared correlation estimates between others. This fact provides good evidence for discriminant validity.

Table 12. Squared Correlation Coefficient Matrix and VEs (diagonal values)

	INT	INV	MAFF	CONS	ATT	WOM
Intrusiveness	0.589					
Involvement	0.255	0.595				
Mobile Affinity	0.034	0.049	0.567			
Conscientiousness	0.032	0.082	0.042	0.450		
Campaign Attitude	0.390	0.241	0.056	0.108	0.616	
WOM Intention	0.221	0.286	0.143	0.054	0.341	0.559

Note: All correlations are significant at the 0.01 level.

Nomological validity is assessed by examining whether the correlations among the constructs in the measurement theory makes sense (Hair et al., 2010). Table 13, shows the matrix of construct correlations. Strong correlations exist among intrusiveness, post-encounter attitude toward the campaign, involvement with the message content and willingness to make WOM referrals. Additionally, mobile affinity is mildly correlated with willingness to make WOM referrals, and conscientiousness is mildly correlated with post-encounter attitude toward the campaign. These constructs are hypothesized to be correlated in this manner. This overview provides supportive evidence for nomological validity.

Table 13. Correlation Coefficient Matrix

	INT	INV	MAFF	CONS	ATT	WOM
Intrusiveness	1					
Involvement	0.505	1				
Mobile Affinity	0.184	0.221	1			
Conscientiousness	0.179	0.286	0.205	1		
Campaign Attitude	0.624	0.491	0.237	0.329	1	
WOM Intention	0.470	0.535	0.378	0.232	0.584	1

Besides the specific evidence of construct validity presented above, validity of the measurement model depends on the fit between the observed and estimated covariance matrices, which is referred as the goodness of fit measure (Hair et al., 2010). There are a number of goodness of fit measures are available in CFA. The fundamental measure of fit is Chi-Square (χ^2). However, even if the difference in covariance matrices remained unchanged, the Chi-Square value would increase as the sample size increases. Thus, for large sample sizes, Chi-Square alone is not sufficient for goodness of fit measurement. An alternative absolute fit measure is Goodnesss-of-fit Index (GFI), which is less sensitive to sample size. A version of GFI, adjusted goodness of fit index (AGFI), takes into account differing degrees of model complexity. It does so by adjusting GFI by a ratio of the degrees of freedom used in the model to the total degrees of freedom available. Additionally, Root Mean Square Error of Approximation (RMSEA) offers an absolute badness of fit measure. Lower RMSEA values indicate a better fit. There are also incremental fit measures, which assess how well a specified model fits relative to a null model. A null model assumes that all observed variables are uncorrelated. The Normed Fit Index (NFI) is the ratio of the difference in the Chi-Square value for the fitted model and a null model divided by the Chi-Square value for the null model. The Comparative Fit Index (CFI) is an improved version of NFI. It is the most widely used incremental fit index, and has been found to be a more reliable measure of fit than NFI (Bentler, 1990; Bentler & Bonnett, 1980; Hu & Bentler, 1999). There are also parsimony fit indices which favor simpler models. They are helpful in evaluating competing models but are not useful when the purpose is to assess the goodness of fit of a single model. Therefore, parsimony fit indices were not used to measure goodness of fit in

this study. Chi-Square, GFI, AGFI, RMSEA, NFI, and CFI were used to measure goodness of fit; their values and recommended values (Hair et al., 2010) are shown in Table 14, below.

Table 14. Summary of Fit Indices

Fit Index	χ^2/df	GFI	RMSEA	AGFI	NFI	CFI
Recommended Value	<3	>0.90	<0.08	>0.80	>0.90	>0.90
Value in this study	2.31	0.88	0.05	0.86	0.87	0.92

Chi-Square test was significant (χ^2 = 839,466; df = 362; $p < 0.001$), RMSEA is lower than the cut-off value and CFI shows adequate fit. While RMSEA values lower than 0.08 are considered as acceptable, an RMSEA value lower than 0.06 indicates a very good fit (Byrne, 2001). NFI is slightly below the cut-off point but CFI, which is an improved version of NFI, suggests acceptable fit. Although the value of GFI is slightly less than the recommended value, AGFI is above the cut-off value. Cumulatively, results indicate adequate model fit between the research model and the empirical data.

CHAPTER 4

DATA ANALYSIS & HYPOTHESES TESTING

Study 1

Study 1 has two objectives: The first objective is to assess the impact of the experimental treatments on perceived intrusiveness, post-encounter attitude toward the campaign, response rate, and the willingness to make WOM referrals about the campaign, when covariates (interpersonal differences) are not taken into account. The second objective is to establish a causal model that explains and predicts consumers' experience through push-type mobile marketing, by establishing predictive functions for dependent variables.

Assessing the Impact of Treatment Variables when Covariates are not Controlled

As an attempt to meet the first objective, the independent and interacting effects of "prior permission" and "explicit incentive" on dependent variables are examined. Since respondents were not chosen on the basis of some a priori criteria, had no prior information about the experiment, and were randomly assigned to experimental conditions, this overview should illustrate the power of taking prior-permission and using explicit incentives in the absence of targeting (when interpersonal differences are not taken into account prior to message delivery) in real market conditions. The fact that the campaign is being employed by a non-profit organization of which all

the respondents are members may reduce the overall perceived intrusiveness of the message, when compared to the particular situation in which the mobile marketing campaign would have been launched by a profit-oriented entity. Although the experimental scenario may influence the overall levels of response rate and other metric dependent variables, it should have minimal, if any, influence on the hypothesized causal relationships between experimental factors and dependent variables.

It is also worth noting that, not all mobile campaigns are employed by profit oriented entities. Mobile-based call-to-action campaigns have been previously launched by several international non-profit organizations to raise public awareness about a particular issue and/or to raise funds. For instance, American Heart Association launched a mobile campaign, which involved the use of mobile banners across several mobile websites targeting women between the ages twenty five to fourty four, inviting them to “Make Their Phone Go Red” by downloading free Go Red ringtones and wallpapers, in order to raise awareness for heart diseases. Recently, Red Cross has executed a push-type mobile marketing campaign to raise donations. Columbia College, Jacksonville Florida, has executed an SMS-based mobile campaign to generate leads from traditional media. The strategy was to insert an audio ad at the end of several local radio programs that may be interesting for their target audience (25+ adults), in which listeners were encouraged to send an SMS to a given number in order to request more information about education opportunities in Columbia College. Therefore, the experimental scenario cannot be reckoned as entirely artificial.

Table 15 shows the number of responses generated, average response rates and the means of the metric dependent variables for each experimental condition. This overview has important managerial implications because it illustrates the power of the two simplest variables that are controllable by mobile marketers: taking prior permission and including an explicit incentive within the message body. In addition to content, prior permission, incentive-based marketing, delivery timing (maximizing role/situation congruence through location- and time-specifity), and targeting constitute the tools available to mobile marketers. Prior permission, incentive-based marketing, and delivery timing (based on time-specifity) are included in the present research as experimental treatment variables. The fourth tool, targeting is about establishing message relevance which requires existence of rich customer databases and adequate profiling/targeting techniques, and hence its employment is not as straightforward as taking prior permission and including explicit incentives in the message body. In the present research, effectiveness of targeting is assessed by post-hoc analysis of the impact of covariates, which represent interpersonal differences, on campaign outcomes.

Table 15. Impact of the Experimental Treatments – Study 1

Incentive / Permission	Incentive Included	Incentive Not Included	TOTAL
Permission asked and granted	N= 38 Response: 13 Resp.Rate: 34.21% Intrusiveness: 1.49 Attitude: 3.52 WOM Int.: 3.67	N= 35 Response: 4 Resp.Rate: 11.43% Intrusiveness: 1.95 Attitude: 3.00 WOM Int.: 3.19	N= 73 Response: 17 Resp.Rate: 23.29% Intrusiveness: 1.71 Attitude: 3.27 WOM Int.: 3.44
Permission asked but no response	N= 59 Response: 8 Resp.Rate: 13.56% Intrusiveness: 1.87 Attitude: 3.05 WOM Int.: 3.36	N= 51 Response: 4 Resp.Rate: 7.84% Intrusiveness: 2.24 Attitude: 2.70 WOM Int.: 3.00	N= 110 Response: 12 Resp.Rate: 10.91% Intrusiveness: 2.04 Attitude: 2.89 WOM Int.: 3.19
Permission not asked	N= 33 Response: 9 Resp.Rate: 27.27% Intrusiveness: 1.72 Attitude: 3.05 WOM Int.: 3.53	N= 34 Response:3 Resp.Rate: 8.82% Intrusiveness: 2.08 Attitude: 2.94 WOM Int.: 3.20	N= 67 Response: 12 Resp.Rate: 17.91% Intrusiveness: 1.91 Attitude: 2.99 WOM Int.: 3.37
TOTAL	N= 130 Response: 30 Resp.Rate: 23.08% Intrusiveness: 1.73 Attitude: 3.19 WOM Int.: 3.50	N= 120 Response: 11 Resp.Rate: 9.17% Intrusiveness: 2.12 Attitude: 2.86 WOM Int.: 3.11	N= 250 Response: 41 Resp.Rate: 16.4% Intrusiveness: 1.91 Attitude: 3.03 WOM Int.: 3.31

At the end of the campaign, 41 respondents sent an SMS including the name of their favorite company and participated in the mobile voting scheme. The overall response rate of the campaign was 16.4%. Average intrusiveness was 1.91, which means that on the average respondents did not find the campaign as intrusive. As mentioned previously, a possible explanation for this may be the fact that the campaign is employed by a non-profit organization of which all the respondents are members. The overall attitude toward the campaign was 3.03, which means that the

respondents were rather indifferent toward the campaign. A possible explanation for this may be the fact that SMS is primarily used for its convenience (a utilitarian motive) rather than its entertainment (a hedonic motive). If the campaign was employed using IVR, MMS, or WAP-Push, it could have produced more interaction and fun, which in turn could cause more vivid experiences to be translated into more positive attitudes. But when the ultimate purpose of the mobile marketing campaign is generating immediate responses (instead of e.g., brand-building or generating a viral effect), consumers are driven by utilitarian motives, and hence convenience becomes a more important concern for the mobile marketer. Therefore, the use of SMS in this scenario was appropriate. Finally, overall willingness to make WOM referrals about the campaign was 3.31, slightly above the mean, which means that the campaign was successful in terms of stimulating respondents to talk about the campaign to some extent.

When response rates are examined, it is seen that both incentive and permission have noticeable effects on the response rate. The response rate is highest (34.21%) when “permission is granted” and the “message includes an explicit incentive”. It is lowest (7.84%) when the “message does not include an explicit incentive” and the recipient gave “no response when he/she was asked for his/her permission”. In both incentive conditions, the response rate of the groups whose “prior permission were not asked” were higher than the groups who “gave no response when they were asked for their permission”, and lower than those who “granted their permission”. In order to examine the significance of the between-group differences in response rate, non-parametric significance tests are employed.

To examine the significance of the impact of incentive on response Mann-Whitney U test, a non-parametric two independent-samples significance test, is employed. It was significant ($\alpha<0.05$), hence it is safe to conclude that the use of explicit incentives within push-type mobile marketing messages significantly increases response rate. To examine the significance of the impact of prior-permission on response Kruskal-Wallis one way analysis of variance test, an extension of Mann-Whitney U test that is used when there are three or more groups, is employed. It was significant ($\alpha<0.05$), meaning that prior-permission is also significantly related with the response rate.

All responses were sent within the first 48 hours. 63.4% of the responses were sent within the first hour after the campaign was launched. Participants tended to vote immediately after they receive the call-to-action message. This finding implies that response in push-type mobile marketing campaigns tends to be immediate. The distribution of the number of responses along the time line is shown in Figure 2.

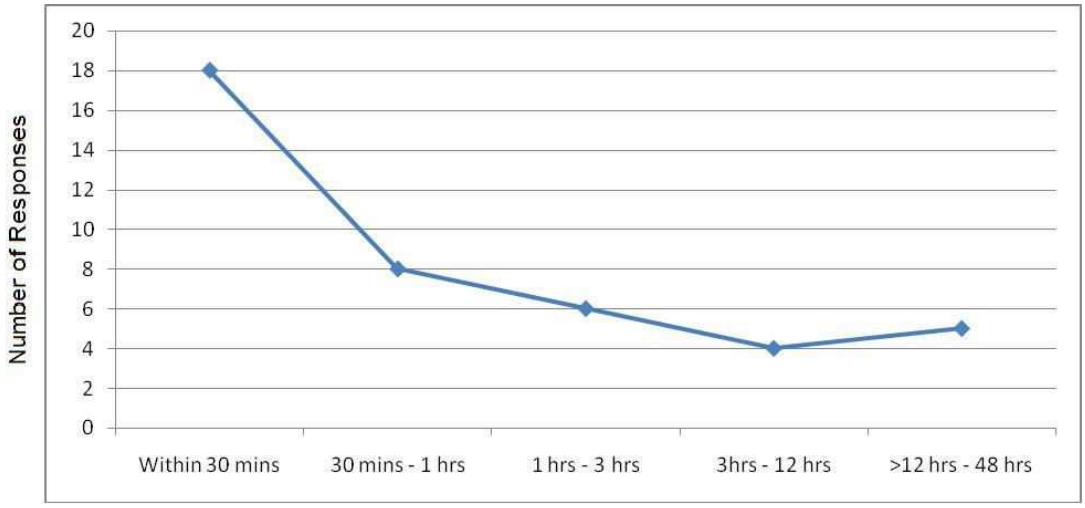

Figure 2. Response delay

The significance of the independent and interacting influence of permission and incentive on metric dependent variables is examined by employing multivariate analysis of variance (MANOVA). For the multivariate test of MANOVA to be valid, three assumptions must be met (Hair et al., 2010): 1) Observations must be independent. 2) The set of dependent variables must have a multivariate normal distribution. 3) Variance-Covariance matrices must be equal for all treatment groups. Additionally, non-linear relationships and high levels of multicollinearity among dependent variables reduce statistical efficiency of the analysis. MANOVA is also sensitive to outliers. Hence, these assumptions were checked before conducting the analysis.

The most basic, yet most significant threat to the validity of MANOVA analysis is the lack of independence among observations, meaning that the responses in each cell are not made independently of responses in any other group. Since the data is collected from all respondents, in a classroom, at a single point in time, in the presence of the researcher who prevented any noise and/or collective answering, dependence is not suspected among observations.

First, data was checked for outliers by calculating Mahalonobis Distance for each respondent, which represent the distance of a particular case from the centroid of the remaining cases. Mahalonobis distances are compared against a critical value from the Chi-Square critical value table. For three dependent variables, the critical value is 16.27. If a case's Mahalonobis value exceeds the critical value, it can be called an outlier. Four individuals with Mahalonobis distances highly above 16.27 were deleted from the data set. Before deletion, their questionnaires were checked for

systematic biases. It was seen that, for some reason they gave the lowest possible score to all items in the questionnaires, hence deletion from the sample was deemed as appropriate.

SPSS provides no direct test for the assessment of multivariate normality (Hair et al., 2010), thus univariate normality of dependent variables are checked by the statistical test of Kolmogorov-Smirnov (see Table 16). The test was significant for all dependent variables, therefore normality assumption could not be achieved. Fortunately, with moderate sample sizes, as in the case of study 1, where there are at least 30 observations in each condition, modest violations of normality can be accommodated by MANOVA, as long as the violation is caused by skewness problems and not outliers (Hair et al., 2010; Pallant, 2007). Since outliers were removed from the sample, admitting the normality problem, MANOVA was undertaken.

Table 16. Tests of Normality for dependent variables - Study 1

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Intrusiveness	.145	250	.000
Campaign Attitude	.114	250	.000
WOM Intention	.134	250	.000

The assumption of the equality of variance-covariance matrices is assessed by the Box's M test. It tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups. Therefore, Box's M test should not be

significant. Although the Box's M test was significant ($p<0.05$). The situation may be explicable and tolerable to some extent due to the facts that 1) Box's M test is especially sensitive to departures from normality (Stevens, 1972), 2) Box's M test gets too restrictive as the sample size increases (Tabachnick & Fidell, 2007), and 3) violation of this assumption has minimal impact if the groups are of approximately equal size (Hair et al., 2010).

Linearity assumption is checked by visual observation of the relationships among the three dependent variables by generating a matrix of scatter plots (see Figure 3). These plots do not show any obvious evidence of non-linearity, therefore this assumption is satisfied.

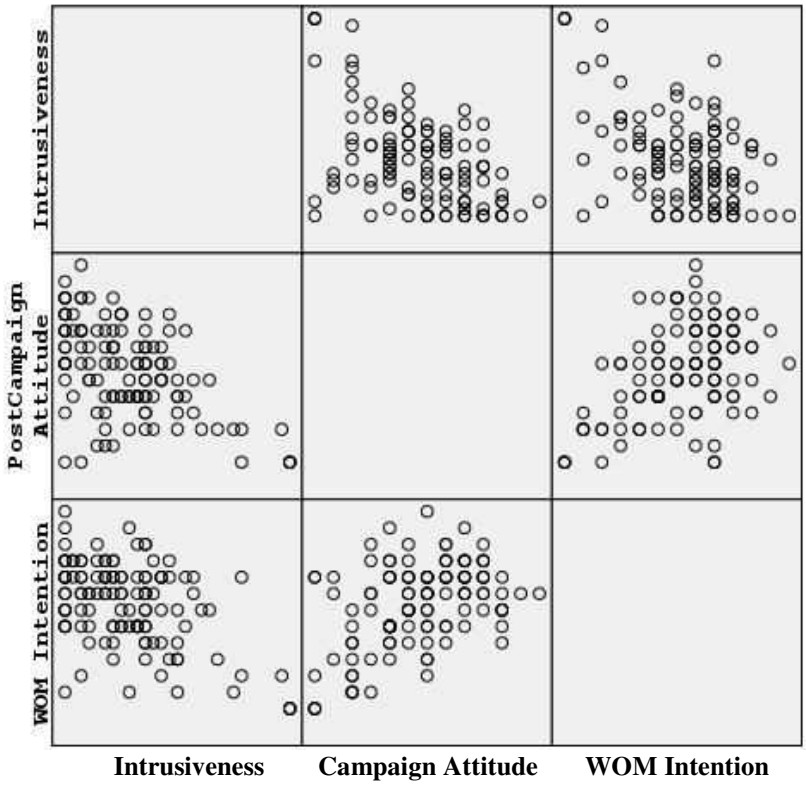

Figure 3. Assessment of the linear relationship among dependent variables – Study 1

Multicollinearity is checked by calculating tolerance and Variance Inflation Factor (VIF) values. Higher tolerance values indicate lower multicollinearity. Tolerance values shown in Table 17, suggest that there exists a moderate level of multicollinearity. However, this level of correlation among the dependent variables has theoretical basis. Furthermore, the convergent and discriminant validities of these constructs were established by CFA in the previous section of this dissertation. Therefore, these constructs cannot be considered as redundant, and hence cannot be removed from the analysis.

Table 17. Multicollinearity Assessment for Dependent Variables – Study 1

	Collinearity Statistics	
	Tolerance	VIF
Campaign Attitude	.645	1.550
WOM Intention	.728	1.374
Intrusiveness	.673	1.485

Table 18, includes four types of statistical criteria to assess the differences across dimensions of the dependent variables. When there are no violations of assumptions and equal cell sizes Wilks' Lambda is the most commonly preferred statistic. However, if there are unequal cell sizes and the assumption of homogeneity of covariances is violated, a more robust statistical measure, Pillai's Trace is preferred (Hair et al., 2010). In the present research, all statistics have produced similar conclusions.

Table 18. MANOVA Results – Study 1

Effect		Value	F	df	Err. df	Sig.	Partial Eta Sqr	Noncent. Param.	Obs. Power
Intercept	Pillai's Trace	.979	3823.12	3	242	.000	.979	11469.37	1.000
	Wilks' Lambda	.021	3823.12	3	242	.000	.979	11469.37	1.000
	Hotelling's Trace	47.39	3823.12	3	242	.000	.979	11469.37	1.000
	Roy's Lar. Root	47.39	3823.12	3	242	.000	.979	11469.37	1.000
Incentive	Pillai's Trace	.073	6.323	3	242	.000	.073	18.968	.965
	Wilks' Lambda	.927	6.323	3	242	.000	.073	18.968	.965
	Hotelling's Trace	.078	6.323	3	242	.000	.073	18.968	.965
	Roy's Lar. Root	.078	6.323	3	242	.000	.073	18.968	.965
Permission	Pillai's Trace	.047	1.933	6	486	.037	.023	11.599	.714
	Wilks' Lambda	.954	1.941	6	484	.037	.023	11.645	.716
	Hotelling's Trace	.049	1.948	6	482	.036	.024	11.690	.718
	Roy's Lar. Root	.044	3.577	3	243	.015	.042	10.731	.786
Incentive * Permission	Pillai's Trace	.010	.397	6	486	.440	.005	2.384	.167
	Wilks' Lambda	.990	.397	6	484	.440	.005	2.379	.166
	Hotelling's Trace	.010	.396	6	482	.441	.005	2.374	.166
	Roy's Lar. Root	.009	.758	3	243	.258	.009	2.274	.211

When significance values are examined, it is seen that all statistics are significant ($\alpha < 0.05$) with high observed powers, except for the interaction term. Groups formed on the bases of both incentive and permission (independently) have statistically significant differences across dimensions of dependent variables. However, for the interaction term, the null hypothesis that all the group vectors of mean scores are equal could not be rejected. Partial Eta square is similar to R^2 in regression, which represents the percent of variance in dependent variables explained by the groups formed by the experimental treatments. When F values are examined together with

Partial Eta squares it is seen that incentive has a larger explanatory power when compared to permission.

Table 19. MANOVA Tests of Between-Subjects Effects – Study 1

Source	Dependent Variable	Type III Sum of Squares	df	F	Sig.	Partial Eta Sqr	Noncent. Param.	Obs. Power
Corrected Model	Intrusiveness	14.489	5	4,146	.001	.078	20,732	.955
	Attitude	15.072	5	4,081	.001	.077	20,405	.952
	WOM Intention	12.674	5	3,559	.004	.068	17,796	.917
Intercept	Intrusiveness	857.192	1	1226.5	.000	.834	1226.55	1.000
	Attitude	2210.73	1	2992.9	.000	.925	2992.99	1.000
	WOM Intention	2637.95	1	3703.8	.000	.938	3703.85	1.000
Incentive	Intrusiveness	9.257	1	13,246	.000	.051	13,246	.952
	Attitude	6.435	1	8,712	.003	.034	8,712	.836
	WOM Intention	9.149	1	12,846	.000	.050	12,846	.946
Permission	Intrusiveness	4.968	2	3,554	.030	.028	7,109	.657
	Attitude	6.453	2	4,368	.014	.035	8,736	.752
	WOM Intention	3.170	2	2,225	.110	.018	4,450	.451
Incentive * Permission	Intrusiveness	.105	2	.075	.928	.001	.150	.061
	Attitude	1.526	2	1,033	.357	.008	2,066	.229
	WOM Intention	.248	2	.174	.841	.001	.348	.077
Error	Intrusiveness	170.52	244					
	Attitude	180.22	244					
	WOM Intention	173.78	244					
Total	Intrusiveness	1100.04	250					
	Attitude	2493.55	250					
	WOM Intention	2931.00	250					
Corrected Total	Intrusiveness	185.012	249					
	Attitude	195.300	249					
	WOM Intention	186.456	249					

In Roy Bargman's Stepdown F test, dependent variables are considered one at a time in order to assess the relative effects of treatment variables on each dependent variable. In table 15, pg. 92, mean scores for dependent variables for each group has been shown. Results shown in Table 19 report statistical significance of the differences among those mean scores. The impact of the interaction term is not

significant on none of the dependent variables. Incentive has significant effects on all three dependent variables. It has the highest effect on perceived intrusiveness (F = 13.246; p = 0.000), which is followed by willingness to make WOM referrals (F = 12.846; p = 0.000), and post-encounter attitude toward the campaign (F = 8.712; p = 0.003), in ranking order. These results provide supportive evidence for Hypotheses H1a, H1b, and H1c.

Permission, on the other hand, has a weaker but still significant effect on post-encounter attitude toward the campaign (F = 4.368; p = 0.014), and intrusiveness (F = 3.554; p = 0.030). It has no significant effect on the willingness to make WOM referrals. Permission has three levels; therefore post-hoc tests were required to identify which combinations of comparisons among groups have statistically significant differences. It is important to choose the correct post-hoc test for multiple comparisons. When equality of variances is maintained, the most widely used post-hoc tests are Scheffe, Tukey's honestly significant difference (HSD), Tukey's extension of the Fisher least significant difference (LSD), and Duncan's multiple range test. Scheffe is the most conservative method, which is followed by Tukey HSD, and Duncan, in ranking order (Hair et al., 2010). On the other hand, when equality of error variances is not maintained, then the appropriate method is Dunnett's post-hoc test. Levene's test tries to reject the hypothesis that the error variance of the dependent variable is equal across groups. Table 20, below, includes Levene test results, which shows that equality of error variances is maintained for "post-encounter attitude toward the campaign", whereas it is not maintained for "perceived intrusiveness". Therefore, Dunnet's test is appropriate for perceived

intrusiveness, whereas Scheffe, Tukey HSD, and Duncan are appropriate for "post-encounter attitude toward the campaign". Since permission has no significant effect on the "willingness to make WOM referrals", no post-hoc examination is required for the dependent variable "willingness of WOM referrals".

Table 20. Levene's Test of Equality of Error Variances – Study 1

	F	df1	df2	Sig.
Intrusiveness	3.194	5	244	.008
Campaign Attitude	1.607	5	244	.159
WOM Intention	2.576	5	244	.027

Table 21. Post-hoc Test regarding Perceived Intrusiveness – Study 1

Dunnett's T3		Mean Difference	Std.		95% Confidence Interval	
(I) Permission	(J) Permission	(I-J)	Error	Sig.	Upper Bound	Lower Bound
granted	no response	-.3325(*)	.12512	.026	-.6340	-.0310
	not asked	-.1962	.13034	.351	-.5112	.1188
no response	granted	.3325(*)	.12512	.026	.0310	.6340
	not asked	.1363	.13351	.668	-.1858	.4584
not asked	granted	.1962	.13034	.351	-.1188	.5112
	no response	-.1363	.13351	.668	-.4584	.1858

Dunnett's test shows that the group of respondents who were "not asked for their prior permission" does not differ significantly in terms of perceived intrusiveness from either those who were "asked for their explicit permission and granted it", or from those who were "asked for their explicit permission but gave no response" (see Table 21). Although the mean score for perceived intrusiveness of the group labeled "not asked for their prior permission" (1,91) resides between the scores of the groups

labeled “asked for their explicit permission and granted it” (1,71) and “asked for their explicit permission but gave no response” (2,04), the differences are not significant. On the other hand, those who were “asked for their explicit permission and granted it” have significantly lower perceived intrusiveness than those who were “asked for their explicit permission but gave no response”. This fact provides partial support for the hypothesis H2a.

Table 22. Post-hoc Tests regarding Attitude toward the Campaign – Study 1

		N	Subset	
	Permission	1	2	1
Tukey HSD	no response	110	2.8939	
	not asked	67	2.9950	2.9950
	granted	73		3.2740
	Sig.		.739	.103
Duncan	no response	110	2.8939	
	not asked	67	2.9950	
	granted	73		3.2740
	Sig.		.459	1.000
Scheffe	no response	110	2.8939	
	not asked	67	2.9950	2.9950
	granted	73		3.2740
	Sig.		.760	.125

Only Duncan’s multiple range test could form two homogeneous subsets with respect to post-encounter attitude toward the campaign (see Table 22). More conservative tests, namely Scheffe and Tukey HSD, included permission level “not asked” in both subsets. This means that those respondents who were “not asked for their prior permission” do not differ significantly in terms of their post-encounter attitude toward the campaign from either those who were “asked for their explicit permission

and granted it", or from those who were "asked for their explicit permission but gave no response". Although the mean score for post-encounter attitude toward the campaign of the group labeled "not asked for their prior permission" (2,99) resides between the scores of the groups labeled "asked for their explicit permission and granted it" (3,27) and "asked for their explicit permission but gave no response" (2,89), the differences were not significant. The other two levels of permission differ significantly in terms of their post-encounter attitude toward the campaign. This fact provides partial support for the hypothesis H2b.

Profile graphs shown in Figure 4, Figure 5, and Figure 6, provides graphical illustration of the differences across dependent variables among groups formed on the basis of treatment variables.

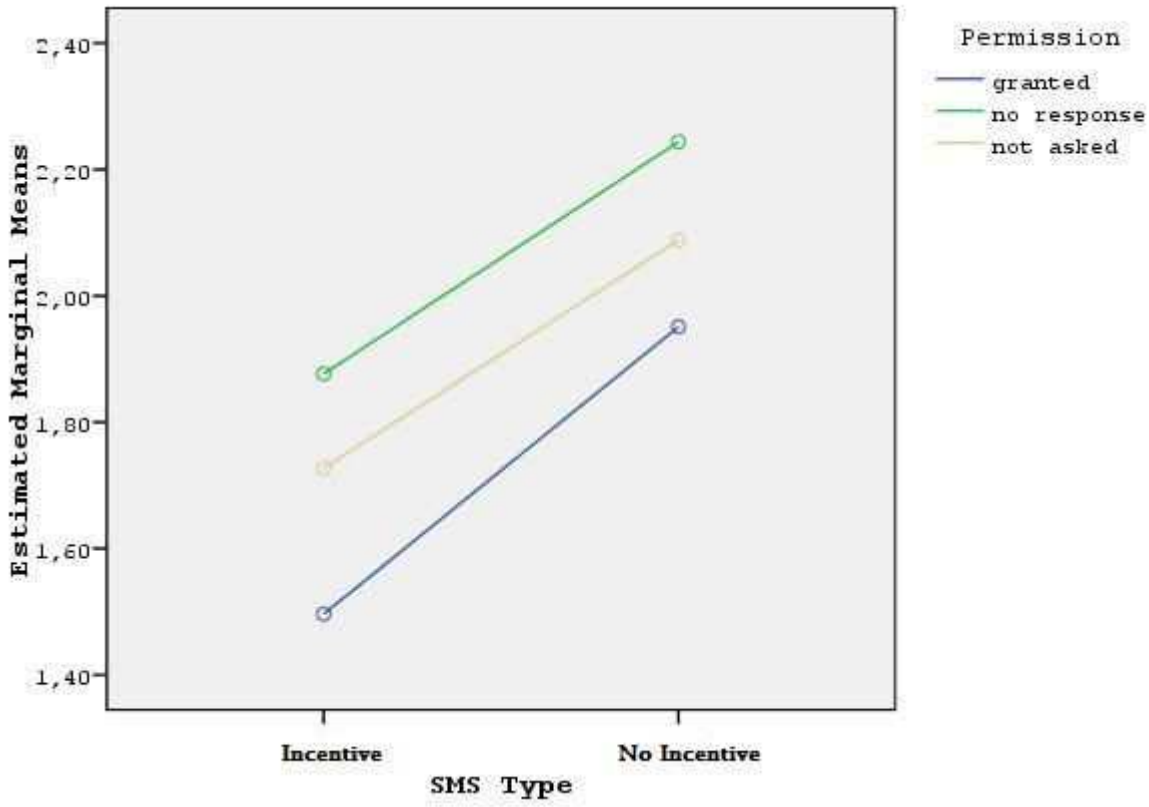

Figure 4. Estimated marginal means of perceived intrusiveness

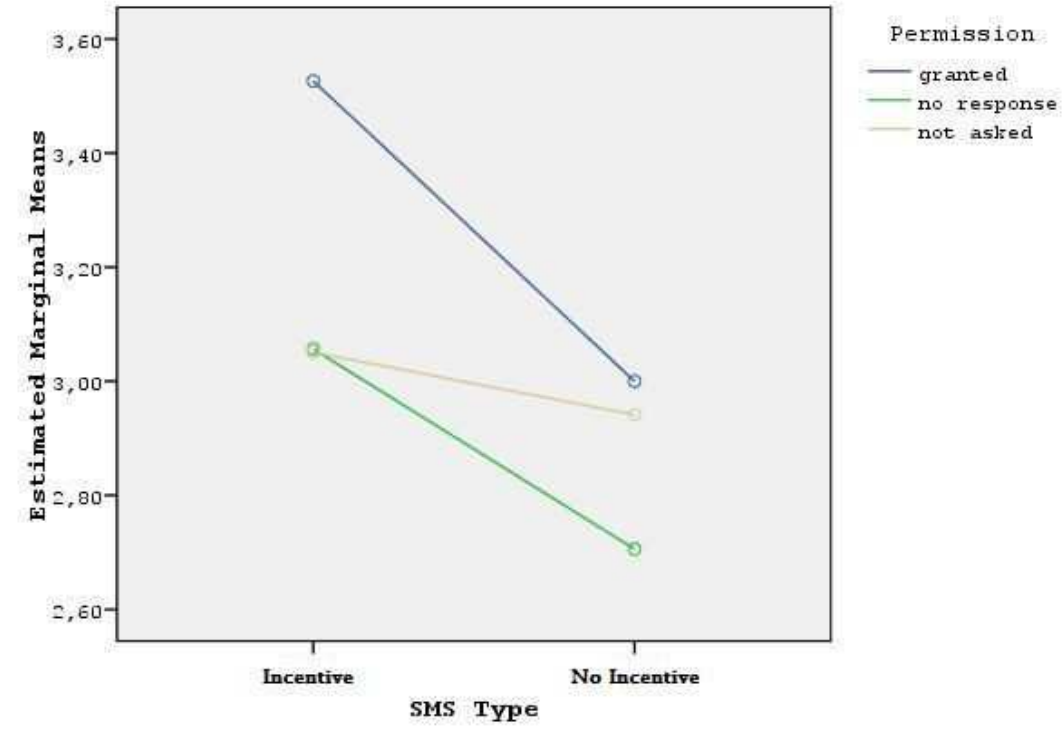

Figure 5. Estimated marginal means of the attitude toward the campaign

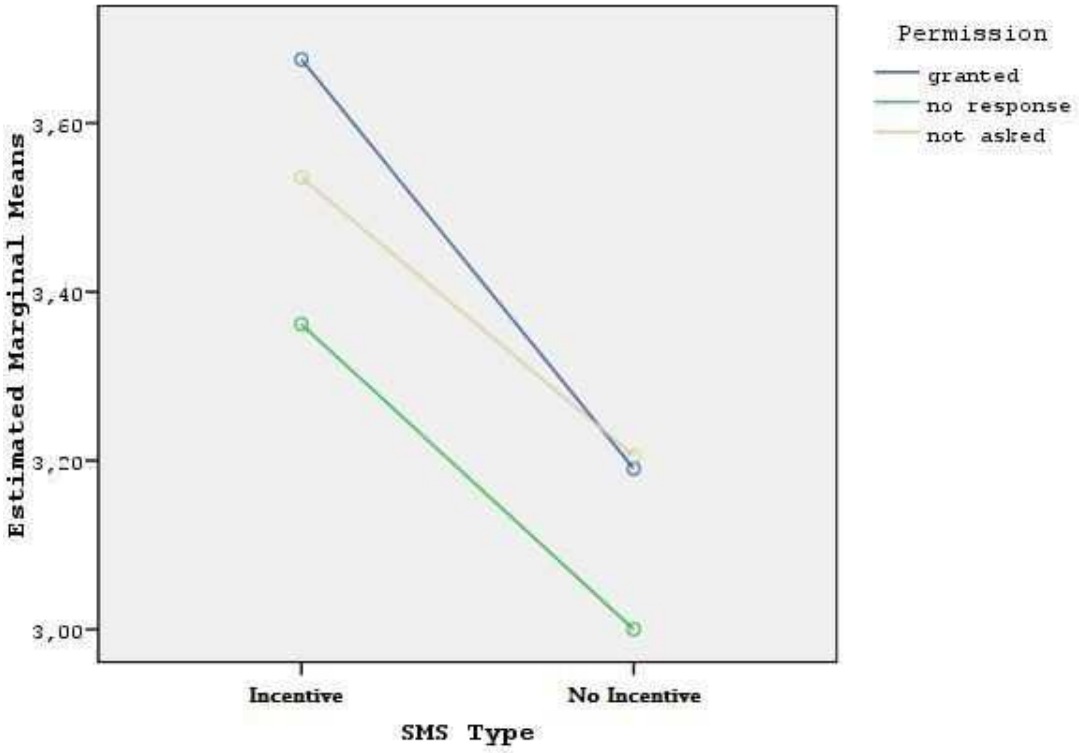

Figure 6. Estimated marginal means of willingness to make WOM referrals

Establishing Predictive Functions for Dependent Variables

The second objective of the present study is to establish a causal model that explains and predicts consumers' experience through push-type mobile marketing, by assessing the hypothesized relationships among experimental constructs. The study involves four interrelated dependent variables. Two of them, namely perceived intrusiveness and post-encounter attitude toward the campaign, are conceived as the constructs that explain and predict success of a particular push-type mobile campaign. It is argued that these two constructs capture a considerable portion of the overall affective and cognitive impact of push-type message delivery and exposure, and predict after-campaign user intentions and behaviors, which are represented by the willingness to make WOM referrals and actual participation in the campaign, respectively. Multivariate analysis of covariance (MANCOVA) is used to assess the hypothesized relationships among treatment variables, covariates, perceived intrusiveness and post-encounter attitude toward the campaign. Interpersonal differences that are hypothesized to be influential on these two dependent variables are introduced to MANCOVA as covariates. Then, two regression analyses were conducted to assess the proposed influence of experimental constructs on post campaign user intentions and actions, which are represented by the willingness to make WOM referrals and actual response, respectively. A least square regression analysis was conducted to examine the predictors of the willingness to make WOM referrals about the campaign; and a logistic regression analysis was used to examine predictors of actual participation in the campaign.

MANCOVA is basically application of regression within the multivariate analysis of variance method (MANOVA). Therefore, it allows assessing the impact of the covariates on the dependent variables similar to examining the impact of independent variables in a multiple regression analysis (Hair et al., 2010). MANCOVA is selected on the basis that it provides the ability to examine several dependent variables simultaneously. When some degree of correlation exists among the dependent variables, conducting a single MANCOVA provides more effective control over the experiment-wide error rate than conducting a series of separate ANCOVAs. Furthermore, since MANCOVA enables assessing differences among combinations of dependent variables, it provides the ability to detect multivariate differences, even when no single univariate test shows differences (Hair et al., 2010).

There exist two requirements for a variable to be used as a covariate in the analysis of covariance. 1) It must have some correlation with the dependent variables. 2) It must have a homogeneity of regression slopes, which means that the relationship between the covariate and the dependent variable must be the same for all groups (Stevens, 1996; Tabachnick & Fidell, 2007). When equality of regression slopes assumption is not met, it means that there is an interaction between the covariate and the treatment. Such an interaction causes MANCOVA to produce misleading results, and hence is undesirable (Hair et al., 2010; Pallant, 2007). All candidate covariates fulfilled these requirements and hence were safely introduced to MANCOVA as covariates.

Table 23. MANCOVA Results – Study 1

Effect		Value	F	Hypot df	Error df	Sig.	Partial Eta Sqr.	Obs. Power
Intercept	Pillai's Trace	.506	118.360	2	231	.000	.506	1.000
	Wilks' Lambda	.494	118.360	2	231	.000	.506	1.000
	Hotelling's Trace	1.025	118.360	2	231	.000	.506	1.000
	Roy's Largest Root	1.025	118.360	2	231	.000	.506	1.000
Gender	Pillai's Trace	.006	.670	2	231	.256	.006	.162
	Wilks' Lambda	.994	.670	2	231	. 256	.006	.162
	Hotelling's Trace	.006	.670	2	231	. 256	.006	.162
	Roy's Largest Root	.006	.670	2	231	. 256	.006	.162
Brand Trust	Pillai's Trace	.000	.003	2	231	.498	.000	.051
	Wilks' Lambda	1.000	.003	2	231	. 498	.000	.051
	Hotelling's Trace	.000	.003	2	231	. 498	.000	.051
	Roy's Largest Root	.000	.003	2	231	. 498	.000	.051
Brand Attitude	Pillai's Trace	.039	4.684	2	231	.005	.039	.782
	Wilks' Lambda	.961	4.684	2	231	. 005	.039	.782
	Hotelling's Trace	.041	4.684	2	231	. 005	.039	.782
	Roy's Largest Root	.041	4.684	2	231	. 005	.039	.782
Source Trust	Pillai's Trace	.006	.755	2	231	.236	.006	.177
	Wilks' Lambda	.994	.755	2	231	. 236	.006	.177
	Hotelling's Trace	.007	.755	2	231	. 236	.006	.177
	Roy's Largest Root	.007	.755	2	231	. 236	.006	.177
Source Attitude	Pillai's Trace	.045	5.417	2	231	.003	.045	.842
	Wilks' Lambda	.955	5.417	2	231	.003	.045	.842
	Hotelling's Trace	.047	5.417	2	231	.003	.045	.842
	Roy's Largest Root	.047	5.417	2	231	.003	.045	.842
Source - Medium Fit	Pillai's Trace	.033	3.883	2	231	.011	.033	.698
	Wilks' Lambda	.967	3.883	2	231	.011	.033	.698
	Hotelling's Trace	.034	3.883	2	231	.011	.033	.698
	Roy's Largest Root	.034	3.883	2	231	.011	.033	.698
Content - Medium Fit	Pillai's Trace	.002	.252	2	231	.389	.002	.089
	Wilks' Lambda	.998	.252	2	231	. 389	.002	.089
	Hotelling's Trace	.002	.252	2	231	. 389	.002	.089
	Roy's Largest Root	.002	.252	2	231	. 389	.002	.089
Brand - Medium Fit	Pillai's Trace	.105	13.514	2	231	.000	.105	.998
	Wilks' Lambda	.895	13.514	2	231	.000	.105	.998
	Hotelling's Trace	.117	13.514	2	231	.000	.105	.998
	Roy's Largest Root	.117	13.514	2	231	.000	.105	.998
Experience	Pillai's Trace	.007	.789	2	231	.228	.007	.184
	Wilks' Lambda	.993	.789	2	231	. 228	.007	.184
	Hotelling's Trace	.007	.789	2	231	. 228	.007	.184
	Roy's Largest Root	.007	.789	2	231	. 228	.007	.184

Table 23. continued.

Effect		Value	F	Hypot df	Error df	Sig.	Partial Eta Sqr.	Obs. Power
Involvement	Pillai's Trace	.031	3.666	2	231	.014	.031	.671
	Wilks' Lambda	.969	3.666	2	231	.014	.031	.671
	Hotelling's Trace	.032	3.666	2	231	.014	.031	.671
	Roy's Largest Root	.032	3.666	2	231	.014	.031	.671
Conscien.	Pillai's Trace	.024	2.814	2	231	.031	.024	.549
	Wilks' Lambda	.976	2.814	2	231	.031	.024	.549
	Hotelling's Trace	.024	2.814	2	231	.031	.024	.549
	Roy's Largest Root	.024	2.814	2	231	.031	.024	.549
Mobile Affinity	Pillai's Trace	.008	.879	2	231	.208	.008	.200
	Wilks' Lambda	.992	.879	2	231	. 208	.008	.200
	Hotelling's Trace	.008	.879	2	231	. 208	.008	.200
	Roy's Largest Root	.008	.879	2	231	. 208	.008	.200
Incentive	Pillai's Trace	.027	3.195	2	231	.022	.027	.607
	Wilks' Lambda	.973	3.195	2	231	.022	.027	.607
	Hotelling's Trace	.028	3.195	2	231	.022	.027	.607
	Roy's Largest Root	.028	3.195	2	231	.022	.027	.607
Permission	Pillai's Trace	.008	.438	4	464	.390	.004	.153
	Wilks' Lambda	.992	.437	4	462	. 390	.004	.153
	Hotelling's Trace	.008	.436	4	460	. 391	.004	.152
	Roy's Largest Root	.007	.758	2	232	.235	.006	.178
Incentive * Permission	Pillai's Trace	.017	.978	4	464	.209	.008	.310
	Wilks' Lambda	.983	.975	4	462	.211	.008	.309
	Hotelling's Trace	.017	.972	4	460	.211	.008	.308
	Roy's Largest Root	.012	1.417	2	232	.123	.012	.302

Significance values, shown in Table 23, indicate that attitude toward the advertised brand, attitude toward the source, source-medium fit, brand-medium fit, conscientiousness, involvement with the message content, and incentive cause statistically significant differences across dimensions of dependent variables ($\alpha<0.05$). However, for permission, the interaction term of permission and incentive, and the rest of the covariates the null hypothesis that all the group vectors of mean scores are equal could not be rejected. When F values are examined together with Partial Eta squares it is seen that brand-medium fit has by far the largest explanatory

power. It is important to note that even when the variation explained by the interpersonal differences (covariates) is extracted, incentive still has a significant effect on the dependent variate. Table 24, shows the results of the univariate tests of between subjects effects.

Table 24. MANCOVA Univariate Tests of Between Subject Effects – Study 1

Source	Dependent Variable	Type III Sum of Squares	df	Mean Sqr.	F	Sig.	Partial Eta Sqr.	Obs. Power
Corrected Model	Intrusiveness	88.673	17	5.216	12.561	.000	.479	1.000
	Campaign Attitude	68.219	17	4.013	7.326	.000	.349	1.000
Intercept	Intrusiveness	95.423	1	95.42	229.794	.000	.498	1.000
	Campaign Attitude	1.232	1	1.232	2.249	.135	.010	.321
Gender	Intrusiveness	.212	1	.212	.511	.475	.002	.110
	Campaign Attitude	.634	1	.634	1.157	.283	.005	.188
Brand Trust	Intrusiveness	.002	1	.002	.005	.941	.000	.051
	Campaign Attitude	.002	1	.002	.003	.954	.000	.050
Brand Attitude	Intrusiveness	3.886	1	3.886	9.357	.002	.039	.861
	Campaign Attitude	.622	1	.622	1.136	.288	.005	.186
Source Trust	Intrusiveness	.000	1	.000	.001	.979	.000	.050
	Campaign Attitude	.757	1	.757	1.382	.241	.006	.216
Source Attitude	Intrusiveness	4.491	1	4.491	10.816	.001	.045	.906
	Campaign Attitude	.736	1	.736	1.345	.247	.006	.211
SourceFit	Intrusiveness	2.434	1	2.434	5.862	.016	.025	.674
	Campaign Attitude	2.212	1	2.212	4.039	.046	.017	.517
ContentFit	Intrusiveness	.001	1	.001	.001	.970	.000	.050
	Campaign Attitude	.247	1	.247	.451	.502	.002	.103
BrandFit	Intrusiveness	11.244	1	11.24	27.078	.000	.105	.999
	Campaign Attitude	1.568	1	1.568	2.863	.092	.012	.392
Experience	Intrusiveness	.008	1	.008	.018	.893	.000	.052
	Campaign Attitude	.743	1	.743	1.357	.245	.006	.213
Involvement	Intrusiveness	2.299	1	2.299	5.537	.019	.023	.649
	Campaign Attitude	2.086	1	2.086	3.809	.052	.016	.493
Conscient.	Intrusiveness	.013	1	.013	.032	.857	.000	.054
	Campaign Attitude	2.718	1	2.718	4.962	.027	.021	.602
Mobile Affinity	Intrusiveness	.020	1	.020	.048	.827	.000	.055
	Campaign Attitude	.786	1	.786	1.436	.232	.006	.222
Incentive	Intrusiveness	1.846	1	1.846	4.445	.036	.019	.556
	Campaign Attitude	2.050	1	2.050	3.743	.054	.016	.487
Permission	Intrusiveness	.239	2	.120	.288	.750	.002	.095
	Campaign Attitude	.457	2	.229	.417	.659	.004	.117
Incentive * Permission	Intrusiveness	1.071	2	.535	1.289	.277	.011	.278
	Campaign Attitude	.967	2	.483	.883	.415	.008	.201
Error	Intrusiveness	96.339	232	.415				
	Campaign Attitude	127.080	232	.548				
Total	Intrusiveness	1100.04	250					
	Campaign Attitude	2493.55	250					
Corrected Total	Intrusiveness	185.012	249					
	Campaign Attitude	195.300	249					

Univariate tests, shown in Table 24, allow examining predictive functions separately for each dependent variable. Attitude toward the advertised brand, attitude toward the message source, source-medium fit, brand-medium fit, involvement with the message content and incentive were found to have a significant relationship with perceived intrusiveness. These findings provide evidence supporting the hypotheses H4a, H6a, H8a, H9a, and H9c. When effect sizes are compared, brand-medium fit is identified as the strongest predictor of perceived intrusiveness (Partial $Eta^2 = 0.105$; $F=27.078$; $\alpha<0.05$), followed by prior attitude toward the source (Partial $Eta^2 = 0.045$; $F=10.816$; $\alpha<0.05$), prior attitude toward the advertised brand (Partial $Eta^2 = 0.039$; $F=9.357$; $\alpha<0.05$), source-medium fit (Partial $Eta^2 = 0.025$; $F=5.862$; $\alpha<0.05$), involvement with the message content (Partial $Eta^2 = 0.023$; $F=5.537$; $\alpha<0.05$), and incentive (Partial $Eta^2 = 0.019$; $F=4.445$; $\alpha<0.05$) in ranking order. The impacts of mobile affinity, prior experience with the mobile medium, conscientiousness, and content-medium fit on perceived intrusiveness were not significant. Therefore, H9b, H10a, H12a, and H14a were not supported. After the variance explained by the covariates was extracted, the main effect of incentive was still significant. This finding implies that, even when the interpersonal differences are accounted for, inserting an explicit incentive within the message is still an effective strategy to reduce perceived intrusiveness of a push-type mobile marketing message. On the other hand, the effect of permission on perceived intrusiveness was no longer significant. The loss in the explanatory power of permission is explicable due to the fact that brand-medium fit (Pearson Corr. Coef. = -0.230; $\alpha<0.01$), source-medium fit (Pearson Corr. Coef. = -0.225; $\alpha<0.01$) and content-medium fit (Pearson Corr. Coef. = -0.161; $\alpha<0.01$) are highly and significantly related with permission groups.

Therefore, these three perceived medium-fit variables extract a portion of variance that could have been explained by permission. To make sure, an ANCOVA is executed with the same covariates except perceived medium-fit items, and the impact of permission on perceived intrusiveness became significant.

Post-encounter attitude toward the campaign is found to have a significant relationship with conscientiousness ($F=4.962$; Partial $Eta^2=0.021$; $\alpha<0.05$), source-medium fit ($F=4.039$; Partial $Eta^2=0.017$; $\alpha<0.05$), involvement with the message content ($F=3,809$; Partial $Eta^2=0.016$; $\alpha<0.05$), and incentive ($F=3.743$; Partial $Eta^2=0.016$; $\alpha<0.055$). However, when effect sizes are examined it can be seen that none of these independent variables could account for a large variance in the post-encounter attitude toward the campaign. The observed powers and partial eta squares are noticeably low. Nevertheless, these findings provide sufficient evidence to support hypotheses H1b, H4b, and H12b. The significant relationship between post-encounter attitude toward the campaign and perceived source-medium fit was unexpected. Perceived medium fit was hypothesized to be an antecedent of perceived intrusiveness. However, it seems that it is related with post-encounter attitude toward the campaign as well. On the other hand, contrary to the expectations, trust toward the source, trust toward the advertised brand, attitude toward the source, attitude toward the advertised brand, mobile affinity and prior experience with the mobile medium were not significantly related with post-encounter attitude toward the campaign, hence H5a, H6b, H7a, H8b, H10b, and H14b were not supported. The effect of permission on post-encounter attitude toward the campaign was no longer significant. Similar to the case of perceived intrusiveness, the loss in the explanatory

power of permission is again explicable due to the fact that medium-fit items are highly and significantly related with permission groups, and source-medium fit and brand-medium fit are significantly related with the post-encounter attitude toward the campaign. Therefore, medium fit items extract a portion of variance that could have been explained by permission. To make sure, an ANCOVA is executed with the same covariates except perceived medium-fit items, and the impact of permission on post-encounter attitude toward the campaign became significant.

Establishing a comprehensive predictive function for the willingness to make WOM referrals is outside the scope of this dissertation. The purpose of including this construct in this study was to find empirical evidence supporting the hypotheses that experimental constructs, especially perceived intrusiveness and post-encounter attitude toward the campaign, can actually drive post-campaign user intentions. Willingness to make WOM referrals is a literature-based after usage/exposure construct, which has tremendous value for advertisers due to the fact that it exponentially increases the effect of a campaign with no additional cost. Establishing the link between experimental constructs and willingness to make WOM referrals would provide the proposed model with pragmatic value and nomological validity. MANOVA results have already showed that the use of an explicit incentive is influential on the willingness to make WOM referrals about a push-type mobile marketing campaign when interpersonal differences are not taken into account. Now, a least square multiple regression analysis is employed to assess the nature of the relationship between the experimental treatment variables,

covariates, and the mediating dependent variables with the willingness to make WOM referrals.

There are several statistical requirements of multiple regression analysis: linearity of the phenomenon being measured, constant variance of the error terms, independence of the error terms, and normal distribution of error terms. Regression is also sensitive to outliers and multicollinearity among independent variables. Outliers have been initially eliminated from the sample. Multicollinearity is examined by calculating tolerance and VIF values, which are shown in Table 26. Independence of residuals is checked by Durbin-Watson test, which is reported in Table 25. Normal distribution of error terms is checked visually by inspecting the normal probability plot of the regression standardized residuals, shown in Figure 7. Since there are visible deviations from the straight diagonal line, the assumption of normality of error terms could not be met.

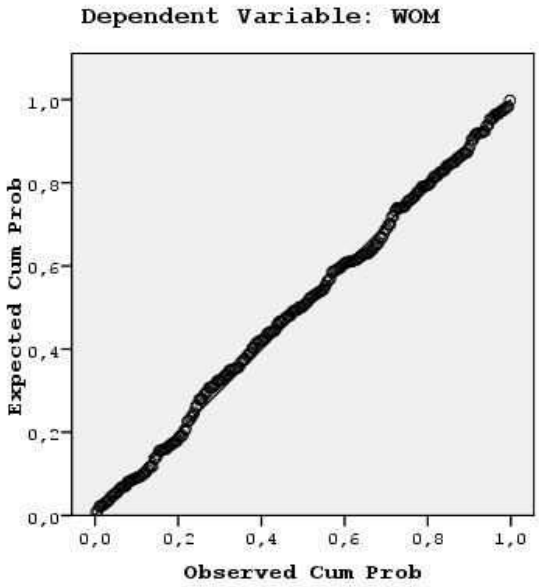

Figure 7. Normal P-P plot of regression standardized residuals – Study 1

Linearity and constant variance of the error terms are visually examined through a residual plot, shown in Figure 8. Since there is no constant curvilinear pattern observed in the residual plot, there is no violation of linearity. The fact that the error terms are homogeneously distributed also provides evidence of homoscedasticity. Besides normality, all other assumptions are met. Results of the multiple regression analysis are shown in Table 25 and 26, below.

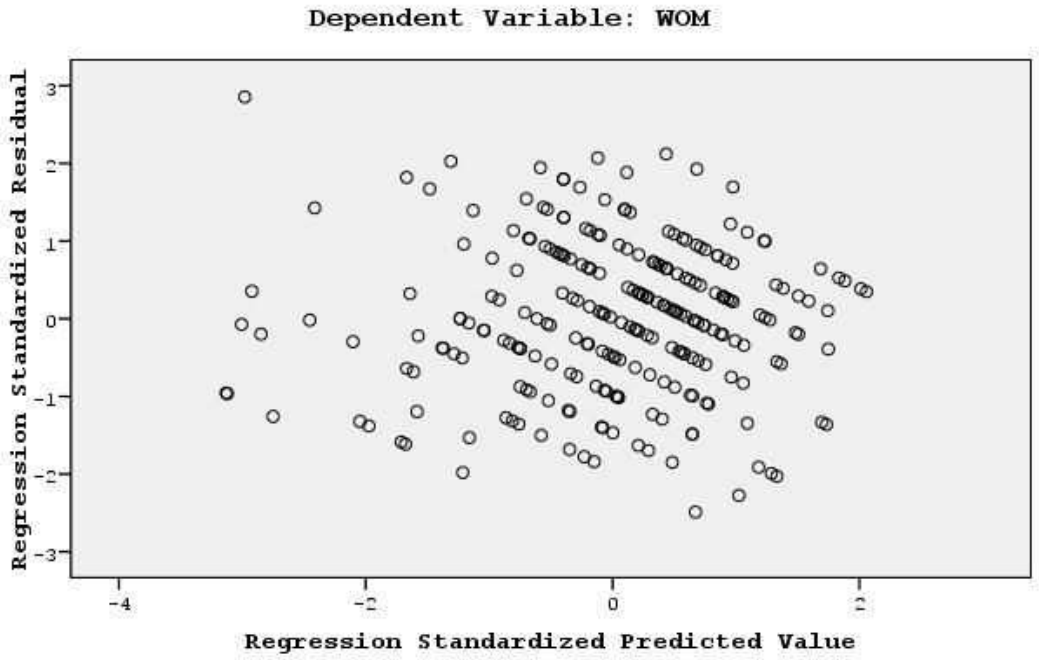

Figure 8. Residual plot for the variate – Study 1

Table 25. Model Summary for Willingness to Make WOM Referrals – Study 1

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.634	.402	.358	.67798	.402	9.159	17	232	.000	.558

Table 25 indicates that 40.20% of variance in the dependent variable is explained by the estimated model. Durbin-Watson test assesses independence of residuals. When Durbin-Watson statistic is not in the range of -2 and 2, it signals correlation among residuals. It is in the acceptable range, meaning that residuals are not correlated.

Table 26. Regression Coefficients for Willingness to Make WOM Referalls - Study 1

Variable	Unstandardized Coefficients		Std Coeffs.			Collinearity	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	.902	.669		1.349	.179		
Incentive	-.280	.248	-.166	-1.129	.260	.120	8.351
Permission	-.001	.185	-.001	-.004	.997	.096	10.452
Gender	.001	.092	.001	.011	.991	.882	1.133
Incentive * Permission	.065	.118	.119	.552	.581	.055	18.112
Brand Trust	-.010	.054	-.011	-.187	.852	.697	1.435
Brand Attitude	.046	.049	.058	.938	.349	.678	1.475
Source Trust	-.084	.070	-.086	-1.195	.233	.493	2.029
Source Attitude	.048	.079	.045	.610	.542	.483	2.070
Source Fit	.012	.060	.014	.200	.842	.544	1.837
Content Fit	.070	.051	.090	1.386	.167	.606	1.650
Brand Fit	.008	.055	.011	.145	.885	.474	2.110
Prior Experience	.082	.046	.096	1.781	.076	.882	1.134
Involvement	.185	.058	.203	3.209	.002	.642	1.557
Conscientiousness	.066	.077	.048	.849	.397	.807	1.239
Mobile Affinity	.149	.047	.171	3.149	.002	.872	1.146
Intrusiveness	-.059	.072	-.061	-.831	.407	.485	2.061
Campaign Attitude	.257	.062	.269	4.105	.000	.603	1.660

Significance values shown in Table 26 indicate that willingness to make WOM referrals about the campaign is significantly related with post-encounter attitude toward the campaign, mobile affinity and involvement with the message content. These findings provide supportive evidence for the hypotheses H4d, H11,

and H16b. Contrary to expectations, perceived intrusiveness was not significantly related with willingness to make WOM referrals about the campaign. Therefore, H15b is not supported. Although MANOVA results indicated a significant relationship between incentive and willingness to make WOM referrals about the campaign, when experimental covariates were introduced into the analysis, this relationship lost its significance. Standardized coefficients show that post-encounter attitude toward the campaign is the most influential predictor of willingness to make WOM referrals, followed by involvement in the message content, and mobile affinity, in ranking order.

In order to assess the influence of experimental constructs on actual participation in the campaign, a logistic regression analysis is conducted. Logistic regression, which is regression with a binary dependent variable, uses an S-shaped logistic curve to represent the relationship between the dependent and independent variables. Instead of minimizing squared deviations, logistic regression maximizes the likelihood that an event will occur in an iterative manner (Hair et al, 2006). It provides a robust method for analysis when assumptions of multivariate normality and equal variance-covariance matrices are violated. On the other hand, it is highly sensitive to multicollinearity among predictor variables and outliers. Outliers were previously identified and eliminated from the sample. Multicollinearity is assessed by calculating and examining tolerance and VIF values for each predictor variable (see Table 27).

Table 27. Multicollinearity Assessment for Independent Variables – Study 1

	Collinearity Statistics	
	Tolerance	VIF
Brand Trust	.717	1.395
Brand Attitude	.688	1.453
Source Trust	.512	1.953
Source Attitude	.495	2.020
Prior Experience	.898	1.114
Involvement	.667	1.499
Conscientiousness	.848	1.179
Mobile Affinity	.877	1.140
Intrusiveness	.491	2.035
Campaign Attitude	.615	1.627
Source-medium Fit	.551	1.816
Content-medium Fit	.608	1.645
Brand-medium Fit	.480	2.084

Tolerance and VIF values shown in Table 27 suggest that there exists some level of collinearity among perceived intrusiveness, attitude toward the source, source-medium fit, and brand-medium fit. Although undesirable in logistical regression, it is explicable due to the fact that perceived intrusiveness is a function of a set of variables that include attitude toward the source, source-medium fit, and brand-medium fit. Therefore, all of the experimental constructs, treatment variables and the interaction term of the treatment variables were introduced as independent variables and logistic regression was conducted.

There exist various measures of model fit in logistic regression. The most basic measure is the log of the likelihood value (-2LL). The lower the -2LL value, the better the model fit (Hair et al., 2010). -2LL of the estimated model was 87.590. Overall model fit can be assessed by calculating Pseudo R^2 value which represents

the improvement in the explanatory power of the estimated model when compared to the null model. It is calculated by taking the difference between the -2LL of the null model (223.122) and the -2LL of the estimated model (87.590) and dividing it to the -2LL of the null model (223.122). Other similar fit measures are The Cox and Snell R^2 and Nagelkerke R^2. These three R^2 measures reflects the amount of variation accounted for by the logistic model (Hair et al., 2010), and are shown in Table 28, below.

Table 28. Fit Indices for the Estimated Logistic Model

-2LL	Pseudo R^2	Cox & Snell R^2	Nagelkerke R^2
87.590	.607	.418	.709

Hosmer and Lemeshow test provides a Chi-Square based measure of fit. The null hypothesis of the test is that there is no difference between actual and predicted values of the dependent variable. Result of the Hosmer Lemeshow test for the logistic regression is shown in Table 29. It is seen that the Chi-Square test is insignificant, meaning that the model fits.

Table 29. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	1.460	8	.993

The results of the logistic regression are shown in Table 30. Logistic regression uses Wald statistic to assess the significance of each coefficient. It is seen that post-campaign attitude toward the campaign, involvement with the message content, prior experience with the mobile medium, trust toward the advertised brand and perceived intrusiveness are significantly related to user response.

Table 30. Variables in the Logistic Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
							Lower	Upper
Incentive	-.273	1.351	.041	1	.840	.761	.054	10.737
Permission			.035	2	.983			
Permission(1)	-.157	2.733	.003	1	.954	.855	.004	181.160
Permission(2)	-.210	1.494	.020	1	.888	.811	.043	15.146
gender	.030	.582	.003	1	.959	1.030	.330	3.222
Brand Trust	1.514	.518	8.545	1	.003	4.545	1.647	12.544
Brand Attitude	-.379	.305	1.537	1	.215	.685	.376	1.246
SourceTrust	-.123	.444	.076	1	.783	.885	.370	2.113
Source Attitude	-.450	.568	.628	1	.428	.638	.210	1.940
Incentive*Permission			.087	2	.957			
Incentive*Permission(1)	.303	3.029	.010	1	.920	1.353	.004	512.883
Incentive*Permission(2)	-.057	1.766	.001	1	.974	.945	.030	30.102
Source Fit	.341	.547	.388	1	.533	1.406	.481	4.106
Content Fit	-.366	.349	1.102	1	.294	.693	.350	1.374
Brand Fit	.265	.401	.436	1	.509	1.303	.593	2.863
Prior Experience	.991	.288	11.808	1	.001	2.693	1.531	4.739
Involvement	2.633	.780	11.402	1	.001	13.910	3.018	64.116
Conscientiousness	.106	.528	.040	1	.841	1.112	.395	3.133
Mobile Affinity	.086	.329	.069	1	.792	1.090	.573	2.076
Intrusiveness	-1.164	.601	3.755	1	.053	.312	.096	1.013
Campaign Attitude	2.643	.704	14.087	1	.000	14.059	3.536	55.905
Constant	-27.531	6.430	18.332	1	.000	.000		

Exponential logistic coefficients, exp (B), shown in Table 30, indicate the magnitude and the nature of the relationship between the dependent variable and the respective independent variable. Exponential coefficients above one represent a positive relationship, whereas values less than one represent a negative relationship. It is seen that user response is positively related with post-campaign attitude toward the campaign, involvement with the message content, prior experience with the mobile medium, and trust toward the advertised brand, and negatively related with perceived intrusiveness. Therefore, H4c, H7b, H14c, H15a, and H16a were supported. The other independent variables did not have significant Wald statistics, which means that their contribution to the overall variance explained in the dependent variable was not significant. Therefore, the hypotheses H5b, H6c, H8c, and H13 were not supported. When response rates of experimental conditions were examined (see Table 15, pg. 92), it was seen that response rate was consistently and significantly higher for those who received the message that has an explicit incentive in it, and gave their explicit permission prior to the campaign. However, neither the impact of incentive nor permission on response rate was found to be significant in logistic regression analysis when covariates are included in the estimated model. This overview provides partial support for the hypotheses H1d and H2c, in the sense that both incentive and permission are useful in increasing response rate when interpersonal differences among recipients are allowed to be random, but their impact loses strength when interpersonal differences among recipients are taken into account. Since targeting is about considering interpersonal differences prior to message delivery, findings imply that effective targeting (based on the constructs

mentioned in this study) may mitigate the need for taking prior permission and/or offering explicit incentives in mobile marketing campaigns.

Assessing the magnitude of those relationships is not straightforward. It can be done by calculating percentage change in odds as follows (see Table 31 for calculations):

$$\% \text{ change in odds} = (e^{b}_{i} - 1.0) \times 100$$

Table 31. Percent Change in Odds of Response – Study 1

Variable	Calculation	% change in odds	Probability
Campaign Attitude	(14.059 – 1.0) x 100	1305.9	.93
Involvement	(13.910 – 1.0) x 100	1291.0	.92
Brand Trust	(4.545 – 1.0) x 100	354.5	.82
Prior Experience	(2.693 – 1.0) x 100	169.3	.72
Intrusiveness	(0.312 – 1.0) x 100	-68.8	.24

Figures shown in Table 31 suggest that the most important predictor of response is post-encounter attitude toward the campaign. One unit change in post-encounter attitude toward the campaign increases the odds of response by 1305.9 %. It is followed by involvement with the message content, trust toward the advertised brand, prior experience with the mobile medium and perceived intrusiveness, in ranking order.

Classification table (see Table 32) shows the predictive accuracy of the estimated model. It should be noted that it predicts “NO”s better. It implies that when post-encounter attitude toward the campaign, involvement with the message content,

trust toward the advertised brand, and prior experience with the mobile medium is low, and perceived intrusiveness is high then response is highly unlikely.

Table 32. Classification Table for Response – Study 1

Observed			Predicted		
			Response		Percentage Correct
			NO	YES	
Step 1	Response	NO	201	8	96.2
		YES	12	29	70.7
	Overall Percentage				92.0

Cumulatively, the percentage of correct classifications is 92.0 % (see Table 32). If the percentage of correct classifications exceeds the proportional chance and maximum chance criteria, then it can be said that the model has predictive power. Proportional chance criterion is calculated by adding up the squares of proportion of individuals in each group (Hair et al., 2010). In this case, it is: $(209/250)^2 + (41/250)^2$ = 72.58%. Maximum chance criterion is arbitrary assignment of all subjects to the largest group (Hair et al., 2010). In this case it is: (209/250) =83.60%. The percentage of correct classifications exceeds both the proportional chance and maximum chance criteria, and hence it is safe to claim that the model has predictive power.

Study 2

Study 2 is employed as an extension to the first study with two particular objectives. The first objective is to assess the impact of the "cognitive intensity and anxiety of the receiver at the time of message delivery" (manipulated by delivery timing) on perceived intrusiveness, post-encounter attitude toward the campaign, response rate, and willingness to make WOM referrals about the campaign both independently and in relation with "existence of an explicit incentive", which was found to be a significant predictor of perceived intrusiveness and post-encounter attitude toward the campaign even when the impact of covariates were taken into account. The second objective is to assess robustness of the proposed theoretical framework by replicating findings of the first study.

Assessing the Impact of Treatment Variables when Covariates are not Controlled

Table 33 shows the number of responses generated, average response rates and the means of the dependent variables for each experimental condition.

Table 33. Impact of the Experimental Treatments – Study 2

Delivery Timing / Incentive	Low level of Cognitive Intensity and Anxiety	High level of Cognitive Intensity and Anxiety	TOTAL
Incentive	N= 59 Response: 14 Resp.Rate: 23.73% Intrusiveness: 1.81 Attitude: 3.32 WOM Int.: 3.62	N= 39 Response: 7 Resp.Rate: 17.95% Intrusiveness: 1.93 Attitude: 3.17 WOM Int.: 3.22	N= 98 Response: 21 Resp.Rate: 21.43% Intrusiveness: 1.86 Attitude: 3.26 WOM Int.: 3.46
No Incentive	N= 49 Response: 4 Resp.Rate: 8.16% Intrusiveness: 2.17 Attitude: 2.77 WOM Int.: 3.38	N= 31 Response: 0 Resp.Rate: 0.00% Intrusiveness: 2.11 Attitude: 3.03 WOM Int.: 3.37	N= 80 Response: 4 Resp.Rate: 5.00% Intrusiveness: 2.14 Attitude: 2.87 WOM Int.: 3.38
TOTAL	N= 108 Response: 18 Resp.Rate: 16.67% Intrusiveness: 1.97 Attitude: 3.07 WOM Int.: 3.51	N= 70 Response: 7 Resp.Rate: 10.00% Intrusiveness: 2.01 Attitude: 3.11 WOM Int.: 3.29	N= 178 Response: 25 Resp.Rate: 14.04% Intrusiveness: 1.99 Attitude: 3.09 WOM Int.: 3.42

It is seen that incentive creates a noticeable difference on perceived intrusiveness (1.86 vs. 2.14) and post-encounter attitude toward the campaign (3.26 vs. 2.87), whereas its impact on the between groups difference of the willingness to make WOM referrals is not as strong (3.46 vs. 3.38). It has a tremendous impact on the response rate (21.43% vs. 5.00%). The statistical significance of the impact of incentive on response rate is examined with Mann-Whitney U test, which is found to

be significant ($\alpha<0.05$). Cognitive intensity and anxiety at the time of message delivery has almost no impact on perceived intrusiveness and post-encounter attitude toward the campaign, whereas it has a weak but visible impact on the willingness to make WOM referrals. Its impact on the response rate is not as strong as that of incentive manipulation, but still is noticeable. However, non-parametric statistical Mann-Whitney U test did not find a significant difference in response rate between groups formed on the basis of cognitive intensity and anxiety.

At the overall level, the two studies generated very similar results. Similar to study 1, responses were immediate, and 68% of the responses were sent within the first hour after the campaign was launched. The overall means of perceived intrusiveness (1.99), post-encounter attitude toward the campaign (3.09), and the willingness to make WOM referrals about the campaign (3.42) are very close to those of the first study which were 1.91, 3.03 and 3.31 respectively. Overall response rate (14.04%) is slightly below the overall response rate of the first study (16.4%).

However at the condition level, there are noticeable differences among the two studies. When all groups are considered, the lowest mean of perceived intrusiveness achieved in study 1 was 1.49, which is considerably lower than that of study 2 (1.81). While, the highest mean of perceived intrusiveness achieved in study 1 was 2.24, which is higher than that of study 2 (2.17). Similarly, the highest mean of post-encounter attitude toward the campaign achieved in study 1 was 3.52, which is higher than that of study 2 (3.32). While, the lowest mean of post-encounter attitude toward the campaign achieved in study 1 was 2.70, which is lower than that of study 2 (2.77). The situation is the same for willingness to make WOM referrals as well.

The highest response rate achieved in study 1 was 34.21%, which is much higher than that of study 2 (23.73%). Since respondents were assigned to studies and conditions in a random fashion, these findings suggest that permission manipulation causes a larger variance in experimental dependent variables than does the manipulation of cognitive intensity and anxiety.

Parallel to study 1, the independent and interacting influence of the "cognitive intensity and anxiety of the receiver at the time of message delivery" and "incentive" on metric dependent variables is analyzed by employing MANOVA. The three assumptions of MANOVA are assessed prior to analysis, which are independence of observations, multivariate normal distribution of dependent variables, and equality of variance-covariance matrices. Additionally, linearity of relationships and levels of multicollinearity among dependent variables were checked after outliers were eliminated from the sample on the basis of Mahalonobis distances.

Since data is collected from all respondents, in a classroom, at a single point in time, in the presence of the researcher who prevented any noise and/or collective answering, dependence is not suspected among observations.

Since no direct test is available for the assessment of multivariate normality (Hair et al., 2010), univariate normality of dependent variables are checked by the statistical test of Kolmogorov-Smirnov (see Table 34). The test was significant for all dependent variables therefore normality assumption could not be achieved. Fortunately, since there are more than 30 observations in each condition, modest

violations of normality can be accommodated by MANOVA, as long as the violation is caused by skewness problems and not outliers (Hair et al., 2010; Pallant, 2007). Since outliers were removed from the sample, admitting the normality problem, MANOVA was undertaken.

Table 34. Tests of Normality for dependent variables - Study 2

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Intrusiveness	.103	178	.000
Campaign Attitude	.143	178	.000
WOM Intention	.147	178	.000

The assumption of the equality of variance-covariance matrices is assessed by the Box's M test. It tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups. Therefore, Box's M test should not be significant. As shown in Table 35, it is not significant, so the assumption of the equality of variance-covariance matrices is not violated.

Table 35. Box's Test of Equality of Covariance Matrices – Study 2

Box's M	27.032
F	1.452
df1	18
df2	69738.755
Sig.	.097

Linearity assumption is checked by visual observation of the relationships among the three dependent variables by generating a matrix of scatter plots (see Figure 9). These plots do not show any obvious evidence of non-linearity, therefore this assumption is satisfied.

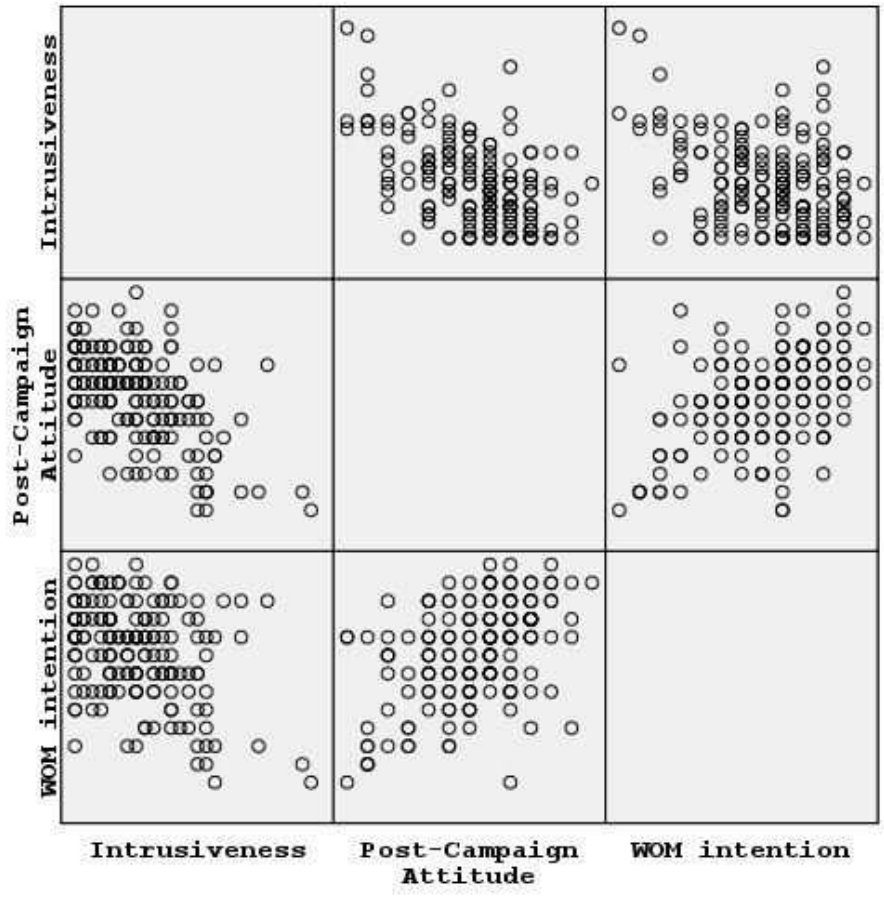

Figure 9. Assessment of the linear relationship among dependent variables – Study 2

Multicollinearity is checked by calculating tolerance and VIF values. Higher tolerance values indicate lower multicollinearity. Tolerance values shown in Table

36, suggest that there exists a moderate level of multicollinearity. However, this level of correlations among these variables has theoretical basis. Furthermore, the convergent and discriminant validities of these constructs were established by CFA. Therefore, these constructs cannot be considered as redundant, and hence cannot be removed from the analysis.

Table 36. Multicollinearity Assessment for Dependent Variables – Study 2

	Collinearity Statistics	
	Tolerance	VIF
Intrusiveness	.689	1.450
Campaign Attitude	.630	1.588
WOM Intention	.758	1.319

Table 37, includes four types of statistical criteria to assess the differences across dimensions of the dependent variables. All four types of statistics have produced similar conclusions for each dependent variable. When significance values are investigated, it is seen that only incentive is significant ($\alpha < 0.05$). Groups formed on the basis of incentive have statistically significant differences across dimensions of dependent variables. However, for delivery timing and the interaction term, the null hypothesis that all the group vectors of mean scores are equal could not be rejected.

Table 37. MANOVA Results – Study 2

Effect		Value	F	Hypot df	Erro r df	Sig.	Partial Eta Sqr.	Obs. Power
Intercept	Pillai's Trace	.981	2942.409	3	172	.000	.981	1.000
	Wilks' Lambda	.019	2942.409	3	172	.000	.981	1.000
	Hotelling's Trace	51.321	2942.409	3	172	.000	.981	1.000
	Roy's Largest Root	51.321	2942.409	3	172	.000	.981	1.000
Incentive	Pillai's Trace	.055	3.312	3	172	.021	.055	.747
	Wilks' Lambda	.945	3.312	3	172	.021	.055	.747
	Hotelling's Trace	.058	3.312	3	172	.021	.055	.747
	Roy's Largest Root	.058	3.312	3	172	.021	.055	.747
Delivery	Pillai's Trace	.022	1.276	3	172	.284	.022	.337
	Wilks' Lambda	.978	1.276	3	172	.284	.022	.337
	Hotelling's Trace	.022	1.276	3	172	.284	.022	.337
	Roy's Largest Root	.022	1.276	3	172	.284	.022	.337
Incentive * Delivery	Pillai's Trace	.017	1.010	3	172	.390	.017	.272
	Wilks' Lambda	.983	1.010	3	172	.390	.017	.272
	Hotelling's Trace	.018	1.010	3	172	.390	.017	.272
	Roy's Largest Root	.018	1.010	3	172	.390	.017	.272

Table 38 shows results of Roy Bargman's Stepdown F test, in which dependent variables are considered one at a time in order to assess the relative effects of treatment variables on each dependent variable. The impact of the interaction term is not significant on none of the dependent variables. Incentive has significant effects on perceived intrusiveness and post-encounter attitude toward the campaign, with a higher effect on post-encounter attitude toward the campaign. However, contrary to the findings of the MANOVA conducted in study 1, it has no significant effect on the willingness to make WOM referrals about the campaign. These results provide corroborative evidence for hypotheses H1a, and H1b; but fail to support H1c. Cognitive intensity and anxiety at the time of message delivery (manipulation delivery timing), on the other hand, has no significant effect on any of the metric dependent variables, thus H3a and H3b are not supported.

Table 38. MANOVA Tests of Between-Subjects Effects – Study 2

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Part. Eta Sqr.	Obs. Power
Corrected Model	Intrusiveness	3.999	3	1.333	2.220	.088	.037	.555
	Campaign Attitude	8.285	3	2.762	4.142	.007	.067	.845
	WOM intention	3.920	3	1.307	1.650	.180	.028	.428
Intercept	Intrusiveness	676.182	1	676.182	1125.981	.000	.866	1.000
	Campaign Attitude	1589.180	1	1589.180	2383.713	.000	.932	1.000
	WOM intention	1940.376	1	1940.376	2450.946	.000	.934	1.000
Incentive	Intrusiveness	2.953	1	2.953	4.917	.028	.027	.597
	Campaign Attitude	4.971	1	4.971	7.456	.007	.041	.775
	WOM intention	.068	1	.068	.086	.769	.000	.060
Delivery	Intrusiveness	.031	1	.031	.052	.820	.000	.056
	Campaign Attitude	.151	1	.151	.226	.635	.001	.076
	WOM intention	1.665	1	1.665	2.103	.149	.012	.303
Incentive *Delivery	Intrusiveness	.365	1	.365	.608	.437	.003	.121
	Campaign Attitude	1.627	1	1.627	2.440	.120	.014	.342
	WOM intention	1.588	1	1.588	2.006	.158	.011	.291
Error	Intrusiveness	104.492	174	.601				
	Campaign Attitude	116.003	174	.667				
	WOM intention	137.753	174	.792				
Total	Intrusiveness	813.082	178					
	Campaign Attitude	1821.667	178					
	WOM intention	2227.556	178					
Corrected Total	Intrusiveness	108.491	177					
	Campaign Attitude	124.288	177					
	WOM intention	141.673	177					

Establishing Predictive Functions for Dependent Variables

Replicating the research methodology employed in Study 1, a MANCOVA is used to assess the hypothesized relationships among treatment variables, experimental covariates, perceived intrusiveness and post-encounter attitude toward the campaign. Covariates were the interpersonal differences that are hypothesized to be influential on these two dependent variables. Finally, two regression analyses, one least square

regression analysis and one logistic regression analysis, were conducted to assess the proposed influence of the experimental constructs on the willingness to make WOM referrals and actual response, respectively.

All the experimental constructs fulfilled the two requirements for being used as a covariate in the analysis of covariance, namely having some degree of correlation with the dependent variables and having homogeneity of regression slopes (Tabachnick & Fidell, 2007), and hence were safely introduced to MANCOVA as covariates. The results of the multivariate tests are shown in Table 39.

Table 39. MANCOVA Multivariate Tests – Study 2

Effect		Value	F	Hypot df	Error df	Sig.	Partial Eta Sqr.	Obs. Power
Intercept	Pillai's Trace	.486	75.977	2	161	.000	.486	1.000
	Wilks' Lambda	.514	75.977	2	161	.000	.486	1.000
	Hotelling's Trace	.944	75.977	2	161	.000	.486	1.000
	Roy's Largest Root	.944	75.977	2	161	.000	.486	1.000
Gender	Pillai's Trace	.010	.813	2	161	.222	.010	.187
	Wilks' Lambda	.990	.813	2	161	.222	.010	.187
	Hotelling's Trace	.010	.813	2	161	.222	.010	.187
	Roy's Largest Root	.010	.813	2	161	.222	.010	.187
Brand Trust	Pillai's Trace	.007	.560	2	161	.287	.007	.142
	Wilks' Lambda	.993	.560	2	161	. 287	.007	.142
	Hotelling's Trace	.007	.560	2	161	. 287	.007	.142
	Roy's Largest Root	.007	.560	2	161	. 287	.007	.142
Brand Attitude	Pillai's Trace	.007	.562	2	161	.286	.007	.142
	Wilks' Lambda	.993	.562	2	161	. 286	.007	.142
	Hotelling's Trace	.007	.562	2	161	. 286	.007	.142
	Roy's Largest Root	.007	.562	2	161	. 286	.007	.142
Source Trust	Pillai's Trace	.002	.192	2	161	.413	.002	.079
	Wilks' Lambda	.998	.192	2	161	. 413	.002	.079
	Hotelling's Trace	.002	.192	2	161	. 413	.002	.079
	Roy's Largest Root	.002	.192	2	161	. 413	.002	.079

Table 39. continued.

Effect		Value	F	Hypot df	Error df	Sig.	Partial EtaSqr	Obs. Power
Source Attitude	Pillai's Trace	.065	5.626	2	161	.002	.065	.854
	Wilks' Lambda	.935	5.626	2	161	.002	.065	.854
	Hotelling's Trace	.070	5.626	2	161	.002	.065	.854
	Roy's Largest Root	.070	5.626	2	161	.002	.065	.854
Source - Medium Fit	Pillai's Trace	.006	.490	2	161	.307	.006	.129
	Wilks' Lambda	.994	.490	2	161	. 307	.006	.129
	Hotelling's Trace	.006	.490	2	161	. 307	.006	.129
	Roy's Largest Root	.006	.490	2	161	. 307	.006	.129
Content - Medium Fit	Pillai's Trace	.003	.253	2	161	.389	.003	.089
	Wilks' Lambda	.997	.253	2	161	. 389	.003	.089
	Hotelling's Trace	.003	.253	2	161	. 389	.003	.089
	Roy's Largest Root	.003	.253	2	161	. 389	.003	.089
Brand - Medium Fit	Pillai's Trace	.157	14.968	2	161	.000	.157	.999
	Wilks' Lambda	.843	14.968	2	161	.000	.157	.999
	Hotelling's Trace	.186	14.968	2	161	.000	.157	.999
	Roy's Largest Root	.186	14.968	2	161	.000	.157	.999
Involvement	Pillai's Trace	.109	9.825	2	161	.000	.109	.982
	Wilks' Lambda	.891	9.825	2	161	.000	.109	.982
	Hotelling's Trace	.122	9.825	2	161	.000	.109	.982
	Roy's Largest Root	.122	9.825	2	161	.000	.109	.982
Conscientious	Pillai's Trace	.043	3.603	2	161	.015	.043	.660
	Wilks' Lambda	.957	3.603	2	161	.015	.043	.660
	Hotelling's Trace	.045	3.603	2	161	.015	.043	.660
	Roy's Largest Root	.045	3.603	2	161	.015	.043	.660
Experience	Pillai's Trace	.018	1.515	2	161	.112	.018	.319
	Wilks' Lambda	.982	1.515	2	161	. 112	.018	.319
	Hotelling's Trace	.019	1.515	2	161	. 112	.018	.319
	Roy's Largest Root	.019	1.515	2	161	. 112	.018	.319
Mobile Affinity	Pillai's Trace	.016	1.296	2	161	.138	.016	.278
	Wilks' Lambda	.984	1.296	2	161	. 138	.016	.278
	Hotelling's Trace	.016	1.296	2	161	. 138	.016	.278
	Roy's Largest Root	.016	1.296	2	161	. 138	.016	.278
Incentive	Pillai's Trace	.033	2.765	2	161	.033	.033	.539
	Wilks' Lambda	.967	2.765	2	161	. 033	.033	.539
	Hotelling's Trace	.034	2.765	2	161	. 033	.033	.539
	Roy's Largest Root	.034	2.765	2	161	. 033	.033	.539
Delivery	Pillai's Trace	.012	.940	2	161	.197	.012	.211
	Wilks' Lambda	.988	.940	2	161	. 197	.012	.211
	Hotelling's Trace	.012	.940	2	161	. 197	.012	.211
	Roy's Largest Root	.012	.940	2	161	. 197	.012	.211
Incentive * Delivery	Pillai's Trace	.010	.798	2	161	.226	.010	.185
	Wilks' Lambda	.990	.798	2	161	. 226	.010	.185
	Hotelling's Trace	.010	.798	2	161	. 226	.010	.185
	Roy's Largest Root	.010	.798	2	161	. 226	.010	.185

Significance values, shown in Table 39, indicate that attitude toward the message source, brand-medium fit, involvement with the message content, conscientiousness and incentive cause statistically significant differences across dimensions of dependent variables ($\alpha < 0.05$). However, for delivery timing, the interaction term of delivery timing and incentive, and the rest of the covariates the null hypothesis that all the group vectors of mean scores are equal could not be rejected. When F values are examined together with Partial Eta squares it is seen that brand-medium fit has the largest explanatory power, which is followed by involvement with the message content. It is important to note that, as it was the case in study 1, even when the variation explained by the interpersonal differences (covariates) is extracted, incentive still has a significant effect on the dependent variate.

It is interesting to see that the findings of the MANCOVA analyses of the two studies agree to a large extent. In both studies brand-medium fit has the largest explanatory power on the dependent variate. Based on this foundation it is safe to argue that brand-medium fit may be the strongest predictor of the dependent variate, which represents the affective and evaluative state induced by the mobile marketing message. Involvement with the message content, attitude toward the message source, conscientiousness and incentive were also found to be significantly related with the dependent variate in both studies. However, the effects of source-medium fit and the attitude toward the advertised brand on the dependent variate, which were found to be significant in study 1, were not significant in study 2.

Table 40. MANCOVA Tests of Between-Subjects Effects – Study 2

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Sqr.	Obs. Power
Corrected Model	Intrusiveness	51.107	15	3.407	9.619	.000	.471	1.000
	Campaign Attitude	49.481	15	3.299	7.144	.000	.398	1.000
Intercept	Intrusiveness	51.508	1	51.508	145.412	.000	.473	1.000
	Campaign Attitude	.052	1	.052	.112	.738	.001	.063
Gender	Intrusiveness	.550	1	.550	1.554	.214	.010	.236
	Campaign Attitude	.158	1	.158	.343	.559	.002	.090
Brand Trust	Intrusiveness	.367	1	.367	1.036	.310	.006	.173
	Campaign Attitude	.136	1	.136	.295	.588	.002	.084
Brand Attitude	Intrusiveness	.397	1	.397	1.121	.291	.007	.183
	Campaign Attitude	.012	1	.012	.025	.874	.000	.053
Source Trust	Intrusiveness	.114	1	.114	.322	.571	.002	.087
	Campaign Attitude	.069	1	.069	.149	.700	.001	.067
Source Attitude	Intrusiveness	3.893	1	3.893	10.991	.001	.064	.909
	Campaign Attitude	.877	1	.877	1.898	.170	.012	.278
Source Fit	Intrusiveness	.328	1	.328	.927	.337	.006	.160
	Campaign Attitude	.001	1	.001	.000	.998	.000	.050
Content Fit	Intrusiveness	.166	1	.166	.468	.495	.003	.104
	Campaign Attitude	.000	1	.000	.001	.977	.000	.050
Brand Fit	Intrusiveness	8.945	1	8.945	25.254	.000	.135	.999
	Campaign Attitude	5.281	1	5.281	11.437	.001	.066	.920
Involvement	Intrusiveness	3.743	1	3.743	10.567	.001	.061	.898
	Campaign Attitude	6.474	1	6.474	14.019	.000	.080	.961
Conscientio.	Intrusiveness	.040	1	.040	.112	.739	.001	.063
	Campaign Attitude	3.295	1	3.295	7.136	.008	.042	.757
Experience	Intrusiveness	.733	1	.733	2.069	.152	.013	.298
	Campaign Attitude	.168	1	.168	.363	.547	.002	.092
Mobile Affinity	Intrusiveness	.867	1	.867	2.447	.120	.015	.343
	Campaign Attitude	.278	1	.278	.603	.439	.004	.121
Incentive	Intrusiveness	.602	1	.602	1.699	.194	.010	.254
	Campaign Attitude	2.291	1	2.291	4.962	.027	.030	.600
Delivery	Intrusiveness	.168	1	.168	.474	.492	.003	.105
	Campaign Attitude	.809	1	.809	1.753	.187	.011	.260
Incentive * Delivery	Intrusiveness	.241	1	.241	.681	.410	.004	.130
	Campaign Attitude	.244	1	.244	.529	.468	.003	.112
Error	Intrusiveness	57.383	162	.354				
	Campaign Attitude	74.807	162	.462				
Total	Intrusiveness	813.082	178					
	Campaign Attitude	1821.66	178					
Corrected Total	Intrusiveness	108.491	177					
	Campaign Attitude	124.288	177					

Results of the univariate tests, shown in Table 40, indicate that perceived intrusiveness is significantly related with attitude toward the message source, brand-medium fit, and involvement with the message content. These findings are in line with the findings of study 1, and provide corroborative evidence for the hypotheses H4a, H6a, and H9c. When effect sizes are compared, brand-medium fit is identified as the strongest predictor of perceived intrusiveness (Partial $Eta^2 = 0.135$; $F=25.254$; $\alpha<0.05$), followed by prior attitude toward the source (Partial $Eta^2 = 0.064$; $F=10.991$; $\alpha<0.05$), and involvement with the message content (Partial $Eta^2 = 0.061$; $F=10.567$; $\alpha<0.05$), in ranking order. Contrary to the findings of study 1, the impacts of attitude toward the advertised brand, and source-medium fit on perceived intrusiveness are not significant in study 2. These results produce discrepant evidence for the impact of attitude toward the advertised brand (H8a), and source-medium fit (H9a), on perceived intrusiveness. After the variance explained by the covariates was extracted, the main effect of incentive on perceived intrusiveness lost its significance. This finding also contradicts with the findings of study 1. Similar to study 1, the impacts of mobile affinity, prior experience with the mobile medium, conscientiousness, and content-medium fit on perceived intrusiveness were not significant. Therefore, counter evidence against H9b, H10a, H12a, and H14a is strengthened.

Post-encounter attitude toward the campaign is found to be significantly related with brand-medium fit, involvement with the message content, conscientiousness, and incentive. These findings are in line with the findings of study 1, and provide corroborative evidence for the hypotheses H1b, H4b, and H12b. The

significant relationship between brand-medium fit and post-encounter attitude toward the campaign was not expected to be observed. Perceived fit was only hypothesized to be an antecedent of perceived intrusiveness; however, in both studies it is consistently found to be related with post-encounter attitude toward the campaign as well. This finding suggest that perceived medium fit may have more profound impact on consumers' experience through push-type mobile marketing than it was initially expected. When effect sizes are compared, involvement with the message content is identified as the strongest predictor of post-encounter attitude toward the campaign (Partial $Eta^2 = 0.080$; $F=14.019$; $\alpha<0.05$), followed by brand-medium fit (Partial $Eta^2 = 0.066$; $F=11.437$; $\alpha<0.05$), conscientiousness (Partial $Eta^2 = 0.042$; $F=7.136$; $\alpha<0.05$), and incentive (Partial $Eta^2 = 0.030$; $F=4.962$; $\alpha<0.05$) in ranking order. As it was the case in study 1, trust toward the source, trust toward the advertised brand, attitude toward the source, attitude toward the advertised brand, mobile affinity, content-medium fit, and prior experience with the mobile medium were not significantly related with post-encounter attitude toward the campaign, hence counter evidence against H5a, H6b, H7a, H8b, H9b, H10b, and H14b is strengthened.

Although both studies found significant relationship between perceived medium fit and post-encounter attitude toward the campaign, their results differed on the basis of the dimensions of the perceived fit that causes the impact. Study 1 found a significant effect for both source-medium fit and brand-medium fit, whereas study 2 found a significant effect only for brand-medium fit.

Replicating the methodology employed in study 1, a least square multiple regression analysis is employed to assess predictors of the willingness to make WOM referrals.

First, statistical requirements of the multiple regression analysis, namely linearity of the phenomenon being measured, constant variance of the error terms, independence of the error terms, and normal distribution of error terms are assessed. Also, multicollinearity among independent variables is examined (see Table 43, pg.144). Outliers were initially eliminated from the sample. Independence of residuals is checked by Durbin-Watson test, which is reported in Table 41. Normal distribution of error terms is checked by visual inspection of the normal probability plot of the regression standardized residuals, shown in Figure 10. Since there are visible deviations from the straight diagonal line, the assumption of normality of error terms could not be met.

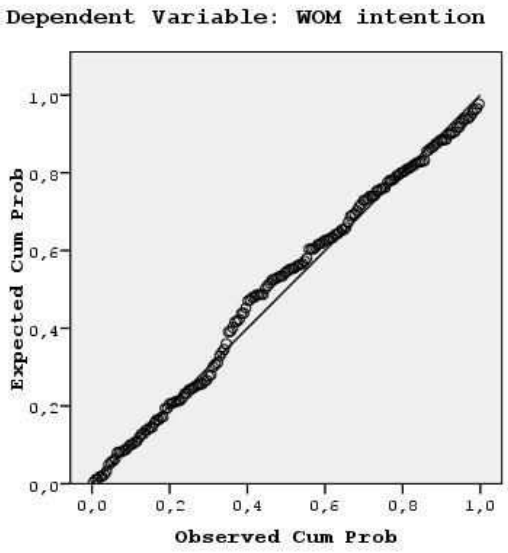

Figure 10. Normal P-P plot of regression standardized residuals – Study 2

Linearity and constant variance of the error terms are visually examined through a residual plot, shown in Figure 11. Since there is no constant curvilinear pattern observed in the residual plot, there is no violation of linearity. The fact that the error terms are homogeneously distributed also provides evidence of homoscedasticity. Besides normality, all other assumptions are met. Results of the multiple regression analysis are shown in Table 41 and 42, below.

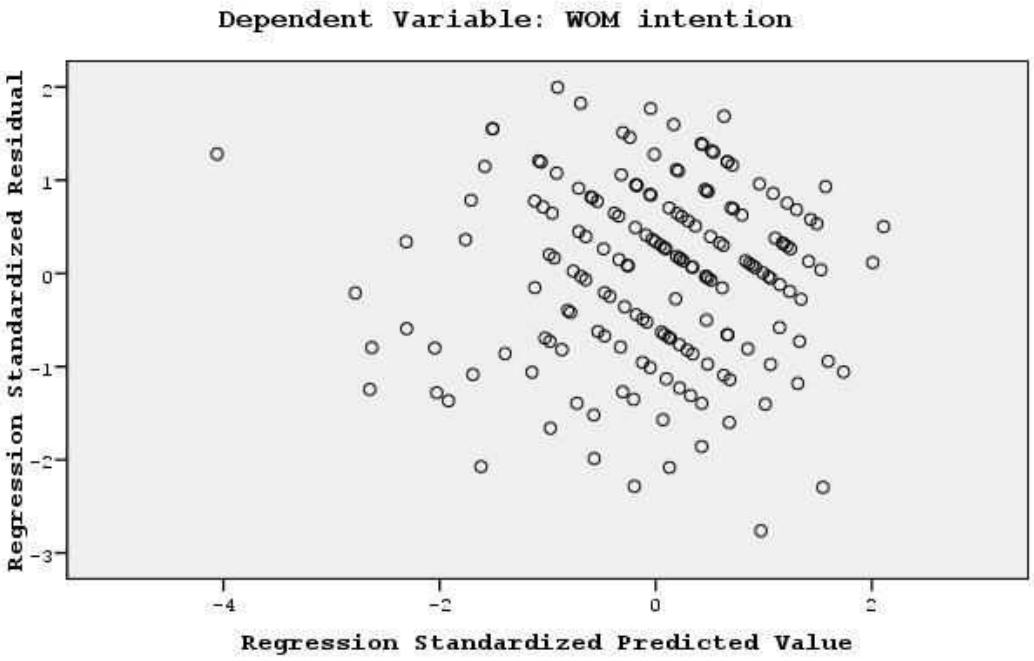

Figure 11. Residual plot for the variate – Study 2

Table 41. Model Summary – Willingness to Make WOM Referrals – Study 2

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.646	.417	.355	.71861	.417	6.726	17	150	.000	1.951

Table 41 indicates that 41.70% of variance in the dependent variable is explained by the estimated model. This figure is very close to that of study 1 (40.20%). Durbin-Watson test assesses independence of residuals. When Durbin-Watson statistic is not in the range of -2 and 2, it signals correlation among residuals. It is in the acceptable range, meaning that residuals are not correlated.

Table 42. Regression Coefficients for Willingness to Make WOM Referrals - Study 2

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.258	.923		.280	.780
Incentive	-.074	.347	-.041	-.212	.832
Delivery	-.345	.360	-.189	-.959	.339
Incentive * Delivery	.169	.237	.192	.714	.476
Gender	.040	.128	.022	.314	.754
Brand Trust	-.023	.093	-.021	-.249	.803
Brand Attitude	.099	.079	.096	1.251	.213
Source Trust	.043	.070	.042	.612	.541
Source Attitude	.021	.098	.020	.217	.828
Source-medium fit	.031	.073	.033	.419	.676
Content-medium fit	-.018	.058	-.022	-.307	.759
Brand-medium fit	.008	.082	.009	.095	.924
Involvement	.359	.085	.308	4.231	.000
Conscientiousness	-.107	.093	-.076	-1.148	.253
Prior Experience	-.030	.061	-.035	-.490	.625
Mobile Affinity	.268	.070	.261	3.802	.000
Intrusiveness	-.022	.098	-.020	-.230	.819
Campaign Attitude	.292	.086	.274	3.407	.001

Significance values shown in Table 42 indicate that the willingness to make WOM referrals about the campaign is significantly related with post-encounter attitude toward the campaign, mobile affinity and involvement with the message content. These findings are meticulously in line with findings of study 1 and provide further supportive evidence for the hypotheses H4d, H11, and H16b. As it was the case in study 1, perceived intrusiveness was not significantly related with willingness to make WOM referrals about the campaign. Therefore, counter evidence against H15b is strengthened. Corroborating the results of MANOVA analysis, multiple regression analysis found no significant relationship between incentive and willingness to make WOM referrals about the campaign. Therefore, counter evidence against H1c is strengthened for study 2. Standardized coefficients show that involvement with the message content is the most influential predictor of willingness to make WOM referrals, followed by post-encounter attitude toward the campaign, and mobile affinity, in ranking order.

As study 1, in order to assess the influence of experimental constructs on actual participation in the campaign, a logistic regression analysis is conducted. Logistic regression does not require assumptions of multivariate normality and equal variance-covariance matrices to be met. On the other hand, it is highly sensitive to multicollinearity among predictor variables and outliers. Outliers were previously identified and eliminated from the sample. Multicollinearity assessment was done by calculating and examining tolerance and VIF values for each predictor variable (see Table 43).

Table 43. Multicollinearity Assessment for Independent Variables – Study 2

	Collinearity Statistics	
	Tolerance	VIF
Brand Trust	.530	1.888
Brand Attitude	.653	1.532
Source Trust	.781	1.281
Source Attitude	.451	2.216
source-medium fit	.588	1.700
content-medium fit	.701	1.426
brand-medium fit	.427	2.339
Involvement	.714	1.400
Conscientiousness	.843	1.186
Prior Experience	.845	1.184
Mobile Affinity	.859	1.164
Intrusiveness	.506	1.978
Campaign Attitude	.591	1.691

Tolerance and VIF values shown in Table 43 suggest that there exists some level of collinearity among perceived intrusiveness, post-encounter attitude toward the campaign, attitude toward the source, source-medium fit, and brand-medium fit. Although undesirable in logistical regression, it is explicable due to the fact that perceived intrusiveness is a function of a set of variables that include attitude toward the source, source-medium fit, and brand-medium fit, and post-encounter attitude is significantly related with perceived intrusiveness. Therefore, all of the experimental constructs, treatment variables and the interaction term of the treatment variables were introduced as independent variables and logistic regression was conducted.

Overall model fit is assessed by Pseudo R^2 , Cox and Snell R^2, and Nagelkerke R^2. These three log-likelihood based R^2 measures reflect the amount of variation accounted for by the logistic model (Hair et al., 2010), and are shown in Table 44, below.

Table 44. Fit Indices for the Estimated Logistic Model

-2LL	Pseudo R^2	Cox & Snell R^2	Nagelkerke R^2
48,468	,664	,417	,750

Hosmer and Lemeshow test provides a Chi-Square based measure of fit. The null hypothesis of the test is that there is no difference between actual and predicted values of the dependent variable. Result of the Hosmer Lemeshow test for the logistic regression is shown in Table 45. It is seen that the Chi-Square test is insignificant, meaning that the model fits.

Table 45. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	1,671	8	,989

The results of the logistic regression are shown in Table 46. It is seen that post-campaign attitude toward the campaign, involvement with the message content, prior experience with the mobile medium, and trust toward the advertised brand are significantly related to user response. Perceived intrusiveness is barely significant (p=0.061). These findings are in line with findings of study 1.

Table 46. Variables in the Logistic Equation for Response – Study 2

	B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
							Lower	Upper
Incentive	18.629	4991.487	.000	1	.498	1E+008	.000	.
Delivery	17.831	4991.487	.000	1	. 498	6E+007	.000	.
Incentive * Delivery			.000	1	. 498			
Incentive * Delivery(1)	-16.050	4991.487	.000	1	. 498	.000	.000	.
Gender	-1.082	.907	1.425	1	.116	.339	.057	2.004
BrandTrust	1.697	.855	3.939	1	.024	5.458	1.021	29.171
BrandAttitude	.569	.694	.672	1	.206	1.766	.453	6.877
SourceTrust	-.044	.538	.007	1	.468	.957	.333	2.747
SourceAttitude	-.935	.906	1.066	1	.151	.393	.067	2.316
SourceFit	-.230	.691	.111	1	.369	.794	.205	3.076
ContentFit	.857	.470	2.121	1	.068	2.357	.937	5.927
BrandFit	-.720	.561	1.643	1	.100	.487	.162	1.463
Involvement	3.628	1.088	11.114	1	.001	37.633	4.459	317.601
Conscientiousness	-1.266	.792	2.551	1	.110	.282	.060	1.333
Experience	1.121	.471	5.656	1	.017	3.068	1.218	7.730
MobileAffinity	-.934	.555	1.831	1	.092	.393	.132	1.166
Intrusiveness	-1.143	.742	2.373	1	.061	.319	.074	1.365
CampaignAttitude	3.746	1.132	10.944	1	.001	42.364	4.603	389.901
Constant	-47.360	4991.494	.000	1	.992	.000		

Exponential logistic coefficients, exp (B), shown in Table 46, indicate the magnitude and the nature of the relationship between the dependent variable and the respective independent variable. Exponential coefficients above one represent a positive relationship, whereas values less than one represent a negative relationship. It is seen that user response is positively related with post-campaign attitude toward the campaign, involvement with the message content, prior experience with the mobile medium, and trust toward the advertised brand, and negatively related with perceived intrusiveness. These findings are also meticulously in line with findings of study 1.

Therefore, supportive evidence for the hypotheses H4c, H7b, H14c, H15a, and H16a is strengthened. As it was the case in study 1, other independent variables did not have significant Wald statistics, meaning that their contribution to the overall variance explained in the dependent variable was not significant. Therefore, counter evidence against the hypotheses, H5b, H6c, H8c, and H13 is strengthened. When response rates of experimental conditions were examined (see Table 33, pg. 122), it was seen that response rate was consistently and significantly higher for those who received the message that has an explicit incentive. However, neither the impact of incentive nor delivery timing on response rate was found to be significant in logistic regression analysis when covariates are included in the estimated model. This overview provides partial support for the hypothesis H1d, in the sense that incentive is found to be useful in increasing response rate when interpersonal differences among recipients are allowed to be random, but its impact loses strength when interpersonal differences among recipients are taken into account. On the contrary, empirical evidence failed to provide support for the hypothesized relationship between delivery timing and response, hence H3c is not supported.

Magnitude of these relationships is examined by calculating percentage change in odds as follows (see Table 47 for calculations):

$$\% \text{ change in odds} = (e^{b}_{i} - 1.0) \times 100$$

Table 47. Percent Change in Odds of Response – Study 2

Variable	Calculation	% change in odds	Probabilities
Campaign Attitude	(42.364 – 1.0) x 100	4136.4	.97
Involvement	(37.633 – 1.0) x 100	3663.3	.97
Brand Trust	(5.458 – 1.0) x 100	445.8	.84
Prior Experience	(3.068 – 1.0) x 100	206.8	.75
Intrusiveness	(0.319 – 1.0) x 100	-68.1	.24

Figures shown in Table 47 suggest that the most important predictor of response is post-encounter attitude toward the campaign. One unit change in post-encounter attitude toward the campaign increases the odds of response by 4136.4 %. It is followed by involvement with the message content, trust toward the advertised brand, prior experience with the mobile medium and perceived intrusiveness, in ranking order. This overview replicates the findings of study 1.

Classification table (see Table 48) shows the predictive accuracy of the estimated model. As it was the case in study 1, the model predicts "NO"s much better. It implies that when post-encounter attitude toward the campaign, involvement with the message content, trust toward the advertised brand, and prior experience with the mobile medium is low, and perceived intrusiveness is high then response is highly unlikely. However, even post-encounter attitude toward the campaign, involvement with the message content, trust toward the advertised brand, and prior experience with the mobile medium is high, and perceived intrusiveness is low, user response may still be inhibited by some other factors.

Table 48. Classification Table for Response – Study 2

Observed			Predicted		
			Response		Percentage Correct
			NO	YES	NO
Step 1	Response	NO	151	2	98.7
		YES	7	18	72.0
	Overall Percentage				94.9

Cumulatively, the percentage of correct classifications is 94.9 % (see Table 48). In this case, the proportional chance criterion is: $(153/178)^2 + (25/178)^2 = 75.9\%$. Maximum chance criterion is: (153/178) =85.9%. The percentage of correct classifications exceeds both the proportional chance and maximum chance criteria, and hence it is safe to claim that the model has predictive power.

Table 49, provides a summary of results achieved in this chapter.

Table 49. Summary of Results

Hypot.	Hypothesized Relationship	Study 1	Study 2
H1a	Incentive >> Perceived intrusiveness	Supported	Partially Supported *
H1b	Incentive >> Campaign attitude	Supported	Supported
H1c	Incentive >> WOM intention	Partially Supported *	Not Supported
H1d	Incentive >> Response	Partially Supported *	Partially Supported *
H2a	Permission >> Perceived intrusiveness	Partially Supported **	N/A
H2b	Permission >> Campaign attitude	Partially Supported **	N/A
H2c	Permission >> Response	Partially Supported **	N/A
H3a	Delivery timing >> Perceived intrusiveness	N/A	Not Supported
H3b	Delivery timing >> Campaign attitude	N/A	Not Supported
H3c	Delivery timing >>Response	N/A	Not Supported ***
H4a	Involvement >> Perceived intrusiveness	Supported	Supported
H4b	Involvement >> Campaign attitude	Supported	Supported
H4c	Involvement >> Response	Supported	Supported
H4d	Involvement >> WOM intention	Supported	Supported
H5a	Source trust >> Campaign attitude	Not Supported	Not Supported
H5b	Source trust >> Response	Not Supported	Not Supported
H6a	Source attitude >> Perceived intrusiveness	Supported	Supported
H6b	Source attitude >> Campaign attitude	Not Supported	Not Supported
H6c	Source attitude >> Response	Not Supported	Not Supported
H7a	Brand trust >> Campaign attitude	Not Supported	Not Supported
H7b	Brand trust >> Response	Supported	Supported
H8a	Brand attitude >> Perceived intrusiveness	Supported	Not Supported
H8b	Brand attitude >> Campaign attitude	Not Supported	Not Supported
H8c	Brand attitude >> Response	Not Supported	Not Supported
H9a	Source-medium fit >> Perceived intrusiveness	Supported	Not Supported
H9b	Content-medium fit >> Perceived intrusiveness	Not Supported	Not Supported
H9c	Brand-medium fit >> Perceived intrusiveness	Supported	Supported
H10a	Mobile Affinity >> Perceived intrusiveness	Not Supported	Not Supported
H10b	Mobile Affinity >> Campaign attitude	Not Supported	Not Supported
H11	Mobile Affinity >> WOM intention	Supported	Supported
H12a	Conscientiousness >> Perceived intrusiveness	Not Supported	Not Supported
H12b	Conscientiousness >> Campaign attitude	Supported	Supported
H13	Conscientiousness >> Response	Not Supported	Not Supported
H14a	Prior Experience >> Perceived intrusiveness	Not Supported	Not Supported
H14b	Prior Experience >> Campaign attitude	Not Supported	Not Supported
H14c	Prior Experience >> Response	Supported	Supported
H15a	Perceived intrusiveness >> Response	Supported	Supported
H15b	Perceived intrusiveness >> WOM intention	Not Supported	Not Supported
H16a	Campaign Attitude >> Response	Supported	Supported
H16b	Campaign Attitude >> WOM intention	Supported	Supported

* The relationship is significant only when covariates are not accounted for.
** Two out of three groups have significantly different scores.
*** The impact is in the hypothesized direction but the relationship is not significant.

CHAPTER 5

IMPLICATIONS AND CONCLUSION

Implications for Practitioners

Empirical evidence provided only partial support for the impact of permission on perceived intrusiveness, post encounter attitude toward the campaign and response. Those who "granted their explicit permission" 1) perceived the message as significantly less intrusive, 2) had significantly more positive post-encounter attitude toward the campaign, and 3) were significantly more responsive than those who "did not provide any response to the permission request". However, neither of those groups differed significantly on any of the metric dependent variables than those who "were not asked for their explicit permission". In order to gain more insights on this issue, those two conditions that include individuals who were asked for their explicit permission are combined into one cell, and mean values of the dependent variables and the average response rate for that cell are compared with those of the condition that include individuals who were not asked for their explicit permission (Table 51).

Table 51. Permission-asked Conditions Combined

Permission Condition	Dependent Variables
Permission asked (including both who granted their explicit permission and those who gave no response to the permission request)	Resp.Rate: 15.8% Intrusiveness: 1.91 Attitude: 3.04 WOM Int.: 3.29
Permission not asked	Resp.Rate: 17.91% Intrusiveness: 1.91 Attitude: 2.99 WOM Int.: 3.37

It is seen that campaign outcomes are almost the same for the two groups. The means of dependent variables are the same, and the response rate of those who "were not asked for their prior permission" is slightly higher. It means that requesting for prior permission is an effective strategy only when the push-type message will be sent exclusively to those who granted their explicit permission. However, this is not the case in many real-market scenarios. Since the emergence of the concept of permission-based marketing, prior permission for the delivery of marketing-related messages has been collected through various channels including emails, websites, SMS messages, loyalty card forms, and orally by customer representatives and salesmen at the point of sales. In many cases, especially when customer data is collected through offline loyalty-card forms or orally at the point of sales, even though the consumer expresses that he/she does not wish to receive promotional messages by not ticking the related box or not answering the related question, he/she receives promotional messages. For instance, almost all of the banks require users to fill-out an application form for giving out credit cards. Similarly, many fashion brands and supermarkets give out loyalty-cards following the same procedure. These forms usually include a question related with the delivery of promotional messages. The response given to this question is rarely considered when assigning people to the target segments of marketing-related messages. There may be several reasons for that such as the human factor in entering customer data in the databases, the thought that people will not remember their response to the permission related question among many others in those forms, the thought that no response does not necessarily mean rejection, the greedy desire to deliver the campaign-related communication to maximum number of people regardless of their privacy preferences, etc. Findings of

this study suggest that asking for prior permission may not always provide superior campaign outcomes, if the communication will not be delivered exclusively to those who explicitly granted their prior permission when asked. On the other hand, exclusively permission-based delivery of mobile marketing messages not only fortifies the ethical stance of a brand, but also results in improved campaign outcomes.

This overview brings forward an important dilemma of permission-based marketing. It seems that the best strategy to maximize the overall response rate for a particular mobile-based campaign is to eliminate "the permission-asked but no reponse given" condition from the sample, in other words delivering messages exclusively on permission-basis. But, doing so would mean missing out a significant portion of the potential responders, and hence revenues. This may not seem a favorable practice on behalf of the marketers who may be focused on increasing the number of responses generated in the short term in order to maximize their own personal utility. Therefore, instead of eliminating this condition, an alternative approach may be minimizing its sample size by employing targeting prior to the delivery of the permission inquiry. This way, only those who are likely to give permission would be receiving the permission inquiry, and hence probability of explicit opt-in would be higher. This would require marketers to solicit consumers' permission on campaign basis, instead of today's commonly employed one-time permission-for-all approach. The preceding discussion highlights two important research avenues: identification of antecedents of user permission, and assessment of the feasibility of collecting permissions on campaign-basis.

Empirical evidence in favor of the impact of explicit incentive on campaign outcomes was strong. The impact of incentive was significantly related with post-encounter-attitude toward the campaign, even when the variance accounted by experimental covariates was extracted in both studies. The impact of explicit incentive on perceived intrusiveness was found to be significant in both studies in the absence of covariates; however its impact lost its significance in study 2 when covariates were taken into account. In both studies two incentive conditions differed significantly in terms of their response rates. However, the impact of incentive on actual response was not significant in neither of the studies when covariates were taken into account. Since targeting is about considering interpersonal differences prior to message delivery, empirical evidence produced by this study implies that effective targeting (based on the constructs mentioned in this study) may mitigate the need for offering explicit incentives when the ultimate purpose of the mobile marketing campaign is triggering responses. On the other hand, empirical evidence suggests that the affective and cognitive effect induced by the push-type message delivery via mobile medium (captured by perceived intrusiveness and post-encounter attitude toward the campaign) is strongly related with the existence of explicit incentives, even when the interpersonal differences are controlled. Therefore, in order to create positive customer experiences in push-type mobile marketing campaigns, the use of explicit relevant incentives is advised.

Evidence regarding the impact of incentive on the willingness to make WOM referrals was discrepant; therefore assessment of the relationship between incentive and the willingness to make WOM referrals remains inconclusive.

Delivery timing, which supposedly manipulated the level of cognitive intensity and anxiety at the time of message delivery, had no significant relationship with any of the dependent variables. Employing a manipulation check was not possible due to fact that asking individuals to recall and assess their level of cognitive intensity and anxiety at the exact moment of message delivery retrospectively would produce at best biased, if not completely unrealistic, results. Therefore, it is difficult to pinpoint a unique explanation for this observation. Nevertheless, assuming that the treatment successfully manipulated cognitive intensity and anxiety, several plausible explanations regarding the nonsignificance of the relationship between delivery timing and metric dependent variables can be offered. First of all, mobile devices are capable of storing an SMS message indefinitely, which allows users to deal with them when they are available. Therefore, an individual who is experiencing heightened levels of cognitive intensity and anxiety may ignore the message at the time of delivery to read it in a more convenient time in the future, or skim through it without giving much attention, or in the worst case delete it without reading its content. In all three cases, since the respondent would not be giving much attention to the message, the message might not have any influence on the individual, neither emotionally or cognitively. On the other hand there was a 6% drop in the response rate when the message was sent during high cognitive intensity and stress. The experimental observation of actual responses showed that participants tended to vote immediately after they receive the call-to-action message. The number of votes significantly decreased after the first hour. This finding may be useful in explaining the dropo in response rate in high cognitive intensity and anxiety condition. Those who are experiencing high levels of

cognitive intensity or anxiety are prevented from giving their full attention to the message immediately at the time of message delivery and hence their likelihood of response decreases. Qualitative responses of the individuals who were misclassified as responders by the logistic regression analyses provide evidence supporting this argument. Ten individuals were misclassified as "responders" when they were actually "non-responders". Three of those stated that they did not have enough prepaid minutes at that time so that they could not spare any for SMS sending, and another three of those stated that they were excessively busy when they received the message, and later they completely forgot about the message. These results cumulatively suggest that the immediate temporal condition of the message receiver is an important driver of campaign participation.

Alternatively, the nonsignificance of the effect of delivery timing manipulation on metric dependent variables may be explicable due to the fact that this experiment did not manipulate the momentary (instant) cognitive intensity of respondents, instead "cognitive intensity and anxiety" of respondents was assumed to differ on period-basis (after a new-years holiday, no school, a week before finals vs. during the finals). However, two individuals who are going through the same stressful and busy week may have different levels of cognitive intensity and anxiety at a particular point in time depending on their immediate activity (e.g., studying, on a break eating snacks, driving a car, etc.). Therefore, delivery based on momentary assessment of cognitive intensity and anxiety would produce more meaningful results and allow for a more realistic assessment of the relationship between temporal

cognitive conditions of the respondent at the time of message delivery and experimental dependent variables.

On the other hand, conditions of delivery timing differed in terms of their response rate, and the impact of delivery timing was in the hypothesized direction. Although the difference was not found to be significant by the non-parametric test of significance, 6% difference in response rate means a lot for marketers. This noticeable difference in response rate provides support for the usefulness of period-based assessment of cognitive intensity and anxiety of a particular target customer group prior to message delivery. An appropriate time frame for message delivery can be identified by an aggregate level analysis of daily routines and life styles of target consumer groups.

It is important to note that this experiment did not leverage location information to determine delivery timing. Location-specifity may provide more precise role/situation congruency for message delivery than time-specifity. Hence, findings related with message delivery should be interpreted solely for the impact of time-specifity.

Experimental covariates represent interpersonal differences that influence perceptions and attitudes towards a particular push-type mobile marketing stimulus. Since targeting is about considering interpersonal differences prior to message delivery, empirical evidence produced by this study illustrates the role of targeting in the success of a push-type mobile marketing campaign.

Involvement was found to be significantly related with all of the dependent variables in both studies. Therefore, it is safe to suggest that success in push-type mobile marketing is highly related with the relevance of the message content for the recipient. Among 11 covariates, only trust toward the message source was not related with any of the dependent variables. Perceived intrusiveness was found to be significantly related with involvement, attitude toward the source, attitude toward the advertised brand, perceived source-medium fit, and perceived brand-medium fit. Post-encounter attitude toward the campaign was found to be significantly related with involvement, conscientiousness and brand-medium fit. Response was found to be significantly related with involvement, prior experience with the mobile medium, and trust toward the advertised brand. And the willingness to make WOM referrals was found to be significantly related with involvement and mobile affinity.

There are two interesting observations that deserve pointing out, which may have tremendous strategic implications for mobile marketers. First, it is seen that predictive functions of the four dependent variables are made up of different sets of covarites. It means that criteria for effective targeting should differ for mobile campaigns with different purposes. Campaigns that ultimately aim generation of immediate responses should target individuals who are likely to be involved with the content, are more experienced with the mobile medium, and trust the advertised brand. On the other hand, campaigns involving passive ad/information delivery with the aim of increasing awareness or delivery of CRM based messages should target those who are likely to be involved with the content, do not have a negative overall attitude toward the brands involved in the campaign, and perceive an increased level

of medium-fit in order to minimize intrusiveness of the message. Campaigns that are executed to generate a viral effect should target those who are likely to be involved with the content, and have higher levels of mobile affinity. Finally, since post-encounter attitude toward the campaign is found to be strongly related with both the response rate and the willingness to make WOM referrals, antecedents of post-encounter attitude toward the campaign (conscientiousness, involvement, brand-medium fit) shall be included in the targeting criteria for all kinds of push-type mobile marketing campaigns.

Second, perceived medium-fit, a concept that has never been a part of any existing model attempting to explain mobile consumer behavior, has surfaced as the strongest predictor of the affective and evaluative state induced by the push-type mobile marketing message. Prior market experience suggests that some mobile applications are more successful than others in generating positive outcomes in campaigns involving different purposes, products and brands. For instance, SMS has been proved to be particularly successful in promoting frequently purchased low-budget items. SMS and MMS are very useful for targeting younger users to announce events or to introduce product launches (Scharl, Dickinger, & Murphy, 2005). Similarly, IVR sound clips are found to be more successful in promoting fast moving consumer products to housewives than to any other consumer segment (Michael & Salter, 2006). Findings of this study provide a plausible explanation to this phenomenon: people may perceive differing levels of fit between campaign components (brand, source, and content) and the mobile medium, and perceived fit is

an important predictor of the affective and cognitive effect induced by a push-type mobile marketing stimulus.

Implications for Researchers

Attempting to establish a theoretical framework that brings forward the distinctive characteristics of the mobile medium, this study gave perceived intrusiveness central importance in explaining consumers' experience through push-type mobile marketing practices. Krishnamurthy (2000) has conceptualized perceived intrusiveness as a function of utility and expectedness of an interruption. Expectedness can be controlled to some extent by acquiring prior permission (Carroll et al., 2007). On the other hand, literature has identified the use of incentives, delivering relevant messages, and establishing role/situational congruency by timely delivery as the three strategies to lower the utility of interruption (Barnes & Scornavacca, 2004; Barwise & Strong, 2002; Bauer et al., 2005; Heinonen & Strandvik, 2003; Kavassalis et al., 2003; Muk, 2007; Wehmeyer, 2007). This study, proposed perceived medium-fit, which is conceptualized to be a function of source-medium fit, brand-medium fit, and content-medium fit, as the fourth predictor of perceived intrusiveness which may have an influence on both the utility and the expectedness of an interruption. Empirical evidence supported this hypothesis. Not only a significant relationship in the hypothesized direction between perceived medium fit and perceived intrusiveness was found, perceived medium fit surfaced as

the strongest predictor of perceived intrusiveness. Even more, in both studies perceived medium fit has also been found to be significantly related with post encounter attitude toward the campaign. These findings suggest that perceived medium fit may have more profound impact on consumers' experience through push-type mobile marketing than it was initially expected. Since perceived medium-fit was an exogeneous variable, development of a comprehensive scale for perceived medium fit remained outside the scope of this dissertation. Hence, its dimensions were measured in an abstract level with single item scales. Nevertheless, empirical findings and the conceptualization of perceived-medium fit presented in this disertation have important theoretical implications and shall serve as a take-off point for future studies aiming to further explore this interesting phenomenon.

Delivery timing, which supposedly manipulated the level of cognitive intensity and anxiety at the time of message delivery, had no significant relationship with any of the dependent variables. Employing a manipulation check was not possible due to fact that asking individuals to recall and assess their level of cognitive intensity and anxiety at the exact moment of message delivery retrospectively would produce at best biased, if not completely unrealistic, results. Therefore, it was difficult to pinpoint a unique explanation for this observation. Prospective studies are encouraged to seek ways to manipulate momentary cognitive intensity and anxiety at the time of message delivery. It would produce more meaningful results and allow for a more realistic assessment of the relationship between temporal cognitive conditions of the respondent at the time of message delivery and experimental dependent variables. Nevertheless, findings of this study

related with the impact of cognitive intensity of the respondents at the time of message delivery on perceived intrusiveness contradict with the findings of several prior studies (e.g., Edwards, Li & Lee, 2002; Wehmeyer, 2007). Wehmeyer (2007) manipulated cognitive intensity via asking respondents to read two different scenarios, instead of using actual treatments. People may not always be capable of fantasy role playing and such scenarios have the potential to lead individuals to respond in the desired direction. Nevetheless, this discrepancy in findings calls for future research. Edwards, Li and Lee (2002) assessed the relationship between cognitive intensity and perceived intrusiveness in the context of wired PC-based internet. Therefore, if it is assumed that the manipulation was successful to some extent, empirical findings of this study provide support to the argument that the mobile context is not an extension of PC-based wired internet, instead represents a new realm of investigation where a different set of rules apply.

Finally, another important implication of this dissertation for researchers is the fact that it generated many stimulating future research questions related with mobile marketing phenomenon, provided in the upcoming section entitled "Qualitative Insights and Future Research Suggestions" (pg. 169).

Limitations

There are several limitations of the present study that should be spelt out. In true experimental designs covariates should be measured before the experimental manipulation is performed. It prevents scores of covariates from also being influenced by the treatment. However, in this study all experimental constructs were measured after the experimental stimulus is administered. Therefore, measurements may have been affected by the experimental treatment. This argument is especially applicable for the measurement of attitude toward the source and attitude toward advertised brand. It may be possible that those who had perceived the message as utterly intrusive may have changed their attitude toward the brands involved in the campaign after they have been exposed to the experimental stimulus. Therefore, only-after measurement of attitude toward the advertised brand/message source as a predictive variable could provide only (at best) biased evidence regarding the relationship between attitude toward the advertised brand/message source and experimental dependent variables. However, prior measurement of covariates would have jeopardized the realism of the experiment and hence could not have been done. Admittedly, the extent of the influence of the experimental stimulus on covariate constructs is not known. On the other hand, after-only measurement has its own merits such that it eliminates many extraneous sources of error. Most importantly, no main testing effect or interactive testing effect occurs since no pretest has taken place (Churchill & Iacobucci, 2005). It also offers cost and time advantages.

Furthermore, responses given to questionnaire items by those who had participated in the campaign by sending an SMS text may also be biased. Cognitive

Dissonance Theory (Festinger, 1957) posits that any discrepancy between expectations and actual product performance will be assimilated by the consumer through the adjustment of his evaluations of the product congruent with his prior expectations. Therefore, respondents who have participated in the campaign may give more positive responses to the related questionnaire items, either because they have already augmented their attitudes toward the campaign elements in positive direction, or because they will be deliberately trying to look more happy with their decision to participate in the campaign. However, there was no practical way to measure perceptions about campaign elements in between the administration of the experimental stimulus and participation in the campaign without damaging the realism of the experiment.

Another potential limitation relates to external validity, in other words generalization of the results. This limitation is typically discussed in relation with experimental studies. Since the aim of the present experiment was theoretical explanation, a homogeneous Turkish student sample was used. A theory should never be scientifically generalized to a setting where it has not yet been empirically tested and confirmed (Lee & Barkerville, 2003). Therefore, as the sample of this study consists of undergraduate university students of a single university in Turkey, the results should be considered as tentative for other demographic groups and other countries. On the other hand, the rationale for studying university students relates to their widespread use of the mobile phones and services. Recent research have revealed that penetration rate of mobile phones is above 90% in college students in the United States (Hanley, Becker, & Martinsen, 2006), and adoption rates of younger users for various types of mobile services are much higher than older users

(Bigne, Ruiz, & Sanz, 2007; Okazaki, 2004; Suoranta & Mattila, 2004; Yang, 2005). In general, young consumers constitute the primary market for mobile devices and services (Sultan & Rohm, 2008; Zhang & Mao, 2008). Therefore, university students represent a big portion of the revenues generated through mobile marketing practices and hence are a population of interest for mobile marketers. Consequently results of the present study shall offer intriguing insights to mobile marketers, especially to those who launch mobile marketing campaigns targeting Turkish youth.

Qualitative Insights and Future Research Suggestions

The concept of "research approach" is centrally important because it drives the generation of research questions and the selection of appropriate methods for any particular study. The research approach adopted in this study has been deductive theory testing, which involves rigorous quantitative research to test the theory at hand. A grand summary of the present research process can be defined as follows: Experimental data have been collected and analyzed so that the causal connection specified by the hypotheses can be verified or rejected. Therefore, based on the principles of deductive research, the present study followed a conscious path from a general law to a specific case. In contrast, inductive approach infers theory from facts and involves qualitative research methods. Qualitative research methods have been heavily criticized by the proponents of quantitative paradigm due to the fact that they have an intuitive component and their results are difficult to replicate (Bryman, 1988). In fact all methods have their own strengths and weaknesses. A researcher should be able to utilize all methods despite their school of origin in order to maximize the available knowledge about the phenomena of interest, as long as research findings are intersubjectively certifiable (Hunt, 1983). Up to this chapter, results of deductive theory testing process are presented. However, acknowledging the strength of qualitative methods in the context of discovery (Gummesson, 2001), an open ended question is placed at the end of each questionnaire with two particular objectives: 1) to collect qualitative data which may facilitate the interpretation of quantitative findings, and 2) to generate new leads that may be useful in forging future research agendas.

The open-ended question was: “What contributed the most to your decision to vote or not to vote via SMS?” Out of 429 respondents, only 320 provided an answer to this question. Some of them responded with a single word, whereas some of them wrote short essays.

Two independent judges have content analyzed the data. Themes that have appeared more than 10 times in the data were coded. One of the judges identified 14 such recurring themes, while the other one produced 12 of them, of which 11 were exactly the same. Through discussion, judges combined several categories and agreed on 11 mutually exclusive themes. “Appreciation for being given the right to choose” and “felt empowered” categories were combined into one category. Similarly “feeling responsible” and “altruism” were also combined into one category. The resulting 11 themes, their frequency and three exemplary instances of each theme are shown in Table 50. Original versions of exemplary instances in Turkish are available in the appendix.

Table 50. Themes and 3 Exemplary Instances from Each Theme

Theme		Frequency
Relevance of the content		133
	The outcome of this voting concerns me.	
	I do not plan to work in a private company.	
	It was an opportunity for me because I was looking for an internship.	
Amount of prepaid credits at the time of message delivery		46
	I did not have credits.	
	Low level of credits.	
	My credit balance at that time.	

Table 50. continued.

Availability at the time of message delivery		39
	I was very busy at that time.	
	Because of the exams, I completely forgot about it.	
	I was available when I received the message, otherwise I wouldn't have texted.	
Appreciate being given the right to choose / felt empowered		29
	I liked the fact that my ideas were being taken into account.	
	I enjoyed the fact that I was being asked for my ideas.	
	I will answer to anyone who respect me enough to ask for my opinion.	
Attitude toward SMS		27
	I never give much attention to such SMS notification messages.	
	I think SMS is useful, practical and fast.	
	I think use of SMS was flippant; it should have been an email.	
Suspicion regarding the authenticity of the message		27
	I was previously notified that I would be receiving an SMS from the Dean of Students so I did not get suspicious about the message.	
	It could have been a fake message.	
	I couldn't be sure that it was for real and asked my friends if they got it as well.	
Trust towards the source of the message		21
	I trust the office of Dean of Students and find its doings beneficial.	
	Thknew the originator of the message.	
	The source of the message was the office of the Dean of Students	
Locus of control		18
	My single vote would have little impact on the outcome.	
	I thought that older students would be able to make better informed decisions.	
	I don't believe that students' desires will be taken into account in this university.	
Concern for privacy		13
	The use of cell phones that belong to my personal life was not appropriate.	
	The use of my GSM no without my permission irritated me.	
	It was an intrusion into my personal life.	
Trust toward the advertised brand		13
	I did not believe that there would be a fair and transparent selection.	
	I could not be sure that they would really call the companies that we chose.	
	I have little trust toward the Department of Management.	
Sense of responsibility / Altruism		11
	I thought that my contribution was important.	
	I wanted to honor those who spent the necessary effort to launch this initiative.	
	I wanted to contribute to the initiative that is undertaken by my department.	

As seen in Table 50, almost one third of the responses included a theme about message relevance. It suggests that relevance of message content was the most important predictor of campaign participation in this particular scenario. Relevance of message content has been captured by the construct "involvement with the message content" in the field experiments. And in both of the studies involvement with the message content was identified as the second most important driver of actual campaign participation after post-encounter attitude toward the campaign. Therefore, this finding is in line with the findings of the quantitative analysis.

The second most frequently mentioned theme was the amount of prepaid credits the respondent had at the time of message delivery. It should be stressed that most of those responses classified in this category expressed the inhibitor of participation as the "lack of prepaid credits at the time of message delivery". This does not mean that they perceive SMS as expensive. On the other hand, it means that some users did not participate in the campaign even though they may have been motivated to do so, due to the lack of prepaid credits when they received the call-to-action message. They expressed that if they had more credits at the time of message delivery, then they may have participated in the campaign.

The third most frequently mentioned theme was availability of the respondent at the time of message delivery. A considerable number of the respondents who did not participate in the campaign expressed that they were either too busy or overwhelmed by another engagement at the time of message delivery. Several of the respondents who had participated in the campaign by sending an SMS vote stated that they would not have participated if they were busy at the time of

message delivery, but they did because they were available when they received the message. Both the second and the third factors underpin the importance of the spatial congruency of delivery timing with temporal conditions of the recipient at the time of message delivery.

The themes involving trust toward the message source and trust toward the advertised brand provide adhoc qualitative justification for their inclusion in the experimental model. Field experiments showed that actual response is related with trust toward the advertised brand, but not related with trust toward the message source. Qualitative findings suggest that intention to participate is related to both trust toward the message source and trust toward the advertised brand. Although actual behavior and self-reported intentions are different concepts and their occurance may not always be in parallel, this discrepancy in findings calls for future research.

The rest of the themes provide new leads that can be followed up by prospective studies in the context of mobile marketing. First, it seems that providing people the right to choose makes them feel empowered, which in turn may increase their intention to participate in voting based campaigns. Similarly, altruistic motives were also mentioned as a predictor of intention to participate in this particular mobile-based voting campaign. Altruism is the intention to benefit others as an expression of internal values, regardless of social or motivational reinforcement (Feick et al., 1995). Altruists are strongly motivated by helping other consumers and companies. The role of intrinsic motives that may become salient in various kinds of mobile-based campaigns is a fruitful future research avenue. Campaigns that are

designed to be driven by such intrinsic motives may strengthen the bond between the brand and its customer constituency, due to fact that customers may perceive themselves as contributing to a cause in cooperation with the brand.

Concern for authenticity of the message has also surfaced as a frequently mentioned theme. A type of mobile marketing campaigns is calling people to send premium SMS in order to participate in radio and TV contests such as radio playlist surveys, favorite hit charts, TV shows, competitions and political surveys. In such schemes, media viewers are instructed to send a text message consisting of a short code, and the system responds to the user by confirming their participation and charges a premium to the phone bill. TV shows such as American Idol have generated phenomenal response rates and revenues world-wide via premium SMS votes.

Abundance of these types of SMS-based campaigns, in which people are charged for premiums for sending text messages, cause negative preconceptions about campaign participation via text message sending. People think that they are being tricked into sending premium SMS messages, even when the originator of the mobile campaign is not a profit oriented entity. They can not be sure about the the authenticity of the message. Such preconceptions cause distrust against SMS-based campaigns, and sometimes lead people to fear that the message they receive on unsolicited basis may be a part of a scam designed to charge a premium to their phone bills. This phenomenon has not yet been investigated by prior studies and represents a promising and valuable topic for future research.

Finally, concern for privacy and locus of control appeared as the two personality traits that may be related with the intention to participate in voting-based mobile campaigns. Concern for privacy is defined as the anxious sense of interest that a person has because of various types of threats to the person's state of being free from intrusion (Malhotra et al., 2004). Some people tend to be more concerned for their privacy than others. This construct may be highly and significantly related with perceived intrusiveness as well. Locus of control captures a generalized belief that life's rewards, reinforcements, and outcomes are controlled either by one's own action (internality) or by external forces (externality) (Rotter, 1966). Internally oriented individuals believe outcomes are influenced primarily by personal factors. Conversely, externally oriented individuals believe outcomes are primarily caused by outside factors (Spector, 1982). Either the impact of concern for privacy or locus of control has not yet been subjected to empirical testing within the context of mobile marketing. Given the fact that perceived user control is regarded as one of the most important success factors of mobile marketing (Barwise & Strong, 2002, Carroll et al., 2007), and perceived intrusiveness is identified an important predictor of campaign outcomes by the present study, the potential roles of these two personality traits on user experience through mobile marketing definitely deserve researcher attention.

It should be noted that the incentive used in this experiment was a non-monetary incentive. The impact of a monetary incentive may be stronger than that of a non-monetary incentive; hence these findings may not apply for the use of monetary incentives. Additionally, the incentive used in this study was strongly

related with the subject of the message and theme of the campaign. Possible impact of an incongruent incentive embedded in a push-type mobile marketing message may have negative effects on campaign outcomes. Investigation of the use of different types of incentives (e.g., monetary incongruent vs non-monetary congruent, monetary congruent vs non-monetary incongruent, instant-small win vs probabilistic large win, etc.) in push-type mobile marketing campaigns is a promising research avenue.

Conclusion

The proliferation of the mobile medium in terms of the enabling technology and its use for customer interaction gave birth to a new kind of consumer who has timeless needs. Wind and Mahajan (2002) used the metaphor of centaur of the Greek mythology to draw a profile for this new type of consumer. “They are like centaurs, half human and half horse, running with the rapid feet of new technology, yet carrying the same ancient and unpredictable human heart” (Wind & Mahajan, 2002, p. 65). This transformation draws mounting interest on mobile phenomena from both academic and business circles. Consequently, research focusing on mobile marketing is rapidly growing, but the accumulated academic knowledge on mobile marketing is fairly fragmented and inconsistent. The relevant body of literature lacks a comprehensive framework that adequately explains and predicts consumers’ experience through mobile advertising and mobile service encounters, especially in push-type mobile marketing campaigns. Furthermore, there exist few, if any, theories that this new prospering research stream can call its own. Given these facts, this dissertation aimed to contribute to the understanding of central theoretical and pragmatic issues related to the application of push-type mobile marketing in consumer markets. The state of the art is critically assesed, and drivers of success in push-type mobile marketing are explored via a field experiment, in which all treatment variables had multiple levels and were actively manipulated, and actual response (both in terms of response occurrence and response timing) was observed within a realistic context.

This dissertation contributes to the relevant literature in three substantial aspects: First, an original conceptualization for "mobile marketing", that is based on consumer-centric value propositions of the mobile medium, is proposed. Second, the accumulated academic knowledge on mobile consumer behavior is compiled and organized into a four-stage framework (Personalization/Targeting Stage-Communication Stage – Consumers' Black Box Stage – Consumer Response Stage) that represents a grand summary of the mobile marketing process. Third, a theoretical framework based on the distinctive characteristics of the mobile medium, that adequately explains and predicts consumers' experience through push-type mobile marketing practices, is established. In this framework, "perceived intrusiveness" has been placed at the heart of push-type mobile marketing success, and empirical evidence supported the argument that it captures a distinct phenomenon that can not be fully captured by sole measurement of the overall attitude toward a mobile marketing campaign. This research has established predictive functions for "perceived intrusiveness" and "post-encounter attitude toward the campaign", which in turn are found to be important predictors of post-campaign user intentions and actions. Moreover, predictors of actual campaign participation in an SMS-based voting scheme are identified. Interestingly, perceived brand-medium-fit, a construct that has never been a part of any existing model attempting to explain mobile consumer behavior, has surfaced as the strongest predictor of the affective and evaluative state induced by the push-type mobile marketing message. Based on this finding, it can be concluded that the essence of success in mobile marketing is extending the value proposition of a brand in a way that fits the unique characteristics of the mobile medium in other words, delivering

something of value that is congruent with the content of a brand's value proposition in a personal, timely, convenient, and non-intrusive way. While intrusiveness may be an inevitable part of push-type mobile marketing, this study showed that antecedents of intrusiveness can be carefully managed to provide a positive consumer experience. Mobile marketing is unlikely to become fully recognized as a research area until it has a solid theoretical foundation. And this research aims to contribute to this progress by providing a theoretical framework that mobile marketing research stream can call its own. Finally, through the discussion of quantitiative results and the comparison of qualitative insights and quantitative findings, a variety of future research avenues are identified. An important contribution of this dissertation is that it produced many stimulating leads to be followed by prospective studies.

Mobile marketing has been held back not by technology, but by marketers thinking of the mobile phone as a disabled PC. "Mobile phones are not disabled PC's, they are differently-abled devices with unique capabilities and attributes that are in many ways superior to the PC and just waiting to be exploited" (Nerger, 2008, p.20). To capitalize on the opportunities provided by this novel medium of customer interaction, marketers will have to develop a complete understanding of the consumer-centric value propositions of the mobile medium. On this basis, this dissertation shall provide intriguing insights to marketers that would guide them in their quest in understanding the mobile consumer.

APPENDICES

Appendix A. Questionairre in Turkish

Araştırmamıza gösterdiğiniz ilgi ve ayırdığınız zaman için çok teşekkür ederiz.

AÇIKLAMALAR

Ankette isim sorulmamaktadır. Vereceğiniz cevaplar sadece araştırmayı yürüten ekip tarafından sayısal veriye çevrilecek olup, kesinlikle hiçbir üçüncü şahıs ile paylaşılmayacaktır. Sonuçların anlamlı çıkması için lütfen soruları dikkatle, dürüstçe ve eksiksiz olarak cevaplayınız.
Anketi eksiksiz dolduran her katılımcıya teşekkür amacıyla 10 TL nakit olarak verilecektir.

Geçtiğimiz günlerde, İşletme Bölümü'nün üniversitemize iş ve staj görüşmeleri yapmak üzere davet edeceği firmaların öğrencilerin oylarıyla seçilmesi ile ilgili bir SMS aldınız. Aşağıdaki soruları bu SMS mesajını düşünerek cevaplamanız rica olunur:

- Bahsi geçen mesajı açıp okudunuz mu? Evet / Hayır
- Yakın arkadaşlarınızın bu SMS'i alıp almadığını biliyor musunuz? Evet / Hayır
- "BU.Ogr.Dek." ibaresinin neyin kısaltması olduğunu anlamış mıydınız? Evet / Hayır
- Bu uygulama ile ilgili kimseyle fikir alışverişinde bulundunuz mu? Evet / Hayır
- Mesajın sahte olabileceğinden şüphelendiniz mi? Evet / Hayır
- Bir firma yazıp istenen numaraya SMS attınız mı? Evet / Hayır

SMS mesajını aldığımda, mesajın ……. olduğunu düşündüm.

Boş bırakılan yere aşağıdaki kelimeler konulduğunda oluşan cümleye ne kadar katıldığınızı ölçek üzerinde işaretleyerek belirtiniz:

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Dikkat dağıtıcı	1	2	3	4	5
Rahatsızlık verici	1	2	3	4	5
Hayatıma zorla giren bir mesaj	1	2	3	4	5
Araya giren, yaptığım işi bölen	1	2	3	4	5
Davetsiz	1	2	3	4	5
Saldırgan	1	2	3	4	5
Sıkıntı verecek kadar sırnaşık	1	2	3	4	5

Aşağıdaki cümlelere ne kadar katıldığınızı ölçek üzerinde işaretleyerek belirtiniz:

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Mesajın içeriği heyecan vericiydi.	1	2	3	4	5
Mesajı aldığım için mutluyum.	1	2	3	4	5
Böylesi ilginç bir uygulama ile karşılaştığımda arkadaşlarımın katılımını da teşvik etmeye çalışırım.	1	2	3	4	5
Böylesi ilginç bir uygulama ile karşılaştığımda, arkadaşlarıma bahsetmek isterim.	1	2	3	4	5
Genel olarak bu uygulamayı takdir ettim.	1	2	3	4	5
Mesajı gayet olumlu karşıladım.	1	2	3	4	5
Arkadaşlarımdan biri benden bu oylamaya katılıp katılmama konusunda tavsiye isteseydi, kesinlikle katılmasını önerirdim.	1	2	3	4	5

Aşağıdaki cümlelere ne kadar katıldığınızı ölçek üzerinde işaretleyerek belirtiniz:					
	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Öğrenci Dekanlığı'nın bana ulaşmak için SMS kullanmasını gayet normal buldum.	1	2	3	4	5
Öğrenci Dekanlığı güvendiğim bir makamdır.	1	2	3	4	5
Öğrenci Dekanlığı hakkında olumsuz bir düşüncem yok.	1	2	3	4	5
Öğrenci Dekanlığı'nı pek tanımam, ne iş yapar bilmem.	1	2	3	4	5
Bu tür oylamalar için mobil ortamın (SMS) çok ideal olduğunu düşünüyorum.	1	2	3	4	5
Mezun olur olmaz iyi bir firmaya girip kariyerime başlamak istiyorum.	1	2	3	4	5
Yakın zamanda iş/staj başvurusu yapmayı düşünüyorum.	1	2	3	4	5
Kariyerim ile ilgili olabilecek duyurular ve etkinlikler ile ilgilenirim.	1	2	3	4	5
Beğendiğim bir firma ile iş veya staj görüşmesi yapma fırsatını kaçırmak istemem.	1	2	3	4	5
Kariyerim benim için çok önemlidir.	1	2	3	4	5
İşletme Bölümü'nün fikrimi sormak için mobil ortamı seçmesini garipsedim.	1	2	3	4	5
İşletme Bölümü'nün en çok oyu alan firmaları davet edeceğine güvenim tamdır.	1	2	3	4	5
İşletme Bölümü hakkında olumsuz bir düşüncem yok.	1	2	3	4	5
İşletme Bölümü'nü yakından tanırım.	1	2	3	4	5

Aşağıdaki cümlelere ne kadar katıldığınızı ölçek üzerinde işaretleyerek belirtiniz:					
	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Cep telefonumun hayatımda önemli bir yeri vardır.	1	2	3	4	5
Cep telefonum sahip olduğum en önemli cihazlardan biridir.	1	2	3	4	5
Cep telefonuma erişimim engellenseydi, onu gerçekten özlerdim.	1	2	3	4	5
Cep telefonumu kullanmadan bir gün bile geçiremem.	1	2	3	4	5
Cep telefonum elimden alınsa kendimi kaybolmuş hissederim.	1	2	3	4	5

Aşağıdaki cümlelere ne kadar katıldığınızı ölçek üzerinde işaretleyerek belirtiniz:					
	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Yaptığım işi eksiksiz yaparım.	1	2	3	4	5
Oldukça dikkatli biriyim.	1	2	3	4	5
İş vermek için güvenilir biriyim.	1	2	3	4	5
Düzensiz, dağınık olma eğilimim vardır.	1	2	3	4	5
Tembel biriyim.	1	2	3	4	5
Azimliyimdir, genelde elimdeki işi bitirmeden bırakmam.	1	2	3	4	5
Verimli çalışırım.	1	2	3	4	5
Plan yaparım ve yaptığım planlara sadık kalırım.	1	2	3	4	5
Kolayca dikkatim dağılır.	1	2	3	4	5

Aşağıdaki mobil uygulamaları ne sıklıkla kullandığınızı 0 dan 3 e kadar bir sayı ile belirtiniz:

Hiç Kullanmadım	Bir Defa Kullandım	Arada Sırada Kullanıyorum	Sıklıkla Kullanıyorum
0	1	2	3

___ SMS

___ MMS

___ Bilgi paketi üyeliği (haber, spor, hava durumu gibi)

___ Cep telefonundan e-mail

___ Mobil internet (cep telefonu ile Google, Facebook, mobil portal kullanımı gibi)

___ Mobil oyunlar

___ Mobil ödeme

___ Mobil TV

___ GPS – Haritalar

___ SMS ile kampanya katılımı (kontör kazanmak için veya çekilişe katılmak için)

- Daha önce hiçbir firmaya kampanyalar veya yeni ürünler hakkında bilgilendirilmek üzere cep telefonu numaranızı verdiniz mi?

EVET / HAYIR

- Firmaların önceden izin almak koşulu ile size SMS atmalarını uygun buluyor musunuz?

EVET / HAYIR

Cinsiyetiniz: Erkek / Kadın

Yaşınız: .....

Kaçıncı sınıftasınız: .....

SMS ile oy atıp atmama kararınız üzerinde en çok ne etkili oldu?
.....
.....
.....

Lütfen eksik soru bırakmadığınızdan emin olun.
Katılımız için çok teşekkür ederiz.

Appendix B. Questionairre in English

We thank in advance for your time and consideration.

EXPLANATIONS
Questionairres are anonymous. Your answers will be converted into statistical data by the researcher and will not be shared with any third party. Your honesty and attentiveness will be much appreciated. All respondents who return a fully complete questionairre will be given 10TL as a token of gratitude.

You have recently received an SMS message regarding the selection of companies that will be called to the campus by the Department of Management to conduct job and internship interviews. Please answer the following questions based on this SMS message:

- Have you opened and read this message? Yes / No
- Do you know whether or not any of your friends received this message? Yes / No
- When you receive the message, did you understand the meaning of "BU.Ogr.Dek."? Yes / No
- Have you talked about this message with anyone? Yes / No
- Did you suspect that the message might be a fake one? Yes / No
- Did you respond to this message by sending an SMS? Yes / No

When I received the SMS message, I thought it was …….. .

Please indicate the extent to which you agree with the statement above when the following phrases are put in the blank:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Distracting	1	2	3	4	5
Disturbing	1	2	3	4	5
Forced	1	2	3	4	5
Interfering	1	2	3	4	5
Intrusive	1	2	3	4	5
Invasive	1	2	3	4	5
Obtrusive	1	2	3	4	5

Please indicate the extent to which you agree with the statements below:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The content of the message was exciting.	1	2	3	4	5
I am glad that I have received the message.	1	2	3	4	5
I would recommend my friends to participate in a mobile-based interesting campaign like this.	1	2	3	4	5
If a find an interesting mobile-based campaign like this, I want to tell my friends about it.	1	2	3	4	5
I appreciate receiving the message.	1	2	3	4	5
I feel that receiving the message was pleasant.	1	2	3	4	5
If somebody asks for advice about an interesting mobile-based campaign like this, I would encourage him or her to participate.	1	2	3	4	5

Please indicate the extent to which you agree with the statements below:					
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I think it is quite normal for the office of Dean of Students to communicate with me via SMS.	1	2	3	4	5
I trust the office of Dean of Students.	1	2	3	4	5
I don't have any negative feelings towards the office of Dean of Students.	1	2	3	4	5
I really am not familiar with the office of Dean of Students.	1	2	3	4	5
I think the mobile medium (SMS) is perfect for running such voting-based campaigns.	1	2	3	4	5
As soon as I graduate I want to begin my professional career.	1	2	3	4	5
I plan to apply for a job/internship in the short term.	1	2	3	4	5
I am interested in events and news that may be related with my career.	1	2	3	4	5
I wouldn't miss the opportunity to make a job/internship interview with the representatives of a company that I like.	1	2	3	4	5
My professional career is important to me.	1	2	3	4	5
I find it weird that the Department of Management has used SMS to solicit my ideas.	1	2	3	4	5
I am fully confident that the Department of Management would call the companies which got the most votes to the campus.	1	2	3	4	5
I don't have any negative feelings about the Office of Dean of Students.	1	2	3	4	5
I am familiar with the doings of the Department of Management.	1	2	3	4	5

Please indicate the extent to which you agree with the statements below:					
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
My mobile phone is important in my life.	1	2	3	4	5
Using my mobile phone is one of my main daily activities.	1	2	3	4	5
If my reach to the mobile medium is prevented I would really miss it.	1	2	3	4	5
I can't go for several days without using my mobile phone.	1	2	3	4	5
I would be lost without my mobile phone.	1	2	3	4	5

Please indicate the extent to which you agree with the statements below:					
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Does a thorough job.	1	2	3	4	5
Tends to be careful.	1	2	3	4	5
Is a reliable worker.	1	2	3	4	5
Tends to be disorganized.	1	2	3	4	5
Tends to be lazy.	1	2	3	4	5
Perseveres until the task is finished.	1	2	3	4	5
Does things efficiently.	1	2	3	4	5
Makes plans and follows through with them.	1	2	3	4	5
Is easily distracted	1	2	3	4	5

Please indicate how frequently you use the following mobile applications:

Never Used	Used Once	Use Occasionally	Use Frequently
0	1	2	3

___ SMS

___ MMS

___ News/updates info package membership

___ Mobile e-mail

___ Mobile Internet (Google, Facebook, mobile portals, etc.)

___ Mobile games

___ Mobile payment

___ Mobile TV

___ Location-based services (GPS, Maps, etc.)

___ Prior participation in SMS-based mobile campaigns

- Have you ever provided a company with your email/GSM no to receive messages regarding campaigns or new products?

YES / NO

- If your prior permission is acquired, is it OK for companies to send SMS messages to you?

YES / NO

Cinsiyetiniz: Male / Female

Age: .....

Class: .....

What contributed the most to your decision to vote or not to vote via SMS?

.....

.....

Please ensure that you have provided an answer to al questions.
Thank you for your participation.

Appendix C. Turkish Version of Table 50

Theme		Frequency
Relevance of the content		133
	Oylama sonucundan doğrudan etkilenecek olmam.	
	Özel bir firmada çalışmayı düşünmüyorum, dolayısıyla ilgilenmedim.	
	Staj arayıp bulamadığımdan, firsat olarak gördüm.	
Amount of prepaid credits at the time of message delivery		46
	Kontürüm yoktu.	
	Kontürüm azdı.	
	O andaki kontür miktarım.	
Availability at the time of message delivery		39
	O an çok meşguldum, uygun bir zamanımda gelseydi oy atardım.	
	Sınavlarım nedeniyle aklımdan çıktı.	
	Mesajı aldığımda müsaittim, eğer işim olsaydı oy atmazdım.	
Appreciate being given the right to choose / felt empowered		29
	Fikirlerimin ciddiye alınması.	
	Fikrimin sorulması hoşuma gitti.	
	Bana saygı gösterip oyuma başvuran herkese cevap veririrm.	
Attitude toward SMS		27
	Gelen bilgi mesajlarına hiçbir zaman ilgi göstermem.	
	Sms'i kullanışlı, pratik, kolay ve hızlı buluyorum.	
	Sms kullanılmasını ciddiyetsiz buldum, maili tercih ederdim.	
Suspicion regarding the authenticity of the message		27
	Daha önceden öğrenci dekanlığından SMS alacağıma dair bilgilendirilmiştim dolayısıyla mesajın gerçekliğine güvendim.	
	Sms'in sahte olabileceği düşüncesi	
	Sahte olabileceğini düşündüm ve arkadaşlarıma sordum. Onlara gelmediğini öğrenince cevaplamaktan vazgeçtim.	
Trust towards the source of the message		21
	Öğrenci dekanlığına güvenmem ve yaptığı işleri yararlı bulmam etkili oldu.	
	Mesajın tanıdık bir kurumdan gelmesi.	
	Mesajın öğrenci dekanlığından gelmiş olması.	
Locus of control		18
	Benim tek oyumun sonucu etkilemeyeceği düşüncesi.	
	Diğer yaşça büyük arkadaşların daha bilgili olacağını ve daha doğru karar alacağını düşündüm.	
	Bu okulda yapılacak şeylerin öğrenci iradesiyle olacağına inanmıyorum.	

Theme		Frequency
Concern for privacy		13
	Genel uygulamalar için bizim özel yaşamımızın bir parçası olan telefonların kullanılmasını doğru bulmuyorum.	
	Cep telefonu numaramın izinsiz kullanılmasından rahatsız oldum.	
	Özel hayatıma müdahale edildiğini hissettim.	
Trust toward the advertised brand		13
	Şeffaf ve adil bir oylama olmayacağını düşündüm.	
	Uygulamanın hayata geçip geçmeyeceğinden emin olamadım.	
	İşletme bölümüne güvenim az.	
Sense of responsibility / Altruism		11
	Katılımımın önemli olduğunu düşündüm.	
	Oylama yapmak zahmetinde bulunmuş insanların emeğinin karşılığını vermek istedim.	
	Bölümün uygulamasında pay sahibi olmak istedim.	

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