

AN ALARMING SIGNAL IN MOBILE TELECOMMUNICATION INDUSTRY: A STUDY IN MALAYSIA

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ABSTRACT

The use of products and services of the mobile telecommunication industry becomes a part and parcel of each human being around the globe irrespective of the age. It is hardly visible to see people without the use of telecommunication technology in today's world. The present research article examines the alarming signal of market saturation of telecommunication companies in Malaysia as internal competitors is increasing in number and age restriction of 18 years and above for legally registered owners of mobiles. The saturation in the mobile telecommunication market is due to the relative low birth rate in Malaysia, the eligible population to register a mobile phone is not proportional to telecommunication service providers. In addition, there is also new Mobile Virtual Network Operators (MVNO) which magnifies the problem further. Otherwise the local service providers have efficient and effective networking with other countries; the sustainability of the telecommunication company's performance is at stake.

KEYWORDS

Telecommunication Industry, Market Saturation, Mobile, Operators, Value Add, Customer

1. INTRODUCTION

According to the statistics by the International Telecommunication Union (ITU) (2014), the mobile cellular subscriptions exceeded 7 billion worldwide by end 2014. The penetration rate for Finland is above 1.41 mobile subscriptions per person, Australia is lower than Finland and having about 1.14 in 2009. According to Riikonen, Smura, Kivi, and Töyli (2013) in developed countries the market is already reaching saturation from the report by International Telecommunication Union (2011), however in developing countries the penetration rate is growing. Mobile phones are no longer a tool to communicate, but the device used to play games, camera to take photos or connect to the internet and corporate information technology systems. Carlsson, Carlsson, Hyvonen, Puhakainen, and Walden (2006) opine that revenue generation for the operators are mainly from the mobile telephone services such as SMS, ring tones, wall paper, and logos. In Europe the adoption of new mobile services is slower than forecasted. Okazaki and Mendez (2013) have stressed that the physical appearance of the device such as the sizes and the form of the latest design and the convenience to use and the pricing of the device can bring greater

business. On 30th June 2014, India Express daily reported that with the advancement and sophistication in telecommunication made India becomes cost effective in launching indigenous satellite rockets to developed nations. Johnson (2013) stated that the usage of mobile phones may have even greater importance for the participants of qualitative research, engendering trust, access, and voice. In the year 2010 the number of mobile phone users in Malaysia is estimated at 33.9 million and by the year 2015 it will reach 40 million. This clearly indicates that the number is more than the country's population, of 28.5 million, which means one person carries more than one mobile phone.

2. LITERATURE REVIEW

Junmo Kim (2011) has described that technology driven growth is meaningful when the market is at sustainable phase. Once the market advances, then it will go to saturation phase. The service and telecommunication sector is not totally free from the market saturation and the future may not be the same as it has been in the past. According to Lee, Yu, Yang, and Kim (2011), the diffusion rates of information communication technology (ICT) products like mobile phones, internet, and PC nearing to 100 percent adoption rate in many developed countries whereas in developing countries mobile phone distribution rate is at 80% or more. The current rate of growth indicates that everyone in the world can have a mobile phone in the next decade as predicted. (The Economist 2009) mobile-phone access will soon be universal. Ahmad et al. (2010) stated that in Pakistan cellular companies experienced 100% growth rate many years before. Due to competition these companies are in saturation phase in the market and to acquire additional customers. Nikbin, Ismail, Marimuthu, and Armesh (2012) (Malaysian Communication Multimedia Commission) commented that the penetration of mobile phone usage in 1996 was 9.8/100 and in 2008 it has grew up to 93.9/100 per the person. Thus, this rate shows that it is reaching saturation point and the operators need to offer various types of incentives and maintain customer loyalty as a priority in their business decision in order to avoid the decline or churn in customer base. Malaysia as a developing country in South Asian region has a population of 29,947.6 million and of which 3 million are foreigners contributing to the development of the country in many sectors such as, construction, industrial development and plantation The telecommunication industry, plays a vital role in the international direct dialling calls (IDD) which generates good revenue to the telecommunication companies. It is projected that in 2040, there will be an increase of 10 million populations in Malaysia. However, the annual population growth rate decreases from 1.8 % in 2010 to 0.6% in 2040. This is in tandem with the targeted decline in fertility rate and international migration (Department of Statistics Malaysia) The market saturation in telecommunication industry is inevitable due to several factors such as:

- i. The new born or birth rate in Malaysia is low, the estimated annual population growth rate decreased from 1.8 per cent in 2010 to 0.6 per cent in 2040 (Source Department of Statistics Malaysia 2003).
- ii. Based on the Malaysian law, the legal age for a citizen to have the eligibility to register an account with the telecommunication service provider is 18 years and above.
- iii. Competing within the telecommunication service providers locally is unwanted for, as it does not fetch more revenue.
- iv. Mobile Virtual Network Operator (MVNO) has been yet another incoming new service provider for better pricing and better operational plan.

The market saturation in the Malaysian telecommunication industry leads to instable sustainability. Backiel, Baesens, and Claeskens (2014) pointed out that the customer retention becomes paramount in many market including mobile telecommunication. When market becomes saturated to get new customers it is much difficult to maintain even the regular current users. Thus, the cost of acquiring a new customer is higher than to retain it. Leung, Chan, and Chan

(2003) have commented that one of the highest penetrated mobile devices in the world is Hong Kong. The time has come for them to go out of the market due to less scope in inner market and to make on the outer market which has high potential to accelerate the survival. Klepper (1996) mentioned that company creates a highly innovated product may capture and obtain the highest market share and encourage new comers in the market. Baldemair et al. (2013) pointed out that in 1970 till 1980 customers concern was on the communication for making and receiving calls. With rapid changes in the telecommunication industry, customer wants more sophisticated task to be carried out in the mobile or smart phones. According to Robert et al. (2013), the greatest achievements in terms of capabilities of mobile communication networks together with the introduction of new types of high tech devices such as tablets and smartphones are an important role in bringing the society to fully connect. Understandably, this does not stop here because the evolution of the 5G is expected to hit the market by 2020 to offer more convenient features to satisfy customers. Janevski (2009) pointed out that development of 5G is on the device which has many features such as screen extension, VoIP, TV, Office, entertainment and many more. Patil, Patil, and Bhat (2012) mentioned with 5G technology users can connect mobile phones with the laptop for broadband access. With all the applications and features such as video player, camera, mp3 recorder, messengers, photo treatment and games have made the mobile devices as a handheld computer. The anticipated market saturation in the Malaysia telecommunication industry leads to instable sustainability. Currently, the inner scope market is very limited, therefore the companies must go out to venture into the new market. The pricing strategy leads to erosion of the profit and does not make any betterment to the companies in the long run. In this process, the customer actually gets a better deal and choice due to internal fighting on pricing strategy. Kim, Park, and Jeong (2004) remarked that the strategy of business in the Korean mobile telecommunication services is to increase customer loyalty. The operator must increase customer satisfaction and eliminate the barriers of customer switch over intention. Ning and Feng (2014) remarked a challenge to the operators on how to maintain more customers and take new ones gradually. Bieschke et al. (2009) revealed that subscribers perceive the switching barrier as high, discouraging subscribers from switching carriers. Brenda Mak, Paul Beckman, Nicole Bohn (2013) suggested countries need to review the policies and regulations to make the mobile phones with the features for users with disabilities to use. Hsieh, Jones, and Lin (2008) suggested that mobile commerce (m-commerce) has become important for business organisations in evaluating the potential revenue for the market, Chen and Nath (2004) explained that many predict that mobile business will revolutionise via e-commerce due to many technical , application and global issue related to mobile business growth and its implications.

3. RESEARCH GAPS IN THE LITERATURE

With tremendous growth in the telecommunication industry and rapid change in daily basis, the operators need to be more adaptive to the changes in this sector. Malaysia has a small nation with 29 million population has tough challenges to address the issue of market saturation because many operators are fighting each other to be competitive and profitable. The Key Performance Index (KPI) of companies is raised by the shareholders and the management needs to be achieved the target gave by the company. The real problem is how the operator of the telecommunication industry will sustain, prosper and grow in the business in the forthcoming years due to market saturation. They should think of the ways and means to overcome the issues. The technology in this industry is particularly changing rapidly in a short period of time and to be competitive the operator's need to adapt these changes. By maximizing the current work force and equip workforce with the necessary talents and skills, outsourcing non-core business units, and importantly to venture into the international business via joint ventures. The market saturation is inevitable, but we need to find ways to prolong the maturity stage in order for the operators to be profitable in the coming years. There are many studies executed on the telecommunication

industry but from the literature review not many studies focus on the pre and post strategies to ensure the operators' sustainable business and this is the focus of the current study.

4. CONCEPTUAL RESEARCH FRAMEWORK

The proposed conceptual research framework may help to prolong the saturation in the telecommunication companies and is illustrated in Figure 1.

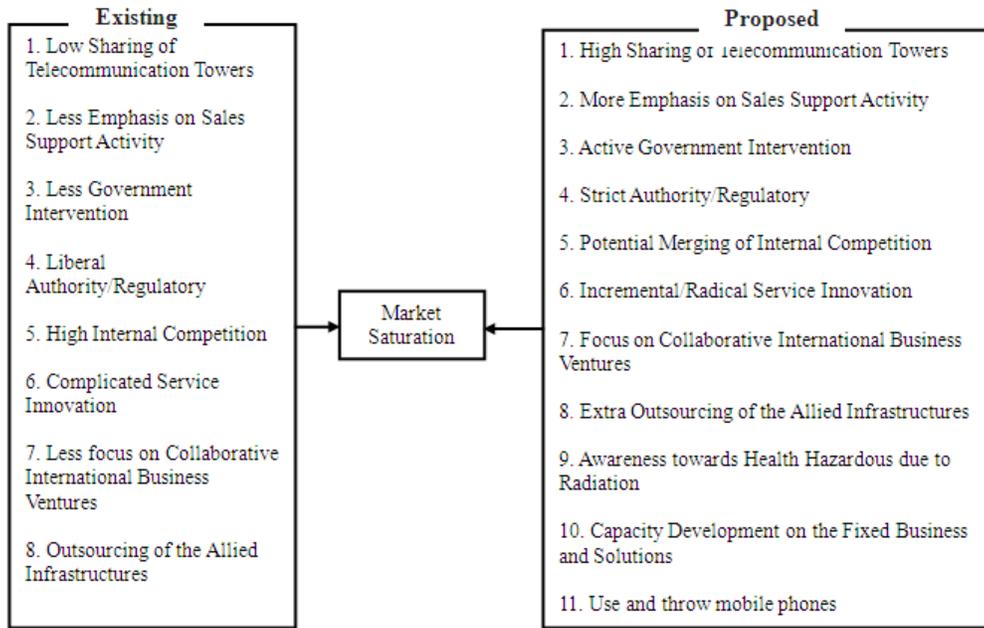


Figure 1. Conceptual research framework

4.1 Sharing of Telecommunication Towers

Sharing of network towers means with a single tower, each service provider is able to fix their dishes and gadgets. With this they can reduce the capital expenditures (capex) of their respective company budget. According to Meddour, Rasheed, and Gourhant (2011) stated that when the pioneer venture to this business, one of the criteria to differentiate their coverage with other operators was coverage area. Hence, they were early competition in securing single owner or operator to a Minneapolis single area in terms of coverage. Choudhary, Babar, Shakeel, and Abbas (2009) pointed out that having sharing agreement among the telecommunication service providers leads to saving in the capital expenditure increase efficiency and reduction in the cost of technology upgrades.

4.2 Sales Support Activity

Goffin and New (2001) pointed out that all products users regardless of Information Technology, camera, computer or home appliances need customer service support when they have problems in using the products or more information regarding the products. Customer or sales support includes after sales support, technical support and call centres. In some organizations sales support activities are outsourced to make it more effective. In any aspects to prolong the saturation phase, operators need to have strategy focuses on the sales support services which add

value to the products. Tao Zhou (2013) mentioned that the success of the mobile operators is from the continuance usage of mobile phones. Mobile internet has been developing rapidly in the world and the operators have released many value add like instant messaging mobile.

4.3 Government Intervention

Presently the need has arisen for government intervention to become the watchdog of the industry. Rules and regulations need to be posed to ensure that the companies have carried out the contingency process to overcome the market saturation in the industry (Lee, 2002) stated that Malaysian Communications and Multimedia Commission(MCMC) was formed under the Malaysian Communications and Multimedia Commission Act,1998 (MCMCA). Nwakanma, Asiegbu, Eze, and Dibia (2014) recommended that to reduce the operating expenditure for the operator's and also to bring down the cost of using the services offered to the user's consistent power supply is a crucial factor. This study also emphasized that telecommunication policies must be transparent and stable in order to create a business promoting environment to pull the foreign investments and to build the industry.

4.4 Authority and Regulator

The Malaysian Commission for Multimedia Communications (MCMC) was established to be an independent regulator. The related ministry or departments must play their role diligently to closely monitor the issuance of the sim cards and the sim card itself must have a monitoring system such as GPS trekking or the sim card movements. This will help both parties the user and the authority in the long run. If a user lost his/her way, then the authority has the capabilities to keep track of them. Also the customers cannot misuse the sim cards for prohibited or illegal activity which will harm the society and the country in general.

4.5 Competition

Undoubtedly the product differentiation will make the organization to prolong their survival in the market. Ibrahim, Shahid, and Ahmed (2014) stated that the Pakistan Telecommunication Authority has more than 122 million mobile users as of March 2013 which caters by six telecommunication operators. By offering all types of value added services in mobile phones it makes the users not to use too much of computers. This makes the life of the younger generation executives easy. As suggested by Pereira and Vareda (2013) the operators are now focusing on bundling of packages to ease the customers' convenience so that customers do not need to buy from different suppliers. With the rise of this new strategy, the pressure of competition will be lessened. Presently in Malaysia the most popular bundle is voice, data and Astro on the go (television services). Zhu, Yang, Wu, and Wei (2012) commended that the competition in mobile phone market has been dramatically increased recently.

4.6 Service Innovation

Kumar (2004) recommended that the United States of America (USA) mobile market excels in service innovation compared to Europe and Asia. American customers' concern for the security and reliable wireless services, whereas Asian and European customers give importance to culture and lifestyle. Zhang and Prybutok (2005) have studied the growth through differences among the three countries China, US and Europe regions. The single focus on voice in the long term leads to decline of average revenue per user. In Malaysia, the tourism sector is going forward with the program Visit Malaysia 2014 which expect about 10 million international tourists to flock to Malaysia and the country have committed to give the hospitality to the tourists during their stay in

the country. Wu, Talwar, Johnsson, Himayat, and Johnson (2011) suggested that mobile internet is evolving towards the embedded internet and the main application is M2M (machine to machine). In order to have a successful embedded internet the development of new technologies and broad standardization effort in system interface network architecture and implementation platforms are needed to be in order. The telecommunication companies can have sim cards which have embedded functions such as phone directory which flash emergency and important phone numbers like immigration offices. Police stations and hospitals in Malaysia. With this opportunity the telecommunication companies can introduce a number of service innovations such as:

- i. The mobile devices with local sim cards act as a map or mobile tourists guide to take them around the country with the concept of convenience, cheap and reliable service.
- ii. The telecommunication companies need to have short term sim cards with competitive price which will be a critical factor for the tourist to use it and will be very convenient to them if it has language translation like in Persian, Mandarin, Tamil and other major languages of the country.
- iii. The sim card should be cheaper because the embedded or value add service will last long for a certain specific period of time. It should be similar to the concept of prepaid whereby there is a tendency for the user's to use. With all the above features, the company actually can contribute to their earnings and the language translator can play a vital role in assisting the tourists. Lehr (2014) enhances network capabilities, latest hi tech devices, appealing contents new continuous investment along the value chain makes faster connectivity which will help to handle the traffic, potentially allow interactive and rich multimedia to be used in faster manner. Alexandros Tsiaousis George. Giaglis (2014) concluded that mobile websites are getting popularity and research found that environmental distractions have a significant effect on user performance, but not on user satisfaction. Clifford and Cifton (2012), it was stated that due to a shortage of trained health care providers and specialists due to leaving from the present country to other countries in the world which gives them better salary and perks which really create a situation for mobile health (mHealth) in developed but lack of resource countries. The mHealth are the tips and health information provided for diabetics, hypertension, pregnancy, stroke and other major related disease. Noordam, Kuepper, Stekelenburg, and Milen (2011) suggested that the mobile phones not only can be used for basic communications such as making and receiving calls but it can go beyond. It can be used widely in the health industry to improve the maternal health services. Werthner and Ricci (2004) opine that the tourism industry indulges in e-commerce activity via the mobile application to access information , to make online booking for hotels , to check currency and many others task just using the mobile devices. The new technologies give what a business traveller wants faster and in convenient manner, but the challenges here are on the trustworthiness and the level of security in order for hackers not to bypass the transactions. Zhaohua Deng (2013) found that the advances in healthcare technology and public concern for health attracted many users.

Taghizadeh, Jayaraman, Ismail, and Iranmanesh (2013) commented that the success of telecommunication companies are determining by the innovation services that they can deliver on time to capture the market and to be competitive. The growing pace of the industry is very robust thus service innovation will lead the market.

4.7 Collaborative International Business Ventures

Instead of focusing on local markets, it is a high time for the service providers in Malaysia to venture their markets aggressively outside the country in Indonesia, China and other developing Asian countries. Lin (2008) reveal that the international investment benefits both parties, namely the investor and the invested countries and it is a win-win strategy. Foreign direct investments not only gives extra funds, but also the investor can bring their know how in technological aspects of the investing countries.

4.8 Outsourcing Infrastructure

Loren Brandt and Eric Thun (2011) studied that China becomes the world largest market for mobile phones in telecommunication sector. In relation to China outsource activities is less in technology to international business ventures mutual understanding. Similarly, a Malaysian telecommunication companies can nurture the possibility of accelerating business with the potential Indian market.

4.9 Health Hazardous Radiation

Kundi and Hutter (2009) studied on cancer to residents staying near to base station exposure which is of low priority. As a result, only a few investigations of effects of base station exposure on health and wellbeing exist in literature. New Zealand Herald Wednesday, May 28, 2014, reported that World Health Organization (WHO) concluded from their studies that there is no link between mobile phones and staying near the base towers questions which may cause any kind of cancers. The US government also for the last 11 years studied the same and they also reported that there is no connection between cancer and the use of mobile phones. Meddour et al. (2011) commented that the pioneers who venture to this business follow one of the criteria's to differentiate their relation with other operators in the coverage areas of the base towers.

4.10 Fixed Business and Solutions

The telecommunication industry is converging to be on the verge of market saturation and therefore the likelihood that there are a few operators trying to diversify the business towards getting licensed to sell fixed business. The operators who have the license are pushing their level best to compete with the current and monopoly player, like Telekom Malaysia (partly owned by the Malaysian government). Peng Lin, Jin Zhang and Qian Zhang (2013) suggested that femtocells can be used to boost up and improve the indoor coverage. However, this is workable with the fixed line network infrastructure, but for the mobile operators, the fixed line connections can save money only from the capital expenditures.

4.11 Use and Throw Mobile Phones

Ongondo and Williams (2011) stated mobile phones have relatively short life cycles and are rapidly seen as obsolete by many users within little over a year due to the tremendous change on its functionality such as an upgrade version of camera, music players and others function of the mobile phones. It is becoming a growing issue related to the waste electrical and electronic equipment (WEEE) and shortage in the types of metal used in mobile phones. According to Ha, Lee, Jeong, Hai, and Jha (2010) recycle of mobile phones waste is needed to protect the environment and the users of it. Mobile phones contain toxic elements such as lead mercury and other valuable metals. However to use and throw strategy mobile phones which made by recycling plastic type and transparent will act as a pulling factor for the short term users with low price will definitely bring the market to greater heights.

5. Conclusions and Suggestions

In looking at the rapid changes in the telecommunication era and customer's preferences it is imperative at this juncture to study the future of the telecommunication industry as the market is heading to saturation phase and it is an alarming signal for the operators to put a halt to this stage and roll out strategies to overcome the saturation or extend the life cycle. It was clearly stated that

by introducing new technology such as 5G tentative roll up will be a new generation in the years to come. The value add services with new features for example, mHealth for the health sector, embedded sim card for the tourism sector and collaboration with foreign partners. Tsai, Lo, and Chou (2009) stated that internet and mobile telephone services are both important for intercommunication between people. In addition, wireless technologies become popular and emerging technologies to the telecommunications industry.

Every country needs to emphasize on longer term strategies in order for the operators and telecommunication industry to prosper and make their presence in the future. Therefore, in the case of Malaysia it should focus and align the position to look for the business opportunities outside the country and the government on their part need to the industry and exercise the regulatory role stringently in giving licenses. The periodical and systematic monitoring using the available act and regulation needs to be enforced. With the market saturation on the card our focus should change from the voice concentration to the data concentration which will be the revenue generating avenue in the future. This can be done through basic text messaging to fixed line services using microwave or fibre optics. However, due to market saturation the operator's need to maximize their revenues and performance of the available infrastructure. Moving forward the mobile operators and the device manufactures should ink win-win networking. The time has come for them to diversify the business to wholesale or business to business (B2B) by renting or leasing their infrastructure to the third parties for example the Mobile Virtual Network Operator (MVNO). The future generation would enjoy the benefits of new technology in telecommunication industry provided the stated enrichments in the present article have been fully explored.

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