The game is on: Business Models Based on Partnerships

The case of mobile games in Asian emerging markets

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Abstract

Mobile gaming is an emerging industry with promising potential of growth in the Asian emerging markets. The mobile gaming ecosystem falls within the mobile data value network and the success of mobile gaming has strong implications for telecommunication firms operating in these markets. As of date, mobile game developers, telecommunication firms and other stakeholders in the value network are experimenting with their strategies to bring mobile gaming to specific markets. Although global app storefronts have played a vital role in distributing mobile games in the West, the current models of these storefronts limit their accessibility to users in the Asian emerging markets and as such these partnerships cannot be successfully replicated in the Asian emerging markets. Besides, bringing mobile gaming to the Asian emerging markets is even more challenging due to the specific characteristics of these markets, such as technological barriers, cultural differences and user behaviors.

Due to the relatively nascent and rapidly advancing nature of the industry, business models within mobile gaming are a relatively unexplored domain in literature. This exploratory study aims to establish fundamental groundwork for the development of business models based on partnerships with specific focus on those markets where mobile gaming is expected to make the highest revenues in the coming years. The study explores in detail the different aspects of the business model framework, namely, value proposition, customer interfaces, infrastructure management and financial aspects. Further it takes into consideration that both the markets and the industry are dynamic. The findings indicate that the business model for bringing mobile gaming to the Asian emerging markets does not translate uniformly across all the countries in this region. Although the business model has to be adapted to each market, it has nonetheless some distinct characteristics. The business model of a telecommunications firm is mainly driven by the value proposition it can offer to its end customers while the business model of game publishers is driven mostly by economic considerations.

This study paves the way for formulating hypothesis for future in-depth studies on the topic. It also indicates that the partnerships that telecommunication firms establish, even though not directly with game publishers, may have a pivotal role in enabling the usage of mobile games in the focus markets.

Acknowledgements

I would like to extend my deepest gratitude to all those who directly or indirectly assisted in making this Master's thesis possible:

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Table of Contents

Table of Figures

1 Introduction

The development of new business models in rapidly advancing and competitive industries is imperative for sustainable competitive advantage. As value chains evolve into value networks, more businesses are realizing the value of complimentary partnerships in order to roll out services and solutions rapidly. Nonetheless, developing business models based on partnerships remains a challenge because the partnering companies may have different objectives, capabilities and resources, amongst other differences. The challenge is even greater when there are no or very few prior examples of such partnerships as a predecessor. This research explores how business models based on partnerships can be formed to deliver mobile gaming to users in specific markets.

With internet saturation in Western markets, it is imperative that telecommunication and IT firms look towards new markets for revenue growth. The Asian emerging markets have a large population, gradually advancing infrastructure and income levels and a huge underserved population. Aurora (2013) research indicates that a major portion of the next 500 million users coming to the internet by the end of 2015 are from the Asian emerging markets.

It is therefore valuable for multinational telecommunication firms and other players in the mobile value network with global perspectives, to plan growth strategies in the Asian emerging markets. With voice services offering very little Average Revenue Per User (ARPU), and the fairly recent launch of mobile data services in these markets, mobile operators need to develop new strategies for deriving value from mobile data networks.

On the other hand mobile games have become very popular and the fastest regions of mobile gaming growth in the world are in Asia, namely, Singapore, Indonesia, Malaysia, Vietnam, Thailand and Philippines according to market research firm Newzoo's 2014 report (Techinasia, 2014). However, a problem for global game developers when moving into these markets is that they virtually have no customer base, they are not well-known in these markets and they have very little familiarity with these markets. Such firms usually find it difficult to penetrate a non-native market without the help of a partner that has knowledge of and presence in these markets.

Telecommunication firms need value creating content to enable new revenue streams while game developers aiming at these markets need infrastructure providers, an understanding of

the market dynamics and access to a customer base. Several business models based on partnerships have emerged in mobile business in Asia but hardly ever are mobile games discussed in these partnerships. The current models of game players enable them to reach their customers in the Western markets through global app storefronts, but these platforms have limitations in the Asian emerging markets. Literature is extant with discussions on mobile games potential in Asia and revenue models for mobile games have also been discussed. Till date small firms are vary of telecommunication operators because of their dominant position and desire to control a partnership. Also, many firms avoid entering unfamiliar markets or those with low profitability. However as the concept of a value network emerges it is evident that successful partnerships require a thorough understanding of the objectives and capabilities of those involved in the value network. Mobile gaming is a nascent industry and the researcher sees a clear need to explore the partnerships that can enable the delivery of mobile games to the Asian emerging markets.

1.1 Why does a research focused on emerging Asian markets start from Norway?

Telecommunication firms are seeking avenues for increasing mobile data usage in low profitability markets. They continue to seek new content and value-added services. Game publishers have the bandwidth intensive content that could help in extracting a greater value from mobile data networks. With the popularity of mobile games, more telecommunication firms are seeking ways to bring mobile games to their customers. At the same time, telecommunication firms have the infrastructure, access to customers and the control over tariff that could help game developers with speed-to-market. Both telecommunication firms and mobile game developers/ publishers are critical stakeholders in the mobile gaming value network.

The researcher's geographical location makes it an obvious choice to start the research with Norwegian companies due to the ease of accessibility. Norway is home to some innovative names in the telecommunications and gaming industry who are engaged in expanding their business in the Asian emerging markets.

Telenor Group is one of the world's major mobile operators with 179 million mobile subscriptions towards the end of 2014, mobile operations in 13 markets and in 14 additional

markets through their shares in VimpelCom Ltd. The Asian markets form a major portion of Telenor's business, with operations in Pakistan, Myanmar, Bangladesh, India, Thailand and Malaysia. (Telenor, 2015). Over 75% of Telenor's customers are from Asia. Telenor has taken the initiative to introduce mobile gaming in some of these markets, thus providing a good case for study.

Dirtybit, a Norwegian game publisher, was the first company to have success with a real-time multiplayer mobile game Fun Run with 45 million downloads worldwide by August 2014. The company has established itself as one of Norway's most promising mobile start-ups. Fun Run was launched on 5th September 2012 and reached no.1 in the US Apple App Store on 11th December 2012 (Dirtybit, 2015). Dirtybit has international aims and from July 2013 Fun Run supports 8 different languages. In 2014 it recorded 580,000 downloads in India and 1.8 million in Malaysia. Although Dirtybit is a startup and their most popular game is a multiplayer synchronous game which is relatively advanced, they offer a good case for these markets because Fun Run is a socially engaging game and is based on an in-app purchase model, a form of micro-transaction model that is very popular in the Asian markets (International Game Developers Association, 2008).

1.2 Objectives of research

The objective of this research is to explore how business models based on partnerships can be formed to bring mobile games to the Asian emerging markets.

1.3 Motivation for research

This research is very close to me, personally and professionally. It is motivated by my seven-years´ experience within Business Development in a multinational telecommunication vendor firm and aims to address a frustration that I myself have faced while I was working in Pre-Sales with customers across Middle-East and Asia. There is a growing disparity between customers' needs and willingness to pay as the geographical location of customers changes from the West to the emerging markets. This disparity is driven by cultural differences, income disparity and fear of introducing new technologies and services amongst other things. This implies that business models that have been applied in the Western markets do not translate into the same value in these emerging markets. During the seven years I worked at

Alcatel-Lucent, telecommunication firms have always been cautious of major investments and have complained of declining ARPU. The approach has been to increase ARPU mainly by capitalizing on new value-added services that increase mobile data usage.

During the course of this Masters, I have worked with Celerway Communication AS. I conducted market research aimed at formulating business models for selling their patented router software solution to customers in the Asian markets, mainly India, Thailand, Bangladesh and Pakistan. The research led to new insights about these markets.

Finally, I am inspired by Muhammad Yunus, Bangladesh's well-known founder of the Nobel Peace prize winning Grameen Bank and author of the book "Creating a World Without Poverty". In his book Yunus discusses how his team of Grameen workers came up with innovative business models for one of the poorest nations in Asia. The business models not only helped sustain the business of Grameen Bank but also served the needs of the people, increasing their level of affordability. Although the book advocates social business, it sets forward visionary examples of unique approaches to business models in the Asian emerging markets.

1.4 Research Question

How can business models based on partnerships be formed to derive value from mobile data networks in Asian emerging markets? The case of mobile games.

1.5 Thesis Structure

This research is organized as follows:

After this introductory chapter, Chapter 2 begins with essential definitions to assist the reader in understanding relevant terms. The purpose is to establish a common understanding of terms that will follow throughout the thesis. A detailed literature review on the context that led the researcher to explore business models based on partnerships for mobile gaming in the Asian emerging markets follows in the same chapter. Chapter 3 provides the theoretical frameworks for the research and explains the choice and application of the framework. Chapter 4 explains the research design and methodology applied. Chapter 5 provides an explanation of the analysis strategy and the detailed analysis itself. Chapter 6 concludes the work with final

conclusions, implications of the research for professionals and academicians and compares the findings with existing literature.

2 Literature Review – Arriving at the context

2.1 Definitions

Asian Emerging Markets:

Financial Times' Lexicon (2008) defines emerging markets as *"Emerging market is a term that investors use to describe a developing country, in which investment would be expected to achieve higher returns but be accompanied by greater risk. Global index providers sometimes include in this category relatively wealthy countries whose economies are still considered underdeveloped from a regulatory point of view"*

Petrick and Juntiwasarakij (2011) suggest that countries emerging as incubators of innovation must be viewed upon as "Emerging markets", rather than following the strict association of the term with the BRIC countries—Brazil, Russia, India, and China. These countries have a high business potential due to a large population but at the same time business face the challenges of declining ARPUs. The International Telecommunication Union's Business Development Bureau (ITU, 2015) classifies countries according to the following business regions:

1. Africa
2. The America
3. Arab States
4. Asia and Pacific
5. Commonwealth of Independent States
6. Europe

Based on the countries identified within Asia and Pacific and combining it with Kearny (2012) classification of emerging markets, these Asian countries fall in the definition of emerging markets: China, India, Indonesia, Malaysia, Pakistan, Philippines, South Korea, Taiwan and Thailand. In this document, then, the **Asian emerging markets** will refer to the Asian countries falling in Kearny (2012) classification. It should be noted that Jordan and

Russia are not included in this region in accordance with the ITU classifications of business regions.

All these Asian emerging countries have a well-developed infrastructure, including banks, but have weak processes of accounting, governance and regulation. They have less efficient markets than the most advanced markets in the world. Such circumstances lead to high uncertainty and risk when conducting business in these markets. However, they have a large population and great room for technological advancement implying these are countries with a high untapped potential. At the same time lower average incomes implies lower ARPU.

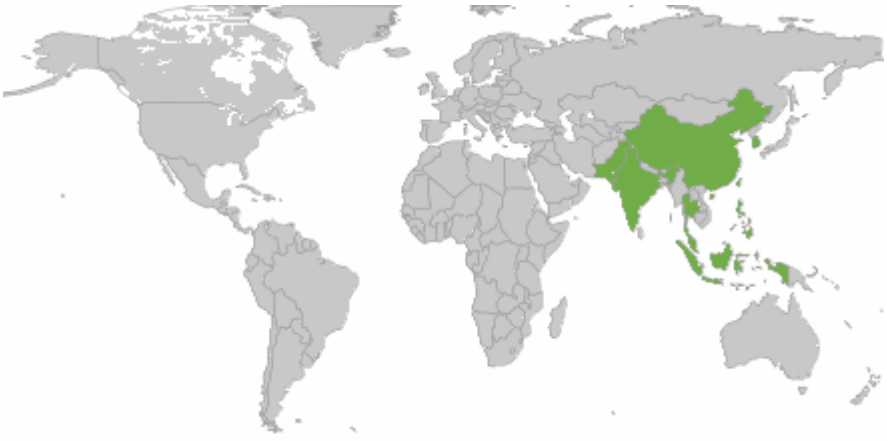


Figure 1 Asian Emerging markets (generated using Travel Map Generator, 2015)

ARPU: *"Average revenue per user is a financial performance benchmark in the telecom industry that measures the average monthly revenue generated per customer."* (Webopedia, 2015)

Cost Per Install: *"Cost-per-install (CPI), or also known as cost-per-acquisition, is a popular mobile advertising payment model used by app developers. Its popularity stems from CPI requiring that developers only pay every time that a user downloads their advertised app."* (Appflood, 2013)

In a new market, game developers have to consider the cost of acquiring new users. **Cost Per Install** is the cost incurred when a new user starts using the game. Instead of paying for the advertisement of a game, the game developer pays on actual install of the game. This concept is explained through an example: a user in India uses an App which has an advertisement

based revenue model. When the user clicks on the game advertisement in the app he is redirected to download the game. When the user has downloaded and installed the game only then the game company will pay for the advertisement.

Direct Operator Billing: ***"****Direct Operator Billing is an easy way for consumers to pay for products and services via their mobile phone. It means consumers do not need a credit card or membership with any payment service provider to pay for their goods online or in the physical world. Charges are applied directly to their mobile phone bill." (Oxygen8, 2015)*

Mobile Data: Mobile data enables a mobile device to gain wireless access to the internet through a telecommunication operator's data plans. Another approach to accessing wireless internet is using a Wi-Fi connection. The advantage with mobile data is that while Wi-Fi only works within the range of a router, the internet can be accessed from anywhere within range of a network signal if the user is using mobile data. (Opera Blogs, 2014)

Mobile Games: *"Mobile games are games designed for mobile devices, such as smartphones, feature phones, pocket PCs, personal digital assistants (PDA), tablet PCs and portable media players."* (Techopedia, 2015a).

Telco: *"A telephone company (telco) provides telephone and data communication services. This term is also known as telecommunications operator or a communications service provider."* (Techopedia, 2015b).

2.2 Value through Partnerships

Mohr and Spekman (1994) define partnerships as *"purposive strategic relationships between independent firms who share compatible goals, strive for mutual benefit, and acknowledge a high level of mutual interdependence***."** **(**Mohr and Spekman, 1994)

The purpose of combining efforts is to achieve goals that each firm, acting alone, could not attain easily. These partnerships are formed mainly to gain competitive advantage in the marketplace (Bleeke and Ernst, 1991). Partnerships can enable a firm to access new markets, provide a wider range of products/services, enable economies, provide access to knowledge beyond the firm's boundaries, minimize risk through sharing of risks and provide access to complementary skills (Powell, 1987).

Literature is extant with theories that reason why firms should enter into partnerships. Some examples are transactions costs analysis (Williamson, 1985), competitive strategy (i.e., Porter, 1980), resource dependence (Pfeffer and Salancik, 1978), political economy (Stern and Reve, 1980), and social exchange theory (Anderson and Narus, 1984).

As the world become more complex the relationships between businesses are transforming from simple value-chains to complex value networks. The focus has moved from individual firms to examining the value-creating network formed by the key firms in the value chain that deliver the value to the end consumer. Businesses are now competing to '*increase customer value*' (Kothandaraman & Wilson, 2001). Kotler & Armstrong (1997) state that "*achieving organizational goals depends on determining the needs and wants of target markets and delivering the desired satisfaction more effectively and efficiently than competitors do".*

Anderson et al. (1992) have defined value "*as the perceived worth in monetary units of the set of economic, technical, service and social benefits received by the customer firm in exchange for the price paid for a product offering, taking into consideration the available suppliers' offerings and prices"*

The customer value is determined by both the market offerings and the price of the offer (Kothandaraman & Wilson, 2001). Creating value requires putting together core capabilities beyond the capabilities resident within the firm. Firms then define strategic positions for putting together a value network to build the capabilities necessary for constructing a high-value market offering for customers. One of the main ways that firms assemble this network of firms is through developing strong relationships with key partners who can add value to the market offering. Figure 1 shows that the ideal partner is one who significantly contributes value to a firm's market offering and at the same time presents low risk (Kothandaraman & Wilson, 2001).

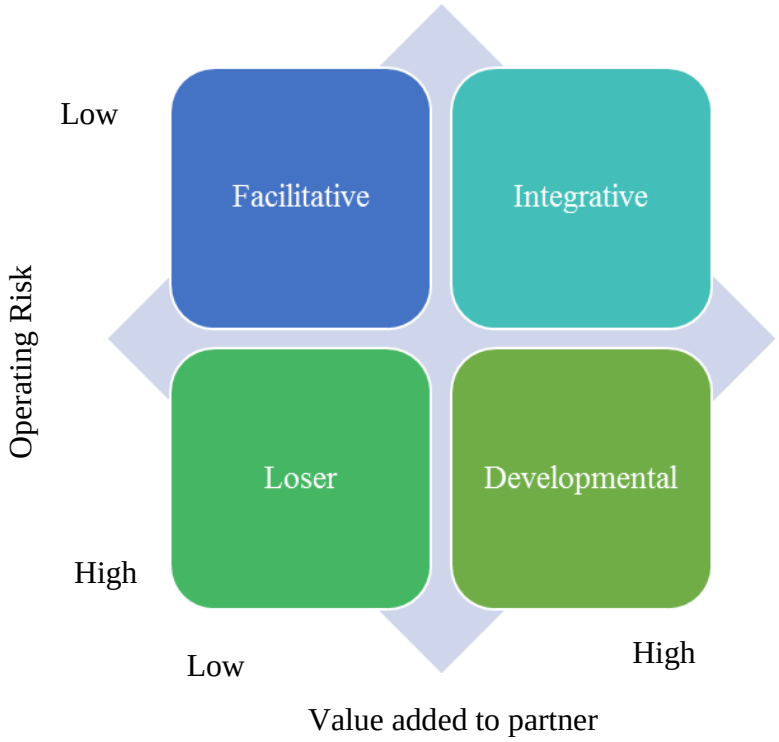


Figure 2 Evaluation of potential partners based on Kothandaraman & Wilson (2001)

2.3 Value Networks in Telecommunications forming the basis for Partnerships

Li and Whalley (2002) explain how the telecommunications value chain has evolved into a value network. The traditional telecommunications value chain is deconstructing into a complex and rapidly changing value network, which is depicted in Figure 2 below.

Within the value network a multitude of market entry points exist, where a variety of companies can enter the market through several possible routes. Many powerful new players from other industries can now enter the telecommunications value network. The exit point is the point where the company interacts with its chosen end customers and this differs significantly depending on the business model adopted by the different stakeholders (Li & Whalley, 2002).

Telcos cannot expect to generate customer value alone if they are to provide the variety of content and services that customers increasingly demand. They will be forced to partner with a multitude of content and service providers (Peppard & Rylander, 2006). In the value-

network approach organizations do not focus on the company or the industry, but the value-creating system itself. The multiple stakeholders work together to co-produce value. The struggle is no more between individual firms. Managers must view the success of their value network and the individual partners that compose it to be as important as their own company's (Peppard & Rylander, 2006).

The transformation from value chains to value networks has significant implications for all of the stakeholder involved—especially for their business models because many stakeholders will be simultaneously involved in several interlinked value chains where the value propositions may differ significantly (Li & Whalley, 2002). Companies within this complex value network should evaluate their business models in order to survive and prosper (Li and Whalley, 2002).

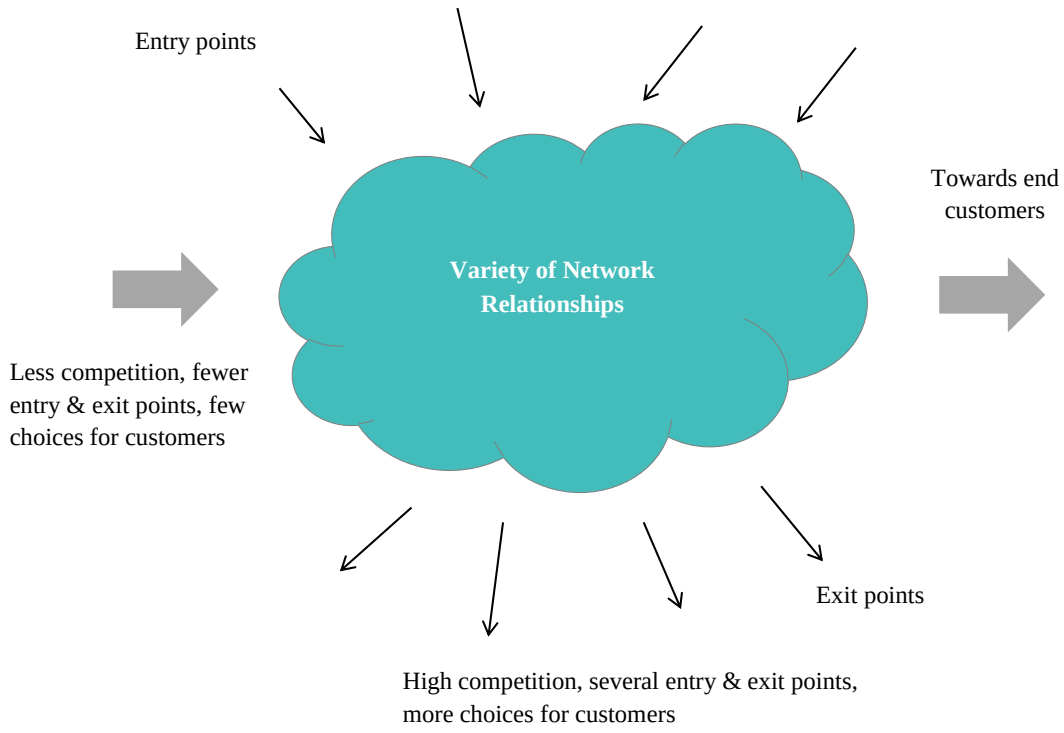


Figure 3 Evolution of telecommunications value network based on Li & Whalley (2002)

2.4 Asian Emerging Markets and the future of Mobile Internet

Considering that the Western markets for smartphones along with the related industries of apps and content are about to saturate, emerging markets have become a key area of growth for these industries (Accenture, 2010). Although many consumers live in rural areas with poor infrastructure but disposable incomes are increasing and the interest in consumer technologies and mobile services is often higher in emerging markets as compared to the developed countries (Accenture, 2010). Aurora (2013) research indicates that the next 500 million users coming to the internet by the end of 2015 are from the emerging markets, with a large proportion of these new users expected from four Asian emerging markets: Pakistan, Indonesia, China and India.

The region of Asia has superseded all other regions in mobile data (specifically 3G) adoption with close to 52 percent of the world 3G market share as early as in 2006 (International Telecommunciation Union, 2006). One main reason for this is the huge population in these countries. In 2014 Asia-Pacific region recorded 895 million mobile data subscribers, the highest number across all regions (Statistic Brain, 2014). This is 22.4% of the population. Meanwhile in Europe the number of mobile data users is half of that in the Asia-Pacific region and accounts for a huge 67.5% of the population (Statistic Brain, 2014). Such huge mobile internet penetration differences indicate that the region of Asia holds a very high potential for mobile data growth.

Despite their market size and potential, the emerging markets have been relatively late movers in the deployment of advanced mobile data networks (such as 3G) when compared to other Western countries. The number of mobile data subscribers in these countries is relatively low when compared to the number of mobile phone users. Although these numbers promise an untapped market, they also imply the need to implement changes that can accelerate the adoption of mobile data.

The Economist (2010a) predicts that new internet users in India are likely to log on via mobile phones because it will be easier and cheaper. The lack of fixed broadband infrastructure could provide a huge boost to mobile data adoption in India. The increased adoption of smartphones will also drive increased revenues, as the average smartphone user spends almost twice the amount that an average mobile user does on mobile internet (The Economist, 2010a).

This mobile-dominated Internet market composition means there will be some distinct usage characteristics. Mobile-based users tend to look for information and content that is designed

for small screens with limited text and more audiovisual interactions, such as social networking, entertainment and chat, and are less likely to browse through and research content for many consecutive hours, as one might when using a PC or laptop. This creates the need for innovative value-added content for mobile phones such as social media and gaming. (McKinsey & Company, 2013)

2.5 Adding Value: But Do Consumers in the Emerging Markets care about Entertainment?

There is a general perception that low income markets will only spend on absolute needs, for instance health and education. However, Prahaldad and Hammond (2002) argue that individuals in low-income economies have no money to spend on luxury (nonessential) goods. According to their research, in the Mumbai shantytown of Dharavi 85% households own a television set despite being on the lowest ebbs of poverty.

Heeks (2008) observes,

"Tens of millions of people in developing countries play computer games on a regular basis. Computer games companies in developing countries employ tens of thousands and earn tens of millions of US dollars annually. Yet you would hardly know it from the research literature, which seems to have almost willfully ignored this area." (Heeks, 2008)

Sey and Ortoleva (2014) observe that a great focus of Information Communication Technology (ICT) in emerging countries has been to create "useful" activities leading to cultural and economic growth, discarding "useless" activities such as for example, playing games. Sey and Ortoleva (2014) indicate that it is possible that the extent of usage of online games in these countries is underestimated since market statistics are often based on sales figures, which are not the best way to assess the diffusion of mobile phone games. Firstly, the basic versions of these games can usually be downloaded for free. Secondly, distribution of pirated copies of the games are not included in sales figures.

According to research carried out by Accenture (2010), the number of gamers globally grew from about 55 million in 2005 to about 183 million in 2008, and global revenue in 2008 amounted to $6.9 billion. Emerging markets contributed significantly to this growth, with China and India being among the most important in terms of new mobile gamers. Companies

are responding to this opportunity. Some have estimated that 40 percent of the mobile gaming industry will come from emerging markets.

According to Big Fish Games (2014) Mobile gaming is becoming increasingly popular in Asia. Games revenue in China increased by 34% in 2012. A notable characteristic is that social and cooperative games dominate.

Sey and Ortoleva (2014) observe that despite its popularity, the amount and type of gaming that occur in developing countries are governed by the resources (type of handset, bandwidth, battery life, cost of data) mobile phone users. However, Sey and Ortoleva (2014) note that the popularity of games such as Angry Birds indicates a form of epidemiologic distribution that touches even nations with high poverty levels such as those in Africa. Sey and Ortoleva's (2014) research provides a strong indication that even in low-income populations with limited resources, the motivation for entertainment and play is far more stronger than perceived.

2.6 Mobile Gaming Prospects in Asia

"*Tens of millions of users worldwide play games, as well as make phone calls, on their cell phones and other handheld devices."* (Soh & Tan, 2008)

The prospects of mobile gaming changed in 2006-2007 with the introduction of smartphones and the availability of mobile data connections with flat data fees (Feijoo et al,2 012). More users are using mobile devices to play games as:

- Mobile device penetration rates increase (Soh & Tan, 2008)
- The capabilities of mobile devices related to video and audio delivery improve (Soh & Tan, 2008)
- Wireless network strengths and speeds improve (Soh & Tan, 2008)

According to Newzoo's 2014 Global Games Market Report the gaming market is growing fast. It is expected to reach $102.9 billion in revenues in 2017 (Newzoo, 2014a). China and South Korea rank amongst the top ten countries contributing to mobile gaming revenues in 2014. The report estimated that Asia Pacific constituted 45% of the global games market_ the biggest region playing games. Amongst the games being played globally mobile games estimated the fastest YoY growth of 19% (Newzoo, 2014b).

According to Newzoo (2015) 20% of the 626 million population in Southeast Asia play online games. Of these, 46% contribute to games revenue. Thailand, followed by Indonesia and Malaysia are the biggest markets in terms of gaming revenue. These markets have promising economic growth prospects, a huge population and rising mobile internet connectivity that will contribute to gaming revenues. Besides, Southeast Asia is a region where English is commonly spoken thus making it easier to access these markets as a foreign company than countries like China, for instance (Newzoo, 2015). Despite the language barriers, YMC Network (2014) predicts that in 2017 an estimated 70% of smartphone users in China will play games on their devices.

On the other hand less advanced countries like India and Pakistan are especially interesting for gaming because of their huge population. Although in India gamers represent a fractionally small percentage of the population but in terms of total revenues India ranks higher than Thailand or Malaysia, some of the fastest growing gaming regions, due to India's high population (Techinasia, 2014).

2.7 Mobile Gaming Ecosystem & Business Models

A high level representation of the mobile gaming ecosystem is generalized in the figure below.

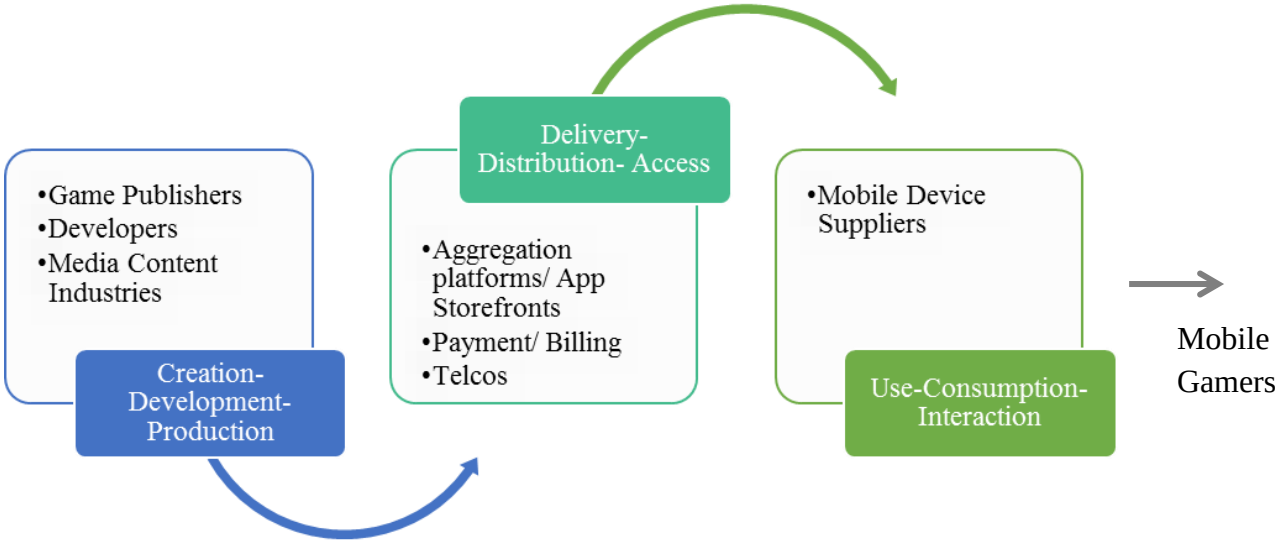


Figure 4 Mobile Gaming Ecosystem based on Feijoo et al (2012)

The ecosystem comprises of a number of partners. Although the game publishers remain relevant but the entire ecosystem is a specific representation of the mobile data network in the context of mobile gaming. Thus stakeholders from the mobile data networks, such as app storefronts, device manufacturers and telcos, are all part of this ecosystem. (Feijoo et al, 2012).

With the advent of Aggregation platforms and App Storefronts the development and marketing costs of mobile games have fallen dramatically, reducing the barriers to entry for mobile games. At the same time, the competition in mobile game development has increased to the extent that the power within the ecosystem has shifted to the aggregation platforms, app storefronts and game publishers (Feijoo et al, 2012). While a partnership offers easier access to customers, it also increases the customization costs for developers who need to develop different applications for each platform (Holzer & Ondrus, 2011).

There is a clash in the business models of the various stakeholders within the value network since content and application providers expect the network to be just a basis of transporting and distributing their content, whereas telcos aim to enhance the value of the connectivity they offer through value-added services and applications (Feijoo et al, 2012).

Feijoo et al (2012) discusses briefly the revenue aspects of business models for mobile gaming but suggests that there is general lack of knowledge about successful business models for mobile games. The telcos main focus is on generating revenue from mobile gaming (Feijoo et al, 2012). Content-providers focus on how to use the mobile channel as an additional source of revenue. Game publishers are more concerned with billing models (Feijoo et al, 2012).

Rajala et al (2007) provide a relatively detailed discussion on revenue logic and shed light on approaches to business models within mobile games. However, their discussion is a comparative study between content providers and game publishers and does not take a value-network perspective where the views of other influential partners within the network are also significant. Lescop & Lescop (2014) also explore in detail the revenue models within mobile gaming while discussing the actors and activities within the value network.

General approaches to revenue logic in the mobile games business have been identified by Rajala et al (2007) as:

1. Licensing, that is, license sales and royalties for generating revenue (Rajala et al, 2007). It involves selling the customer the right to use the game.
2. Revenue sharing with distribution partners or sharing the profit with users (Rajala et al, 2007). A logical choice of a model for mobile games companies is based on revenue sharing with telcos who provide the backbone for transmission game data. Rajala et al (2007) indicate that telcos often retain major share of the revenue.
3. Loss-leader pricing, where the game is given away for less than its value (Rajala et al, 2007). This is done, for example, in order to increase the customer base for later revenue, or, to support sales of some other part of the product/service offering .
4. Media model, where the revenue is based on advertisement sales (Rajala et al, 2007). These can be either through advertisement at user interfaces points in software or through selling user information for advertisers.

Jain (2011) reflects on an in-app purchase model as an emerging viable business model. In this model users download the game for free and revenue is driven by the purchase of virtual goods sold within the game. According to Forbes (2013) Apps with in-App purchases have generated the highest revenue in 2012. Micro-transactions, another name for the in-app purchase model, is a fairly popular revenue model for online games in the Asian markets (International Game developers Association, 2008).

Koivisto's research for Nokia (2010) suggests that the revenue models that are used in the computer world will be transferred to the mobile platform, for instance subscription based models and in-app purchases. Nokia's research (2010) of mobile games suggests that operators so far have had a governing role in the mobile games value chain. In the current model it is common to see one party both developing and publishing the game. However, as the mobile game industry grows, there will be a need to consider changing the responsibilities within the value network.

Aside from these discussions on revenue logic (Rajala et al, 2007), (Feijoo et al, 2012) and literature on possible partners (Feijoo et al, 2012), very little is discussed in literature on the holistic business model for mobile games. In the proceeding Section Theoretical Framework a detailed discussion is provided on the definition of business models. Although literature does exist on business models in the App market (Holzer & Ondrus, 2011) (Jain, 2011) but because the mobile gaming industry is relatively nascent, no literature has been found to comprehensively discuss business models in the context of mobile gaming.

2.8 How are Business Models for Asian Emerging Markets Different?

Petrick and Juntiwasarakij (2011) argue that business practices cannot be simply "transferred" from the Western countries to their Eastern counterparts as is because of fundamental differences between the markets in Asia's emerging countries. According to the Economist (2010b), the emerging markets have a very fast-growing consumer base. The spending power of the poor is rising as disposable incomes increase.

However, value in emerging markets, equates to reducing products and services to a bare minimum and "minimum price dominates" (Petrick and Juntiwasarakij, 2011).

Gotschalksen (2013) concludes that in the emerging markets new business models for data are required to accelerate the uptake of internet. The following are some of the main trends witnessed in the Asian emerging markets, as drawn from literature:

- The Value offered:

Chong et al (2012) highlight that with declining revenues from voice services, mobile operators must now turn to mobile value added services to drive growth. Chong et al (2012) also hypothesize that the variety of services offered will have a direct impact on perceived usefulness and value of mobile data. They suggest that there should be sufficient applications and services to attract potential consumers to subscribe to mobile data services. Consumers might also compare mobile data connection with non-wireless internet connection via their computers. Therefore, applications such as mobile games, location based services and video contents on mobile should be used to attract potential consumers (Chong et al., 2012). Accenture (2010) research identifies seven potential areas in emerging markets from where telcos can derive value, namely, mobile gaming, reading, social networking, video, finance, location-based services and advertising.

- Technology & Infrastructure:

The Asian emerging markets suffer often from poor network quality. This is a result of striving to build low-cost networks for low-income economies (Gotschalksen, 2013). There are other infrastructure challenges, such as power outages, inefficient frequency and spectrum

allocations. Even mobile data networks suffer from these quality challenges (Gotschalksen, 2013). Opera Mini's growth in these markets has been largely to adjust their platform to solve issues related to unreliable networks in the Asian markets. The Opera Mini browser reduces traffic and caches content to make network quality issues invisible (Gotschalksen, 2013). Furthermore, the level of infrastructure development varies from country to country. Some countries have good network speeds, large coverage and thus higher internet penetration (Techinasia, 2014).

- Costs and Pricing:

In the world's poorest markets addressing the issue of affordability is a key challenge. A potentially large customer base earns low incomes, often on a daily or weekly basis, and many have very low disposable income. Affordability stems from two issues, the cost of the handsets and the cost of using the service. (Anderson et al, 2007). Although sophisticated low-cost smartphones have emerged in these markets, these usually have low memory and processor capabilities and may not be suitable for intensive applications. However, innovative revenue models such as financing and micro-purchases can help to cross affordability barriers even for expensive equipment and services. (Anderson et al, 2008)

Mobile data tariff models need to be addressed so that customers are charged according to the value they receive (Gotschalksen, 2013). An example is Opera WebPass, which allows operators to retail mobile data in small increments for example by charging $1 for 1 hour of Facebook access (Gotschalksen, 2013).

The gap between peak hour and off peak traffic increases as network capacity increases and usage grows (Gotschalksen, 2013). Networks are designed to allow for handling peak capacity therefore the cost of running a mobile network is closely related to the peak capacity. This means a lot of expensive resources going to waste if the network is not well utilized during off-peak hours (Gotschalksen, 2013). Therefore operators need to optimize the network usage for controlling costs associated with the network (Gotschalksen, 2013).

- Market trends

There are significant cultural differences. Unlike their counterparts in the Western world, these populations are not "Internet literate". Telenor research (2014) indicates that a great portion of the population in these markets remain doubtful of the Internet, unaware of the

content and unsure how to use it. The Asian culture prefers prepaid over postpaid subscriptions. Micro-purchases create a perception of low price and helps avoid long term contracts. (Gotschalksen, 2013). According to Telenor (2014) the next wave of Internet adoption in India will be dominated by local language speakers, which emphasizes the need for much more content and applications to be offered in local languages. Providing locally adapted, relevant and attractive services in local language and script are seen as crucial drivers by telcos (Telenor, 2014).

Social Influence greatly impacts the Asian societies which have a strong social structure. Chong et al (2012) have carried out an empirical study to investigate the drivers of mobile data adoption in China. Their findings indicate that social influence will has a direct impact on perceived usefulness of mobile data. Social influence from friends and family is found to have a significant influence on the intentions to adopt 3G by users in Taiwan and Malaysia (Chong et al., 2012). Zhou, Lu, and Wang (2010) found that social influence can explain consumers' decisions in adopting mobile technologies such as mobile banking.

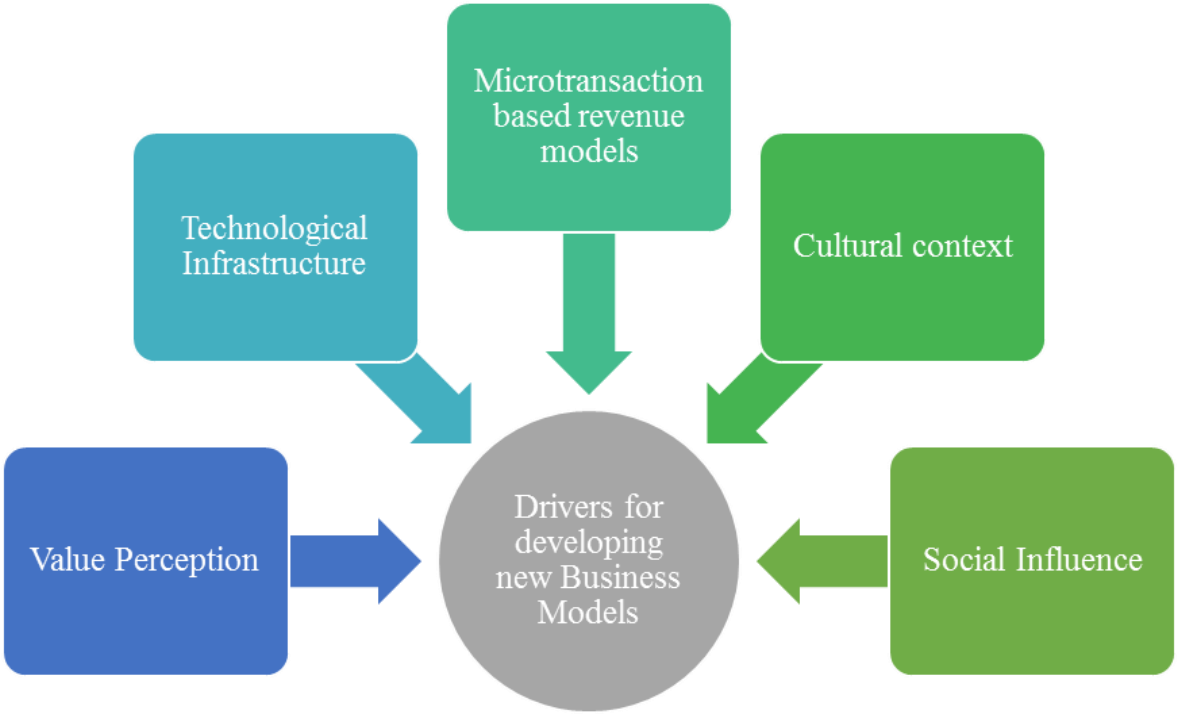


Figure 5 Drivers for Developing New Business Models for Asian Markets

2.9 Business Models based on Partnerships in Mobile Gaming in Asian emerging markets - The Need for more work

The preceding literature review and the gaps in literature that led to the choice of context are summarized hereafter.

Mobile gaming is a relatively new industry and even more so in the Asian emerging markets especially because high speed mobile data networks have only been recently deployed. Significant research points to the emerging potential of mobile gaming in these markets. Research also indicates a growing need of telcos to boost the usage of mobile data and mobile internet infrastructure. Mobile games are bandwidth intensive, and increase network usage. Meanwhile, mobile games' reach may be limited to customers with the right handsets and network capacities and bandwidths.

The preceding literature review indicates that business models for mobile gaming have not been thoroughly reviewed for the fact that the industry is no new. Several possibilities exist for partnership to increase the resulting value offered to customers. Further, if mobile gaming has to be brought to potentially the largest gaming markets in the world, i.e the Asian emerging markets, then a significantly different approach to business models must be applied. Not only is the mobile data network complex in itself, but the strategy towards business models is driven by the uniqueness of the Asian emerging markets also.

These value-adding partnerships are nascent and a significant research gap exists making it necessary to explore further how business models based on partnerships can be formed in mobile gaming. It requires combining the knowledge and experiences of some of the most important stakeholders in the mobile data value network relating to mobile games. At the same time the special needs of the emerging Asian markets need to be recognized, in order to come up with business models that are mutually beneficial for all stakeholders in the value network.

3 Theoretical Framework

3.1 Business Model

Over the years extensive research has been carried out on the business model, its definition, frameworks and methods of analysis. Yet the business model concept remains a complex concept (Zott et all, 2011). Zott et al (2011) conclude that business models take a holistic view of how firms conduct their business and aim to explain how value is created. Furthermore, a firm's activities play a key role in the concept of the business model. As a result the business model is emerging as a new unit of analysis.

Osterwalder et al (2005) provide a very concise and holistic definition of a Business Model:

"A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams."(Osterwalder et al, 2005)

Osterwalder et al (2005) conclude that a business model provides a holistic view of the business and simply one certain aspect of a business does not reflect the business model alone. According to Osterwalder et al (2005) research a business model has four pillars with nine building blocks:

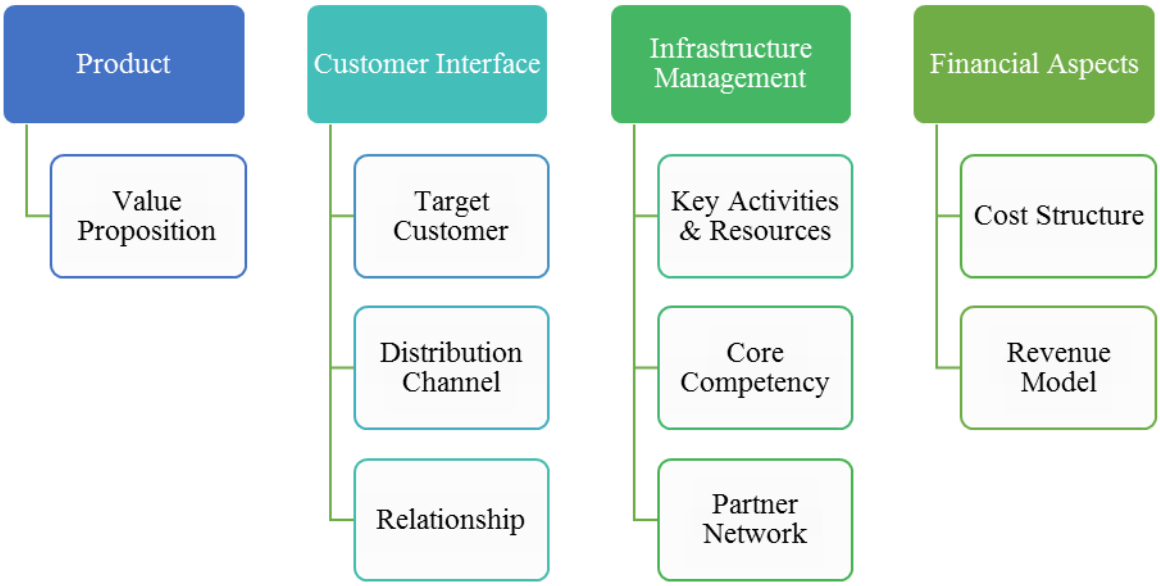


Figure 6 Business Model Framework based on Osterwalder et al (2005)

Every firm has its own understanding of a business model and in order to have a uniform and balanced perspective it is necessary to use a common framework. Osterwalder et al (2005) have developed a concrete framework which can be used to form a common language amongst the various stakeholders in the value network so that all firms have a common understanding of the business model concept. Further, since different stakeholders within the value network have their own business models a structured model will simplify comparison and analysis of those models to determine how collaborative business models could be formed for deriving value from the network.

The four components of the business model identified by Osterwalder et al (2005) are:

1. Value Proposition: describes the value that the firm delivers to customers and other stakeholders
2. Customer Interface: describes the target customers that the value will be offered to, the means that the company will use to get in touch with its customers, and the links that the company establishes with its customers
3. Infrastructure Management: describes the arrangement of activities and resources, the competency necessary to execute the business model and the network of partnerships with other companies to efficiently monetize and deliver value

4. Finance: describes the costs involved to execute the business model and the revenue models for generating revenue

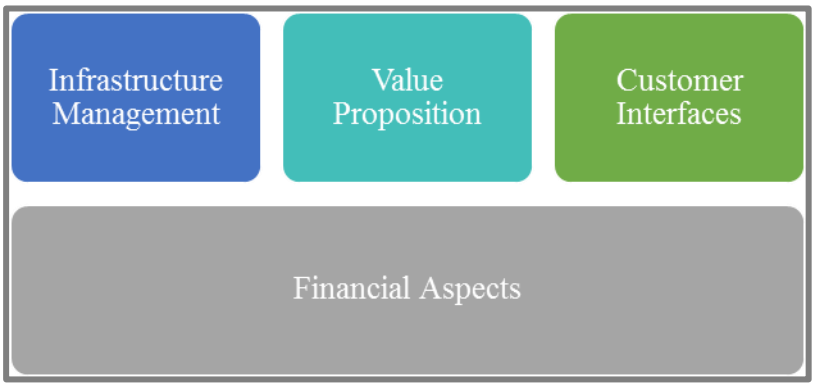


Figure 7 Business Model Block, based on Osterwalder et al (2005)

3.2 Dynamic Business Model for emerging mobile services

Osterwalder et al (2005) business model framework suggests that the business model must evolve with time in order to take into account the evolving value network and thus must be dynamic in nature. Kijl et al (2005) propose a dynamic business model framework for emerging mobile services because of the rapidly evolving market and technologies.

Figure 7 depicts the framework chosen for this research. This is a combination of the Kijl et al (2005) and Osterwalder et al (2005) frameworks. The large blocks in the center represent business models and comprise of the four pillars in Osterwalder et al (2005) model.

The smaller external blocks represent external influences, which are the Market, Regulations and Technology. Market implies opportunities or threats such as an increasing demand for mobile games, or an increasing preference for micro-transactions or the lack of credit card ownership. Technology implies the developments in infrastructure and technology such as availability of a very good and stable mobile data connection. Regulation implies the influence of governmental bodies that control regulations and legislations, for example the lack of mobile data licenses.

The time line in the model show that the business models are developing over time and that several phases can be separated from each other. Although it appears linear but the entire process is meant to be iterative. A firm may pass through each phase several times. The symbols ++, +, and ± show the changing significance of the various factors in and between each phase. The ++ implies high expected importance, + implies medium expected importance, and ± implies low expected importance. Therefore, technology in the technology/R&D phase is the most important external factor. In the next phases, the importance of technology decreases because it is already in place. Then, because of the focus on implementation and market offering, the market factor becomes increasingly important because the market needs to be understood. In the implementation/roll-out phase however a key external factor is Regulation, which may hinder the market offering of the service. In the market phase, regulation may remain important but the key external factor is the market.

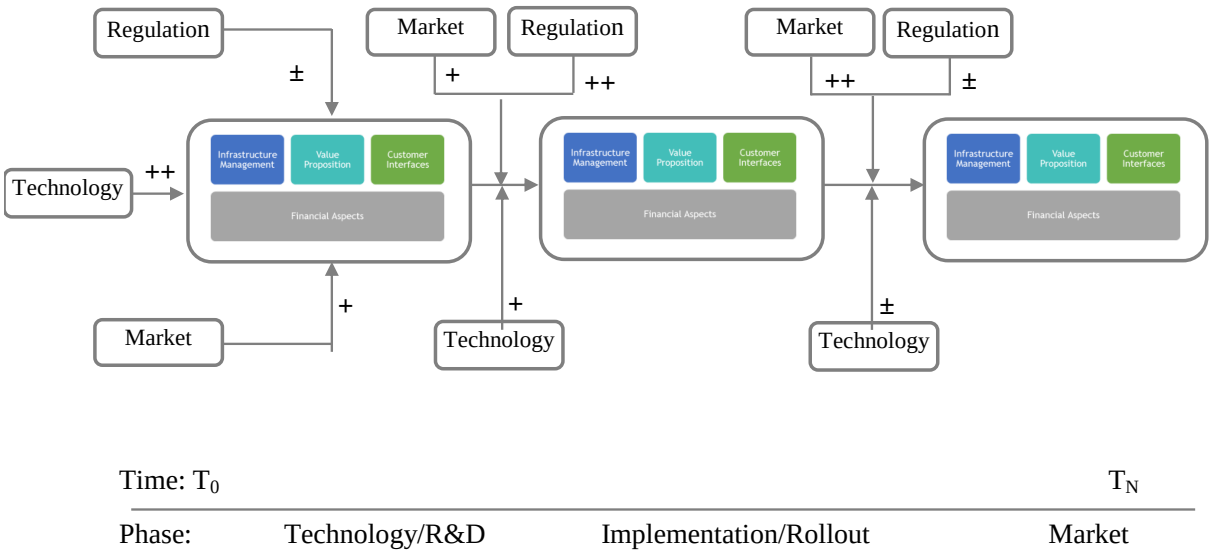


Figure 8 Framework for Research based on Kijl et al (2005) and Osterwalder et al (2005)

Not only does a dynamic business model suit the rapid advances in the mobile value network, it is seen that unlike the Western markets, technology is not uniform throughout the emerging Asian markets. At the same point in time, countries can be classified to be in different phases within the dynamic business model framework. From previous experience, the researcher is aware that some countries have a well-developed mobile internet infrastructure and therefore high internet penetration while others have very low internet penetration and poor

infrastructure. At the same time there are variations in the market and regulations from one country to the other. When a business model has to be developed that can be generalized to a number of markets that are at varying stages of readiness, the researcher finds this dynamic business model framework to be a suitable choice.

4 Methodology

4.1 Design

4.1.1 Choice of a Research Design

According to Yin (2009) a case study design is most appropriate when (a) the purpose of the study is to answer ‘how’ and ‘why’ questions; (b) the investigator cannot manipulate the behavior of the events or those involved in the study; (c) contextual conditions are relevant to the phenomenon under study, or (d) the question may require an in-depth investigation of a social phenomenon.

The research question and the context lend themselves very well to a case study approach. The question is a ‘how’ question that aims to find out how business models based on partnerships may be developed. The events being studied are a result of changes in the telecommunications and gaming industry and as an investigator the researcher is independent of these industries and is unable to influence the behavior of the actors or events in these industries. The context is very important to this study since the researcher is focusing on mobile gaming in very specific markets in Asia. Furthermore, the nature of value-added services in the telecommunications industry is rapidly evolving. Everyday new Apps and services are launched. Gaming is a relatively young but a fast-growing industry. Although research has been done on gamers’ demographics, their behaviors, developments in the gaming industry and revenue models but the interest of telcos in mobile gaming as a source of revenue is relatively recent. This is mostly because mobile gaming has only recently become very interesting after smartphones have grown in popularity and functionality. Due to the young age of the gaming industry, and the gap in literature addressing business models in mobile gaming, an in-depth investigation is required. Such a study should be able to establish groundwork for future studies.

In order to conduct this research the researcher could look only at mobile game publishers and their business models in these markets. However, by doing so the investigation would be limited towards the choices of mobile game publishers and would not consider other valuable contributors in the mobile value network and how they could influence a partnership. It would also be similar in perspective to Rajala et al (2007) and Lescop & Lescop (2014) research and

not consider partnerships from a value-network perspective. Also, many game publishers have not ventured in these markets or do not have access to customer data in these markets in order to fully understand a valuable aspect of the business model, i.e. the customer. One valuable and powerful player in the mobile data value network with access to the customer base is the telco. It would be valuable to obtain insights from a telco that has presence in these markets, partnerships with key stakeholders within the mobile data network and understands the customers and markets very well.

Baxter and Jack (2008) explain that by doing an embedded case study and looking at sub-units that fall within a larger case, a rich analysis can be done. Embedded analysis can be a powerful tool to shed more light on the case. Data can then be analyzed:

1. *Within* the subunits separately (within case analysis)
2. *Between* the different subunits (between case analysis), or
3. *Across* all of the subunits (cross-case analysis)

The embedded case design makes it possible to use strategies of knowledge synthesis (Scholz & Tietje, 2002). The pitfall that must be avoided is to fail to return to the global issue that the researcher initially set out to address (Yin, 2009).

Therefore, the research is approached as a ***single case study with embedded units that will be analyzed across all of the sub-units***.

4.1.2 Unit of Analysis

Baxter and Jack (2008) approach is applied for determining the unit of analysis. Analyzing the research question:

How can business models based on partnerships be formed to derive value from mobile data networks in Asian emerging markets?

The researcher is more interested in understanding what influences the formation of business models based on partnerships, thus the ***business model is the unit of analysis***.

However, Yin (2009) recommends defining boundaries so as to prevent the case from becoming too broad. A case can be limited (a) by time and place (Creswell, 1998); (b) time and activity (Stake, 1995); and (c) by definition and context (Miles & Huberman, 1994).

Therefore, the researcher limits this case of business models to the context of mobile gaming within specific markets in Asia. The research focuses specifically on how partnerships can be structured to bring mobile games to these emerging markets. Other markets will not be investigated. Nor will the research investigate partnerships that are not related to mobile gaming, for instance those related to bringing other apps or value added services to these markets.

Since the research design is a ***single case study with embedded units that will be analyzed across all of the sub-units***, the researcher must choose sub-units. Based on the above discussion, the choice of sub-units is:

1. The business model approach of mobile game developers /publishers
2. The business model approach of telcos when bringing mobile games to these markets

In our synthesis, the researcher will analyze the business model approach across both these sub-units.

4.1.3 Type of Case Study

Yin (2009) categorizes case studies as explanatory, exploratory, or descriptive. Yin (2009) also differentiates between single, holistic case studies and multiple-case studies. Yin (2009) describes that an exploratory case study design is a viable research design option when research is being carried out on a research problem where there is very little prior published research or knowledge existing on the topic. The purpose of an exploratory study is then to investigate the topic in-depth and form groundwork for future research.

In that way mobile gaming is a very emerging phenomenon and very little published research exists on business models in this field and specifically related to the Asian emerging markets. In view of all these limitations an ***exploratory case study design*** applies as the most suitable type of case study for the topic under investigation.

4.2 Data Collection

4.2.1 Conceptual framework

Although a conceptual framework is important at the time of data interpretation, it also helps to realize a method for carrying out the study. Eisenhardt (1989) provides a detailed conceptual framework for developing theories from case studies. Eisenhardt's (1989) approach is particularly relevant to exploratory studies that research new topic areas.

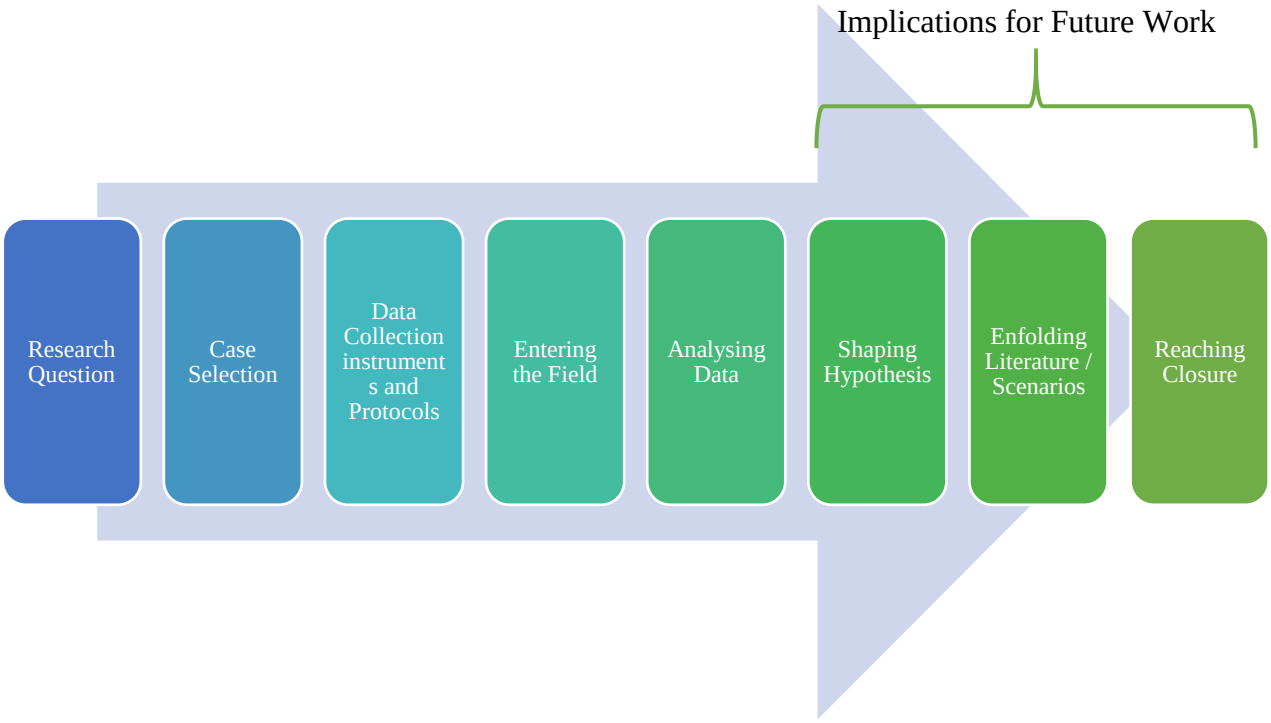


Figure 9 Eisenhardt (1989) conceptual framework for inducting theory

The researcher will use Eisenhardt (1989) framework to guide the case study process. Further, Baxter & Jack (2008) explain that exploratory studies may lack propositions due to the reason that the researcher may not have sufficient experience, data, or information from the literature upon which to build propositions. Such is the case with this research where the researcher has not formulated any propositions after completing the literature review. The last three stages of Eisenhardt (1989) framework will be considered in the section of Implications for Future Work since the scope of this research does not include developing new hypothesis.

The research question has been formulated and a selection of the case and sub-units of analysis has been made in the previous sections. The application of the other parts of Eisenhardt (1989) framework in the context of this research is described hereafter.

4.2.2 Timelines

It is relevant to mention the timelines of this research as it strengthens the validity of this study. The work began in October 2014 when market data was gathered about the Asian emerging markets as part of market analysis for Celerway Communications, a Norwegian startup. The exercise helped in identifying potentially valuable and reliable sources of market statistics. In November 2014 the first test interview was conducted with VP of Business & Marketing at Dirtybit in order to understand the concerns of emerging game publishers related to business models in Asian emerging markets. The interview was done via Skype due to geographical limitations, the researcher being based in Oslo and the interviewee in Bergen. The one-hour interview established a good communication with Dirtybit and served as a starting point for formulating interview questions. Further literature review and choice of a theoretical framework was carried out between October 2014 and February 2015. All interviewees were sent an introductory write-up and a question-set and the interviews were conducted in March 2015. Secondary data was updated again in March 2015. Before the end of April 2015 all the interviews had been transcribed and all the data collectively analyzed. Relevant sections of the report were completed in parallel to gathering the data. The report was consolidated in the last weeks of April and early May 2015.

4.2.3 Data Collection Instruments

A powerful strength of the case study research is that it is possible to use multiple data sources, which in effect also strengthens data credibility. (Yin, 2009). Furthermore, triangulation of data allows for richer analyses and greater credibility (Eisenhardt, 1989). Common sources of evidence include, but are not limited to, documents, archival records, interviews, direct observations, participant observation and physical artefacts. For this exploratory study the researcher's choices for data collection instruments are limited due to the nascent status of the gaming industry and rapidly evolving nature of the telecommunications industry.

1. No archival records exist relevant to the topic of study so this form of data collection will not be used.
2. Very little **published literature** exists on business models based on partnerships in mobile gaming. However there is some recent literature on the mobile gaming industry and revenue models. These documents have been used to establish a better

understanding of the industry in the literature review section and to identify the gaps in literature.

3. Because the industry and technology is evolving rapidly a significant amount of information related to network infrastructure and technology usage statistics are available online. This **online data** is relevant to this research as it will help to categorize the markets according to certain indicators in one of the 3 categories (very emerging, mature and very mature) within the Asian emerging markets.
4. Conducting **interviews** with personnel working within these fields is by far the most valuable source of data. Industry Business Development specialists working particularly with bringing mobile gaming to the Asian emerging markets will provide valuable insights for this exploratory case study.
5. It is seen that because of the online nature of the involved firms some useful information can be gathered online from company websites, such as which games a certain company has introduced in a specific market. The time frame does not allow an in-depth analysis but a few cases have been mentioned in the **secondary research** to illustrate how the industry is bringing games to the market currently. This secondary research will be combined with the data from the interviews and literature to build internal validity.
6. Direct observation is not relevant to this topic unless in the form of a participant engaged with the business development and strategy teams. Participant observation is also not possible due to the limited time-frame for carrying out this research. Given that the researcher was granted permission to directly work within the industry, partnerships take months to materialize. The time-frame restrictions do not allow such a long period for data collection.
7. Even if it were possible to get hold of a physical artefact of a mobile game, it would not be relevant to this topic since the researcher is more interested in the business models related to mobile gaming rather than the game itself.

4.2.4 Before Entering the Field

The research focuses on 9 markets which although common in their definition of being emerging markets in Asia, are still distinctively different. A secondary online research is conducted to classify each of the countries within a sub-definition (very emerging, mature or very mature) as described in the Data Analysis & Findings section. This will serve as a guide

for the personnel who are interviewed and will also facilitate in understanding the dynamic nature of the business model across these markets.

The choice for interviewees is driven by the unit of analysis and sub-units. Therefore, it was decided it would be most valuable to talk to a Business Development professional in a mobile games developing and publishing company and a Business Development professional in a telco looking at mobile gaming specifically in the focus markets. Further, two interviews within a mobile game developer/publisher are conducted because the information is very valuable for this research. New insights could also be gathered by conducting interviews of other related professionals in the value network (for example, App storefronts, content publishers), however, time and resource restrictions did not make that possible.

4.2.5 Establishing Protocol for Interviews

In parallel to the online research a test interview was conducted with the VP of Business and Marketing at Dirtybit in October 2014. This interview helped identify key areas of concerns in business model development for game developers. Although unstructured interviews may be the preferred option in an exploratory study but the test interview was a good practice in learning that due to the relatively emergent nature of this industry and the wide variety of ways a business model can be defined, it is best if the interviews are guided through a semi-structured set of questions. This question set would allow the interviewee to add other useful knowledge from their experience but would essentially cover the main points. The feedback from the test-interview was combined with knowledge of the industry and markets and the theoretical framework chosen earlier, to establish a semi-structured question set for the actual interviews.

Guidelines:

All the interviewees were provided with an introductory write-up about the purpose of the research and the questions they could expect during the interview. The write-up is a ten page document that establishes guidelines for the interviews. The key guidelines are:

1. The research aims to establish how business models based on partnerships can be formed to bring mobile games to Asian emerging markets.

2. The Osterwalder et al (2005) definition of a business model is used so that all the interviewees have a common understanding of the business model concept. This is important to avoid ending up with different understandings of the business model and thus highly uncorrelated answers.

3. This research focuses only on the Asian emerging markets, which have been classified as: India, Indonesia, Pakistan, Philippines, Malaysia, South Korea, Taiwan, Thailand and China.

4. The interviewees can answer in general, if something applies to all markets, or specifically if something applies only to a particular market or broadly, by classifying each market in categories (very emerging, mature and very mature). In addition to understanding if a business model can be generalized across the markets, it also allows to confirm if the initial segregation of these markets in 3 categories is fair or not.

Question Set:

The question set is guided by two frameworks:

Framework 1: To understand the business model approach of the firm in a partnership situation, the Osterwalder et al (2005) framework is used

Framework 2: To understand the dynamic nature of the business model in these markets the Kijl et al (2005) dynamic framework is combined with the first framework.

In the business model part, the questions aim to understand the value proposition, customer interfaces, infrastructure management and financial aspects. In the dynamic part the questions seek information about technology readiness, regulations and market readiness in these markets. In the Appendix the complete question set is attached.

Yin (2009) calls for distinguishing between the following levels of questions:

Level l: questions asked of specific interviewees;

Level 2: questions asked of the individual case

Level 3: questions asked of the pattern of findings across multiple cases;

Level 4: questions calling on information beyond the case study evidence; and

Level 5: normative questions about policy recommendations and conclusions.

The question set is designed so that the researcher can ask Level 2 questions and then go deeper and ask Level 1 questions. In the end the researcher asks Level 4 and Level 5 questions. Level 3 questions do not apply to this single case study approach.

To provide an example of the question levels, as part of understanding the business model the researcher asks the interviewees about their value proposition. Here is how the questions can be assigned to Levels:

i. What value do you perceive from a partnership that brings mobile games to end customers in emerging Asian markets? This is a Level 2 question.

ii. What are your key strengths as a game publisher? This is a Level 1 question that is asked from only game publishers. This will be rephrased for operators as: What are your key strengths as an operator?

iii. What is your value proposition for end customers in emerging markets in Asia? This is a Level 1 question, asked only of telcos, since amongst the interviewees only Telenor has customized its value proposition for these markets.

iv. What is your value proposition with mobile gaming for end customers in emerging markets in Asia? This is a Level 2 question.

Furthermore, a Level 5 question would be: What would you suggest to be a good way of testing a partnership in a market?

And a Level 4 question would be: Do you believe mobile gaming has driven mobile internet usage in markets such as Thailand, Malaysia, South Korea and Taiwan?

4.3 Ethics

In view of privacy, prior to the interview the consent of the interviewee for recording the interview was taken. The interviewees were informed that analysis of the transcript would be included in the research and some conversations would be quoted in their actual form. The

privacy and confidentiality of the interviewees has been retained to the extent desired by them.

5 Data Findings & Analysis

5.1 Data Analysis Strategy

Yin (2009) presents four general strategies for analyzing case studies, namely, relying on theoretical propositions, developing a case description, using both qualitative and quantitative data and examining rival explanations. The first cannot be used since there are no theoretical propositions in this exploratory case study. Further this case study research does not deal with any quantitative data so a combined qualitative and quantitative data approach cannot be used either. Examining rival explanations is an approach that may manifest itself in any of the other three analysis forms. Consequently, most relevant to this exploratory study is a case description analysis.

Yin (2009) describes five techniques for analysis of a case study: pattern matching, linking data to propositions, explanation building, time-series analysis, logic models, and cross-case synthesis. Of these, the Explanation building technique is the most relevant to our exploratory case study. According to Eisehardt & Graebner (2007) a single case study has an advantage of presenting a rich analysis very well because the entire story can be thoroughly explained in the research.

The researcher first categorized each interview according to the inner business model blocks of the framework in Figure 8. The smaller blocks can be further broken into the sub-categories as shown earlier in Figure 6 and explained below.

- Value Proposition
- Customer Interfaces:
    - Target Customers
    - Distribution Channel
    - Customer Relationships
- Infrastructure Management:

- Key Activities and Resources
- Core Competencies
- Partnerships

- Financial Aspect:
  - Cost Structure
  - Revenue Model

The Dynamic aspect of the business model is categorized into three important elements:

- Market
- Technologies
- Regulation

After segregating data according to these categories, the following structure is applied to describe the analysis. Such a structured description will also be fruitful in giving a direction for future work.

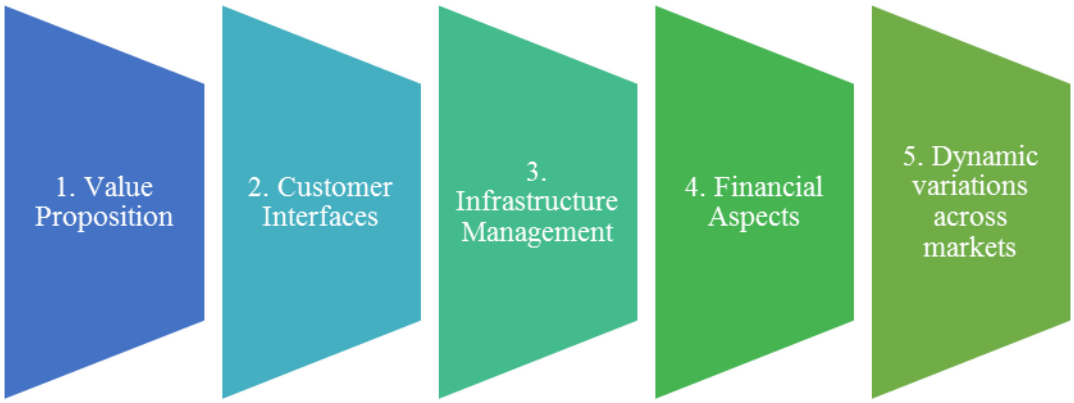


Figure 10 Descriptive Structure for this Research

Since there are two sub-units, cross-analysis is carried out across both the sub-units for triangulation and a richer analysis. In addition to the interviews, secondary data and the preceding literature review is referred back to in order to strengthen the analysis.

5.2 Achieving trustworthiness and credibility

Baxter & Jack (2008) emphasize the need to achieve trustworthiness in case study research. For the purpose of reliability and accuracy of collected data, all interviews were recorded using an App called Smart Voice Recorder. The interview sound files were then exported to a PC and transcribed with the help of a transcription tool that reduced the speed of the speech so that the researcher could keep pace with the recording and writing. The transcription is recorded in the same grammatical form as spoken. Baxter and Jack (2008) suggest conducting a process of member checking where participants can cross-check the interpretations of data. One of the interviewees had limited time to do this but the transcribed narrative was sent to the two other interviewees so they could cross-check and see if they would like to add or exclude any point.

There are high chances of researcher bias during data analysis due to the fact that the researcher has geographical roots in these markets and has prior experience in the field of telecommunications. Any bias due to prior knowledge is avoided by introducing a telco representative in the interviews who knows the markets very well. This helps in minimizing the researcher's own opinions from the telco and market perspective. This additional source of data enables the researcher to triangulate the data and explore the case from multiple perspectives and thus achieve greater *"truth value"* (Baxter & Jack, 2008).

Eisehardt & Graebner (2007) suggests that interview bias can be limited by using interview sources who are highly knowledgeable and who can view the phenomenon from diverse perspectives. The sources of interviews, i.e. the interviewees are very critical to the validity of the data. Because only 3 individuals are interviewed it is critical that their role and experience must be very relevant to the research topic. The interviewees chosen have been working closely within business development activities related to mobile gaming and are senior representatives of their companies. One of the individuals interviewed is a Director in Business Development with strong focus on bringing mobile games to Asian subsidiaries of Telenor. The other interviewee is a co-founder and Board member of a mobile game developer and publishing company Dirtybit and is involved in business strategy development for the company. The third person is the VP Business and Marketing for Dirtybit and is actively engaged in business development activities for bringing Dirtybit's mobile games to

market. They have early-stage experience in the Asian markets but they are an emerging global mobile gaming brand because of their very popular games Fun Run and Fun Run 2.

Although by having more interviews there is a higher chance of increasing data validity, but the research topic limits the researcher to only a few people within the organization who can provide in-depth insights. For example, Telenor informed the researcher that his team working on mobile gaming was very small and located remotely. Furthermore, two of the interviews lasted for 1.5 hours each and one lasted for 1 hour, enabling the researcher to gather in-depth data.

All efforts have been done to conduct the research in a transparent and consistent manner. One method to maintain consistency was to provide all participants with a prior introductory write-up so that everyone had a similar understanding of the business model concept and the questions expected. The question set was semi-structured but care was taken to cover similar aspects with all participants. This question set was according to the theoretical framework chosen and allowed to collect the data systematically and analyze it logically as emphasized by Baxter & Jack (2008).

5.3 Categorizing markets

The research is approached in a systematic manner. The markets being investigated, the Asian emerging markets, comprise of 9 countries which vary in their telecommunications infrastructure, mobile internet usage and user behaviors. The researcher began first by gathering secondary data on relevant telecommunication and mobile gaming indicators within these markets. This data is used to classify each of the countries in one of the following 3 categories:

1. Very emerging markets (for mobile gaming within the Asian emerging markets)
2. Mature markets (for mobile gaming within the Asian emerging markets)
3. Very mature markets (for mobile gaming within the Asian emerging markets)

A detailed table based on this secondary research is provided in Appendix A. It includes other indicators that will be used during triangulation of data concerning markets. Below are the results that led the researcher to initially categorize each country into a specific category.

Characteristic Measured	Very Emerging	Mature	Very Mature
Classification Basis	Mobile broadband usage < = 25%	Mobile broadband usage between 25% and 75%	Mobile broadband usage > =75%
mobile broadband usage	India, Pakistan	Indonesia, Philippines, Malaysia, Thailand, China	South Korea, Taiwan
Classification Basis	Smartphone penetration < = 20%	Smartphone penetration between 20% and 40%	Smartphone penetration > =40%
smartphone penetration	India, Pakistan, Indonesia	Philippines, Malaysia, Thailand	South Korea, Taiwan, China
Classification Basis	average mobile internet speeds upto = 2Mbps	average mobile internet speeds between 2-4Mbps	average mobile internet speeds upto > 4Mbps
mobile internet speeds	India, Pakistan,	Indonesia, Philippines, Malaysia, Thailand, Taiwan	South Korea, China
Classification Basis	% of population playing mobile games<=10%	% of population playing mobile games>10% and <25%	% of population playing mobile games>=25%
mobile gaming	India, Pakistan, Indonesia	Philippines, Malaysia, Thailand	South Korea, Taiwan, China
Assigned position	India, Pakistan	Indonesia, Philippines, Malaysia, Thailand	South Korea, China, Taiwan

Figure 11 Categorizing markets

The most distinctive indicators are mobile broadband usage percentage, smartphone penetration, mobile internet speeds and interest in mobile gaming, and these are used to categorize the markets as very emerging, mature or very mature for mobile gaming within the Asian emerging markets. Further it is evident that some countries may be categorized in more than one category, for example, China under this definition could be categorized either as a mature or very mature market. In such cases the researcher assigned a category in which the country has the most occurrences. For example in this case China is a very mature market in the emerging markets because it occurs in the "very mature" category twice. Indonesia, however, occurs in two categories equally. However, it is classified in the mature markets because secondary research from Newzoo (2015) indicates it is a high revenue market for mobile gaming in 2015, after Thailand. The classification is thus:

1. Very emerging markets: India & Pakistan
2. Mature markets: Indonesia, Philippines, Malaysia & Thailand
3. Very mature markets: South Korea, Taiwan, China

This is an initial categorization and Part 5 of the interviews which relates to the dynamic nature of these markets will be further used to confirm if this categorization is valid or not.

5.4 Cross-Analyses across Sub-units & Synthesizing Results

The researcher has cross-analyzed the information gathered from the three interviews and combined it with secondary research and literature review in order to reach the results below. Two professionals from Dirtybit were interviewed in order to have thorough information and the results of these two interviews were combined first. Effectively, the researcher ended up with two descriptions that were categorized according to the descriptive structure in Figure 10. The interview transcripts are not attached rather the interviewees' accounts are thoroughly included in the detailed explanation that follows below.

The representative in Telenor guided the researcher to further data that could be gathered online, such as Telenor's recent partnerships with game developers, content publishers and mobile payment platform providers that enable mobile gaming. Secondary research was conducted on these and was combined with the data from the interview with Telenor. The secondary research is included in Appendix C - Secondary Research related to Telenor. This meaningfully categorized information was then cross-analyzed to reach the proceeding analysis.

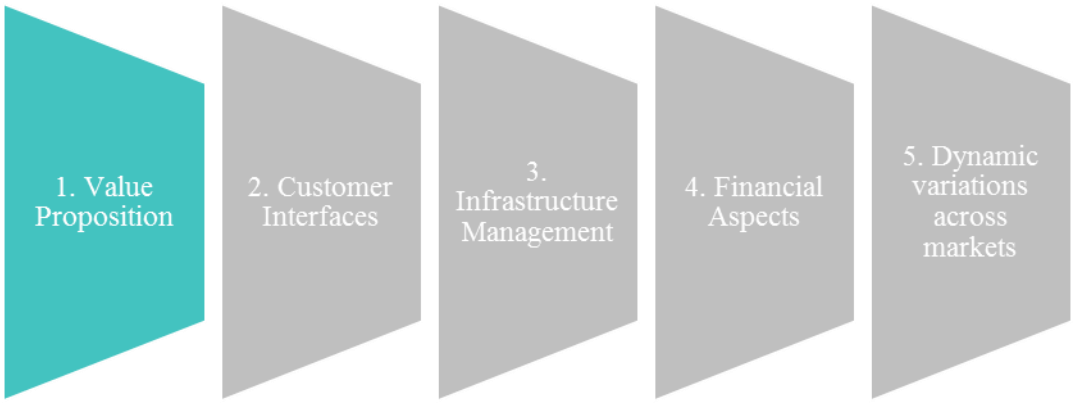
Overview of Companies

Dirtybit is a Norwegian game developer and publishing company. It is a startup that has established a brand name through its most popular games Fun Run and Fun Run 2 in a relatively short time within the mobile gaming industry. Dirtybit was the first company to have success with a real-time multiplayer mobile game Fun Run with 45 million downloads worldwide by August 2014. They have strong interests in the Asian emerging markets. In 2014 Fun Run recorded 580,000 downloads in India and 1.8 million in Malaysia.

Telenor is a Norwegian telco with a significant footprint in Asia. Amongst the Asian emerging markets, Telenor has operations in Pakistan, India, Thailand and Malaysia. Telenor has established some recent partnerships with game publishers to bring mobile gaming to its customers in Asia. The interviewee is working closely with bringing mobile games to Asian

customers and is leading the team that has introduced mobile gaming in some of these markets, thus proving to be a very relevant source of information.

1. Value Proposition



The researcher gathers from the interviews that the value proposition is the most challenging aspect of the business model for partners whose core business is not mobile gaming itself. The value proposition within a business model based on a partnership has several aspects. The mobile game, i.e. the end product, has a value for the end user and it is essential that this value be communicated to the end-user. The partnership that enables mobile gaming has a unique value for each stakeholder. This value proposition should link back to the partners' core business otherwise the value of the partnership is not significant for the partner. The differences in value propositions of stakeholders are also pointed out by Li & Whalley (2002). The value of the partnership for mobile game developers is to help them access new markets and provide access to knowledge about those markets. For the partnering firm, the partnership is a method of gaining competitive advantage. These results have synergies with the literature review on value-adding partnerships (Bleeke and Ernst, 1991) & (Powell, 1987). Resonant with the literature review and secondary research, the interviewees also confirmed that the mobile gaming industry has promising prospects of growth in the Asian emerging markets.

Value Proposition of mobile games to end users:

The value proposition of a mobile game is that "it provides users with a way to have immense fun ***or to kill time".*** Having a competitive and socially engaging game may increase the value of the game. Playing games on mobile has value because mobile phones have a ***real strength on accessibility***, and ***people look for instant gratification*** and ***activities that require limited attention spans*** of 10-40 seconds.

A possible value proposition for end-users is to be able to get free things within games, such as loyalty points in gaming that could be used for other things outside gaming. That would ***shift the value proposition more towards the benefit users get from playing mobile games***.

Value Proposition of a partnership for other stakeholders in the partnership:

According to Telenor***, mobile gaming is the most valuable digital category identified for the year 2015 with strong business potential in Asia. Mobile gaming can be a vehicle to help increase data usage by altering user behavior and to acquire new users.*** Smartphones are essential for getting data users and in that way mobile gaming could indirectly be influencing the uptake of new data users. According to Dirtybit, for a partner aiming to publish a developer's game the brand name of the game is valuable. From Telenor's perspective, a more ***recognized brand*** with a ***large selection of games*** will have greater value. Also the possibility of ***revenue generation*** from the monetization part in mobile games is valuable from the perspective of Dirtybit. The partner usually gets a cut of revenue of the mobile game developer. For Telenor, mobile games can also be used as a ***differentiator tool*** to stand out from competition.

Value Proposition of a partnership to a mobile game developer:

According to Dirtybit, the value of a partnership for a mobile game developer or publisher is to be able to ***reach out to a larger customer base*** and ***simplify operator billing integration*** (by partnering with one entity that has further partnerships with small content stores and telcos in these markets). Also a ***partner who knows the market and culture*** very well is valuable. For a game developer that has no local presence in these markets it is very important to ***not enter these markets blindfolded***.

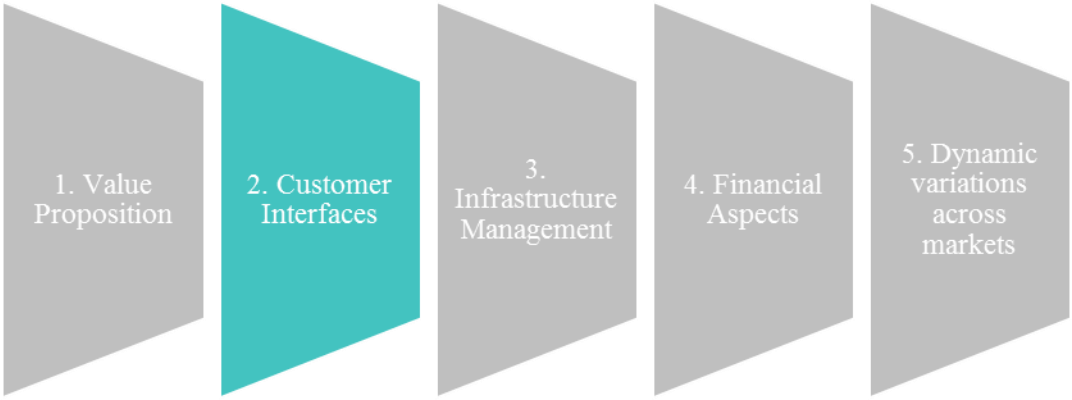
Linking value proposition to the core business of the partner:

For Telenor, it is essential to link the value proposition of mobile games to its core business. So for example, if Telenor's core business is to sell data, SMS and voice and if mobile games can increase data usage, increase usage of SMS, or increase customer loyalty then it can be tied to Telenor's core business and is valuable.

Communicating value proposition to customers:

The biggest challenge of Telenor is to define and communicate the value proposition of mobile gaming to its customers. ***In mobile gaming a value proposition based on aspirations and dreams cannot be defined***, according to Telenor. Music, TV and films are about artistic glamour, inspiration and dreams to which people can relate. According to Telenor, it is easy to market and brand a value proposition based on glamour and dreams but not mobile games.

2. Customer Interfaces



Target Customers:

Dirtybit's customers, i.e. mobile game players, are usually users in the age group 18-24 years who look for something to do when they are bored. However, according to Telenor, a partner's target customers' group in many cases will be broader and include users from other demographics. The partner's interest will then be to attract as many of its customers as possible, and not only a select few.

Customer Channels:

According to Dirtybit, the channels a game developer uses to distribute its game depend on its ***size*** and ***resources***. A small game developer with limited resources will be ***limited by the platforms*** it uses for compiling its games. In general, Dirtybit and other game developers they have spoken to, find global storefronts such as Google Play and Apple Store fairly simple to use and convenient for payments. For a small fee the developers can distribute their games and also ***receive promotions*** by being featured on the front pages within these stores. These stores reach out very well to customers in the Western markets at least. These storefronts are an obvious choice for channel and as such as Feijoo et al (2012) point out they have a significant power within the mobile gaming ecosystem. As Holzer and Ondrus (2011) suggest

game publishers would consider the customization costs involved if they have to move from one of these platforms to another platform.

But the disadvantages of these channels according to Dirtybit are ***that not many people*** in many of the Asian emerging markets are using App Store and Google Play. In some of these countries credit cards are not being used which, according to the interviews, is the biggest issue for getting payments from users. However, with Google Play integrating direct operator billing and doing agreements with some telcos, such as Telenor, in these markets, both Dirtybit and Telenor think that the billing capabilities will improve gradually.

Secondary research shows that in the Asian emerging markets, telcos such as Telenor sell their SIMs to customer directly through their own franchises or through partnerships with handset vendors. In some low-smartphone penetration markets, Telenor has introduced its own ultra-low-cost Android smartphone called Telenor 3G with preloaded Telenor Android App Store. Users that use the Telenor 3G handset or a Telenor-partner handset have to use the Telenor SIM and a predetermined data plan. Soh & Tan (2008) and Feijoo et al (2012) identify that smartphone introduction and penetration are critical factors for increasing mobile gaming uptake. ***Thus such schemes offered by partners may increase the adoption of smartphones which is necessary for the uptake of 3G and mobile data and may in turn increase the capability to play mobile games***.

Customer Relationships:

According to Dirtybit, game developers today ***maintain customer relationships and engagement by updating their games on a regular basis***. Dirtybit adds more content to its games preferably on a 3-week basis. They also focus on contests over social media and within the game. They have weekly ranking lists, where the best player of the week gets rewarded. They also push notifications on players.

To allow players to have a good experience of the game, developers introduce mechanisms that prevent the game from stopping while a connection is being restored. For the Asian emerging markets ***brand quality would be reflected in how the game works on a low-end device***.

The ***publisher's brand name is not as important as the brand name of the game,*** according to the interviewees. So for example, Angry Birds is a well-known brand that users can relate

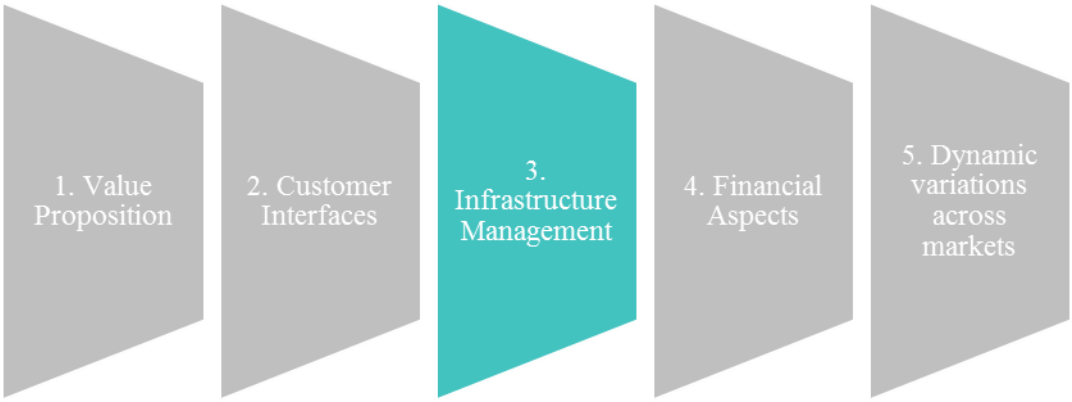
to but few know about Rovio, the publisher behind Angry Birds. When taking a popular global game and bringing it to an Asian emerging market game publishers think it is important to maintain the brand name of the game because that is what players relate to. However, when moving into a particular market Dirtybit believes it would be important to ***customize according to that culture and market***. Game publishers have seen in their industry that when big developers enter into Asian emerging markets they make some major changes to the game to fit it in those markets. These ***changes are beyond language-wise translation***, and would imply some ***changes in graphics*** and ***price points***. From secondary research, Telenor (2014) and Gotschalksen (2013) suggest that in order to attract customers in these markets locally adapted content and market-adjusted prices may be an important step.

According to Telenor ***customer loyalty does not exist in these markets***. This finding is also indicated by the secondary research (refer to Appendix A - Table of Indicators) where it is seen that in some of these markets (namely Indonesia, Philippines, Malaysia, Thailand, Taiwan and South Korea) mobile penetration is greater than 100% i.e. users own several mobile connections. However, to retain a mobile game player over a certain time frame, the following could be done in partnership with a telco:

1. Buying of mobile games can be enabled using the phone bill as a payment method instead of credit cards, which are not popular in these markets. This may ***make mobile games more accessible***.
2. Games can be used as ***loyalty tools,*** and the incentive to users can be that the loyalty points earned in games can be used elsewhere.

The interviews indicate that a partnership could have an added-value of ***improving or enhancing customer relationships*** in these markets.

3. Infrastructure Management



Key Activities & Resources:

Both the interviews and literature strongly indicate that ***going ahead and having an active emerging market strategy would require localization, it would require optimizing the game for low end devices and it would require reviewing the price points.*** These would require ***resources*** and ***platform capabilities***. If a developer requires to change the platforms it is using that would mean acquiring new resources knowledgeable in the new platform and that would be a significant investment. An important activity that is required is ***operator billing integration***. Because each operator has its own Application Programming Interfaces (API), a developer will be required to do a separate operator billing integration for each operator it interfaces with. Such a scheme is not very scalable for a developer. According to Holzer & Ondrus (2011), while a partnership offers easier access to customers, it also increases the customization costs for developers who need to develop different applications for each platform.

According to Dirtybit, ***it might be applicable to use a publisher or media content partner that is already present in the local markets.*** In such a case, a game developer will be required to optimize the game for low end devices and many publishers may prefer to do these optimizations in-house for ***fear of giving away source code***.

Within the localization of a game the most costly part is to ***test*** the game. This requires partnerships with ***localization agencies*** who review the changes.

According to the interviews, a practical way of approaching these activities is to create a ***prototype*** or a very simple version of the game, release it into a small market or one country and let it be there for a month and see how it works and how people use it. Based on the information gathered from this experience using analytic tools, developers can make the next

iteration of the game and improve it and see if the players are more engaged and the retention is much higher. If it works developers will continue developing the game and if it doesn't they will cut out the game and work on another one.

Partnership-specific development activities may be required. One example of a change in Fun Run required by a particular game publisher X in India was that they needed to remove the images of blood from the Fun Run game. The reason for that was that the publisher had its own global regulations and had children as an audience. Under those rules blood could not be shown in any of their games. Dirtybit would have to think about doing something creative without making it look unnatural for the game. This implied recreating the graphics and almost making a whole new game for the Indian market.

Additionally if a game developer chooses an advertisement-based revenue model they will have to ***invest resources and time in developing advertisements*** for these markets.

In Figure 12 below the key activities required to bring a game to the Asian emerging markets are graphically summarized. The number of activities required and the contribution of the game developer and publisher in these activities will depend significantly on the nature of the partnership. This will be discussed further in the later part of this analysis.

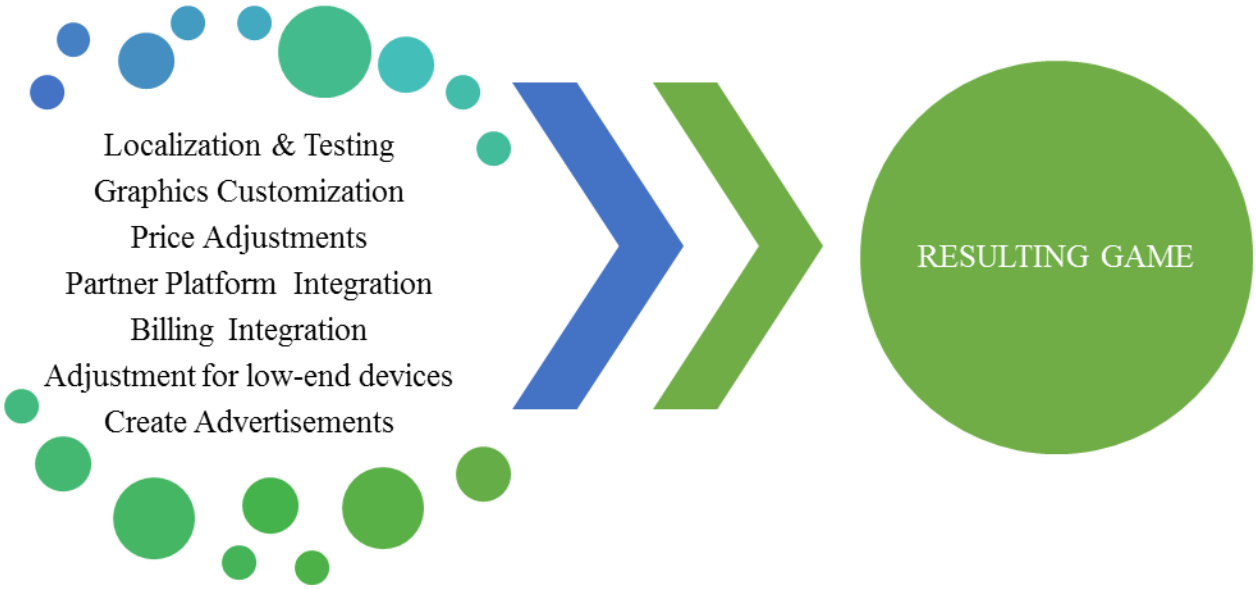


Figure 12 Key Activities when bringing a game to the Asian emerging markets

The challenges of the game developer are the opportunities for telcos and vice-versa. This finding from the interviews is strengthened also by literature. Feijoo et al (2012) highlight the clash in the business models of the various stakeholders within the value network because the stakeholders have different objectives.

In the very emerging markets such as India and Pakistan there are many low-end Chinese Android phones which do not even have Google Play. In these markets that have lower presence of Google Play and App Store, there is ***an opportunity for telecom operators to replicate these global storefronts and create their own App Stores***. However a key challenge is to deliver very good content.

In mature markets such as Thailand and Malaysia where there is already competition from Google Play and App Store, ***an operator's Store has to differentiate from the global stores both for game developers and customers***. The operator's Store should offer developers with a ***marketing opportunity*** which means that their game will be promoted within the operator's store. Also, the operator will have to consider introducing perks, such as for example if users play a game through the Telenor App store they will get 10 lives extra.

At the operator end, as confirmed by the interview with Telenor and literature (Feijoo et al, 2012), the challenge is more about ***developing differentiation tools*** rather than finding ways of integration.

Competencies:

From the interviews it is seen that both telcos and game publishers agree that ***being a publisher allows a developer to create its own user base and brand and thus it is a very powerful competency.*** The user base can be used for the next games also. This is in agreement with literature where Feijoo et al (2012) note that the competition in mobile game development has increased to the extent that the power within the ecosystem has shifted to the aggregation platforms, app storefronts and game publishers.

Meanwhile, a partner's assets are its ***good tap into customers and knowledge of the market***. A big partner such as a telco will have the added advantage of ***money*** and ***stamina*** to do new experiments ***without worrying too much about the fear of failure***.

Partnerships:

From the interviews several possible partnership schemes for bringing mobile games to the Asian emerging markets are evident. Literature shows that the ideal partner is the one who significantly contributes value to a firm's market offering and at the same time presents low risk (Kothandaraman & Wilson, 2001). Meanwhile risk is an issue for Dirtybit, the interview with Telenor indicates that money is strength and Telenor is willing to take risks in partnerships.

Game Publishers & developers Approach to partnerships:

A game developer could choose to do ***a deal related to a game in specific*** or give its ***whole portfolio to a publisher***. ***Any partnership for a publisher, big or small, would be driven from an economic standpoint,*** according to Dirtybit***.*** The number of customers reached, the revenues achieved and costs to publish the game in a market would be important considerations. According to Telenor, from its experience with big game publishers, a big publisher would also measure against the revenues generated within its existing markets before it decides to invest its time and resources to bring its game to a new and different market such as the Asian emerging markets.

Telenor's position on partnerships:

According to Telenor, many telcos are fear driven when it comes to partnerships. Telenor is rather opportunity driven in its partnerships. They have realized that it is best to work together with partners rather than viewing them as a competition and banning them. Literature also supports such a view on partnerships. According to Peppard & Rylander (2006) managers must view the success of their value network and the individual partners that compose it to be as important as their own company's.

Telenor has been fairly unique in their approach because they did really early partnerships with popular social media apps in Asia, for example, Facebook, Whatsapp and Line. Telenor may have long processing times due to its size but according to the interviewee its position has been fairly open to allowing partners to succeed. They believe "***It's all a part of not dividing a fixed cake but creating a bigger value and having a stake in the value creation instead of controlling value creation***."

Below are the possible models for bringing mobile games into emerging Asian markets, evolving from this research.

Partnership model going through a local mediator:

Game publishers can approach the market through local publishers or media content companies, also referred to as mediators. For example Disney India is an internet company that also publishes several games branded under its name in the India market. They have done operator billing integration with several big telcos in India and know the local market and culture very well.

According to Dirtybit, ***local publishers know the market and culture very well***. Due to their knowledge of the market, they ***demand a great level of customization*** of the game from mobile developers. They will usually demand to ***take the technology*** and wrap around their localization and customization, before they push it out to operators that make it available to end customers. A disadvantage of the local partners, according to Dirtybit, may be that they are country specific, so the customization done for them ***will not be applicable or scalable to other markets*** in this region. Big local ***publishers might demand exclusive partnerships*** but are effectively able to target more the right customers within a particular market, according to Dirtybit.

When considering partnerships, a game developer would be reluctant to give away their source code to local publishers for optimizing the game for low end devices. This reluctance is because they ***fear they wouldn't be protected in a good way in legal matters*** on foreign soil.

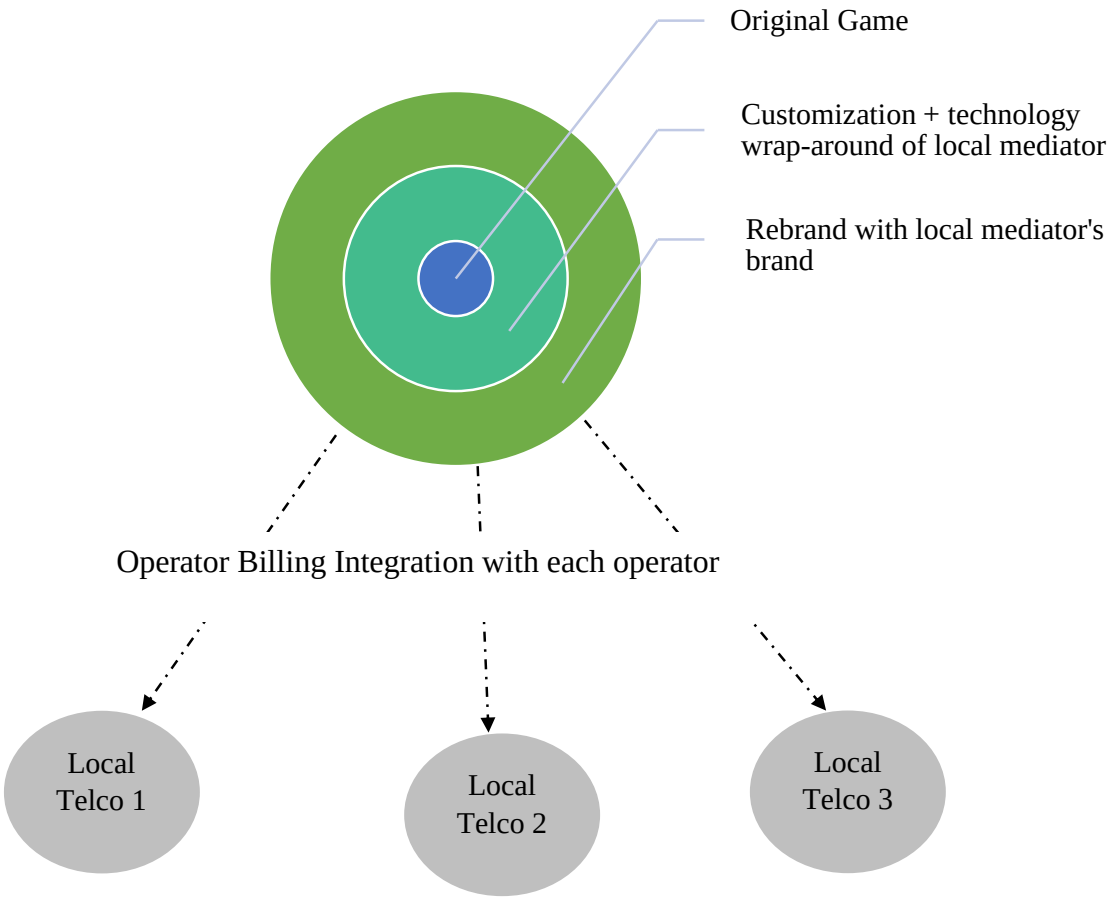


Figure 13 Partnership model going through mediators

Partnership model going through independent global app storefronts

The current channels that Dirtybit uses to reach users in the Asian emerging markets are global app storefronts such as Google Play and Apple App Store. These partners take a revenue cut but ***simplify payments and integration for developers***. The first limitation of Google Play and App Store, emerging from the interviews, concerns t***he limited use of credit cards in the Asian emerging markets.*** However, this issue is gradually being resolved as Google Play has started entering into agreements with telcos to enable direct operator billing. ***Google Play's partnerships with telcos such as Telenor positively impacts developers***. It enables mobile game players (in the supported markets) to go in the app store and pay with their phone bill rather than to pay with their credit card. According to Dirtybit, payment would remain convenient for game developers and they would only be able to see if the conversion rate (the number of users who become paying customers) in that specific region is increasing or not.

The second more serious limitation of Google Play and Apple App Store is that in the emerging Asian markets ***these platforms are not very popular due to affordability issues***, according to the interviews. Low cost Chinese handsets are prevalent. One independent app storefront working closely with operators and platforms in emerging markets is Opera Software.

Opera Software is a Norwegian company that operates in emerging markets, including Asia, and has ***experience of integrating with several low-end platforms and telcos in these markets***. The advantage of such storefronts, according to Dirtybit, is that have a large distribution channel within and outside the said markets, which implies the capability to reach a much wider customer base. However, Dirtybit is of the view that because these app storefronts are not very market-specific and do not know the market so well as local publishers, there is no guarantee that the game would be accepted in the same format across all markets. ***With global storefronts that customize the game less for each individual market there would be less certainty of success***. Further, these storefronts will require a cut of revenue and integration with its APIs.

Dirtybit believes that in terms of legal issues, such ***a global entity may appear safer*** to partner with than a local partner situated further away in emerging Asian markets.

Holzer & Ondrus (2011) discuss this partnership model in detail and indicate that app storefronts are relatively established and represent a safe distribution scheme for mobile apps such as games. Figure 14 below depicts this model.

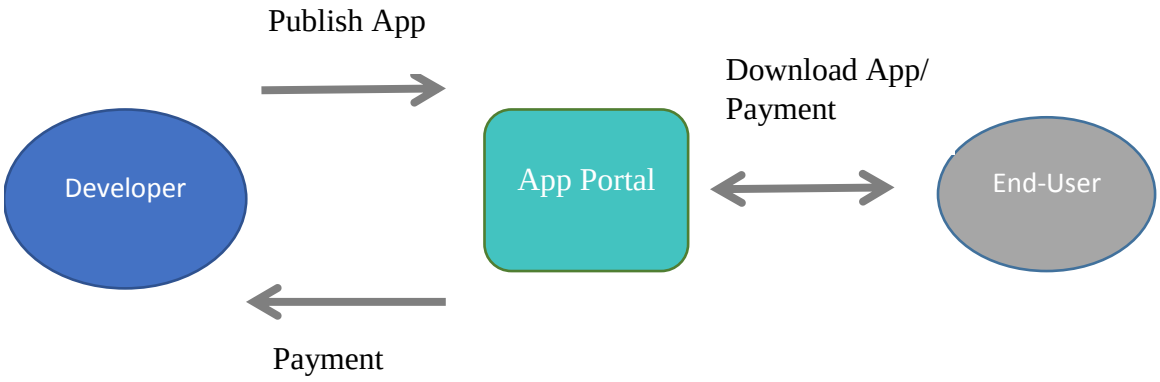


Figure 14 Partnership Model going through independent storefronts

Partnership model going directly with operators:

It is evident from the interviews and secondary research that small game publishers ***would prefer to avoid risk*** and ***replicate the models*** of other successful and big game publishers. For smaller game publishers a partnership may not always be very scalable. Publishers will be expected to do a special publish for several operators if they want to reach a wider number of customers in the market. Today, collaborations with operators will require publishers to make changes to the game to enable integration that could ***potentially be risky*** for small publishers. According to Dirtybit, because there are so many in the operator's value chain, it ***takes a long time for the game developer to get paid*** in the end.

However there are some global game publishers that are working in some of these markets. Additionally from secondary research the researcher finds that Telenor has partnered with several bigger and well-known game developers and content publishers such as EA Sports, Gameloft, Inlogic Software and The Walt Disney Group. According to Telenor, very well-known and ***extremely successful game publishers do not see significant value in such a partnership*** due to the high level of customization required in these markets and the special integration with operators.

Partnership model going through mobile payment solutions providers:

The secondary research and interview data show that direct partnership with telcos may not be very practical for many publishers. Telenor has seen that ***many developers and publishers are not interested*** in doing multiple billing integrations for different operators and so they have ***partnered with global mobile payment solution providers*** such as Fortumo. This enables app and game developers to easily monetize users by allowing them to make micro-payments with their mobile phone and charging the amount to their phone bill. With Fortumo's platform, mobile payments are available to all mobile phone users and payments are charged directly to their operator bill without the need to use credit cards. Secondary research shows that ***using mobile payments has enabled some app and online developers to increase their conversion rate (number of paying users)*** and thus emerging market revenues.

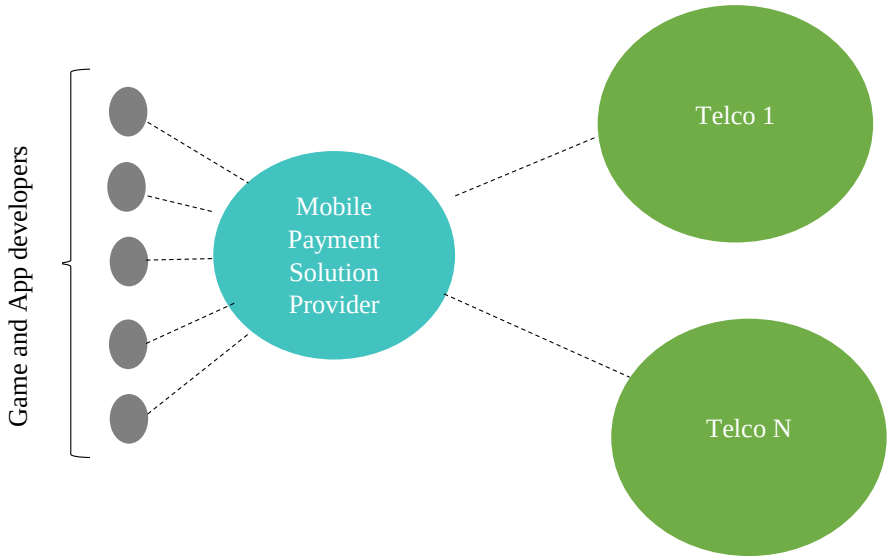
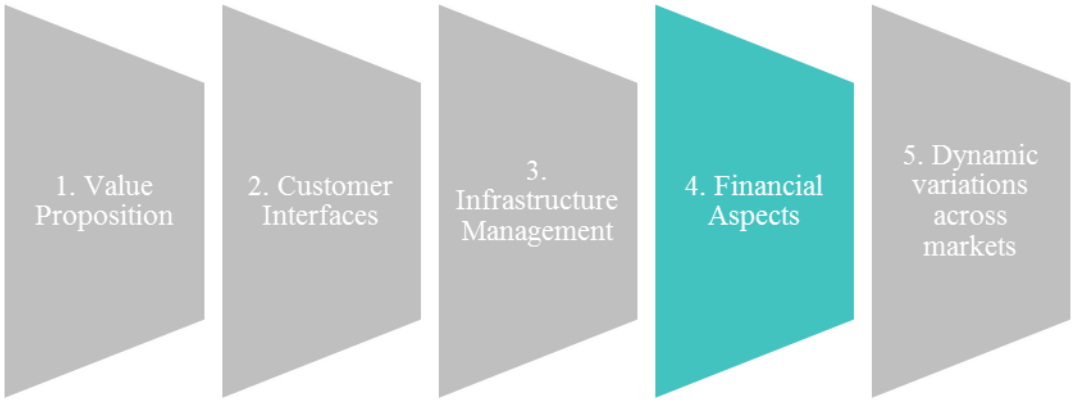


Figure 15 Partnership model going through Mobile Payment Solution Providers

4. Financial Aspects



Cost Considerations:

From the interviews it emerges that to bring mobile games to a certain market, several costs are involved.

Some games, such as online games, require ***extra servers*** located in nearby countries to get the best connectivity for users. Server cost is an additional and significant cost only for specific games and will impact the publisher's competitiveness and revenues in a certain market.

The level of customization needed depends on the partner that is mediating to bring the game to the markets. The greater the number of iterations that need to be completed to optimize the

game for a specific country, the greater the costs in general. Customization could include language-wise ***translation***, ***testing t***he translation through localization agencies, ***adjusting price points***, ***adjusting graphics*** and ***integrating with the mediator***.

In a new market, game developers have to consider paying a ***Cost Per Install (CPI)*** for acquiring new users. For every user acquisition the game developer has to pay a fee. Game developers will pay this fee until a threshold level has been reached. When a certain number of users have downloaded and installed the game, the market will start growing itself without the need for more advertisements. Dirtybit has experienced that growth in a new market is much faster if developers pay a Cost Per Install instead of waiting for the game to take off on its own.

The billing scheme may impact costs. An in-app purchase scheme implies that transaction costs will be high and there will be chances of failure of some transaction. However the risk associated with in-app purchasing is small for telcos. For an operator like Telenor money is strength. Costs are not a big challenge. According to Telenor, they are in a position to explore partnerships and see what works best for them without worrying about their cost impact.

Revenue Models:

Dirtybit is currently using advertisements and in-app purchase methods for generating revenue. ***Game developers who do not change their pricing for these markets have not experienced success with the in-app purchase model*** according to the interviews.

For game developers who have an additional server cost, Dirtybit believes it would make most sense to ***discuss revenue share from ARPDAU (average revenue per daily active user) subtracted with server costs.***

According to Telenor so far ***free to play has not succeeded in these emerging markets*** because ***prices have not been localized*** for these markets. Another reason is that in the very emerging markets free to play with advertisement based digital marketing doesn't work because ***digital advertising is not a mature industry***. In-app purchases with micro-transactions could work very well in these markets due to the high interest in micro-transactions and usage of prepaid cards, according to Telenor.

Like Google Play, telcos will take a cut of the revenue. But beyond that a telco has to seek new approaches of generating revenue and create differentiation for its customers. Some approaches for revenue generation are to do a ***gaming subscription*** or ***connect to the high value data plans***. An approach to differentiate over App Store or Google Play would be to ***offer loyalty points*** that could be used in games if customers stayed with Telenor for longer.

Another model could be to ***zero-rate*** a service (give it away for free) for some time and then start charging customers after they have ***developed a user behavior***. Additionally, a service can be free but if a user goes to a link out of that service then the user is charged.

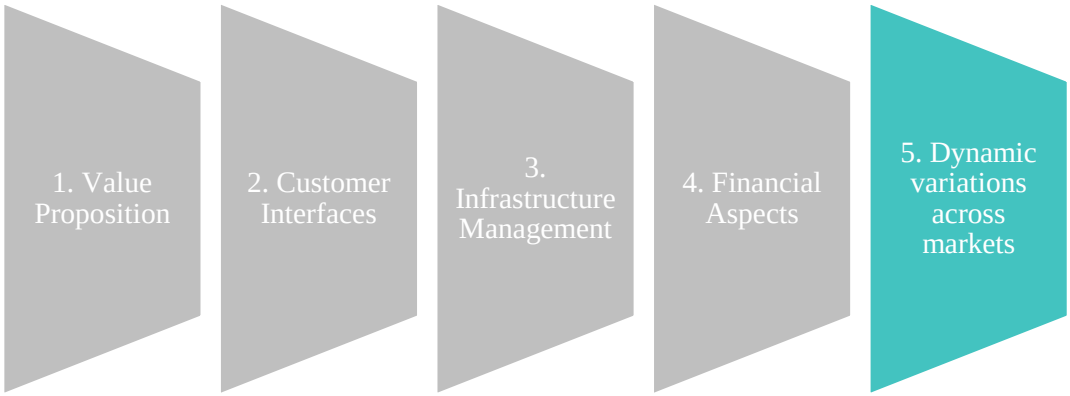
Telcos can also earn money on the Cost Per Install. So while CPI is a huge cost for game developers it is a valuable aspect of the value chain for earning revenues.

Literature and the the interview with Telenor favor innovative revenue models such as micro-purchases. Anderson et al (2008) argue that micro-purchases can help to cross affordability barriers even for expensive services. As Dirtybit themselves explain, their low success with in-app purchase model in these markets may be due to non-adjusted prices. The revenue model is particularly important for telcos who have to focus on generating revenue from mobile gaming (Feijoo et al, 2012). Looking back at Rajala et al's (2007) literature, Telenor has so far been using the revenue-sharing model (sharing revenue with game publishers and developers), loss-leader model (when it gives away a service for free by zero-rating it) and media model (based on advertisements).

Payment Considerations:

On the App Store Apple takes about 30% of the cut of revenue from game developers. But payments to developers are usually on time. With a telecom operator a larger share of revenue could be expected so that in the end game developers will get much smaller revenue share than from selling via the App Store. Further when going through an operator, because ***there are so many stakeholders in the operator's value network***, getting payment takes a long time and is not free from hassle because of the number of stakeholders involved. This is generally in line with literature from Holzer & Ondrus (2011) where they discuss that it is relatively convenient for app developers to use storefronts as a distribution channel.

5. Dynamic Nature of Markets



Market:

Both telcos and game developers agree that the markets can be segregated into three categories from the perspective of mobile gaming in the Asian emerging markets:

1. Very emerging: These markets have low ARPU, almost 6-7 times less than the ARPU in the Mature markets, according to Telenor. The internet penetration and smartphone penetration are very different (low) in comparison to that in the mature markets. However, they are exciting for mobile gaming because of their very high population. Pakistan and India have been categorized under this category by both the telco and game publisher. Coherence with the secondary research is evident here, where in these countries it is seen that mobile internet penetration is less than or equal to 25%, smartphone penetration is less than 20% and the percentage of population playing mobile games is less than or equal to 10%. According to Dirtybit they are not certain if these markets are ready for mobile games yet although they believe these are exciting markets nonetheless because of their high population.
2. Mature: Malaysia and Thailand share similar cultural aspects and have been classified in this category by both Telenor and Dirtybit. They have a very English speaking culture and according to game developers they do not demand such extensive localization of a game because they haven't established themselves as attractive enough markets so that a game developer would actually need to localize everything for that specific market. These markets have very good smartphone and internet penetration and the usage of high quality smartphones is not uncommon, implying that users have access to global storefronts such as the Apple App Store and Google Play. This is also coherent with the secondary research where it is seen that these markets have a fairly

decent mobile internet penetration between 25% and 75%, an improved smartphone penetration (between 20% and 40%) and a greater interest in playing mobile games.

3. Very Mature: From the game developers perspective the Chinese and South Korean markets are distinct and apart from the other markets. That is also because there's significantly high spending on games in these markets in comparison to the rest. Mobile games are very popular and very localized. Games often have local graphics. If developers were to publish a game in one of these distinct markets (South Korea or China), they would have to understand the culture and create the game specifically to work for that market and be much localized. From secondary data it is seen that these markets have a very high mobile internet penetration (over 75%) and the interest in mobile gaming is by far the greatest (over 25% of the population playing mobile games). Their smartphone penetration is also significant.

From the interviews no category can be drawn for Indonesia, Taiwan and Philippines because neither Telenor nor Dirtybit have worked in these countries or have good knowledge of them. However, according to Telenor, generally countries in the same group share similar cultural aspects and would behave similarly. This implies that other countries in the vicinity that share similar cultural aspects may also be categorized in this category. Based on this, the initial methodology is retained for categorizing Taiwan, Philippines and Indonesia. Indonesia and Philippines are categorized as mature markets due to their cultural similarities to Malaysia and Thailand (countries of South East Asia) and based on the similarities seen in secondary research. For the same reasons, Taiwan (the Taiwanese have cultural similarities with the Chinese[1]) is categorized as a very mature market along with China and South Korea. However, no confirmed conclusions can be drawn for these three markets from this research.

A ***marketing campaign or strategy does not scale in the same way across the markets***, according to Telenor. Every market is unique. . Even the ***cash flow is different*** across markets. Some game developers are successful on downloads in one market but are not earning any money, according to Telenor. Others are low on downloads yet earning a lot of money. Also, the ***demographics of game players across the markets is very different.*** In some markets females don't play games with the same interest as males. Also, it is learnt from the interview with Telenor that ***a partner's standing in a market is an important factor*** that influences the model that can be introduced into a market. For example, Telenor is not the

[1] http://www.kwintessential.co.uk/resources/global-etiquette/taiwan.html

number 1 operator in India and so it has always approached the market with very competitive prices. Its standing in Pakistan is very different. Therefore, the approach to a market strategy is different.

Telcos see that ***the only thing that can be reused across the markets is the value proposition***.

Technology:

According to Dirtybit, for a game developer a choice of market would depend on the ***type of game*** and the ***infrastructure*** in the market. Online games would require the internet infrastructure to be somewhat established. The ***type of platforms and devices*** in the market are important.

In the very emerging markets low-end Chinese smartphones are in common use. In these markets game developers have to consider the game's ***capability to function on low-end devices***.

The differences in infrastructure readiness, such as network strengths and speeds, are not a major issue. Telenor has experienced that usually mobile game players play games in ***'at-home settings where the network strength is good'***. Even when a game is using 3D graphics, they are not heavy on network usage because the game is not streamed. Even a multi-player game is basically not real-time, it is turn based**.** If there is a situation with a huge number of dropped downloads, the telco would shift the users to Wi-Fi to secure the download and that too only when the games reach a very big size.

From the secondary research, the researcher finds that some game developers, such as Gameloft_ Telenor's partner, have developed smart approaches for the emerging markets. They ***offer a compressed version*** of their games and ***billing is done only on download success, not on download start***.

For telcos the ***lack of advanced devices is an opportunity*** and not a matter of grave concern. It will allow Telenor to replicate the Google Play and App Store models for low-end phones and thus offer a differentiation.

On the other hand in the mature markets there is a good penetration of proper Android phones and iPhones. In such a case it ***becomes challenging to stand out with a unique proposition***

for end users because the operator is then offering a replica of these global stores but with lower quality on content.

In these markets telcos have to seek new ways to encourage users to play games through them and not through other storefronts. In parallel telcos are doing direct operator billing partnerships with storefronts. In markets with advanced technology, telcos have to work with the value proposition and revenue models to offer differentiators for customers.

Regulations:

When it comes to mobile gaming, regulations are not very common. However, game developers have seen some regulations related to the graphics depicted in their games. For example, China has state regulations that prohibit showing certain graphics such as blood in their games. Also, there can be ***partnership-specific regulations***. A partner may require under its global regulations to follow certain instruction. For example, a particular game publisher X in India had a prerequisite to remove the images of blood from the Fun Run game. The reason for that was that the publisher had its own global regulations and had children as an audience. Under its global PG rating rules blood could not be shown in any of their games.

Telcos, on the other hand face several challenges with regulations due to their physical presence in a country. They face tax regulations in billing. Telenor has invested huge amounts in the network which they cannot reuse. The license and the cost of building the network are non-recoverable costs. If telcos leave a country due to some legal issues they would not be able to recover this investment. Further, ***customer data is very strictly regulated*** and Telenor is not allowed to transfer customer data out of the country. Telcos in these markets cannot transfer their investments so every investment they do within a country doesn't scale completely across borders.

The fact that customer data usage is regulated, impacts the ***marketing strategy in a country***. For example, Malaysia is a very special country according to Telenor. The population has 30% Chinese, 60% Malay and 10% Indians. Either Telenor will have to do different marketing for each group or they can segregate gamers according to age and sex and do marketing according to that without considering differences in ethnicity or race. But in order to do the latter they would have to use data about their customers, such as income levels,

when they're active or inactive, ethnicity, etc… and depending on the regulations they are limited in how they can use the customer data**.**

To summarize the analysis on dynamic nature of markets it is important to discuss in light of the dynamic framework discussed before and shown again here.

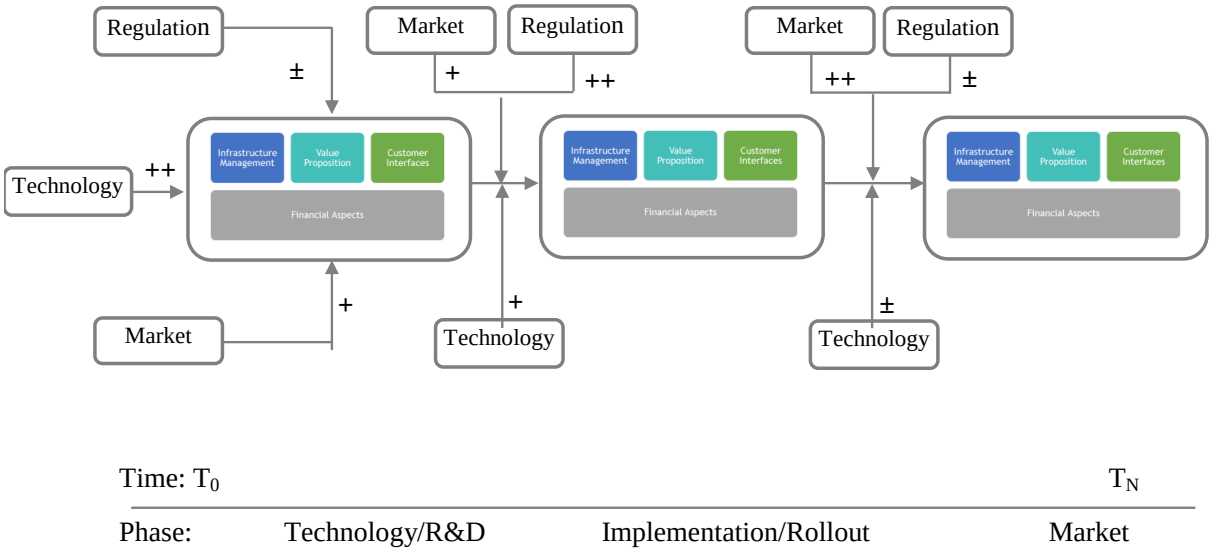


Figure 16 Framework for Research based on Kijl et al (2005) and Osterwalder et al (2005)

The very emerging markets (i.e. India and Pakistan) are at the first phase of Technology/ R&D. Mobile data networks have recently been launched. The market characteristics do not demand a very high level of customization although pricing may still have to be adjusted for these markets. The business model is highly impacted by Technology. The high penetration of low-end handsets implies mobile game publishers can expect to reach few customers if they use global platforms that are associated with high-end smartphones. From Telenor's perspective, these are promising markets mainly because technological limitations (such as low-end handsets) provide Telenor with an opportunity to create an attractive value proposition both for game publishers and end users. In these markets, telcos could have a pivotal role in changing user-behavior by enabling value propositions that drive the usage of mobile games.

The mature markets have a fairly good infrastructure and penetration of global platforms that mobile game publishers are currently using so these are ***'safe'*** markets for mobile gaming

from the publisher's perspective. They might also not expect specific customizations of the game. From the perspective of game publishers these markets are at the Implementation/ Rollout phase where for example, Dirtybit has already released some of its games successfully. From the business model perspective, mobile game publishers have a wider choice of distribution channels. From Telenor's perspective these are challenging markets because competition from other distribution channels of mobile games (app storefronts) is not insignificant and will impact the value proposition within the business model.

The very emerging markets have a very strong market which drives mobile gaming. Technological infrastructure for supporting mobile games is already in place. The market expects significant local customizations and from the game publisher's perspective it is very difficult to enter these markets without local partners. These are equally challenging markets for both Telenor and Dirtybit, who do not have local presence in these markets. The market needs and local partners will play a significant role in shaping the business model in these markets.

6 Conclusion

6.1 Final Conclusions

This exploratory research investigates how business models based on partnerships can be formed to derive value from mobile data networks in Asian emerging markets specifically in the case of mobile games. The research was conducted in an exploratory manner due to the nascent nature of the mobile gaming industry and the limitations in finding relevant literature on the topic of business models based on partnerships within mobile gaming.

A theoretical framework was first established based on two well-known business model frameworks from literature, one of which has been specifically established for emerging mobile services. Secondary research was carried out to learn about the characteristics of the markets being studied and the markets were categorized as either very emerging, mature or very mature markets for mobile gaming within the Asian emerging markets. The critical data for the research was in the form of interviews with key persons working closely within Business Development in mobile gaming in Telenor, a multinational telco, and Dirtybit, a mobile games developing and publishing company. Thus the business model was analyzed from the perspective of a telco and a game publisher. These two sub-units enabled a broad perspective and rich analysis. The data gathered from the interviews was structured according to the theoretical framework and cross-analyzed along with secondary research and available literature. The analysis was presented in the form of a descriptive explanation that analyzed how game publishers and telcos approach the five key aspects within the framework: Value Proposition, Customer Interfaces, Infrastructure Management, Financial Aspects and Dynamic Nature of Markets.

The key conclusions that can be drawn in each of the domains are; Value Proposition: this is the most challenging aspect of the business model for partners whose core business is not mobile gaming itself. For telcos the partnership is a means of gaining competitive advantage while for mobile game publishers the value of the partnership is that it provides access to and knowledge of new markets; Customer Interfaces: The channel a game developer ultimately uses to distribute its games depends on the developer’s size and resources. A telco uses mobile games as a loyalty tool to retain customers. The results indicate that a partnership with

telcos could have an added-value of enhancing customer relationships in these markets by enabling users to pay for games via their phone bill; Infrastructure Management: Game developers will be expected to perform some or all of the key activities such as customization, price adjustments, billing integration, adjustment for low-end devices and advertisements within a partnership. The level of effort that needs to be put by the game developers depends on the nature of the partnership and type of partner. The challenges of the game developer are the opportunities for telcos and vice-versa. Both the telco and game publisher are of the view that direct partnerships between telcos and game publishers may not be scalable for small game publishers; Financial Aspects: Even the financial models of telcos and game publishers clash. The Cost Per Install is a significant cost for publishers while it is an opportunity for telcos. However, telcos have the power in the value chain to enable revenue schemes that enable more users to play mobile games; Dynamic Nature of Markets: These markets can be categorized into three categories for mobile gaming, namely, the very emerging, the mature and the very mature markets for mobile gaming within the emerging Asian markets. Markets in similar categories show similar characteristics, such as interest in mobile games, level of customization required and types of platforms. Nonetheless, the marketing strategy is very specific to each country and may be impacted by regulations.

The research indicates that the business model for bringing mobile gaming to the Asian emerging markets does not translate uniformly across all the countries in this region. The business model has to be adapted to each market. Nonetheless, the business model has some distinct characteristics. It can be inferred that the business model of Telenor is mainly driven by the value proposition they can offer to their end customers. Meanwhile the business model of a game developer/ publisher like Dirtybit is driven mostly by economic considerations.

Finally, it is important to highlight the aspects of internal validity and external validity (Yin, 2009; Wilson, 2010). The interview results were cross-analyzed with literature and secondary research to build internal validity. For external validity and generalization of this research it is important to understand that the research is limited to the case of mobile games and that too within specific markets, namely, the Asian emerging markets. The framework used to analyze the data is specifically applicable for emerging mobile services and does not apply to other industries or partnerships. The research has been conducted on a single unit of analysis, the business model, in the context of 2 sub-units, i.e. a specific telco and a specific game publisher. Both sub-units have their specific characteristics. Telenor is a global telco with a

strong footprint in Asia, varying presence across the focus markets and a very positive approach to partnerships. The views, experiences and strategies of Telenor cannot be generalized to other telcos operating in these markets, although other telcos may benefit from the strategies adopted by Telenor.

On the other hand Dirtybit, although a familiar brand in the West, is nonetheless a startup game publisher with limited resources. Their preferred choices within the business model are limited by their ability to take risk. As the interviewees indicate, game publishers adopt different business models based on their size and strength.

Further the markets of study have distinctive characteristics and this study cannot be generalized to other markets outside the Asian emerging markets. Even within the Asian emerging markets, the analysis can only suggest that Indonesia, Philippines and Taiwan may be expected to follow similar approaches to business models in mobile gaming based on secondary research and indications from interviewees. However, confirmed conclusions cannot be drawn for these markets. Therefore, the conclusions are valid to the specific case and geographical boundaries.

6.2 Implications for Future Work

Several implications emerge from the conclusions and open points in this research.

Firstly, this research has several practical implications for Business Development professionals focusing on mobile gaming in these markets. The value proposition to a telco of a partnership that enables mobile gaming is one of the most challenging aspects of the business model. This value proposition may manifest itself in the form of how end users are charged and what benefits they receive if they choose to play mobile games using the operator's network. Partnering companies that bring mobile gaming to these markets will expect some level of customizations for these markets, which may be in the form of graphical customizations, price adjustments or platform integration adjustments. Further, telcos may simplify integration for game publishers by working with new mediating partners such as mobile solution payment providers. On the other hand, by partnering directly with global app storefronts for direct operator billing, telcos may enable users in these markets to pay for the games on app storefronts without the need for the game publishers to directly integrate with

telcos. Thus the partnerships that telcos do may have a pivotal role in enabling the usage of mobile games in the focus markets.

Secondly, this exploratory research has several implications for academicians. It provides groundwork for researchers to continue deeper analysis of the business model based on partnerships in mobile gaming. The results indicate that several partners of choice are possible. The same interviews can be replicated with other key partners such as app storefronts, platform developers and payment solution providers. With results from a number of sub-units, the conclusions that are consistent across all the sub-units can be drawn as normative conclusions; and the reasons for the conflicting results, if any, can be investigated.

Furthermore, one of the conclusions is that the size of the game publisher will have a significant impact on determining the business model chosen. It would be interesting to conduct interviews across a number of game developers and publishers who vary in size, resources and brand popularity to determine how the business model will be impacted by these factors. Another aspect would be to conduct a similar research for the markets that the interviewees could not provide data on, i.e. Indonesia, Taiwan and Philippines, to see if the conclusions can be generalized to these markets. As the study indicates, each country will have its own adaptation of the business model. An in-depth study with only one market amongst these 9 markets would be also very valuable. The researcher could then explore in detail all choices of partnerships, specific value-propositions, revenue schemes, etc… in the context of that specific country. Finally, business models based on partnerships can be studied in the context of other cases within telecommunications, such as the case of other value-added services, or even outside the field of telecommunication within other dynamic industries, such as the software industry.

When looking back at literature, several resonant themes emerge. The value propositions of stakeholders in the value network are significantly different as pointed out by Li & Whalley (2002) and as also concluded in this research. The research indicates that the value of the partnership for mobile game developers is to help them access new markets and provide access to knowledge about those markets. For the partnering firm, the partnership is a method of gaining competitive advantage. These results have synergies with the literature review on value-adding partnerships (Bleeke and Ernst, 1991; Powell, 1987). From the interviews with the game publisher it is learnt that global app storefronts are an obvious choice as a distribution channel due to convenience. Feijoo et al (2012) point out also that global app

storefronts have a significant power within the mobile gaming ecosystem and have become a convenient choice. The research infers that the choice of partner determines the effort required of the publisher and thus the costs incurred. Therefore for publishers the choice of a partner would depend on how convenient a partnership is in terms of effort and costs. Holzer and Ondrus (2011) similarly suggest game publishers would consider the customization costs involved if they have to move from one platform to another platform.

Literature shows that the ideal partner is the one who significantly contributes value to a firm's market offering and at the same time presents low risk (Kothandaraman & Wilson, 2001). From the publisher's perspective, in the light of this research, this conclusion holds true. Both Dirtybit and Telenor (from its experience with publishers) confirm during the interviews that game publishers, big and small, would like to avoid risks. From the telcos perspective, this research confirms the first aspect only. The value of the partnership is a significant factor for the telco but at least for Telenor, if not for all telcos, money is strength and enables Telenor to take risks.

According to Peppard & Rylander (2006) managers must view the success of their value network and the individual partners that compose it to be as important as their own company's. This approach is seen to be taken by Telenor, which believes that a bigger value can be created by having a stake in the value creation rather than controlling the value network.

To conclude, some of the key findings of this research are resonant with previous literature. Overall this study contributes essential groundwork that enables the research topic to be studied in-depth and creates a path for developing hypothesis for future research.

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Glossary

3G: Third Generation of mobile telecommunications technology

API: Application Programming Interface

ARPU: Average Revenue per User

CPI: Cost Per Install

IT: Information Technology

PC: Personal Computer

YoY: Year-over-Year

APPENDIX A – Table of Indicators

Characteristic Measured	Indicator Description	Pakistan	India	Indonesia	Philippines
Mobile as a medium for accessing internet	National Internet Penetration	15 %	19 %	28 %	44 %
	Growth in internet users	47 %	14 %	22%[1]	18 %
	mobile connections as % of population	79%	75%	121%	113%
	mobile broadband usage (active 3G and 4G compared to population)	3%	8%	41%	48%
	share of web traffic on mobile phones	46%	68%	49%	22%
Devices	smartphone penetration as a % of population	7%[5]	13%[6]	14%[6]	39%[6]
Mobile internet usage trends and interests in mobile gaming	time spent on internet (hours per day)	2.5[4]	5.1	5.1	6.3
	% of population playing games on mobile phones	NA[2]	8%	10%	15%
	average internet connection speeds Mbps	1[4]	2	3.7	2.5
	average mobile net speeds Mbps	1.5	1.7	2.4[1]	2.1[1]
	mobile social usage	9%	9%	25%	36%
	growth in mobile social users	113%	50%	23%	50%
Payment Pratices	mobile commerce (% of population that bought online)	NA[3]	9%	9%	11%
	Pre paid connection % amongst all connections	97%	95%	99%	96%

Table 1 Table of mobile gaming related indicators for Asian emerging markets (Pak, India, Indonesia, Philippines)

Characteristic Measured	Indicator Description	Malaysia	Thailand	Taiwan	South Korea	China
Mobile as a medium for accessing internet	National Internet Penetration	66 %	54 %	80 %	88 %	47 %
	Growth in internet users	5 %	47 %	6 %	10 %	10 %
	mobile connections as % of population	137 %	150%	139%	109%	95 %
	mobile broadband usage (active 3G and 4G compared to population)	78 %	112%	118%	108%	44 %
	share of web traffic on mobile phones	40%	38%	44%	26%	23 %
Devices	smartphone penetration as a % of population	35%[6]	31%[6]	51%[6]	73%[6]	47%[6]
Mobile internet usage trends and interests in mobile gaming	time spent on internet (hours per day)	5.1	5.5	4,7	3.4	3.9
	% of population playing games on mobile phones	24%	21%	31%	29%	25 %
	average internet connection speeds Mbps	4.1	6.6	9.5	25.3	3.8
	average mobile net speeds Mbps	2.5	2.8	3.5	18.2	6.2
	mobile social usage	50 %	46%	62%	27%	46 %
	growth in mobile social users	18 %	36%	20%	23%	26 %
Payment Pratices	mobile commerce (% of population that bought online)	19 %	11%	27%	37%	27 %
	Pre paid connection % amongst all connections	77 %	86%	14%	6%	79 %

Table 2 Table of mobile gaming related indicators for Asian emerging markets (Malaysia, Thailand, Taiwan, South Korea, China)

Table Notes

All data, except as indicated in the notes below, is collectively gathered from http://www.slideshare.net/fullscreen/wearesocialsg/digital-social-mobile-in-apac-in-2015/38

[1]http://www.slideshare.net/s_jeruk/indonesia-digital-landscape-2014-pdf

[2]3G services were launched in Pakistan in 2014 and are still under rollout so the market is yet not so mature to gather useful statistics on these indicators

[3]A nascent industry that is expected to grow into a promising industry with the emergence of mobile internet: http://www.rozee.pk/brecorder/e-commerce/

[4]http://pakwired.com/internet-users-in-pakistan/

[5]https://www.techinasia.com/smartphones-in-pakistan-infographic-2014/

[6]http://www.slideshare.net/truongminhyen/2014-asia-pacific-digital-overview

APPENDIX B – Interview Questionnaire

The Business Model Perspective

Value

i. What value do you perceive from a partnership that brings mobile games to end customers in Asian emerging markets?
ii. What are your key strengths as a game developer/ telco i.e what service/ product do you provide?
iii. What is your value proposition for other stakeholders in the network?
iv. What is your value proposition for end customers in Asian emerging markets?
v. What is your value proposition within mobile gaming for end customers in emerging markets in Asia?

Customer Interfaces:

i. Who are your target customers in these markets?
ii. What is your strategy for getting, keeping and growing customers in the Asian emerging markets?
iii. What channels have you used to reach your customers in these markets? How are the positive things about these channels? What are the short-comings?
iv. What channel will you use to reach your customer in case of a partnership?
v. How costly is to maintain customer relationships in these markets?
vi. Can you point out any characteristic of these customers that you have come across while working in these markets?
vii. How important is it for you to retain your brand image and brand quality in these markets? What possible aspects of such a partnership could impact your brand image?

Infrastructure Management:

i. With your current resources how do you bring a mobile game to the market?
ii. What are the key resources you need to have to bring mobile games to the Asian emerging markets?
iii. What are the key activities you will need to do within this value network?

iv. What do you see as your role within this value network?
v. How is this different from how you work currently?
vi. What other support in the form of partnerships do you need?

Financial Aspects:

i. What are the key cost considerations?
ii. What revenue models are you considering for these markets? What are your concerns about developing certain revenue models?

Dynamic Perspective (how can the model be applied across countries at different levels of technology readiness, regulations and market readiness)

Technology Readiness:

i. What are the key technology considerations (e.g. the type of network speeds, stability and coverage required, type of phones)? For example if you have to bring the game to a market that only has mobile internet speeds of 1.7Mbps, what would need to be done? Are low-end phones an issue? What sort of games do you expect will work on the low-end phones? What are your considerations about the platform integration? And network stability?
ii. How easily can a game be adapted to fit different technological levels of readiness? How much modifications are required? What does it mean for a platform developer or operator to develop the same game for several devices?

Regulations:

i. How can regulations impact mobile games? Are there any countries where you cannot introduce your game? For what reason? As a telco are there certain restrictions that you have faced in these markets?

Market:

i. What is the market interest of users in mobile games in these countries? Does the market influence the revenue model, billing schemes?

ii. Do you believe mobile gaming has driven mobile internet usage in markets such as Thailand, Malaysia, South Korea and Taiwan?

iii. How do you think mobile games developed for one category of markets differ from games developed for another category?

iv. What would you suggest to be a good way of testing a partnership in a market?

APPENDIX C – Secondary Research about Telenor

Telenor Customer Channels:

Telenor sells its SIM card to customer directly through its own franchises or through partnerships with handset vendors. For example, in Pakistan they also offer Telenor SIM in combination with handset from Samsung, Apple, Q-Mobile, Nokia and other vendors. Also in order to promote handset uptake and thus 3G usage, Telenor has introduced their own ultra-low-cost Android smartphone called Telenor 3G preloaded with the Telenor Android App Store and Social Media Apps. Users that use the Telenor 3G handset or a Telenor-partner handset have to use the Telenor SIM and a predetermined data plan[2] (Telenor, 2015b). In other Asian countries, Telenor also offers smartphone related packages[3].

Telenor Partnerships

The Telenor Android App Store, so far released in Pakistan, has several apps, including games. Telenor advertises some of these games and puts them in the front of their online store for them to catch the attention and interest of their customers. The Store has games from well-known publishers such as EA Sports, Gameloft and Inlogic Software, and also smaller developers.

The partnerships with bigger publishers enables publishing of several games of the same publisher to the store. The payments are enabled via Fortumo's mobile payment platform which allows users to buy the apps and games using their mobile phone bill.

In 2013 Telenor signed a global Frame Agreement with Fortumo[4], a mobile payments solution provider, enabling app and game developers to easily monetize users by allowing them to make micro-payments with their mobile phone and charging the amount to their phone bill.

[2] Available from: https://www.telenor.com.pk/personal/devices/mobile-phones

[3] Available from: http://new.digi.com.my/Page/products/default/phones

[4] http://www.telenor.com/media/articles/2013/fortumo-partners-with-telefonica-and-telenor-increasing-payment-reach-by-460-million-users

With Fortumo's platform, mobile payments are available to all mobile phone users and payments are charged directly to their operator bill without the need to use credit cards. According to Telenor, using mobile payments has enabled some app and online developers to increase their conversion rate (number of paying users) and emerging market revenues by more than 10 times. Fortumo enables developers to do one integration and gain billing access to the subscriber base of many mobile operators in 80 countries.

Telenor has signed a wireless content distribution agreement with The Walt Disney Internet Group[5] that will bring Disney-branded content, including logos, ringtones, wallpaper screens, electronic greeting cards and games, based on Disney's line-up of popular characters, to Scandinavian mobile users.

In 2015, Google and Telenor Norway cooperated[6] so that customers could pay for their apps on Google Play using their mobile bill. At the same time this partnership makes it easier for Telenor customers to find services such as Telenor Faktura (the mobile phone bill), Mine Kontakter (my contacts) and Dekningsappen (app for coverage), and other Telenor Apps.

These partnerships with Google and Disney have started in Scandinavia and will gradually have impact on the offerings in the other business units of Telenor.

[5] http://www.telenor.com/media/press-releases/2002/djuice-and-the-walt-disney-internet-group-enter-into-a-wireless-content-distribution-agreement/
[6] http://www.telenor.com/media/press-releases/2013/google-and-telenor-norway-make-it-easier-to-buy-apps-and-games-on-google-play/