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Value Innovation Activities in the Wireless Telecommunications Service Sector: A Case Study of the Malaysian Market

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Abstract

Innovation has become an important source of growth and survival for the telecom industry, especially with the highly competitive, dynamic business environment of this sector. The telecom market attributes of liberalization, privatization and globalization result in fierce competition, which aggravates telecom firms' challenges to expand their market share, and hence, increase customer base, sales volume, and ultimately profit. A new strategy to succeed is innovation differentiation, which leads to breaking out the competition and creating uncongested market space. The aim of this paper is to highlight the logic of value innovation in the wireless telecom sector. A qualitative research approach was used to analyze the actions related to value innovation in the mobile service sector in Malaysia. In particular, this study focuses on the motivation, and hence the changed strategies, of telecom service providers to embrace value competition rather than traditional tariff competition in order to enhance customer satisfaction and encourage customer loyalty, which will ultimately result in higher profitability and growth. The services and loyalty packages provided by the telecom firms were reviewed through employing analytical case study. Also, this paper highlights the drawbacks and limitations of the services that did not live up to the expectations of customers and failed to earn their loyalty. Moreover, this study gives suggestions to service providers regarding ways to achieve long-run profitable growth.

Keywords: innovation, value innovation, telecom, Malaysian telecommunications industry

Introduction

Innovation has played a key role in economic advancement, thus becoming a topic of interest for both entrepreneurs and scholars. Today, innovation has become imperative for the growth and achievement of any company due to the highly competitive environment of global business industry (Abdi & Ali, 2013; Drobyazko, Hryhoruk, Pavlova, Volchanska, & Sergiychuk, 2019; Letangule, Letting, & Nicholas, 2012). So, companies need to be more efficient in quickly

producing and modifying their products and offering services that can satisfy customers' rapidly evolving needs (Drobyazko et al., 2019; Ranju & Versha, 2012). Moreover, innovation is not only required for the company's growth and survival, but it also boosts a country's economic growth by improving the living conditions of an area (Abdi & Ali, 2013). According to Schumpeter (1939), innovation leads to enhancement of the economy, which ultimately results in success and affluence. Hence, innovation is one of the most prioritized concepts as it makes major sectorial and regional developments possible (Wagner, Taylor, Zablit, & Foo, 2014).

Generally, the term *innovation* refers to the process of pioneering new ideas and concepts that aid in the enhancement of overall organizational performance (Rogers, & Rogers, 1998). The innovation could be in the form of new service, product, technology, method of production or market or management system (Ranju, & Versha, 2012). Moreover, for a successful implementation of an innovation process, it is crucial to manage innovation resources and efforts. Therefore, innovation is also noted as a management *buzzword* (Gassmann, Frankenberger, & Sauer, 2017; Ranju & Versha, 2012).

Value innovation plays an important role in improving the strategic thinking and innovation management efforts of a firm. Therefore, organizations with well-defined aims and objectives have higher rates of success in producing, determining and implementing new business prospects that are able to bring prominent developments in the technology, operation and market (Smith, 1994). With the concept of value innovation, business differentiation can be achieved through the enabling of a quantum leap in buyer value, whereby breaking through the competition and creating uncongested market space (Kim, & Mauborgne, 1997, 1999).

The telecom industry has been highly reliant on innovation as a key source of sustainable growth and rapid expansion (Hajar, Ibrahim, & Al-Sharafi, 2018). The introduction of a variety of highly innovative products and services allowed telecommunications companies to enhance their performance and profitable growth (Hajar et al., 2018). For example, the introduction of an advanced telecommunications technology like CDMA and LTE, having a high data transmission speed and bandwidth, resulted in the production of new revenue streams like Value Added Services (VAS) (Hajar, Ibrahim, Darun & Al-Sharafi, 2020).

Moreover, telecommunications companies are trying to escape market growth saturation through offering a large variety of innovative services. The new focus of these companies is the increase in customer value to maintain existing customer loyalty through innovative products and services, instead of seeking new customers (Ahn, Ahn, Byun, & Oh, 2011). Therefore, telecommunications companies need to move ahead with the value innovation logic of breaking out the competition through making leaping in buyers' value, whereby opening new market space and forming the need for demand and more chances for profitable advancement (Kim & Mauborgne, 2005).

This paper highlights the need for value innovation in the telecommunications service sector by motivating telecommunications firms to work more on techniques related to value competition rather than tariff competition for the purpose of enhancing customer satisfaction and encouraging customer loyalty, which will ultimately result in having better business performance and higher profitable growth. To this end, a qualitative research methodology was used to examine the value innovation activities in the Malaysian mobile service industry. The firms' attitude towards customer value was analyzed in the study. The present study employed an analytical case study

approach to investigate the mobile services and loyalty packages given by mobile service providers. The collected data was gathered by observing the organizational activities and also from the online information present on the company's official websites and reports published by them.

The following parts of this paper are organized into three main sections. Section 2 presents the literature review, including innovation in the telecommunications industry, technological capabilities, value innovation, and customer satisfaction and loyalty. That is followed by Section 3, which analyzes the mobile telecommunications service industry in Malaysia. It discusses the Malaysian market evolution processes, market situation, shortfalls and actions that discourage customer satisfaction and loyalty, as well as provides suggestions to enhance long-term success and survival. Finally, the conclusion of the study is provided in Section 4.

Literature Review

Innovation in the Telecom Industry

Since 1960s, innovation has played a key role in the development and expansion of the telecommunications industry around the globe. It all began when major innovations brought alterations in the conventional technical and institutional system of the telephone network (Davies, 1996). Innovation was included in the telecommunications industry via extensive research and development (R&D) to advance technologies and to find solutions for problems related to this sector. The telecommunications system has undergone drastic changes after studies were done in field of telecommunications technology, whereby it advanced from automatic to electronic telephone switches, which later included private branch exchanges, telefax, radio links, mobile systems, internet and data transmission, television, satellite technology, cable television and alarm systems (Hauknes & Smith, 2003).

As further advancements continued to take place in telecommunications R&D projects, the element of administration was inevitably added in order to enhance quality, increase profits and reduce cost. For example, as the telecommunications market is growing at a fast speed and becoming more competitive by the day, therefore, it has become imperative for firms to enhance their competitive advantage by introducing more innovative ideas, products and customer services to attract more clients and also retain the loyalty of existing customers through more creative market techniques and better project finance systems (Chaturvedi, 2003).

Ranju & Versha (2012) stated that innovation had become a key factor in the telecommunications industry due to the ever-increasing need for demand and competitiveness in this field, along with technological advancements brought by various telecommunications firms. Innovation is becoming a more significant element in this industry because of three major trends: higher global competition, incoherent and challenging markets, and a variety of instantly changing technologies (Letangule et al., 2012).

Today, innovation is considered to be a major source of growth and survival, particularly in the telecommunications services industry (Abdi & Ali, 2013; Drobyazko et al., 2019; Ranju & Versha, 2012). As Bentley (2014) emphasized, innovation has become critically imperative for telecommunications firms and not a choice anymore. The environmental changes of market globalization, liberalization and privatization have made it harder for telecommunications

companies to survive and succeed without making use of the concept of innovation (Ranju & Versha, 2012). As a result, innovation capabilities have been improved by exchanging knowledge, information and experiences among the companies through global alliance.

As the mobile technology has advanced from 3G to 4G and 5G now, along with competent traits of high-rate data transmission and bandwidth, the telecommunications industry has taken a huge leap from simple voice and text messaging to inclusion of capable media and multifaceted internet services (Birudavolu & Nag, 2011). These innovative developments have helped telecommunications firms to expand their sales volume by generating new sources of revenue like business-to-business (B2B) services and VAS.

Innovation and Technology

Innovation in the telecom industry has often been referred to merely as a technological development (Drobyazko et al., 2019). Most of the previous researchers and scholars who studied innovation in the telecommunications industry had concentrated narrowly on technological innovation (Ranju & Versha, 2012). However, innovation is much more than technology; it encompasses many other complementary processes for market success.

Technological innovation is defined as the adoption of a creative idea to develop a new product or service, or a new element or technique of production or service operation (Ranju & Versha, 2012) while the implementation of a new organizational or marketing method is described as non-technological innovation (Schmidt & Rammer, 2007). Phillips (1997) has distinguished non-technological innovation from technological innovation by including novel marketing strategies, innovative management techniques or creative change of organizational structure.

However, Schmidt and Rammer (2007) have criticized the technological view of innovation for three reasons: (a) bias toward manufacturing processes and inefficacy to completely capture innovation in services , (b) inability to link new technology development with the adoption and reconstruction of business routines, internal organization, external relations and marketing, and (c) inefficiency in interpreting new ideas and business opportunities into market success due to weaknesses in associating product, process, and organizational innovation.

On the other hand, for telecommunications firms to cope with the rapidly changing phenomena and highly competitive market environment of this sector, it is critically important for these firms to constantly develop their technological capabilities (Drobyazko et al., 2019; Ranju & Versha, 2012). Thus, telecommunications firms would be required not only to provide new services, products or processes and expect immediate results, but to gear up initiatives to build up technology capabilities with an innovation management knowledge base that, in turn, can be a source for long-run profitable growth and sustainable competitive advantage. According to Ranju & Versha (2012, p. 38), building technology capabilities can be achieved by adopting a strong climate of innovation that can motivate an organization to "identify its technological needs and select the technology to fulfill the needs; operate, maintain, modify and improve the selected technology; and promote technical learning."

Consequently, technological innovators who manage to merge product and process innovations along with organizational and marketing innovations achieve better with respect to sales, market

novelties, process innovation, and cost structure. According to Schmidt and Rammer (2007), companies that institute both technological and non-technological innovations have the greatest innovation impact on profit margin. Thereby, the success of service providers relies on linking both technological and non-technological innovations rather than pursuing a technology trajectory (Damanpour, Walker, & Avellaneda, 2009).

Value Innovation

In the present telecommunications market, simply being innovative is no longer enough to cope with the rapidly changing and highly competitive business environment. Multiple factors are raising the bar and, in the eyes of business leaders, increasing the need for breakthrough innovation (Wagner et al., 2014). According to Herstatt and Kalogerakis (2005, p. 331), breakthrough innovation is "a key strategy for many companies in an increasingly tight competition," where it is a vital improvement in an existing system. Thus, breakthrough innovation has become a necessity for large firms' survival and long-term growth (Jeppsson & Ahlm, 2012).

Value innovation drives value breakthrough via the simultaneous pursuit of business differentiation and low cost to create a leap in value for both customers and the firm itself. The concept of value innovation intents to break out "the bloody competition by creating uncontested market space that makes the competition irrelevant*"* (Kim & Mauborgne, 2005, p. 11). Thus, the logic of value innovation is not about developing new technology, competencies or being first to market, but about the effective utilization of those technological and managerial opportunities to link innovation to value, create new demand and change the market to render the competition irrelevant (Kim & Mauborgne, 1997).

According to Kim and Mauborgne (2005, p. 13), "innovation without value tends to be technology-driven, market pioneering, or futuristic, which often shooting beyond what buyers are ready to accept and pay for". In that context, the logic of value innovation extends beyond innovation activity to a complete strategy that encompasses the entire system of a firm's activities and resources to attain a quantum leap in value for customers and shareholders (Agnihotri, 2016; Chang, 2010). Kim and Mauborgne (1997) emphasized that the logic of value innovation is not restricted to company's size, wealth, type, location or high technological capabilities; it occurs only when a company is able to properly align innovation with utility, price, and cost position (Kim & Mauborgne, 2005). Moreover, Jacobs and Zulu (2012) looked at value innovation beyond industry boundaries by investigating five dimensions of strategy, customers, assets and capabilities, product and service offerings.

Customer Satisfaction and Loyalty

Customer satisfaction is generally understood as the fulfillment response of customers (Oliver, 1999). Existing research has viewed customer satisfaction from two different perspectives; namely, transaction-specific perspective and cumulative perspective. Whereas transaction-specific perspective views customer satisfaction as "a post choice evaluative judgment of a specific purchase occasion," cumulative perspective interprets it "as an overall evaluation based on the total purchase and consumption experience with a product or service over time*"* (Kuo, Wu, & Deng, 2009; Wang & Lo, 2004, p. 174). In telecommunications, customer satisfaction is known as the evaluation, effective response or feeling of customer's post-purchase to the overall product

or service experience (Kuo et al., 2009; Lin & Wang, 2006). According to Diaw and Asare (2018), and Kim, Park, and Jeong (2004), customer satisfaction elevates a firm's performance in both ways; while it does heighten customer loyalty, increase customer volume, improve advertising effectiveness, and enhance firm's reputation, it impedes customer churn, decreases customers' price sensitivity, and reduces operating cost, failed marketing cost, and customer attaining cost.

Besides these perspectives, customer loyalty is defined as a "deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future" (Oliver, 1999, p. 34). In the telecommunications context, customer loyalty can be defined as "a favorable attitude toward a specific service provider, which leads to a repurchase likelihood of additional services from the same provider" (Turel & Serenko, 2006, p. 317). Literature has marked customer loyalty as the consequence of customer satisfaction, and higher customer loyalty depends mainly on higher customer satisfaction (Diaw & Asare, 2018).

Innovation has been indicated as significant a driver for customer satisfaction as a firm's performance, especially in service industries (Bellingkrodt & Wallenburg, 2015; González-Cruz, Roig-Tierno, & Botella-Carrubí, 2018). For instance, innovation plays an important role in enhancing the value of the offered service, and hence increasing customer satisfaction and promoting customer loyalty either by offering new services or enhancing existing services (Bellingkrodt & Wallenburg, 2015; Yi & Gong, 2009). According to Simon and Luc (2012), innovation produces a positive customer experience via creating uniqueness and differentiation over competitors, which, as a result, increases customer share and satisfies their needs. In addition, customer loyalty (brand loyalty) is an important, intangible and valuable resource for sustainable competitive advantage and superior performance (Hajar, Ibrahim, & Darun, 2019). For example, retaining current customers through the promotion of customer loyalty is critical for telecom firms in such a highly competitive environment, especially with the very low swapping cost. According to Wang and Lo (2004), as they cited from Reichheld and Sasser (1990), solid customer loyalty positively influences the company's economic returns; where increased loyalty of current customers implies more customers will re-buy (be retained) in future, and thus provide a steadier stream of future cash flow.

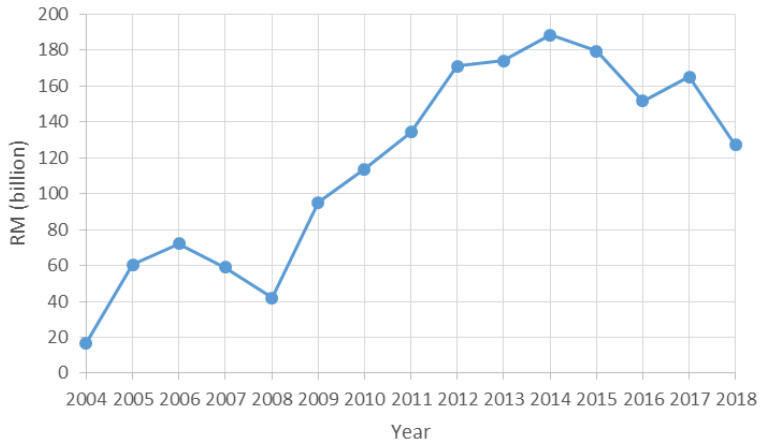
The Mobile Telecommunications Service Sector of Malaysia

Overview

Immense growth and development have been witnessed in the Malaysian mobile telecommunications market since early 1990s, as the market has become more privatized and liberal (Chuah, Marimuthu, & Ramayah, 2015; Said & Adham, 2010; Yoong, Lee, Boon, Tan, & Cassey, 2011). The key factors influencing the development and expansion of the Malaysian market included the high rate of rivalry, ease of access, low-priced services and public awareness along with more acceptance of mobiles (Hajar et al., 2018; Said & Adham, 2010). Other than these factors, the Malaysian economic policies and rules that were relevant to the telecommunications sector have highly aided the changes in the industry and technological development in going parallel to the rapid changes in the global market. Besides Telekom Malaysia (TM), six private companies were licensed to function: Time Engineering Group (Time Wireless), Maxis, Celcom, Mobikom, Sapura Digital, and Mutiara Swisscom which is now known as DiGi (Chuah et al., 2015; Yoong et al., 2011).

Although liberalization had essential advantages in the Malaysian market evolution, it also caused a high increase in tariff competition making it more challenging with regard to resulting profitability. For instance, the fierce competition of the seven telecom operators being followed by merely 20 million subscribers at most exhausted the resources of the telecommunications organizations, especially the newcomers in the market who held smaller customer base with only hundreds of thousands of customers for more than 10 years (Chuah et al., 2015; Hajar et al., 2018). In addition, the Asian financial crises, which struck between 1997 and 1998, severely affected Malaysian telecommunications firms, leaving even incumbent companies like Celcom in debt. This caused the service providers to make several efforts to consolidate; for instance, Sapura Digital combined with Time Wireless to form the company Time Cel, which was taken over by Maxis in 2002. Similarly, Mobikom joined DiGi to become DiGi.com, and TM Cellular with Celcom to form TM Celcom (Chuah et al., 2015). However, in 2008 TM Celcom was separated under a TM revamp plan to leave the wireless business and Celcom solely to operate by providing wireless services as a member of the Axiata Group (Chuah et al., 2015; Hajar et al., 2018). At the same time, a new service provider known as U Mobile came into market by launching 3G mobile services.

That series of market transformations led to a rapid evolution in the Malaysian wireless telecommunications market. Figure 1 depicts the Malaysian telecommunications market capitalization from the year 2004 to 2018, during which the market gradually expanded, particularly after the introduction of broadband services transformed the market in 2008. For instance, in 2009, Maxis was re-listed with RM40.3 billion garnered in market capitalization, while the Axiata group raised its market capitalization to RM25.7 billion compared to RM13.6 billion in 2008.

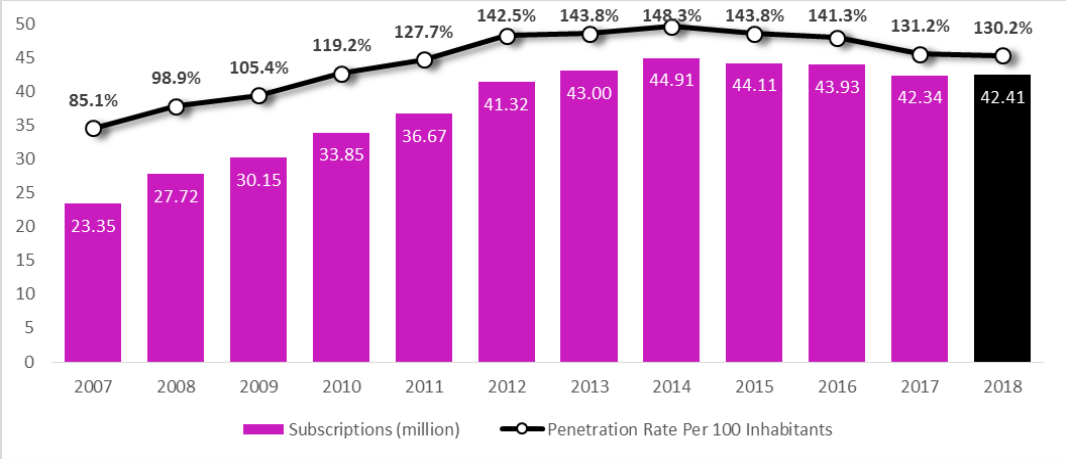


Source: Malaysian Communications and Multimedia Commission (MCMC), 2017, 2018

Figure 1: Malaysian telecommunications market capitalization 2004 – 2018

In the past 20 years, there was a rise in the subscription growth of the Malaysian mobile market, in which the penetration rate crossed 100% for many years. As per the performance report submitted by the regulatory body, the Malaysian Communications and Multimedia Commission (MCMC) (MCMC, 2016, 2017, 2018), in 2007, mobile subscribers witnessed tremendous growth, from 23.35 million to 42.41 million (Figure 2). This major increase of subscribers can be associated with the evolution of mobile broadband in 2017, when mobile broadband experienced a subscription rate of 23.6% (MCMC, 2017). Instead, this expansion was mainly driven by the high

demand for smartphones and the shift from voice subscriptions to cheaper postpaid or prepaid data plans. Moreover, there was also advancement witnessed in wireless broadband technologies, and increased utilization of mobile Internet and digital content, which provided an opportunity for the wireless service providers to increase their revenue output (Chuah et al., 2015; MCMC, 2017, 2018). However, the exceeding penetration rate of over 100 percent indicates that the Malaysian mobile service market has experienced saturation (Chuah et al., 2015).



Source: MCMC, 2016, 2017, 2018

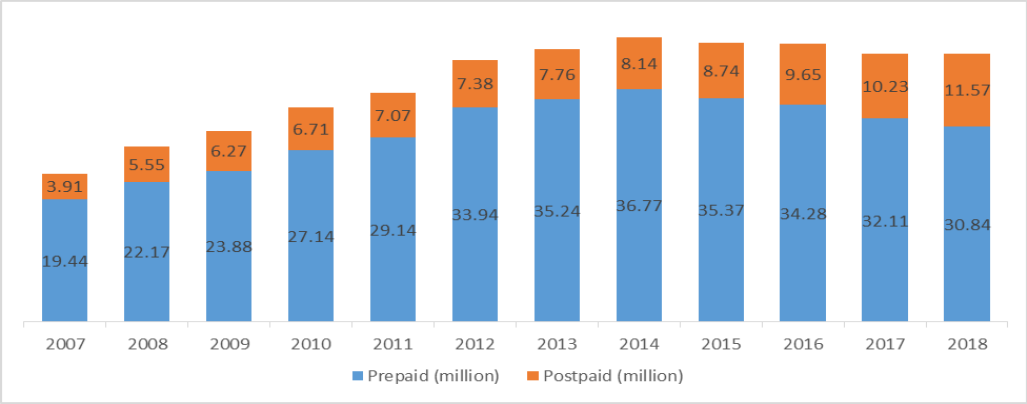
Figure 2: Malaysian mobile cellular subscriptions and penetration rate (2007-2018)

Market Analysis

The Malaysian telecommunications market has witnessed a rapid expansion and advancement of wireless technologies, which in turn resulted in a high rise in subscribers and penetration rate, specifically in wireless broadband and digital content services. Therefore, the conventional business models of mobile service companies have lost their significance as internet and rich media services have taken over the simple voice and messaging services. This has forced the mobile service providers in Malaysia to leave behind the old traditional business models and alter their strategies from voice-based subscription to innovative bundle plans that include internet data, voice, messages, etc. (Hajar et al., 2018). According to Figure 2, since 2009, the market has progressed greatly with a penetration rate higher than 100%, which confirms that the market has hit saturation point and customers appear to use multiple SIM cards. From the years 2015 to 2018, a steady restraint on subscriptions was applied by endorsing more pricey packages, especially on postpaid, which reduced the benefits for people having more than one SIM (MCMC, 2017). This conclusion is supported by the factual data that shows a modest increase in the number of subscribers for postpaid packages, which was 8.14 million in 2014 and it reached 11.57 million by 2018 (See Figure 3).

Nevertheless, the high ratio of prepaid customers to postpaid customers of about 30:11 by 2018 implied that the gap of a greater number of prepaid subscribers (30.84 million) as compared to postpaid subscribers has continued to exist (Figure 3) (MCMC, 2018). This shows the increasing churn rate and lower customer loyalty experienced by the service providers as the customers conveniently switch between networks depending on the cost and availability of services (Chuah et al., 2015). Moreover, on 15 October 2008, the WNP (Wireless Number Portability) service was initiated through which customers could keep their current numbers while switching from one

service provider to another. This was a major breakthrough in wireless telecommunications environment as subscribers had more freedom to choose and change their service providers (Hajar et al., 2018). However, the competitive pressure on service providers has increased immensely, in spite of the WNP aiding in reducing the problems caused by switching networks including customer costs. For this reason, it has become imperative for the mobile service providers to foster their marketing activities and boost the overall value offered to customers by minimizing prices, enhancing service quality, and offering new innovative products and services in order to increase the number of customers and keep the loyalty of old ones as well. This has made it even more challenging for service providers to run a profitable business due to the high operation and marketing costs associated with the telecommunications sector. For example, the policy used to grant smartphone subsidies to customers has contributed to increasing the operational cost (Chuah et al., 2015).



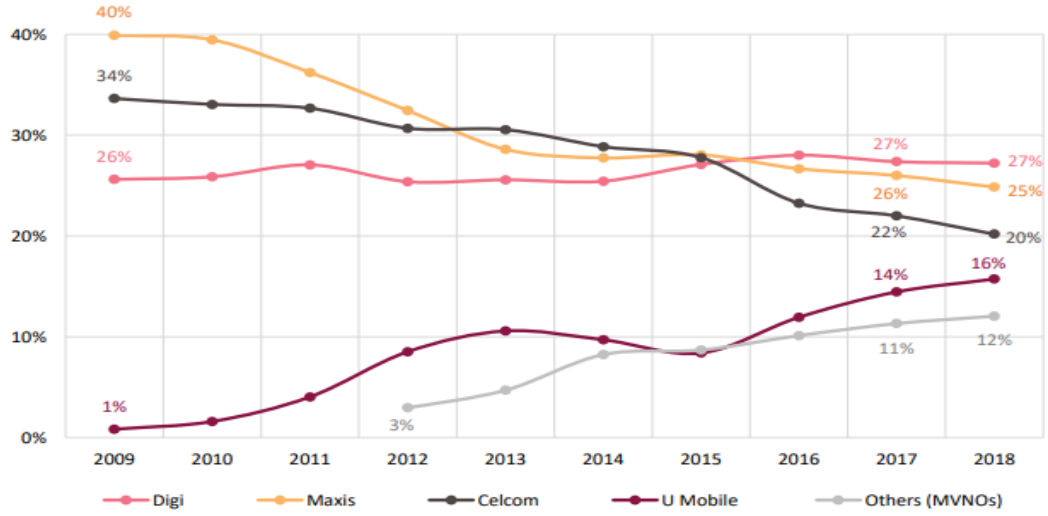
Source: MCMC, 2016, 2017, 2018

Figure 3: Prepaid and postpaid subscriptions of mobile services 2007-2018

Another threat for mobile service providers with conventional voice and message businesses is the introduction of OTT (Over-The-Top) applications like Skype, WhatsApp, Viber, Imo, WeChat, Messenger, etc. (Chuah et al., 2015; Hossain 2016; MCMC, 2016, 2017; Sujata et al., 2015). OVUM, a UK research company, has indicated that the growing impact of OTT applications might have caused a major loss of $386 billion to the global telecommunications industry between the years 2012 and 2018 (Hossain, 2016). Locally, the Malaysian telecommunications market has experienced a large number of non-traditional competitors among the OTT players. MCMC (MCMC, 2016, 2017) observed that with a higher demand for OTT services there has been a visible decline in the usage of voice and short message system (SMS) with a decrease of 4.5% revenue for service providers (RM982.35 million) in 2016 compared to 2015.

As a result, the service providers endeavored to reevaluate and reinvent their core competencies by offering innovative data networks with bandwidth-efficient technologies that are good for video streaming and large extent of broadband availability so that OTT applications could be advantageous (Berhad, 2012). Moreover, service providers are focusing ahead of the digital content business and customer transaction expansion methods to enhance their business models by offering such things as OTT services and home shopping to increase revenue (MCMC, 2018). For instance, Digi.Com Berhad has partnered with the WhatsApp service provider so that Digi customers can have unlimited usage of WhatsApp service at cheap rates (Sujata et al., 2015).

As stated previously, the Malaysian mobile market is run by four key companies: Celcom, Maxis, Digi and U Mobile. Figure 4 shows that in 2009, Maxis had the highest shares in the market (40%), Celcom came in second place with 34% shares, Digi, 26% and U Mobile had only 1% shares as it had recently entered the market. Until 2011, the four current organizations were able to maintain their market shares with a reduced loss of 4% from Maxis to other three major companies. However, at this time, U mobile was still at its initial stages of infrastructure and core competencies. After 2011, non-traditional mobile virtual network operators (MVN) entered the Malaysian market. Of these, 17 MVN operators in the wireless market (See Table 1 in appendix) introduced cheap competitive packages to catch the customers of other mobile network operators, resulting in a high tariff competition (MCMC, 2018). This made it more tough for the existing companies like Maxis and Celcom to keep their market shares, which decreased over the last decade to 25% and 20%, respectively, by 2018 (MCMC, 2017, 2018).

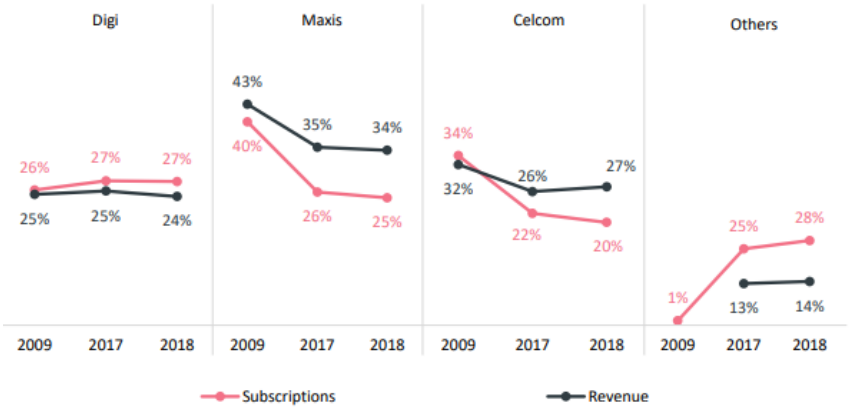


Source: MCMC, 2018

Figure 4: Mobile subscription market shares by service providers from 2009 to 2018

However, Digi market shares remained at same level over the whole past decade, while the shares of U Mobile and MVN operators' market slowly increased from 1% to 16% (6.78 million) and 12% (5.08 million), respectively, by the end of 2018 (MCMC, 2017, 2018). Moreover, this development has positively affected the revenue market shares (see Figure 5). Even though Maxis market shares kept decreasing from 40% in 2009 to 25% in 2018, it still stayed on top of the revenue market share by having a powerful hold on the postpaid subscriptions and higher ARPU (average revenue per user). That implies that the strategy used by Maxis to enhance the customer experience by attracting more high-end subscribers remained successful (MCMC, 2018). Celcom was found in a similar situation regarding its revenue market share as it slowly decreased from 32% in 2009 to 27% in 2018 (MCMC, 2017, 2018). In contrast, Digi was able to retain its revenue market share average at 26% at the same time when U Mobile and MVN operators improved their revenue market shares from 11% in 2016 to 14% in 2018 (MCMC, 2017, 2018). According to MCMC (2017), the high increase in U Mobile and MVN operators' market shares was because of their innovative products and packages with varied promotional and marketing activities that enticed more customers to swap from the other three main competitors. In other words, the Malaysian MVN operators have made the competition irrelevant, successfully tapping the uncongested market space by targeting the no-frills and ethnic segment (MCMC, 2016). Thus, the

key success of Malaysian MVN operators was their strategy that embraces low operating cost, services differentiation, innovative customer services and engagement, strong marketing and distribution channel, and mutually beneficial relationships with mobile network operators (MNO) (MCMC, 2016, 2017).



Source: MCMC, 2018

Figure 5: Mobile market shares by subscriptions and revenue from 2009 to 2018

Drawbacks and Reasons for Customer Dissatisfaction

With the advancements in the Malaysian telecommunications market, it became compulsory for the service providers to move from their voice competition base towards the bundle plan base in order to cope with the market changes. This encouraged the service providers to introduce long-run loyalty packages to achieve customer satisfaction and loyalty, and hence, improving or maintaining their market shares and profit margin. However, there were still some actions taken by service providers that dissatisfied customers and made them move toward other operators rather than staying loyal.

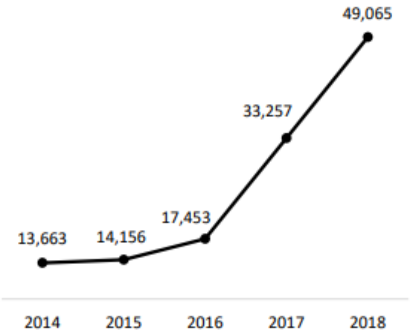
For example, the service providers failing to manage the loyalty offers and promotions that were used to make telesales and telemarketing via third party contractors to pull more customers had a negative impact on their existing loyal consumers. The older customers felt betrayed when loyalty packages with better deals were given to new subscribers, while old subscribers still paid more for the normal high tariff packages. This unfair treatments by service providers led to the shifting of customers to other companies offering better loyalty packages.

Similarly, the auto-renewal of VAS or add-on subscriptions like ringtones, games, videos, music and news popular among consumers comes with a recurring fee deduction that can possibly result in losing customer loyalty and satisfaction. As such services are not easy to unsubscribe from, along with poor customer care from service providers, results in either terminating the line or customers, especially prepaid subscribers, switching to other operators (Hajar et al., 2018).

Another action of service providers that results in loss of customer trust is offering rewards and promotions with unclear terms and conditions to deceive consumers, as the offers are impractical and lead to negative impacts. For example, an SMS reward is offered in which customers can get free RM3 credit after a top-up or reloading of their subscription with RM30 within a specific time period. This is disappointing for consumers as the availability period is too short, lasting for a

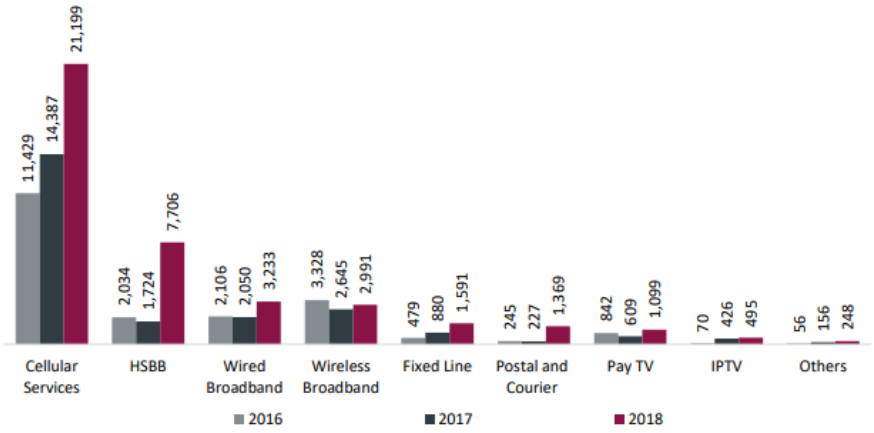
maximum of 3 days, and requires the utilization of RM30 credit before accessing the free credits. In other words, the customer is asked to use up their RM30 credit within 3 days so they can enjoy an extra RM3 credit reward, making it a less useful and even non-beneficial reward for customers. Similarly, internet data packages are also offered on the same bases to customers with validity periods remaining till the weekend or after midnight (Hajar et al., 2018).

Moreover, many customers despise the default activation of auto-answering voicemail, especially those who mostly receive international calls. Although a key source of revenue, this causes major customer dissatisfaction, leading to a long-term adverse impact on the firm's performance and profit rate, particularly with the associated difficulty in de-activating the service bundled with other services of the same sort, like call alert messages.



Source: MCMC, 2018

Figure 6: Number of consumer complaints received by MCMC 2014-2018



Source: MCMC, 2018

Figure 7: Number of complaints per services in telecommunications sector, 2016-2018

Correspondingly, the cumulative effects of such customer satisfaction losses negatively influence customer retention, repurchase intentions as well as firm's reputation, and hence, service providers' long-term success and viability (Diaw & Asare, 2018; Kuo et al., 2009; Lin & Wang, 2006). For instance, Figure 6 reflects the ascending level of customer dissatisfaction in which customer complaints jumped from 13,663 in 2014 to 49,065 in 2018, with 43% of the recorded complaints for cellular services in 2018 (Figure 7) (MCMC, 2018). Also, these results indicate the higher level of customer awareness and expectations which service providers failed to cope with, falling short of meeting customers' needs or demands.

Suggestions

As the market of Malaysia has intense competition, profitability and sustainable growth are hard to achieve with merely simple innovation. Even offering innovative packages and economical bundle plans to create differentiation would not work in the long run, as competitors can duplicate those services quickly. It has been observed that the majority of those bundle plans offered by different service providers are pretty similar. Therefore, it is essential for the service providers to adopt the strategic logic of value innovation, which is not intended to just go ahead with competing but also break through the competition by forming a leap in value for customers and themselves (Hajar et al., 2018; Kim & Mauborgne, 2005). As highlighted by Kim and Mauborgne (2005), value innovation is more than just a technological leap but a comprehensive strategy that involves all activities within a company's system and directs it towards a leap in value for customers and the company itself (Kim & Mauborgne, 2005). Moreover, it is critically imperative for value innovators to align innovation with utility, price, and cost position (Kim & Mauborgne, 2005).

In accordance with this, the service providers need to improve customer satisfaction and promote customer loyalty by ensuring an outstanding customer value that fulfills customer's requirements and expectations for long-lasting success and survival. Earlier researchers have highlighted the significance of customer satisfaction's positive impact on company profit and customer retention (Diaw & Asare, 2018; Kuo et al., 2009). As per Zhao, Lu, Zhang, and Chau (2012), the telecommunications market becomes increasingly mature as mobile services become more homogeneous, and the race to attract a higher number of customers while keeping the existing customers becomes more intense. In such a business environment, emphasis on customer satisfaction becomes an essential approach for mobile service providers to sustain or improve their market share and profitability (Zhao et al., 2012). Thus, it is strongly recommended for the mobile service providers to motivate their current low-paying prepaid customers to switch to a postpaid subscription, which would result in stronger customer loyalty and decreased trend of customer churn.

Besides that, mobile service providers should differentiate themselves with distinguished offers, looking for untapped market segments, generating demand and creating new markets. For instance, MVN operators were able to attract 4.79 million subscribers in a couple of years by using novel ways to stand out from other competitors. For instance, the 8 Telco Company, which is identified by the name *Buzz Me*, has creatively launched the hybrid travel SIM utilizing the technology of multi-International Mobile Subscriber Identifies (multi-IMSI) to offer unprecedented value for customers and business travelers. Similarly, Telin Malaysia has introduced KarTuAS as a 2-in-1 SIM card holding Indonesian and Malaysian mobile numbers to provide new customer experience and open new market space by targeting travelers and particular community groups (MCMC, 2017).

Another suggestion is that service providers should make use of Customer Relationship Management (CRM) software to improve their connections with their high-end customers. This way, customers would not be dealt with as followers but like partners by the service providers. This would benefit both parties as the customers would have the freedom to choose and customize their respective bundle plans. This business model has proved to be a very effective approach for Dell as the customers are able to personalize their own computers. Also, the mobile service provider branded as Yes 4G, which is owned by YTL Communications SdnBhd, has been offering

a large variety of options to customers for upgrading or customizing their bundle plans in an attempt to improve customer satisfaction and loyalty.

Conclusions

Without a doubt, the Malaysian telecommunications sector has proved to be a very competitive and rapidly changing business industry that has caused major advancements in wireless technologies and a massive increase in the number of subscribers as well as the penetration rate. However, there was also a fierce competition in the tariff rate experienced by the market as numerous services and bundle plans were offered. The situation worsened with the entry of new non-traditional players like the MVN operators, the introduction of OTT applications and the accessibility of WNP service.

This research paper focused on the logic of value innovation, particularly in the mobile telecom service industry. It attempted to encourage the approach toward value competition rather than tariff competition for telecommunications companies, as a way to enhance customer value, encourage customer loyalty, and improve business performance and resulting profit rate. A qualitative research methodology was used in this study to examine the value innovation activities in the mobile telecom service industry of Malaysia. Organizational activities were observed to gather initial data for study and the secondary data was collected from companies' official websites and existing published reports. Besides that, an analytical case study approach was adopted to explore the mobile services and loyalty packages given by the mobile service providers. Drawbacks and actions causing customer dissatisfaction and loyalty were discussed in this paper, along with the suggestions for service providers to maintain a proper profitable expansion and long-term endurance of their businesses.

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Appendices

Table 1: List of Mobile Virtual Network (MVN) Service Providers 2017

Mobile Network Operators (MNO)	Thick MVN Service Providers	Thin MVN Service Providers
Maxis	-	REDtone Engineering and Network Services SdnBhd (ANSAR Mobile)
Celcom Axiata	Webe Digital SdnBhd (Webe) Altel Communications SdnBhd (Altel) Tune Talk SdnBhd (Tune Talk) XOX Com SdnBhd (XOX) Red ONE Network SdnBhd (redONE)	Merchantrade Asia SdnBhd (Merchantrade Asia) PLDT Malaysia SdnBhd (Smart Pinoy)
Digi	Talk Focus SdnBhd (Tron) Xiddig Cellular Communications SdnBhd (XiddiG)	Pavo Communications SdnBhd (SpeakOut Wireless)
U Mobile	Telekomunikasi Indonesia (Malaysia) SdnBhd (Telin) Ceres Telecom SdnBhd (FRiENDi Mobile)	Uni Comms International SdnBhd (UCSI) Mobile 8 Telco SdnBhd (Buzz Me) ECI Communications SdnBhd (ECI) MyAngkasa Holdings SdnBhd (MyAngkasa Mobile)

Source: MCMC, 2017