

The Introduction of Value-added Services in Jamaica

Paul Golding¹ and Opal Donaldson¹

¹ University of Technology, Jamaica
237 Old Hope Road Kingston 7 Jamaica

Abstract. Since the liberalization of the Jamaican telecommunications sector in 1999 the mobile market has become extremely competitive. The level of competition in the market coupled with a high level of handset saturation has created a ripened environment ideal for implementing mobile commerce services. However based on reviewed literature the introduction of mobile commerce services must be done from a consumer perspective. Telecommunication providers are becoming increasingly aware of the importance of understanding consumer attitude towards wide scale adoption of mobile services. The approach of introducing applications to market without consumer input could result in the loss of time and financial investments. In order to develop best practices for launching mobile commerce products within the market, researchers have taken the approach to study consumer interest in mobile commerce and to evaluate the characteristics of the products that are found most desirable. Consequently this research seeks to understand the interest of consumers within the Jamaican telecommunication market and to determine what are the value-added characteristics/ properties of services that are most desired by consumers.

1 Introduction

Jamaica is an island located in the Greater Antilles of the Caribbean. The population of the island currently stands at 2.6M. Prior to 1999 the Jamaican telecommunications sector was fully monopolized by Cable and Wireless Jamaica Ltd. The sector was liberalized in 1999 and since then the industry has evolved into a competitive market. The liberalization of the sector resulted in the issuing of 146 telecommunications licenses. According to [1] Phase I of the liberalization process took effect on March 1st 2001. This phase opened the market to competition in wireless cellular services. In a publication by [2] it was explained that since liberalization of the sector in 2001, the number of mobile subscribers has increased significantly from approximately 300,000 to over 1.5M in 2004.

One of the early recipient of a license was Mossel Jamaica Limited a company owned by Irish investors. On entering the market Mossel Jamaica Limited adopted the name Digicel as their brand. According [2] Digicel was launched in April 2001 and had its customer base quickly expand to over 850,000 customers. Digicel had expected to achieve the 100,000-customer mark by the end of its first year in operation. However this goal was achieved 100 days after its launch. The level of handset

penetration was increased further with the entry of Oceanic Digital (ODJ) in the market. According to [3] ODJ entered the market in November 2001 operating under the name MiPhone. Universal Service/ Access Obligation for Telecommunication Services in Jamaica (2004) [2] highlights that MiPhone provides island wide services to approximately 100,000 subscribers. [4] states that with this level of consumer coverage MiPhone currently possess 4.5% of market share in comparison to Digicel's 64% and Cable and Wireless 31%. The current state of the industry is consistent with the vision of The Ministry of Commerce, Science and Technology, which highlight that it intends "to develop a competitive and vibrant telecommunications industry to move Jamaica towards becoming a knowledge-based connected society".

The state of the telecommunication sector has created the opportunity for most Jamaicans to own a cell phone. According to [5] 75% of households had an average of 2 working mobile phones while 26% had mobile phones as their only telephone. [6] present statistics highlighting that in 2000 the number of mobile subscribers per 1000 was 142 and in 2004 this figure had increased to 615 per 1000. [7] highlights that within the European market the average penetration rate is approximately 65% and is approaching saturation. This level of saturation experienced in Europe is similar in other countries such as South Korea. According to [8] South Korea is one of the world's leaders in mobile technologies and currently has a penetration rate of 69.12%. Based on the number of handsets in the local market (1.5M) and the size of the population (2.6M) it can be deduced that Jamaica's mobile market is approaching saturation with a mobile penetration rate of fifty seven percent (57%). The level of handset saturation coupled with the competitive nature of the market and the intention of mobile providers to deploy 3G networks in the near future, has created an ideal environment for introducing mobile commerce applications. Consequently the purpose of this research is to examine users' perception of proposed mobile commerce services to be introduced to the Jamaican telecommunications market and to understand the mobile value-added features that are most appealing to consumers.

2 Aim

The successful implementation and wide scale adoption of mobile commerce services is best achieved by understanding consumers' attitude, interests and needs. This principle has been presented by researchers [9], [10] and [11], as the key to creating large returns on investments in wireless telecommunication. This standard will be applied to the Jamaican wireless telecommunication sector in order to increase the probability of achieving successful integration of mobile commerce services within the market. Consequently the aim of this research is to understand consumers within the Jamaican telecommunication market and to determine what are the value-added characteristics/properties of services that are most desired by consumers

3 Significance

According to [5] majority (72%) of Jamaica's mobile subscribers utilize their phones solely for voice communication. Therefore based on reports made by [5] and the competitive nature of the local telecom market it can be deduced that in the near future the average revenue per user for voice communication will be on the decline. The aggressive competition that exist within the market, the high penetration of handsets and the use of mobile phones primarily for voice communication are all indicators of the need for a new revenue stream. Therefore the significance of this study is centered on determining what type of cultural or regional content would be ideal for creating new revenue streams for the mobile industry.

4 Literature Review

The views expressed by researchers on the issue of content creation have been consistent based on the literature examined. The general stance taken is centered on the creation of services based on consumer perspective. Researchers such as [9] highlights that in order to achieve high levels of acceptance of m-commerce it is important to be knowledgeable of consumer's need, definition of consumer usage context, and possess the ability to maximize Mobile Content Quality (general value-added aspects of mobility such as personalization, localization ubiquity etc.) for customers. The importance of incorporating the user's perspective in creating a marketable end product is also emphasized by other scholars who believe that a consumer oriented approach is the key to mass market adoption. [10] explains that in earlier years of mobile platform development, the emphasis was completely placed on technology and not end users. [10] criticize the current linear approach in which mobile carriers dictate terms of innovation and development to content providers and users. [10] suggests a more ecological approach in which content providers, technology companies and users of the platform all play an important role.

The views shared by [10] coincide with that of [11] and other researchers who advocate that the user perspective should be taken into consideration. Studies conducted by [11] and [12] convey that the development and deployment of any mobile application should be done from the consumer perspective. [12] explain that several companies have invested in projects from a 'technocist focus', which means they have neglected the consumer perspective during development. The authors explain that this approach have resulted in the failure of projects. According to [13] the need to evaluate different opinions on value- added services lies in the possibility that one group may have a high opinion of a specific value-added service feature, whereas another group may completely reject this value-added offering.

The idea of using the consumer perspective to develop applications has lead researchers such as [11] developing frameworks and guidelines that address the issue of consumer needs. [11] propose an analytical framework that can be used to evaluate the suitability of applications for M-commerce. The framework consists of two components namely wireless-value and mobile-value. The wireless-value is defined as the value, which arises when using unwired devices for example a laptop or a Per-

sonal Digital Assistance (PDA). On the other hand mobile-value is defined as the value arising from the mobility of the new medium for example making an Internet connection with a PDA. The authors made it clear that the fact that a device is wireless doesn't mean it offers mobile-value.

[11] focused on the mobile-value perspective, which is broken down in the following areas:

- ✦ **Time-critical arrangements:** Time-critical situations arise from external events, which mean that the always-on connectivity of the medium is an important feature for example alerts for stock traders.
- ✦ **Spontaneous decisions and needs:** These needs are related to products and services that are characterized by the purchasing decision being straightforward, meaning that they do not require careful consideration. Spontaneous needs can also be entertainment-related, efficiency-related or even time critical in nature.
- ✦ **Entertainment needs:** These needs are centered on killing time/having fun, especially in situations where there is no access to wired entertainment appliances. Entertainment needs are generally also spontaneous in character, especially in mobile settings.
- ✦ **Efficiency ambitions:** These applications are aimed at productivity
- ✦ **Mobile situations:** These services are valuable only through a mobile medium, as needs for these services predominantly arise when users are on the move for example vending machine payments,

The results of the study carried out by [11] indicate that services offering mobile-value on several dimensions prove to be more interesting than services that offer one dimension of mobile-value.

The importance of mobile consumer perception and the offering of value added services have also been examined by [14]. [14] states that the relationship between consumers and suppliers in the wireless environment should be viewed from a value proposition standpoint. Clarke defines the value proposition for mobile commerce within four (4) categories (see table 1). The categories presented by [14], [11] are similar to summaries made by [9] who concludes that the general value-adding features of the mobile medium are personalization, localization, timeliness, ubiquity and convenience.

[13] utilizes [14] value proposition framework to examine numerous mobile commerce services offered in Taiwan and China. The findings from the study suggested that each category of mobile commerce is characterized by a diverse combination of value proposition attributes. However, based on results obtained the authors conclude that value-added service tendency is largely driven by entertainment as these services were highlighted in the study as having the most value.

The ideas presented by [11], [14], [13] and [9] are all similar. All authors argue that in order for m-commerce to be successful Mobile Content Quality (MCQ) must be carefully examined in the presentation of services. The result of work conducted by [9] indicates that media that adds value to the user will be the most successful within the market. Therefore it must be reiterated that mobile users should have a say in the types of services brought to market.

Table 1. Clarke's Value-added Proposition Framework.

Value Proposition	Definition
Ubiquity	Mobile devices allow users to receive information and perform transactions from any location on a real-time basis. The question here is, what value offering will be provided everywhere at the same time?
Personalization	The personalization of messages based on time and location for specific users. The issue that needs to be evaluated within this category is, what individual based target market can be employed?
Localization	Supply of information relative to the current geographic location of the user. Developers should evaluate, what location-based marketing strategies can be offered?
Convenience	The ability to access information and services without the constraints and limitations of wired infrastructure. The area of focus within this category is what factors create time and space utility?

5 Methodology

The arguments presented by [13] highlighted that gathering consumer perspective from different user groups is essential in understanding mixed reactions to the same value offering. That is, one group may accept a particular service while another may reject that same service. Based on this principle a study will be carried out that seeks to understand the interest of mobile users within the Jamaican telecommunication market. The method of data collection for this research is the survey technique. The survey instrument will be pre-tested among a group of twenty-five (25) persons selected randomly in order to determine the accuracy and level of clarity of the instrument. Five Hundred (500) persons will be sampled from the three counties in Jamaica (Cornwall, Middlesex and Surrey, see fig. 1). The participants will be chosen at random in order to negate any unforeseen bias. The data collected from the survey will be analyzed with the SPSS software. Linear Regression technique will be applied to the data to determine predictor variables for consumer choices. Frequencies, correlation and means will also be calculated. The results from this phase of the investigation will be used to develop the service which is most favoured by users/consumers.

Using the analytical framework created by [11] the following services will be classified based on their mobile value offering (see table 2).

Based on the classification stated below the research seeks to answer the following questions:

1. To what extent is it likely that a particular service will gain popularity in the early years of introduction?
2. How does mobile- value correspond with the demographics of users?
3. Are consumers likely to favour mobile services that offer a broad range of mobile value?

Table 2. Mobile Service Classification.

Mobile service	Mobile –Value				
	TC	S	EN	EA	MS
Watching TV on the cell phone		✓	✓		✓
Downloading and listening to music		✓	✓		
Playing a game that predicts the lottery		✓	✓		
Viewing sports (cricket, football, racing)		✓	✓		
Accessing information on local recipes		✓			✓
Video calls		✓			✓
Sending pictures to friends		✓	✓		
Pay utilities (Light/water)	✓	✓			✓
Playing the lottery		✓	✓		
Voting for election candidates	✓				✓
Check advertisement for houses	✓	✓			✓
Viewing weather Report	✓	✓			✓
Purchasing movie Tickets		✓			

- Time Critical –TC
- Spontaneous – S
- Entertainment Needs – EN
- Efficiency Ambitious – EA
- Mobile Situation – MS

**Fig. 1.** This Figure illustrates the location of the different counties in Jamaica.

6 Conclusions

The Jamaican telecommunication market is at the ideal stage for introducing wide scale mobile commerce applications. However in order to achieve a successful introduction to the market consumer interest must be accessed. Therefore this research will be instrumental in understanding what content is most appealing to consumers and what will drive mass adoption for sustainability in the market. The results of this study will provide a foundation for understanding consumer preferences in the local telecommunication market. The findings of this study will also be useful to telecommunication providers both locally and internationally. The results will also be instru-

mental in providing insight on what services would be most suitable for development within the local market.

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