THE BUSINESS MODEL OF A SHANZHAI MOBILE PHONE FIRM IN CHINA

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ABSTRACT

This study defines Shanzhai mobile phone (ShanzhaiGi) as an indigenous innovation product supported by a group of value chain suppliers that provide good-enough products by charging reasonable prices in a rapid time frame to fulfill the needs of target customers. Through examining the business model of Shanzhai mobile phone firms, we find that the value created by them is to provide products that benefit the countryside people so that everyone can get connected. Moreover, ShanzhaiGi offers more features than premium international brands to fulfill the market demand of the masses. Shanzhai mobile phone firms capture values, sales revenues, and market shares through cost control by utilizing Shanzhai's value chain suppliers and innovative channel management. While contrasting the business model of Tianyu (as the 'King of Shanzhai') with other market leaders (Nokia and Samsung), we find that the market leaders have a relatively more developed business model than Tianyu. Therefore, Tianyu should further enhance its segment, value chain relationship, and competitive strategy.

Keywords: *Shanzhai; Business model; Value creation*

1. INTRODUCTION

1.1 Background and Motive of the Study

With dynamic changes in the new economy, the cost of technology development is rising while the sustainability of a product life is shortened as competition becomes more severe. In addition, consumers' knowledge of is growing due to advancement of the Internet. It is seen that more firms gain market share not through technology innovation but via a novel business model. This study aims to reveal the business model of a China Shanzhai mobile phone company and identify how it creates value as well as captures it.

ShanzhaiGi, the mobile phone of brand type in China, is the most discussed there since 2008. Shanzhai mobile phones enjoy a strong growth rate compared to international brands, with its market share forecasted to reach the level of international brands as per Digitimes reports indicate. Many researches consider Shanzhai products are the result of disruptive creation while others see firms produce Shanzhai products in order to build a brand name through imitation and innovation. Debates have risen about Shanzhai products violating intellectual property rights versus the rise of indigenous innovation against over-priced international brands (Peng et al., 2009). To understand how China Shanzhai mobile phone firms are able to capture the market so rapidly, this research studies their business model since a business model tells the core value that a firm creates and how it captures the value.

1.2 Objective

Within the enormous Chinese mobile phone market, a collaborative domestic brand, Shanzhai, has taken up market share in the fight against international brands. This study aims to reveal the business model of Shanzhai mobile phone firms, taking a closer look at their formation of value creation and profit model. By doing so, we hope to provide firms in the industry with an insight into the business model of Shanzhai mobile phone firms as well as how to reengineer business models in order to compete in the Chinese market.

The objectives of this study are outlined as below.

1. To reveal the business model of the Shanzhai mobile industry;
2. To identify the value creation of Shanzhai mobile phones and how they captures the value;
3. To compare the difference and similarity of three companies, Tianyu, Nokia, and Samsung, in their formation of value proposition and strategies and find out what makes them successful;
4. To explain why the business model of Tianyu can be more competitive in the low end market;
5. To predict future development and provide suggestions in the direction of sustainable development and expansion to respective firms.

2. LITERATURES REVIEW

2.1 Business Model

To survive and keep profits rolling in are what every business strives to achieve, but how does a business firm become full success in the market? The answer lies in its business model. Although a good business model may not reflect the success of a firm, a successful firm must have a viable and explanatory business model. A good business model is necessary for gaining profitability and survival (Betz, 2002).

Timmers (1998) who conceives a business model as an architecture for the product, service and information, including a description of the various business actors and their roles; and a description of the potential benefits for the various business actors; and description of the sources of revenues. Magretta (2002) points out a good business model and it answers Peter Drucker's old questions: Who is the customer? And what does the customer value? It underlines the profitability methods and underlies logic that explains how to deliver value to customer at an appropriate cost. Tapscott et al. (2000) discuss business innovation models and refer them to business webs (b-webs), which are inventing new value propositions, transforming the rules of competition, and mobilizing people and resources to unprecedented levels of performance.

Faber et al. (2003) provide another view of definition from cross-company collaboration; they see business model as a way a network of companies intends to create and capture value from the employment of technological opportunities. They consider the business model for an enterprise, with a collaborative effort from multiple companies offering a joint proposition to their consumers. Morris et al (2005) define business model on different levels. At the economic level, the concern is with the logic of profit generation, and at the operation level, the model represents an architectural configuration; and at the strategic level, the focus is placed on competitive advantage and sustainability. A business model is a concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture and economics are addressed to create sustainable competitive advantage in defined markets.

Managers must consider the firm's value proposition and choose the activities it will undertake within the firm to determine how the firm fits into the value creation network. Chesbrough and Rosenbloom (2002) see a business model as mediation between technology development and economic value creation and they propose that a business model should:

- articulate the *value proposition*, i.e., the value created for users by the offering based on the technology;
- identify a *market segment*, i.e. the users to whom the technology is useful and for what purpose, and specify the revenue generation mechanism(s) for the firm;
- define the *structure of the value chain* within the firm required to create and distribute the offering, and determine the complementary assets needed to support the firm's position in this chain;

- estimate the *cost structure and profit potential* of producing the offering, given the chosen value proposition and value chain structure;
- describe the position of the firm within the *value network* linking suppliers and customers, including identifying of potential cooperators and competitors;
- formulate *the competitive strategy* so an innovative firm will gain and hold advantages over rivals.

This study defines a business model as a system companies use to generate profit and stay sustainable. Within the system, there are sub-modules used to identify how a firm transforms its resources into the product that the market accepts. Resources are inputted through a value chain process while the product is a result of value creation for which a specific segment of customers is willing to purchase the product.
A business model does not guarantee profitability. In order for a firm to create profit, it also depends upon strategy and execution. A business model provides a blueprint of what a company's business value is, and strategy is decision made over time to realize the value and the capability to execute the strategy (Shafer et al., 2005).

2.2 Shanzhai
Mobile phones have become an indispensable and inseparable part of day-to-day life. Currently in China, there are 600 million mobile phone service subscribers. However, this number reflects only half of the total available market in China, with the other half being an enormous and unexplored market which is an opportunity and challenge for every mobile phone firm when aiming to achieve remarkable growth in revenue. In a market such as China, consumers in second-tier cites and even more remote regions are less aware of international brands, and therefore the challenges faced by leading brands such as Nokia and Samsung are not traditional marketing and supply chain issues, but to a cluster of domestic mobile phone manufacturers that sell imitated and innovated products with a commonly known brand 'Shanzhai', which emerged after China's government removed the license policy to manufacture mobile phones in 2007 (Steinbock & Lowenstein, 2001).

2.3 Background of Shanzhai mobile phone industry
Shanzhai literally means a mountain village controlled by a Robin Hood kind of figure, which implies a rebellion against officials and stands for the general public. When the meaning of the brand is extended, Shanzhai mobile phones are the synonymous for counterfeited, imitated, and indigenous-innovated product with an affordable price and sufficient quality. It rebels against expensive world-leading brands, but very quickly they have transformed themselves into emerging indigenous adaptors and innovators, from not only the aspects of industrial design and capturing domestic demand, but also core technological breakthrough.

The concept of Shanzhai products is that they are made for the general public with attractive features at affordable prices. Their imitated goods are on the edge of violating intellectual property rights, but are produced to meet the demand of the masses. With a significantly lower cost to mimic the industrial design and feature of brand products plus some innovative new features, Shanzhai mobile phones have gained more share in the market and created a phenomenon that their physical design, feature, and price are all more attractive than those of international brands.

This study defines a Shanzhai mobile phone as a primitive indigenous innovation product supported by a group of value chain suppliers that provide a good enough product at a reasonable price in a rapid time frame to fulfill the needs of target customers. Types of Shanzhai mobile phone are classified in Table 1.

Table 1. Category of Shanzhai mobile phone

Types	Description
White Brand	Provided by companies with a mobile phone license, but the license is purchased from a legal holder and the phone through official testing.
Counterfeits	1. Clone Clone looks exactly like branded phones with the brand logo printed on the phone, such as clone Nokia N95. 2. Imitation Imitated phones that look like branded phones with different logos printed on them, such as Hiphone v. Iphone 3. Fake Fake phones have the brand logo printed on them even though the brand does not have such a product, such as LV phone.
Indigenous Innovation	Indigenous innovative mobile phones with many features and attractive outlooks, such as phones with dual SIM cards, extensive speakers, or race car or cigarette box style.
Rework	Recycle the repaired main board of leading branded phones and replace the shell.

Source: Digitimes (2009)

2.4 Value chain of Shanzhai mobile phone manufacturers

The value chain of Shanzhai mobile phones is a cluster of supply chains according to their characteristics. Shanzhai has very strong features of an industrial cluster, which includes geographical gathering, internal cooperation, and firm linkage between different nodes of the network (Porter, 1985). In contrast with a traditional manufacturing process such as for Nokia or Samsung, a Shanzhai manufacturing value chain is constructed by a cluster of no brand small-scale factories, which specialize in different activities (Zhu and Shi, 2010). A company with specialized knowledge in production can use the expertise of another company to specialize in design or R&D to create a new product. Each player focuses on very specific, unique contributions, such as industrial and mechanical designs (ID/MD), IC design, component support, final assembly, and distribution generally through contract manufacturing service or electronic manufacturing service (EMS) providers. With a cluster of Shanzhai manufacturing players, a new product can be launched to the market within 2 months, compared to 6-12 months of R & D requirement for international brands. Not only do the component suppliers contribute specifically on the vertical dimension, but also those companies with R&D functions are all linked together on a horizontal dimension as Figure 1 illustrates.

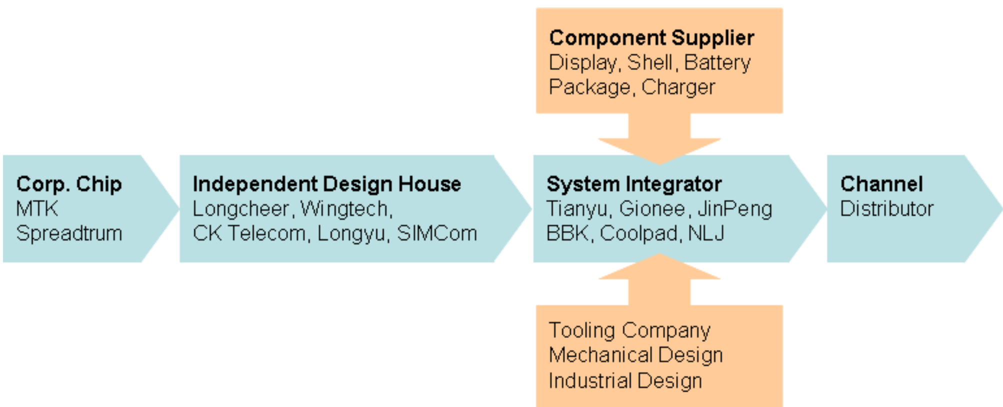

Figure 1. Value chain of Shanzhai mobile phone
Data Source: Digitimes (2009)

Innovation allows Shanzhai mobile phones to become recognized. Shanzhai mobile phones started with a Taiwan-based integrated circuit (IC) design house, MediaTek (MTK), developing a 'total solution chip' in 2005.

For the first time, an independent company was able to provide a single chip which would give a similar operating platform and comprehensive functionality to that used by OEMs and supplied by many major chip providers for a mobile phone design. The turn-key solution, including the core chip, reference design, and interface, is more open, allowing the developers to easily change the interface between different components and hence standardize the mass production procedurals. On the other hand, for the software design house, it is much easier for them to develop the user-interface, as all essential interfaces with the hardware have been designed by MTK. With such great work done by MTK, all the phone developers were left with the hardware case design, implying that the cost of developing a mobile phone from scratch was no longer prohibitively expensive. Developers could create their own product without having to spend too much on R&D or face the threat of legal action for infringing intellectual property rights. It also greatly shortened the development schedule and reduced the resources required when it used to be over 1 year. It was cut down to 1 month with only a few technical engineers involved.

With the experience of working in an OEM (Original Equipment Manufacturer) or a distribution channel for leading brands, many engineering entrepreneurs and businessmen established their own company with their expertise. As a result, a value chain for Shanzhai mobile phone manufacturers was formed.

System integrator companies such as Tianyu and Gionee act as the main players in the value chain. Usually their employees have worked in a distribution channel of leading brands previously, and so they have in-depth knowledge about how to target the domestic market and have a strong sense of customer segmentation. System integrators define the product features and acquire technical design of the main board from an independent design house.

Independent design house engineers (IDH) have the background of working in an OEM for a leading brand. With MTK’s total solution guide book, a common module design is available. IDHs could either adopt the common module design or add features to it to create a new product specification.

Component suppliers, mechanical design, and industrial design houses play supporting roles in a Shanzhai mobile phone’s value chain. With an increase of Shanzhai mobile phone sales, these supporting players also gain revenue as well as offer strong competition.

The distribution channel is also another important player in the value chain. Due to high profit sharing, distributors stand at the front line encouraging consumers to choose Shanzhai mobile phones over branded phones. They contribute greatly as to which phone is to be purchased.

2.5 Cost advantage

The first image of a Shanzhai mobile phone brings an impression of being able to afford added features when comparing with international brands. The cost advantage of it can be seen in the following:

1. Avoidance of the 17% value-added and sales taxes.
2. Avoidance of the official product tests which usually take more than half a year and 200,000 RMB per new model.
3. Low R&D cost.
4. Low promotion cost.
5. Low overhead cost.

Superficially, the cost advantage comes from not paying the 17% value-added tax and sales tax and the investment in research and development. However, the greatest advantage lies on the enormous promotion expense when comparing with leading brands. In return for high profit sharing with its channel distributors, the developers of Shanzhai mobile phones do not spend much on market promotion. As the table below shows, the profit margin of selling a Shanzhai mobile phone is as high as 48% compared with 16% when selling an international brand.

Low overhead operation is also a key element. Normally, a mobile phone company invests in R&D, design, promotion, and channel expenses and this total cost is added onto the price of a mobile phone. I n general, the scale of a Shanzhai mobile phone company is around 20 employees and can be done with as few as 3 people. One is responsible for sourcing the solution and components, the second one works with outsourced factories, while the third person cooperates with channels on rebates. These are the main cost advantages of Shanzhai mobile phone companies.

Table 2. Cost comparison of Shanzhai and international brand mobile phones

Item	Shanzhai	International Brand	Difference
BOM Cost	$37	$52	$15
Logistic & Assembly	$7	$9	$2
Subtotal	$44	$61	$17
Markup from OEM	$7	$21	$14
FOB Price	$51	$82	$31
Gross Margin of OEM	14%	26%	12%
VAT	$0	$21	$21
Markup from Channel	$47	$20	$27
Retail Price	$98	$123	$25
Gross Margin of Channel	48%	16%	32%

Source: Digitimes (2009)

3 RESEARCH METHODOLOGY

3.1 The Business Model Approach

The research applies the framework of Chesbrough and Rosenbloom's business model and takes Beijing Tianyu Communication Equipment Co. Ltd. (Tianyu) as the subject of the case study since Tianyu is given the title of 'The King of Shanzhai' in the industry and has the top market share among domestic mobile phone manufacturers in mainland China. The study further compares Tianyu with Nokia, which has the highest handset market coverage globally and Samsung which is the second market leader. By comparing the business models of these 3 companies, we intend to find out how value is created and how they capture it.

This research focuses on studying a firm's business model and looks into value creation and the capture process. Further questions can query about what the definition and elements of a business model are, as well as examining any common result from successful business models. Could this result be categorized in segments? What are the key segments to evaluate a successful business model? To confirm the feasibility of the model would require several testimonies in different industries. This research focuses on exploring the literature and historical data to develop a key segment to analyze the business model of Shanzhai mobile phone manufacturers.

3.2 Business Model of Tianyu

a. Market: Because high-end customers have strong brand preferences, Tianyu, a newcomer, targets the younger generation with middle and low-end mobile phones at a competitive price and attractive ID design and features. As the target market is the middle and low-end, Tianyu focuses on controlling cost due to management strongly believing only low cost reflects the key to competitive price. In fifty-two models which Tianyu sold in 2009, thirty-eight of them (over 70%) were under 1000RMB, twelve of them between 1000RMB to 2000RMB, and only two models over 2000RMB. Tianyu started with low-end models and worked its way up to middle and high-end products. To fulfill the needs of younger generation music lovers, Tianyu cooperates with digital music content providers and promotes a series of music mobile phones.

b. Value proposition: In the fifth year of its establishment, Tianyu launched its own brand 'Tianyu' and new logo 'K-Touch'. The interpretation of K-Touch is to 'Keep in touch' as Tianyu phones make friends keep in touch with each other, and 'Key touch' means that keypads on Tianyu phones are the key to communicating with loved ones, and 'kind touch' as in: Kind touch in life has been brought by good communication enabled by the

Tianyu mobile phone. In addition to trendy and technical elements, Tianyu intends to create a brand culture of being people-oriented. K-Touch symbolizes a living style as well as an attitude towards life. The underlined theme is to never stop communicating. Tianyu literally means language of the sky, as the company sees customers and partners as the sky and therefore Tianyu follows the language of the sky. The message is saying to its customers that “let’s keep in touch forever and always listen to the language of the sky.” Through the brand image it builds, Tianyu delivers a ‘people-oriented’ message and devotes itself to providing affordable mobile phones so that communication never stops and people are in touch with their loved ones.

c. Value chain: The key partner in Tianyu’s value chain is a Taiwan-based IC design house, MediaTek (MTK). Relying on MTK’s open platform, the downstream integrator leverages the advantages of a market -collaborated network, with more feature models at high speed and low cost. With MTK’s total solution, Tianyu launched eighty-four models, more than Nokia’s offering in 2007. MTK’s total solution dismisses the core technology to design a mobile phone, which beforehand to require a team of engineers to spend more than a year on designing a phone, but with MTK’s core chip and reference design, a mobile phone is launched to the market within three months. Tianyu is one of the first few to adopt MTK’s solution and have its engineers trained by MTK to collaboratively develop new features, leaving other Shanzhai players behind. Besides working with MTK, Tianyu outsources to the Shanzhai value chain to complete the product design and outsources manufacturing to EMS companies such as BYD and Foxconn. As a result, Tianyu enjoys a great deal of cost savings on overhead and increases flexibility during expansion.

d. Cost and profit: In order to differentiate itself from international brands and offer high commission to sales channels, Tianyu takes cost control very seriously. The final selling price aims to be half to two thirds of the international brands, but with more features. It keeps 10% profit margin while leaving more to distributors and retailers.

e. Value network: Tianyu positions itself as a system integrator of mobile phones, utilizing the cluster of the Shanzhai mobile phone value chain to provide affordable prices, fair quality, and feature products to market.

f. Competitive strategy: The channel strategy is Tianyu’s winning capability over domestic brands and it contributes the most to paving the way towards being the King of Shanzhai. Having the experience as a leading brand distributor, Tianyu’s management knows the needs of the market and distributors. Unlike other leading brands, international or local, it spends a significant amount on promotion and sales through multi-layer channels to cover a wide range of China’s market. Tianyu has no budget planned for promotions but offers high profit margin to its channel distributors.

The channel management practice is common in the mobile phone industry and is within the profit margin of 40-50%. Mobile phone companies take 20-30% since they bear the promotion and inventory cost. First layer distributors take 10-15% and leave only 5% to the dealers. A 5% margin does not provide much incentive to greatly promote specific mobile phones. With its own innovated strategy, Tianyu directly supplies to city-based distributors to ensure the coverage of the market and to create a brand new value sharing mechanism by high profit sharing with lot by lot deals.

Tianyu transfers the cost of promotion and inventory to city-based distributors with a profit margin as high as 40-50% and further negotiates lot deals with its distributors while empowering them to decide the end selling price, which offers a significant incentive for dealers to sell Tianyu mobile phones, and induce word of mouth. On the other hand, Tianyu can save on overhead expense, avoid the risk of price fluctuation, and lower the burden of inventory and cash flow.

Resulting from this innovated channel management, Tianyu has opened up market coverage from the main cites to the fourth to sixth level cities. Tianyu’s channels cover five times the market compared to Nokia’s channel coverage, because Tianyu works with 1200 direct distributors all over China. In order to avoid sales conflict between distributors, Tianyu provides a wide range of mobile phone models for distributors to select.

4. RESULTS AND DISCUSSION

4.1 Innovated Channel Strategy

With an innovated channel strategy plus various fair price mobile phone models launched to fulfill the vast market demand, Tignyu became the King of Shanzhai in 2007. Tianyu is an excellent example that demonstrates how a new start-up company can take over the market by innovation in its business model instead of technology improvement.

Tianyu created a clear value in the Chinese market, especially for low income people in the subordinate cities as Tianyu's products are made for them. The message shown in the brand image, to keep in touch and be people oriented, has no terms of technology as it emphasizes that Tianyu helps people to stay in touch. In addition, the delivery of the message is through word of mouth by the retailers as they receive a high commission when selling Tianyu phones. Front-end salespersons educate low income customers not to select over-priced international brands, but to purchase domestic Tianyu mobile phones which cost less with more features. As a result, the sales volume of Tianyu's mobile phones reached a record high 17 million in 2007, and grew to 24 million in 2008 and 27 million in 2009.

4.2 Comparison of Business Models

In order to compare the business model of Tianyu with the market leaders, Nokia and Samsung, each element of the three firms is first compared, and this research further ranks the level of development of each firm in each element of the business model. Second, three figures of each business model are formed to represent the three firms for a vivid comparative representation.

a. Market: Nokia aims to cover every segment of the market while Samsung tends to build its valuable brand image by offering high-end products. Tianyu, as a late comer, fulfills the demand of low income people, along with product offerings for the low-end segment.

b. Value proposition: Nokia, the industry leader, emphasizes the linkage between human usage and technology. Samsung shows its differentiation by providing a stylish product which reflects on product features and outlook design. Tianyu provides the basic product and delivers the message to fulfill basic demand.

c. Elements of value chain: As Samsung mobile mainly utilizes the resource from its own group, it requires the least effort in partner networking and therefore is rated the lowest. EMS is one of Nokia's key partners. Although having the capability to complete the phone design and manufacturing process, Nokia outsources manufacturing to EMS in order to lower the cost. Another key partner of Nokia is the system operator which Nokia works with to set up the protocol in order to keep its leading position in technology. Nokia is rated in-between Samsung and Tianyu. Due to the complexity of the Shanzhai value chain, Tianyu is rated the highest.

d. Position in value network: Market share in China is used to measure the end result of how well the three companies perform in value configuration. Nokia has the highest score and Tianyu has the lowest with Samsung second.

e. Competitive strategy: Tianyu's innovated channel management is easily duplicated, and in fact it is common practice in the circle of Shanzhai mobile phones. The strong sense about market needs is Tianyu's weapon to compete with the leading brands, and therefore Tianyu is given a lower score in this block. Samsung's main strategy is in its marketing strategy, especially in venue marketing through sponsorship in sports fairs and TV dramas. Samsung is given a medium score. Occupying the pole position in the mobile phone market, Nokia is given the highest score for its brand marketing, development in technology, and cooperation with system operators to develop the Symbian platform.

Based on the above comparison, a comparative level of development in each segment of business model is summarized in Figure 2.

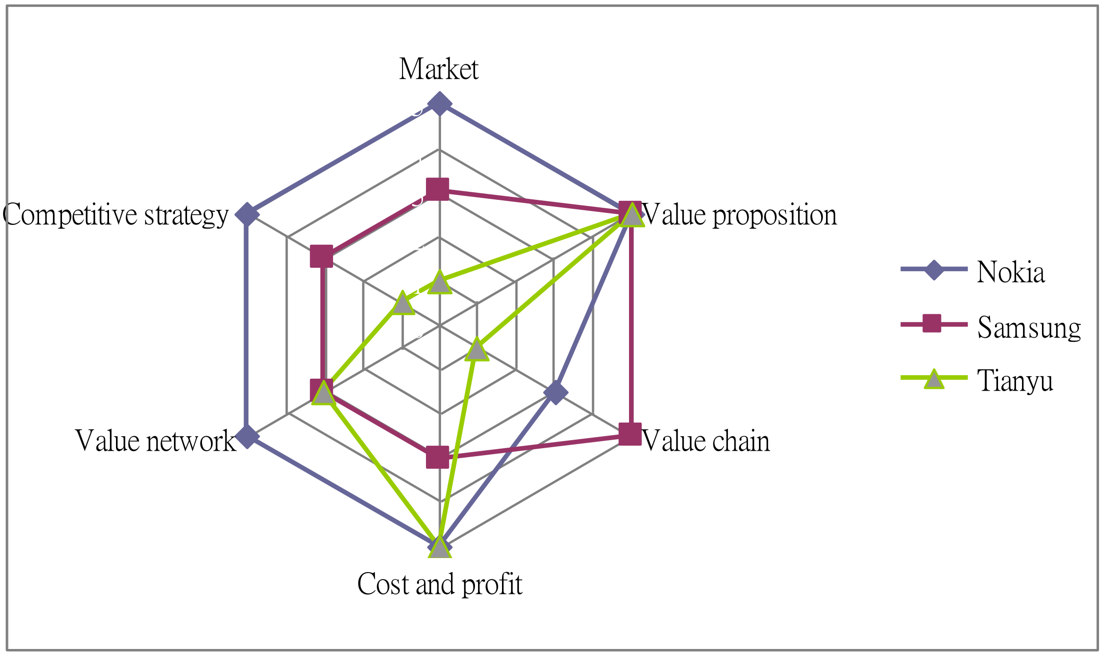

Figure 2. A radar graph for three business models

Each of the business models can be further illustrated in Figure 2: Nokia, the current market leader in mobile phones, has a near regular hexagon shape-like business model, symbolizing a well formed business model in each element. Samsung also has a near regular hexagon shape result, but the area is smaller than Nokia which reflects the reality in the business world that Samsung is behind Nokia. The business model graph of Tianyu is not quite a hexagon at all which represents that overall business model is not yet fully constructed and well balanced. However, Tianyu develops its strength in value proposition and cost and profit benefits; as a result Tianyu enjoys its success in mobile phone sales.

5. CONCLUSIONS AND SUGGESTIONS

5.1 Conclusions

At the end of 2007, both China's government's withdrawal of the license for mobile phone production policy and the turn-key solution to design a mobile phone provided by MediaTek, have greatly reduced the work of mobile phone design, as many small enterprises with a previous background of being an OEM and distributor of leading mobile phone brands have joined mobile phone production. These developers collaboratively provide the so-called 'Shanzhaigi' to the domestic market in China.

Shanzhai, a terminology that emerged in 2008, is a synonym for indigenous innovation in China. This research defines the term as a primitive indigenous innovation product supported by a group of value chain suppliers that provide a good enough product with an affordable price in a rapid time frame to fulfill the needs of target customers. This paper further reveals the systems, operation mechanism, and value proposition of the so-called 'King of Shanzha', Beijing Tianyu Communication Equipment Co., Ltd. (Tianyu) by adopting Chesbrough and Rosenbloom's (2002) business model to pursue a more comprehensive understanding.

The case study of Tianyu shows that a company does not need to be perfect in every segment of its business model in order to gain a leading position in the market. In fact, Tianyu gained its position in the Chinese mobile phone market with no background of R&D and manufacturing capability. Instead, Tianyu utilizes the value network with expert insight on market needs to create value for its target segments. The target segments not only include end customers, but also channel distributors. A clear value position and a right cost and profit strategy are enough to make Tianyu the King of ShanzhaiGi.

In a dynamic, competitive market, business strengths and weaknesses do not remain unchanged along with market demand. Therefore, firms should re-examine and reengineer business models from time to time to align value creation and value capture with a dynamic market demand. At present, China's mobile phone market is gradually moving from a growth stage to maturity with its market size increasing steadily, but how to survive and retain profit are the main challenges Tianyu faces. Previously, Tianyu gained its market share through strategic channel management, various product offerings, and cost advantage resulting from fair prices. However, Tianyu heavily relies on value chain suppliers which may bring flexibility, but it also may become an obstacle for further growth. As China's mobile telecom industry moves towards a 3G system, the market demand is changing. Tianyu depends on MeidaTek's 3G solution and other suppliers' components to provide 3G phones. Until its supply chain improves, Tianyu has no competitive edge in the game of 3G phones.

Only by creating value which the market deems worth it, can a firm will gain a position in the market. Brands such as Nokia, Samsung, and Tianyu deliver clear value creation from their product value proposition and every element in their business models.

5.2 Suggestions

A business model is not only essential to a firm's core value, but can be examined as to whether a firm follows through the core value, and also can be applied as a tool to see a firm's competitiveness compared to its follow competitors. In this study the business model of Tianyu is compared with those of leading players such as Nokia and Samsung and a radar graph is drawn to clearly show any similarity and difference. The radar graph clearly shows that Nokia covers most of the elements while Samsung's coverage ratio is in the middle, and Tianyu's coverage is the lowest. Tianyu should enhance its business model by:

1. expanding the market segment, by not only focusing on the low-end products but also to upstream to other models;
2. enhancing the value chain relationship. Tianyu heavily relies on the value chain to create a good side for releasing the overhead cost burden, but this may also bring the downside for further new product launches;
3. implementing a more competitive strategy. In addition to a channel strategy, Tianyu should find a way to effectively implement more strategies such as maintaining a rapid rate of new model launches to fulfill mass public demand while not creating any downside and cooperating with local telecommunication system operators to develop the 3G market.

The above conclusion is not only for Tianyu, but should be also practical for other Shanzhai mobile phone firms.

5.3 Research Limitations

Due to the scope limitation of this research, the comparison made between the three business models may be subjective. It is suggested that in a future study, the framework could be extended and include an empirical study. Furthermore, the framework may be applied to other industries and to compare the performance of late comers with the leading players. The clear value proposition business model has helped Tianyu become the champion of domestic mobile phone firms in the beginning of Shanzhai era. However, since the business model is easily duplicated, future study may research on how to sustain the competitive strength within the business model.

This study also focuses on the Shanzhai mobile phone sector, and the same business model may be applied to other industries that have a Shanzhai value chain. The Shanzhai netbook sector may be the next focus of study. It is worth it to find out whether the value created in Shanzhai mobile phones is the same as the value created in Shanzhai netbooks. This may provide a great reference to a firm to position its value proposition.

ACKNOWLEDGEMENTS

The authors thank conference participants at Sun Yat-Sen University in Guangzhou, China for their helpful comments. Partial financial support from National Science Council in Taiwan (NSC98-2410-H-009-055) is gratefully acknowledged.

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