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Analyzing Suitable Revenue Model of Digital Music Platforms in China Based on the Assumption of Paid-Music

Information Systems Science

Master's thesis

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2014

Department of Information and Service Economy
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Analyzing Suitable Revenue Model of Digital Music Platforms in China Based on the Assumption of Paid-Music

Master's Thesis
Zhang Yu
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AALTO UNIVERSITY SCHOOL OF BUSINESS ABSTRACT
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Yu Zhang

ABSTRACT

Objectives of the study

As changes in the distribution channels of music, the online platforms become the most popular and most important channel around audiences all over the world. But in the meanwhile, pirated music on the Internet is a great threat for the licensed digital music services. Especially in China, due to the audience's lower willingness-to-pay and the rampant pirated music, music platforms are looking forward to some practical solutions. This research aims at exploring feasible revenue models with applicable features for Chinese digital music platforms.

Academic background and methodology

At first, literature reviews contributed to build the research framework of this study, which included business model, revenue models used in digital music platforms, web 2.0, and the value-adding strategy. The empirical research was divided into two parts – business model evaluation of leading international music platforms and the China market study. The business model evaluation of selected case companies was based on the modified business model. And the case companies were selected following the four different types of revenue models. The second part of China market study was comprised of a SWOT analysis of local digital music industry and the consuming behavior of Chinese audience. Furthermore, the business model evaluation was regarded as benchmarking to highlight specific features that the foreign music platforms are using. The China market study was the ground of analyzing and reflecting beneficial characters for the local digital music platforms.

Findings and conclusions

The essential finding of this research is that the artist-to-consumer model is the most suitable model for Chinese digital music platforms. Moreover, a three-sided platform should be developed to leverage the power of audience, advertiser, and celebrities and stars. Application of big data is helpful for music platforms not only at attracting more advertisers and music listeners, but also at encouraging the conversion rate. The value-adding services could combine online features and offline activities through fully leveraging celebrity effects.

Keywords

Digital Music Platforms, Business Model, E-Business Ontology, Revenue Models, China Digital Music Market, Value-Adding Service

AALTO-YLIOPISTON KAUPPAKORKEAKOULU TIIVISTELMÄ
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ABSTRAKTI

Tutkimuksen tavoitteet

Muusikin jaossa tärkeimpänä toimintaohjelmana toimivat nykyään verkko palvelimet. Samaan aikaan kuitenkin piraatti – keinoin jaettu musiikki toimii vaarana lisenssöidylle musiikille. Etenkin Kiinassa jossa ihmisten mielipiteet ja tottumukset musiikin maksamisesta ei ole yleistä, etsitään uusia ratkaisuja musiikin lailliseen myyntiin verkossa. Tämä tutkimus keskittyy toteuttavissa oleviin ratkaisuihin digitaalisen musiikin verkkopalveluille.

Kirjallisuuskatsaus ja metodologia

Tutkimuksessa käytetään ensin kirjallisia arvioita liike- ja ansaintamalleista jotka ovat jo käytössä digitaalisessa musiikissa. Web 2.0 sekä arvo-lisä strategioita käytettiin tutkimuksen kehyksinä. Empiirinen tutkimus jaettiin kahteen kohtaan; jo olemassa olevien toimijoiden liiketoiminnallinen arviointi sekä Kiinan markkinat. Yritykset valittiin niiden erilaisten toimintamallien mukaan. Toinen osa Kiinan markkinatutkimuksesta koostui SWOT analyysistä paikallisista markkinoista, sekä kulutuksen analysoinnista. Liiketoimintamallien arviointia tehtiin myös benchmarkkaamalla tiettyjä erikois piirteitä joita ulkomaalaiset musiikki platformit käyttävät.

Tulokset ja päätelmät

Tutkimuksessa käytetään ensin kirjallisia arvioita liike- ja ansaintamalleista jotka ovat jo käytössä digitaalisessa musiikissa. Web 2.0 sekä arvo-lisä strategioita käytettiin tutkimuksen kehyksinä. Empiirinen tutkimus jaettiin kahteen kohtaan; jo olemassa olevien toimijoiden liiketoiminnallinen arviointi sekä Kiinan markkinat. Yritykset valittiin niiden erilaisten toimintamallien mukaan. Toinen osa Kiinan markkinatutkimuksesta koostui SWOT analyysistä paikallisista markkinoista, sekä kulutuksen analysoinnista. Liiketoimintamallien arviointia tehtiin myös benchmarkkaamalla tiettyjä erikois piirteitä joita ulkomaalaiset musiikki platformit käyttävät.

Avainsanat

Digitaalisen Musiikin Verkkopalveluille, Liike-ja ansaintamalleista, Kiinan Digitaalisen Musiikin Markkin, Lisäarvoa Tuottava Palveluun

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1. INTRODUCTION

Over the past decades, digital music technologies have become widely used due to the high quality of sound level, portability and lower cost. Music has been transformed into digital form and stored on CDs, laser discs and digital versatile discs. After the networking (broadband) technologies are developed, consumers are able to get high-quality digital music directly via the Internet. Furthermore, Internet has become the main conduit not only for music, but also for other information and entertainment (Calvin and Bernard, 2001). On the other side, due to the increasing number of digital channels in both traditional physical media and emerging online streaming services (Levy and Bosteels, 2010), the long tail effect of the music becomes increasingly obvious. Consequently, almost all the indications have pointed out that the music industry is changing and new revenue model should be carefully analyzed to help relevant companies survive in the fierce competition.

This study focuses on developing feasible revenue models for Chinese digital music platforms based on the important assumption of paid-music. The whole research is composed of studying successful digital music platform in the worldwide and the digital music industry in China. In the introduction chapter, the author will express the research background to derive research objectives, and then define the research questions. Next, the author will present the structure of thesis.

1.1. Research Background

Firstly, a glance at the global music world builds an overall understanding of this industry and gets some ideas that why digitalization of music is irreversible.

The music industry was a flourishing sector with a clear structure in the mid-1990s. Due to the transition from vinyl records to CDs and the relevant secondary usage of back catalogs, a significant growth was ensured in industry sales. A tremendous increase in the global recording sales occurred between 1985 and 1995, and the sales tripled from $12.3 billion to $39.7 billion. Furthermore, another evidence was that five record companies – Universal/Polygram, Sony Music Entertainment, EMI, Warner Music Group and the Bertelsmann Group (BMG) dominated the market world-widely. In 1997, the market share of these five record companies achieved 80

percent of the whole industry. Thus, these vertically integrated companies controlled the entire value chain, including selection and management of musicians and their products, recording and copy rights, music production, and especially the global distribution channels. (Dolata, 2011)

However, the booming record market began to subside since the end of 1990s and the market situation almost completely changed as well. In the worldwide, the recording sales have continuous declines, from $40.5 billion in 1999 to $31.8 billion in 2007 and to $ 27.8 billion in 2008. These decreases in music sales mostly depend on the drastic drop in the traditional core business – CD sales. (Dolata, 2011) Nevertheless, due to the transition of distribution systems, the revenue from digital channels is growing year by year, while the physical music revenue is decreasing. From the figure below, the global recorded music sales declined as well. According to IFPI's report, the global recorded music trade revenue firstly increased by 0.2% in 2012, after 12 years' decreases. However, despite of the growth in the whole industry, sales of physical music still diminished. Till 2014, the revenue from physical music accounts for 51%. And digital music revenue equals to 39% with a 4.3% rise from 2013.

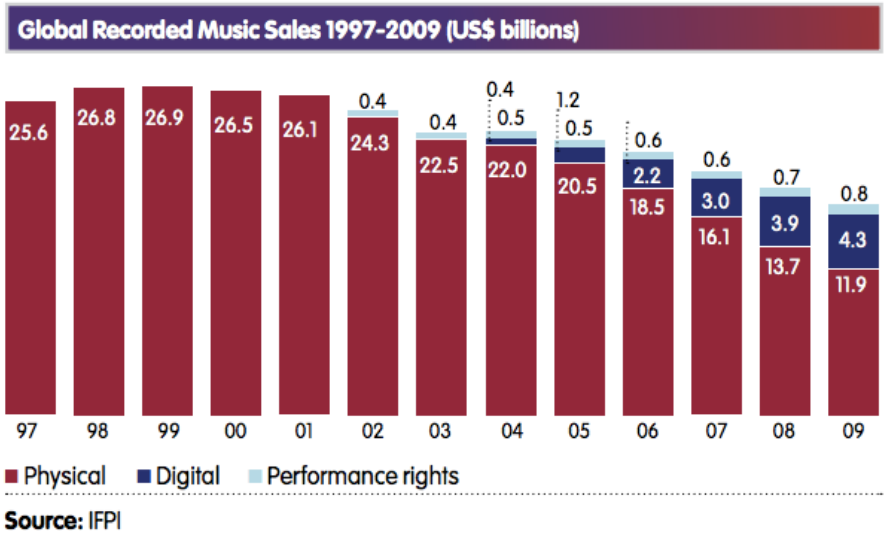

Figure 1: Global Recorded Music Sales 1997-2009 (IFPI, 2010)

In general, as the rapid growth of trade in intellectual property, the information-based 'new economy' is playing a more important role currently (McCourt & Burkart, 2003). The digital music market has an unpredictable giant space to grow. In the meantime, this large upside

potential also makes competition more drastic. Similar changes are happening in Chinese Music Industry as well and it's a crucial opportunity of transition from the off-line to the on-line music.

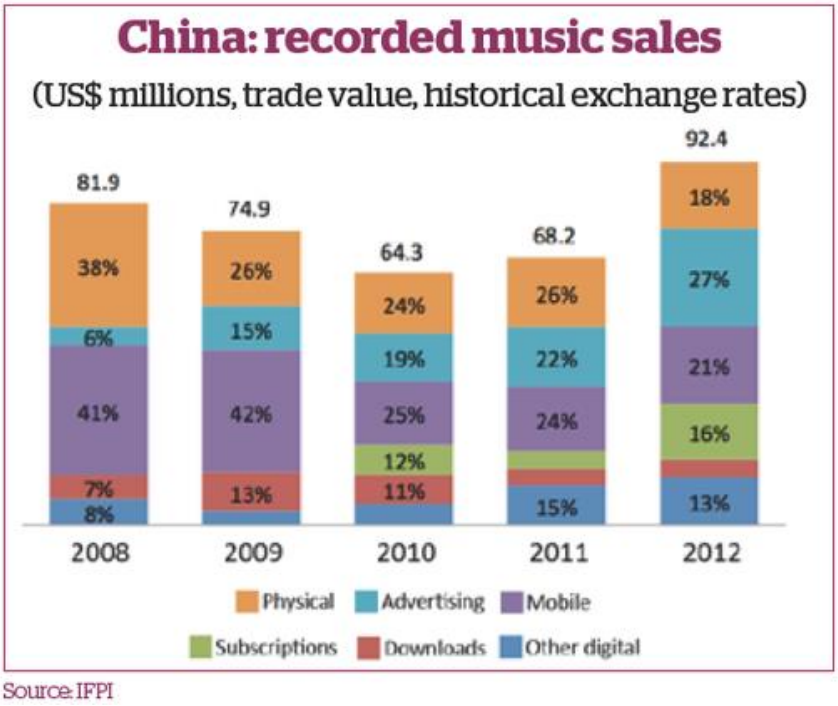

Figure 2: China Recorded Music Sales 2008-2012 (Music Ally Report 321, 2013)

The above figure shows the boom of digital music in China market. In 2012, the digital sales had a 49.8% increase to $75.5 million, while the physical sales decreased by 5.1% to $16.9 million. Among all these channels, advertising sales shared the biggest percent – 27%, followed by 21% of mobile format. However, the vital component of Chinese consumers' annual expenditure on mobile music is the ringback tone, which is different from the real listening music. (Music Ally Report 321, 2013)

Despite the overall sales, estimated revenue per capita is only $0.10 – compared with $34.7 in Japan (IFPI—RIN 2013). The widely known reason is that Chinese market lacks intellectual property protection for the intellectual capital. Due to the rapid development of information technology, in recent years users can easily get digital content of music, movies, dramas, book and others from the Internet without paying. However, this phenomenon is changing slowly but firmly towards a sound system. In 2011, three international record companies established an agreement with the Chinese Internet leader – Baidu to force it to close infringing links' service

and set up the anti-piracy regulations. (IFPI, 2014) Till 2013, eight Chinese major online music services subscribed the anti-piracy agreement with major record companies and some independents. (IFPI, 2014) This successful transformation brings a brighter image on the music industry of China. Furthermore, another advantage is the giant Internet population – 618 million in 2013, and 81% of these users connected to mobile. (IFPI, 2014) This number means that China music industry has a great potential to become one of the top markets all around the world, especially in the digital music. (IFPI, 2014)

But the challenges still exist. Since Chinese audience get used to obtaining free digital content from the Internet for such a long time, it is difficult to change the consuming behavior to a paid-model. Even so, a successful transformation has taken place in the online video broadcast. Under the pressure of relevant departments and producers, the mainstream video website changed their business model smoothly towards "Paid-plus-Free" mode without losing any audiences. (Mao, 2010) Therefore, as the step of paid-music era is approaching, online music service companies should build appropriate revenue models to remain current users and achieve more users to pay the vast royalties and get better profit in the meantime. This is also the reason why the author would like to study on this topic.

1.2. Research Objectives and Research Question

The paid-music model is not non-existent in the online music service of China in the past. For example, QQ music that belongs to Tencent has 30 million paid users paying 10RMB per month. Besides, Xiami, Kugou, Kuwo, Dounban.fm and other service providers have their own subscription models as well. However, the number of paid subscribers occupies a very small proportion of the total users. Moreover, the conversion rate of the paid subscribers is extremely low. Most of the websites cannot guarantee the subsistence ability just rely on the paid services including pay-per-download and paid subscribers. The mainstream websites such as QQ music and Baidu music make profit mainly depend on the advertisement.

Nevertheless, there are a big amount of music enthusiasts who always chase diverse recorded music and collect those music. And fans of the music stars are also willing to spend money in watching their performance or joining the fan club. Thus, Chinese audiences have the willingness

to pay for the music. The main problem is to find an appropriate way to attract them to spend money on the online music.

Based on this thought, the author will study on the major international digital music service providers to get some ideas of attracting new audiences, increasing paid-user conversion rate and making real profit. In another hand, the China music market and audience behavior also need to be carefully researched to analyze suitable service model and sustainable revenue models for the providers of digital music platform.

Thus, the research objective is:

> *Based on two-step studies – the international leading digital music platforms with the applied features and the China digital music industry, the author wants to explore feasible revenue models for Chinese paid-music service providers.*

To reach the objective, this paper will focus on the following problems:

> *1. How do the leading international online music platforms operate their businesses and generate revenues?*
> *2. How do the value-adding services attract more users and stimulate conversion rate?*
> *3. What is the current situation of the digital music industry in China?*
> *4. What can be learned from the international online music platforms and how to adopt them to China market?*

1.3. Structure of the Thesis

This paper is composed of six chapters and the detailed contents of each chapter will be illustrated in the rest of this sub-chapter.

Chapter 1 presents the overall view of thesis, including research background and the motivation, research objective and research problems, structure of the thesis as well as limitation of the research.

Chapter 2 conducts reviews of literatures in business model, revenue models and value-adding service. Since this thesis focuses on the online music platform, the e-business model will

highlight. The revenue models are studied to evaluate models used by relevant companies. In addition, value-adding service is reviewed to understand the important impact of accessorial services to the whole business model.

Chapter 3 illustrates research framework and methods that are used to conduct the empirical part of this thesis. Moreover, reasons of selecting multi-case study as method are also introduced in this part. The reliability and validity of this study is justified in the end.

Chapter 4 focuses on analyzing business model and revenue models used by each selected company to answer the first two research problems. This part is built on the reviewed articles and books in the chapter 2.

Chapter 5 has two parts. It will begin with a SWOT analysis of local digital music market to build the knowledge of superiorities and obstacles that the service providers face to. The second part states consuming behavior for the purpose of analyzing attractive value-adding services to Chinese audience.

Chapter 6 answers rest research problems and presents empirical findings based on the two-phase study. The managerial suggestions are brought out as well, which includes viable revenue models and attractive value-adding services.

Chapter 7 presents the research conclusion and makes suggestions for the further study. Furthermore, limitations of this research are introduced as well.

2. LITERATURE REVIEW

David and Penny pointed that "a substantive, thorough, sophisticated literature review is a pre-condition for doing substantive, thorough, sophisticated research" in his article. The literature review in relevant research topic is an indispensable part of both research process and research report. (Hart, 1998) It collects advantages of former researches and builds the foundation for the further empirical analysis. To achieve a collective understanding, a researcher needs to know the previous studies and their strengths and weaknesses, discover new research opportunity and place his/her own ideas from the literature review. (David and Penny, 2005) To better understand what should be done in literature review part, several questions could be considered:

1. *What problems have been solved in the existing publications and what have been overlooked?*
2. *What do these researches discourse and what are the conclusions?*
3. *What are the main divergences in the literature and what are the reasons of the divergences?*
4. *What theories or concepts do the researches use? And what are not used in the studies?*
5. *Are these conclusions based on solid reasons, certain evidences and a rational methodology to achieve a sound conclusion?*
6. *Are there any problems and gaps still existed? Do they need additional study?*

(Jeffrey, 2006)

In this study, the literature review part consists of three steps to "advance the collective understanding" (David and Penny, 2005). In the first stage, the business model canvas will be briefly reviewed to lead to a detailed study of e-business model ontology that is more relevant to the research background. A study of Internet business model is helpful for understanding the advantages and disadvantages of current digital music platforms, and analyzing the inadequate aspects of existing platforms. The researches of revenue models will be reviewed as well after e-business model study. In the end, a further research of value-adding service will be conducted to make a concrete analysis of those services that are applied to attract new users and remain existing users by the mainstream digital music platforms in the empirical study part.

2.1. Business Model Ontology

The discussion of business models has become fairly fashionable in recent years. However, numerous executives have no idea about how to implement business model in reality. This result can be proven by an Accenture's study among 70 executives from 40 companies. Coincidently, 62% interviewees cannot describe the process of making money in their own company in a sufficient way. But this doesn't mean that business models are insignificant or ineffective in enterprise management. Quite the opposite, since the survival and thriving of all profit-making organizations depends on their abilities of creating and capturing value, all these abilities are directly connected with business models. Therefore, through business models, enterprises' executives can analyze and modify their operations to gain a sustainable success. The same tendency can be found from the increasing literatures about business model. Through a careful review of 12 definitions in the relevant publications during 1998-2002, Shafter, Jeff and Jane found 42 different components appeared in the business model. According to affinity diagram, they identified four main groups to classify business model components that were referred more than twice in those definitions. The four major groups are "strategic choices, creating value, capturing value and the value network". (Shafter, Jeff and Jane, 2005) The components of business model affinity diagram are shown below.

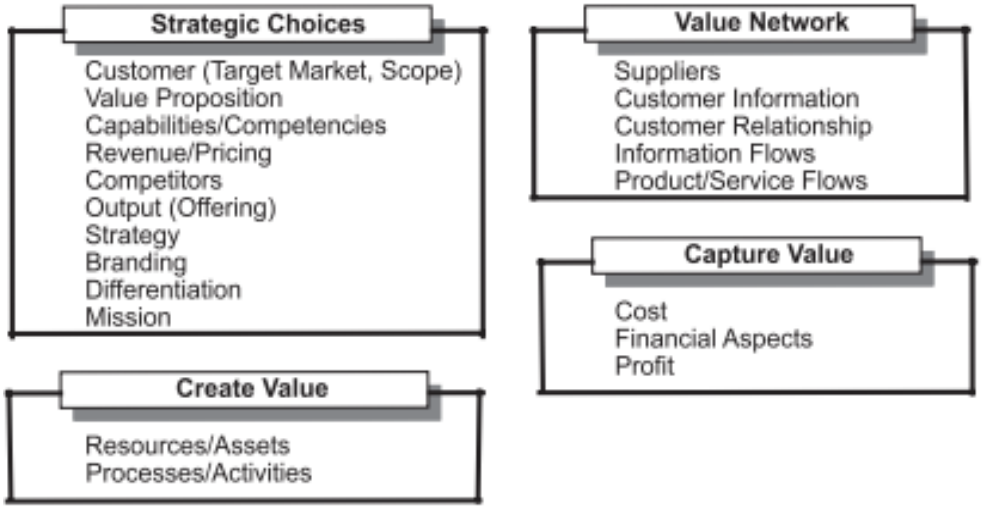

Figure 3: Components of Business Model Affinity Diagram (Shafter, Jeff and Jane, 2005)

The collection and classification of all the business model components are covered and explained by a more sophisticated model called business model canvas proposed by Osterwalder and Yves (2010), which will be introduced in the next sub-chapter. The business model canvas provides a logic way to understand how the company performs activities, manages operations and monetize value. Osterwalder and Yves (2010) also make a definition of business model in their book, which summarizes the catalogs of different business model components:

> *"A business model describes the rationale of how an organization creates, delivers, and captures value".*

2.1.1 Business Model Canvas

2.1.1.1 Nine Building Blocks

The business model canvas consists of 9 building blocks: customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. (Osterwalder and Yves, 2010) The picture listed below shows how the 9 building blocks organize and work together.

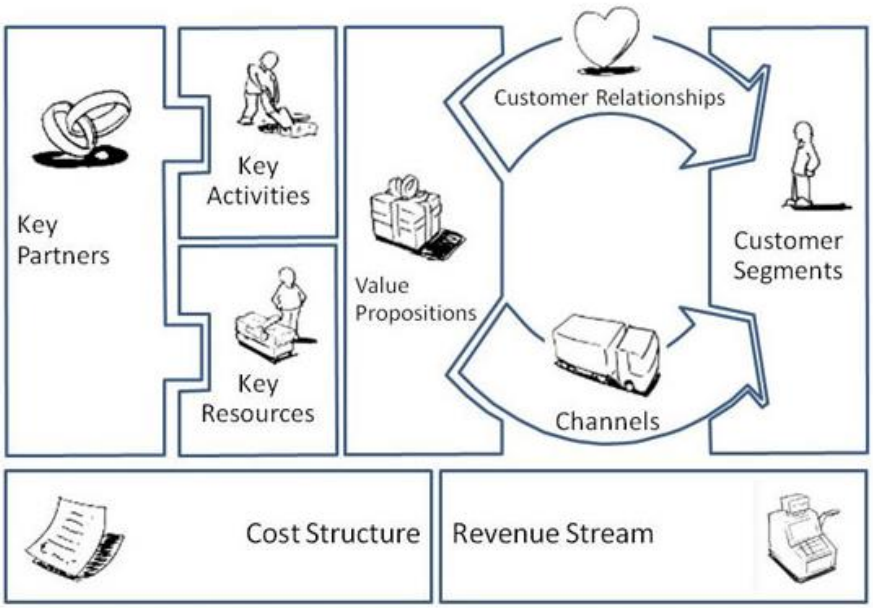

Figure 4: Business Model Canvas (Osterwalder and Yves, 2010)

The block of customer segments is the precondition of deciding other parts of business model, since profitable customers make company exist longer in the market. Customers with similar needs and purchasing behaviors are divided into one group. Company needs to identify one or several customer segments as the most important customers to achieve and service, while other segments can be ignored. It ensures the effective and rational use of main resources in an enterprise to satisfy its most profitable customers. Another issue should be taken into consideration is the multi-sided platform, which requires more than two independent groups of users. In the multi-sided platform, the main segments of different sides are required simultaneously to complete the whole business model. (Osterwalder and Yves, 2010) The differences of business model in the context of multi-sided platform will be presented later.

An imperfectly replicable and imitable value proposition attracts the attention of customers and leads them to this specific company over others. A good value proposition is built on the clear customer segments and better understanding of requirements of the particular segment. Thus, value proposition is a collection or selected portfolio of products or services that company provides to its customers. Besides, one company always searches for extra features or attributes beyond the existed value in order to differentiate its own product or service from others in the market. (Osterwalder and Yves, 2010) In this regard, the issue of adding value, which essentially distinguishes one's offerings in the eyes of customers, can be seen as the crucial consideration. (Devlin, 2000) The value-adding service will be talked more in the end of this chapter.

Channels are ways used by a company to reach and communicate with its customers to convey the value proposition. The function of channels is much more than delivering products or services to the consumer. Channels are the touch point between customers and the company and play various roles, such as increasing awareness among users, providing a method of evaluating company's value proposition for users, enabling customers purchase goods and services, delivering value proposition, and building the post-purchase service. (Osterwalder and Yves, 2010)

Customer relationships represent how the company acquires customers, remains them and stimulates sales through the relationship management. The customer relationships might differ from specific customer segments. Several typical customer relationships that are widely used in

the market, such as personal assistance, self-service, automated service, communities and co-creation. Furthermore, several different types of customer relationships could co-exist in one customer segment. (Osterwalder and Yves, 2010)

Revenue streams describe the process of generating cash from customer segments. Generally, a business model consists of two major types of revenue streams, which are the transaction revenues represent one-time payments and the recurring revenues represent ongoing payments. When company decides the ways to generate revenues, it should carefully consider customer's willingness-to-pay of each specific segment. (Osterwalder and Yves, 2010) Since ways to generate revenues are related to different industries or markets, the revenue models, which can be applied in the digital music market, will be stated in detail in the next sub-chapter.

Key resources are the driving force to make the whole business model work. These resources are existed through the entire operation process, including creating and offering a value proposition, launching market, maintaining relationships with customers and making revenues. Key resources used by companies can be divided into four categories: physical, financial, intellectual and human resource. (Osterwalder and Yves, 2010)

The block of key activities represents the most crucial actions that company needs to accomplish to force the business model work. Similar to key resources, key activities are implemented through entire operation process and rely on the business model type. (Osterwalder and Yves, 2010)

Key partnerships describe the network, which is built among company and its suppliers and partners, to optimize business model, lower the risks and accumulate more resources. There are four main partnerships among companies: "strategic alliances between non-competitors", "strategic partnerships between competitors", "joint ventures" to create new business, and "buyer-supplier relationships". (Osterwalder and Yves, 2010)

Cost structure building block is the last block in the business model canvas. After identifying key resources, key activities and key partnerships, the cost could be easily determined. Similarly, cost structure is also throughout all the operation process. (Osterwalder and Yves, 2010)

2.1.1.2 Multi-sided Platform Pattern

Business model canvas has various particular types depending on the different markets or industries. One single model could involve several different types. (Osterwalder and Yves, 2010) One type is based on the multi-sided platforms as mentioned above, which is related to the research background – digital music platform. Before moving into the business model type of multi-sided platforms, we should clarify what multi-sided platform is. Hagiu and Wright (2011) gave a definition of multi-sided platform based on the former literatures:

> *"Multi-Sided Platform is an organization that creates value primarily by enabling direct interactions between two or more distinct types of affiliated customers".*

Multi-sided platform type differs from others mainly in six building blocks. Firstly, because of its own properties, multi-sided platform must have at least two customer segments: one is "subsidy side" and the other is "money side". The "Subsidy side" increases network effects by attracting more users, while the "money side" provides bigger amount of funds to improve the network and its service. When more users of the subsidy side appeal to this network, companies or organizations in the money side are more willing to pay more. This phenomenon is seen as "cross-side network effects". (Eisenmann et al., 2006) Thus, in the multi-sided platform pattern, company should carefully think about which side is "subsidy side" and which side is required to pay more. Meanwhile, the company needs to identify the distinct customer segments, different value propositions and separate means of revenues for each side in the network. (Osterwalder and Yves, 2010)

2.1.2 E-Business Model Ontology

In the above paragraphs, the general business model was reviewed. But when the Internet becomes a part of our daily life presently, companies that provide services or products based on the Internet need to reconsider the business model to the new environment. Therefore, in this sub-chapter the e-business model is studied to identify business components used in the New Economy and understand the ways of making money (Osterwalder and Yves, 2002).

Osterwalder and Yves (2002) proposed the e-business model ontology based on an intensive review of academic literatures, so that the Internet-based companies could become more efficient and flexible to reach customers' requirements, to forecast the further expectations and to stand at

competitive stage in the new era. The e-business model is composed by four major pillars as shown in Figure 5:

- The *"**products and services**"* which a firm provides represent an essential value to the customer, and for which customers are willing to pay;
- The *"**infrastructure and the network of partners**"* are indispensible to create value and maintain a good relationship with customers;
- The *"**relationship capital**"* that a firm establishes and maintains with its customers is used to satisfy customers to earn sustainable revenues;
- The *"**financial aspects**"* are placed transversally and consist in the three former components, such as revenue and cost structures.

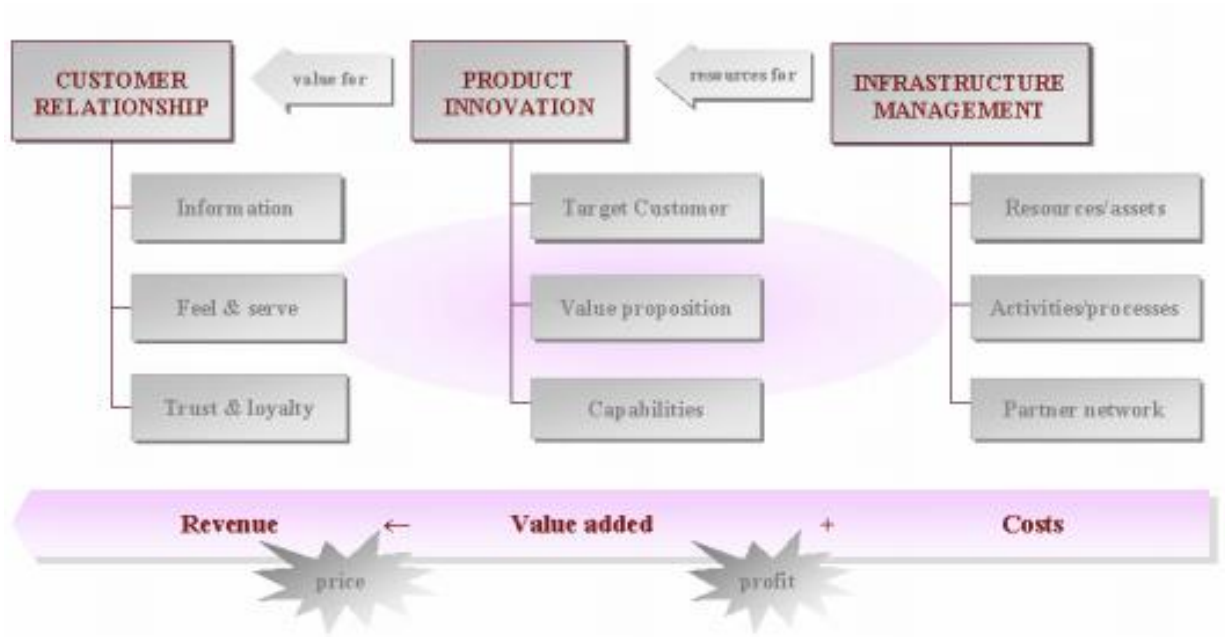

Figure 5: E-business Model Framework (Osterwalder and Yves, 2002)

2.1.2.1 Product Innovation

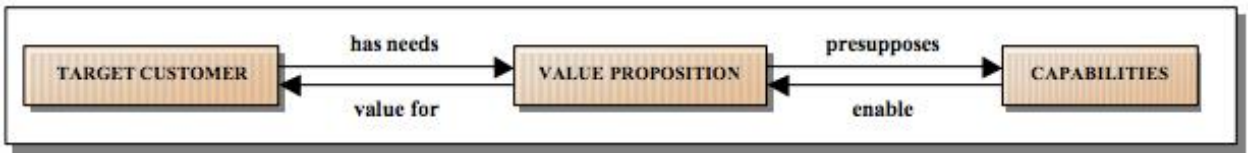

Figure 6: Product Innovation (Osterwalder et al., 2002)

This pillar displayed in Figure 6 describes all the issues related to product. It involves three main elements: the **value proposition** identifying company's offer, **target customer segments** and the **capabilities** to ensure the value delivery. (Osterwalder and Yves, 2002) Since both of the business model canvas and e-business model framework mean to gain the optimal operation results, some elements are overlapped in these two models. In this sub-chapter, the repetitive parts are not stated further. Instead, the main focus is how the ICT helps company improve its business model.

In the **value proposition**, ICT creates new opportunities in value creation on one side and provides more efficient value creation on the other side. (Osterwalder and Yves, 2002) Two authors suggest four drivers of value creation under the ICT environment – efficiency, complementarities, lock-in, and novelty. Enhancing ***efficiency*** is through both offline and online business by reducing search costs, lowering selection range, reducing distribution costs and allowing scale economies for individuals. (Amit and Christoph, 2001) Milgrom and John (1995) define the ***complementary***, based on Edgeworth's theory, as "activities are complements if doing (more of) any one of them increases the returns to doing (more of) the others". Amit and Christoph (2011) pointed out that a firm providing a bundle of products together had more value than the total value of providing single good separately. This means that bundling sales offer more value to the customer than selling products or services in single file. In the e-business, new technologies leverage the potential of creating more values through providing complementary products and services. Additionally, the offline assets always supplement the offline offerings. (Amit and Christoph, 2001) The modern, intricate technologies usually gain increasing returns according to their adoption level. The wider acceptance one technology founds, the more experiences it gains, and the more it is improved. As a consequence, it could attract more potential adopters and become further improved and adopted. (Arthur, 1989) This phenomenon is ***lock-in*** and it can be derived to many other industries and products, especially in e-business. Since once users get used to the interface design of a website, it is inconvenient for users to learn other sites and switch to them. E-business could enhance lock-in by building virtual communities to unite customers to increase the transaction frequency and enhance loyalty. Furthermore, another way for e-business firms to enhance lock-in is enabling users to customize products and services based on their own requirements and expectations. Another driver of value creation is ***novelty***, which can be applied in introducing new products and services, developing new ways of

manufacture, distribution and marketing, and launching the new market. For instance, eBay firstly introduced the customer-to-customer auctions and Priceline.com connected buyers with sellers to build the reverse market. E-business firms create value by connecting separate organizations, removing the inefficient selling-and-buying processes via accepting innovative transaction methods and catching potential customer needs. (Amit and Christoph, 2001)

Company should rethink of the **customer segment** due to the revolutionary changes in the Internet-based marketplace and the digitalized products. (Varadarajan and Manjit, 2009) With the ICT, firms can expand their customer scope beyond traditional geographical regions and run their business without working time limitation. (Osterwalder and Yves, 2002) However, ICT creates threats in the meantime because it lowers the market entry barriers and increases competition. (Porter, 2001)

With the increased competition, a new concept of corporate strategy comes out, which is called "capabilities-based competition". This new concept refers to company's capability to compete effectively on time, for instance, the acuity of predicting customers' further needs, the ability of expanding the emerging markets or the capability of producing new ideas and applying them in innovation. (Stalk et al., 1992) Wallin (2000) made a definition of **capabilities** as repeatable activities using firm's assets to create, manufacture, and/or provide products and services to the market. For example, a computer chip designer needs to continuously innovate and update its products. A news-blog needs to be able to provide the latest news. The fresh food online shop – LeShop.ch has to ensure its capabilities of delivering fresh groceries and frozen products rapidly to compete the value proposition. (Osterwalder and Yves, 2002)

2.1.2.2 Infrastructure Management

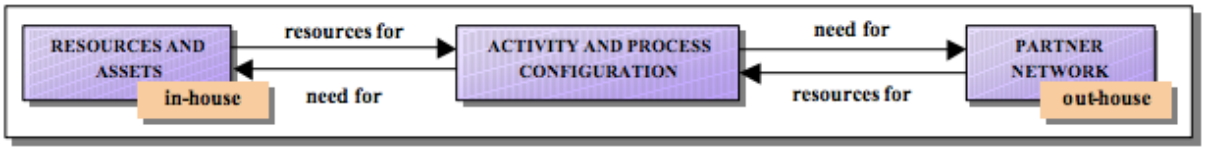

Figure 7: Infrastructure Management (Osterwalder et al., 2002)

The second pillar of infrastructure management illustrates the value system configuration, which is the essence of delivering value proposition to customers. As the figure shows above, it has

three components: **activity configuration** presenting those activities to create and deliver the value, the company's **in-house resources and assets** and the **out-house partner network**. (Osterwalder and Yves, 2002)

The **activity configuration** represents a series of inside and outside actions and processes that needs to be done to create the value for customers to pay for. (Osterwalder and Yves, 2002) In the fast developing world of e-business, the value creation can be regard as the value exchange in three layers of the network between corporates and customers – goods/services and revenues, knowledge, and intangible benefits, more than just one single value chain. The knowledge exchange includes planning knowledge, useful information, technical know-how, open innovation, collaborative design and so on, which surround and support the central products and services value chain. Intangible benefits present the value beyond actual services and not directly counted in the financial measures, such as customer loyalty, brand image enhancement and others. (Allee, 2000) Allee stated a flow diagram as displayed (in figure 8) to describe the whole processes. Therefore, the activity configuration that company completes should follow the value network, in order to enhance customer's willingness-to-pay.

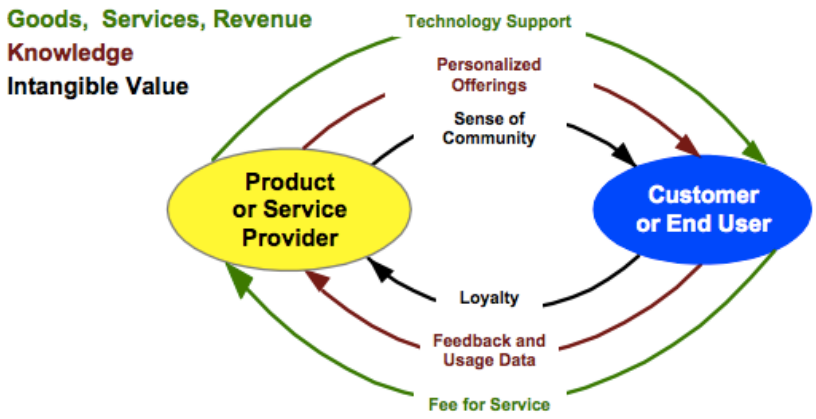

Figure 8: Mapping the Value Exchanges (Allee, 2000)

Partner network makes corporates focus on the core activities and competencies to improve their products and services, and their partners take care of other additional activities. (Osterwalder and Yves, 2002) It includes relationships in different countries and industries as the form of "strategic alliances, joint-ventures, long-term buyer-supplier partnerships, and a host of

similar ties." (Ranjay et al., 2000) In the e-commerce, the strategic network is also called "business webs" that involves customers, venders, and even the rival firms – now rename it with "coopetition". (Tapscott et al., 2000)

Resources and assets that firms need to create value include tangible, intangible, and human assets. Tangible resources are plants, equipment and cashes. Intangible resources include company's reputation, brand image, patents and copyrights, and trade secrets. Human resources refer to the firm's employees to create value. (Osterwalder and Yves, 2002)

2.1.2.3 Customer Relationship

Figure 9: Customer Relationship (Osterwalder et al., 2002)

Customer relationship management has been developed in many years from a single part of business model loosely connected with marketing to an electronic engine aiming to maximize the value of existing customers. (Fjermestad and Nicholas, 2006) ICT redefines the bound of customer relationship management for organizations and enterprises. As the figure shows above, firms can understand customer needs and gather data through the **information strategy**, which can be studied to provide better products or services to develop a more personal and close interaction with users. (King and Thomas, 2008; Osterwalder and Yves, 2002) Through various new **channels** supplemented by ICT customers could easily feel company's image and be rapidly touched by delivering value proposition. Firms need to pay more attention on the **trust and loyalty** due to the increasingly virtual business world and less face-to-face contact. (Osterwalder and Yves, 2002)

Osterwalder and Yves (2002) defined three objectives of the **information strategy**, including gathering accurate customers information, improving customer relationship through those information, and finding out new and sustainable market opportunities to achieve and exceed customer's expectation. For some traditional industries, the ICT may not directly participate in the main operations, but it makes the business processes more effective and efficient by

providing supplementary services. For instance, company can offer customers with basic information of products, prices and availability, and as well as customized real-time information, such as product lifecycle management, delivery status and others. (Osterwalder et al., 2002) For both of the digitized industry and the traditional industry, the derived information technologies, such as data warehousing, data mining and business intelligences, play an important role for managers to understand their customers' purchasing behavior more profoundly and precisely. (Osterwalder and Yves, 2002) The applications of data mining can identify and predict both individuals and aggregate customers to build customer profiles, which provide the personalized services or the collaborative filtering. (Apte et al., 2002; Osterwalder and Yves, 2002)

ICT and especially the Internet create a great opportunity to fulfill and complement the physical business **channels**. (Porter, 2001) The direct selling via the web could save costs and therefore increase margins, while the new Internet-mediated services represent new market opportunities. Besides, ICT drastically improves the way enterprises interact with their customers from the pre-sale to the after-sale communications. On the other hand, ICT allows personalized and individualized services, which also deeply affects customer's experiences. (Osterwalder and Yves, 2002)

The changes of business environment towards the Internet and virtual market lead **trust and loyalty** between business partners become more critical. Customer loyalty is always established on the customer's satisfaction and trust. (Osterwalder and Yves, 2002) The trust between e-business company and customer involves the offline trust and online trust. The offline trust is based on the multiple touch points and channels, such as kiosks, physical stores or other public places. The online trust relied on the firm's website is composed of four aspects – reliability/believability, emotional comfort, quality/competence and benevolence. (Shankar et al., 2002) Gommans and other co-authors (2001) stated a five-part framework to build the e-loyalty, including value proposition, customer service, trust and security, website and technologies, and the brand building. Except some elements that are mentioned in the above chapters, more special and suitable strategies are reviewed in this framework by Gommans et al.. For example, website and technologies includes interface design, ease-of-use, webpage loading time, effective search functions and others. The third party verification and authentication can be regard as strategies of the trust and security. Customer service could be derived into free online applications, easy

payment methods and so on. Building virtual community to enhance brand image and company reputation. (Gommans et al., 2001) One law to keep in mind is that encouraging existed customers to do repeat business is much cheaper than acquiring new customers. (Osterwalder and Yves, 2002)

2.1.2.4 Financial Aspects

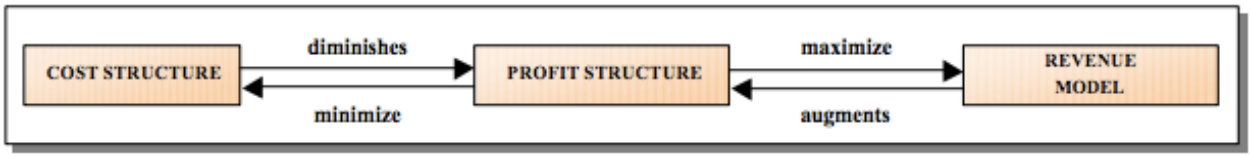

Figure 10: Financial Aspects (Osterwalder et al., 2002)

The last pillar is mainly composed of two elements – **revenue model** and **cost structure**. The other element which name is **profit structure** measures the cash flow from the revenue to the cost. (Osterwalder and Yves, 2002)

Cost structure is involved in all of the business processes, including create values, market values and distribute values. Besides of focusing on the core activities and competencies, firm that commits to a sustainable profit structure also need consider of new opportunities by applying ICT. For instance, company can enhance its customer relationship and attract premium customers under the right use of ICT. Although it increases the cost, it create substantial additional value at the same time. (Osterwalder and Yves, 2002)

The **revenue model** of one company can have various pricing models. (Osterwalder and Yves, 2002) By applying ICT in the e-business, consumers are confronted with flexible pricing mechanisms and product differentiation. Especially in the service firms, innovative business model with web-based pricing models is emerging in a wider scope. (Klein and Claudia, 2000) For example, the online media company can have several different ways to get better earnings. It may charge subscription fees from single customers and the fixed prices for the contents. In addition, it might also have advertising or sponsoring mechanisms. (Osterwalder and Yves, 2002) Since the center of this study is suitable revenue models for China digital music market, in the next sub-chapter the ordinary revenue models that are widely used by digital music service providers will be considered carefully.

2.2. Revenue Models in the Context of Digital Music

When Napster firstly knocked on the door of digital music downloading via MP3 files, the peer-to-peer architecture shook the foundation of traditional music industry by extremely cutting down the profits. (Magali et al., 2004) At its peak, about 75 million registered users downloaded almost 10,000 songs per second. (Ku, 2001) But because lots of music files were circulated and played without the permission of the authors, Napster and as well as the P2P technology caused big issue of copyright. Both the record companies and related software companies, such as Universal Music International and Microsoft Media Player, took actions to protect copyrighted products. (Magali et al., 2004)

The Yankee Group (2002) stated five preconditions to win the legitimate music services:

- Availability: *the service provider had to provide digital music from all major labels and independent labels;*
- Ownership: *consumers wanted to own music that they purchased, instead of renting them. The service providers should offer them an opportunity to mix, burn and copy them;*
- Portability: *the downloaded music can be played on various devices in any places;*
- Exclusivity: *legitimate music providers must have special contents and services to differentiate from the unlicensed providers;*
- Digital Rights Management (DRM): *the music providers need to have DRM, allowing consumers to share music with their friends.*

Followed by the adopted pricing scheme of "pay-what-you-want", the emerging challenges to music service providers become understanding factors of attracting consumers, creating value, and dragging them to the paid service. (Ramaprasad et al., 2012) Berman et al. (2007) issued seven recommendations for the media firms, including deliver both experiences and contents to consumers, leverage virtual world to extend brand and service, innovate business models with fast way to test new ideas, enhance the interactive, palpable and measurable advertising platforms, rethink the partnership by discovering niche market and the "prosumer", shift investment to the new model by seeking potential aspects for consolidation, economies of scale and structural changes to business, and build a flexible business design.

One of successful examples of the trends towards digital products is the appearance of e-readers, mobile music players and their related online distribution channels of digital contents for these devices, such as, Apple's iPod and iTunes. However, almost all of the consumers are looking for a cheaper way and even a "free" way to get digital goods, the new strategy of collecting more revenues is existed in the involvement of social progress. (Ramaprasad et al., 2012) Besides of **pay-per-download model** used by iTunes, new revenue models are taken place in the music industry to enable the free entrance of digital music, including **subscription model**, **broadcasting model**, and the **artist-to-consumer model**. (Fox, 2004) Additionally, each single revenue model could have several different revenue streams to make a sustainable and profitable growth. Shuen (2008) depicted some common mechanisms used by website to generate revenues: single stream relied on one product or service, multiple streams based on different products or services, interdependent streams by selling one set of goods, loss leader, subscription/member fee, advertising fee, transaction fee, sponsorship/co-marketing. In the following paragraphs, the four categories of revenue models applied by digital music providers will be introduced one by one.

2.2.1 Pay-per-download Model

This model corresponds to the traditional distribution mechanisms except for providing a more flexible combination of single songs, albums and even playlists created by other customers. (Amberg and Schroöeder, 2005) The pay-per-download model is used by the five major labels, and as well as the third-party aggregators. (Fox, 2004) The offered digital content is in a data format, such as WMA, MP3 and other particular formats. For example, Apple iTunes have 700,000 songs in the format of AAC, and the price for a single song is €0.99 and one album is €9.99. (Amberg and Schröeder, 2007) The sales of hardware components also could be involved in this model to increase profits and enhance the long-term customer relationship, such as Apple iTunes and Sony Connect. (Amberg and Schröeder, 2005)

2.2.2 Subscription Model

Under the subscription model, the music service provider will typically charge consumers a flat periodic fee for the entrance of a music library, such as monthly fee, annual fee and others. (Fox, 2004; Rappa, 2004) Differentiated from the one-time sales, subscription model creates steady

cash flows and provide a conspicuous benchmark to measure growth. In subscription model, customers always pay the fee before they receive the services or products; hence it effectively reduces the volatility of retail or pay-per-play. (McCourt & Burkart, 2003) Furthermore, subscription model also stimulates increased use among frequent users, and as well as maximize revenues from infrequent users; thus it enables service provider to charge a higher advertising rates. (Meyers, 2001) In addition, the service providers can also generate profits from the customer databases, which are collected from online activities, by reducing marketing uncertainty and reselling customer data to other vendors. (Gandy, 1993)

Both of major labels and other external aggregators have launched the subscription model, since subscription services attract the consumer who prefers a more convenient and timely purchasing method. However, it also increases the costs and risks of subscription service providers. The online music service company wants to collect large scale of different songs and music to appeal to more users, so that it needs to negotiate separate licensing agreements with thousands of music publishers, numerous record companies, various codec license holders, and developers of copyright protection software, and other parts that take part in this value chain. (Fox, 2004; McCourt & Burkart, 2003)

2.2.3 Broadcasting Model

One survey conducted by Berklee College of Music (2013) pointed that the convenience and free contents are the most important factors that affect consumer's decision of accessing music. Moreover, the survey results showed the top three popular methods used by consumers to gain music – Spotify, Torrents/P2P file sharing and YouTube. All of these methods are either intrinsically free or have a free option. Coincidently, the broadcasting model represented as a free music service better meets consumers' need and expectation. Similar to television and radio broadcasting, this model offers users free content and generates revenues from several ways. (Fox, 2004) In this model, company believes that real value comes from the audience who consumes the music, instead of from music itself. Therefore, the main factors of operating the broadcasting model successfully are existed in three dimensions: selling advertising places to other organizations, mining and selling customer data, and selling relevant products and services. (Fox and Wrenn, 2001) Moreover, the marketer could monitor the effectiveness of

advertisements and target customers more accurately through broadcasting model's provision of music with advertising. (Fox, 2004)

Fox (2004) stated several ways to operate a broadcasting model in his article. First, record companies can provide music for visitors to listen to or download through their own websites. In return, these websites get advertising fee from other parties, earning of selling merchandise (e.g. posters and t-shirts), commission fee of concert tickets. Second, record labels license their music to third-party websites and they pay the commission fee to record labels. The audience would prefer using this kind of website to get much more music rather than visiting several websites of different music companies. The last way is a marketing platform that customers get free music by providing their information. The website could sell customer data of different demographics and preferences to other parties, such as advertiser and market analysis organization.

2.2.4 Artist-to-consumer Model

Considering the producing and selling processes of music, the artist who creates the music receives an advance payment, and then the record company obtains revenue from album sales to pay back the advance. This is one reason why corporate entities only focus on their own profits, so that most artists earn nothing from the record sales in practice. (Wendkos, 2001) Besides record labels, artists may be able of recording and distributing music by themselves in the digital format to make an economic, creative and cultural future through the online platform. (Bockstedt et al., 2006; McLeod, 2005) These are also the reason why artist-to-consumer model is more attractive for some musicians. (Fox, 2004)

This model is primarily originated from a progressive rock star named Todd Rundgren with a large loyal fan base. He built the site to offer merchandise, such as concert tickets. However, the artist-to-consumer sites have been developed with providing more additional functions to attract more audiences. (Fox, 2004) Furthermore, it is not limited with only one single pop star in the site. The online digital music companies contracted alliances with artists and record labels to draw a large big fan base to their websites. (Bockstedt et al., 2006)

The artist-to-consumer model is centered on musicians or stars and contains several options. For example, it provides real-time online charts or live performances, offers collaborative

opportunities with musicians, provides registered users the pre-released music, created online communities and other extra functions. (Sylva, 2000)

2.3. Web 2.0

A brand new type of communities is booming on the Internet, while it is reshaping the online collaboration and communication patterns and impacting the way of producing and consuming information. This new online communities is named of Web 2.0 by Tim O'Reilly in 2005. The term is used to emphasize the differences between emerging communities and the former ones in the perspectives of technology, attitude and philosophy. (Hoegg et al., 2006) For instance, the content management systems in Web 1.0 turn to wikis in Web 2.0, and obtaining new songs from Napster in Web 2.0 instead of mp3.com in Web 1.0. (O'reilly, 2007) However, Web 2.0 is not just an updated version building on Web 1.0. Instead, it is particular in several ways, such as:

- *flexible web design, creative updates and reuses;*
- *an affluent, responsive and interactive user interface;*
- *collaborative content creation and management;*
- *collecting people with common interests and connecting them by social networks;*
- *creating external applications through combining data and information of other sources or combining the applications on the web;*
- *gathering collective intelligence.* (Murugesan, 2007)

The significant influences on businesses that are brought by Web 2.0 shouldn't be ignored, since its trends and characteristics are challenging the old rules of creating and capturing value. Thus, it is very important and needed to understand the fundamental factors of web 2.0 phenomenon. (Hoegg et al., 2006; Wirtz et al., 2010) According to Wirtz et al. (2010), Web 2.0 has four broad factors – "social networking, interaction orientation, personalization and customization, and user-added value" and their related sub-factors that are linked and interacted with each other.

a. Social networking

Social networking services aim at creating assessment system of certain products or services, or connecting people who hold common interests. Users would like to join the social networks

because of self-reflection, entertainment, image creation and approach to relevant information. Therefore, social networking dramatically increases the participants of certain online website. (Wirtz et al., 2010). Since the value of a product or service is bases on the number of users, the larger user base forms network effects to pull more customers in this website. (Shapiro and Hal, 1999) Additionally, four sub-factors are associated with social networking and affect the social networking trends. (Wirtz et al., 2010)

First sub-factor is **social identity** meaning that Internet users prefer to look for and join some specific web interest groups to gain a sense of belonging and make their own distinct image in the online environments. The online websites or online communities become a more important social environment that users can generate positive, irreplaceable and abiding interpersonal relationships and gain social approval. Especially, lots of social network users are keen on creating their online image. The next sub-factor is **social trust** representing in two aspects – product reviews and customer comments services (e.g. customer opinion section of online stores) and the confidence of co-created contents by other users (e.g. Wikipedia and other source of knowledge that people participate, manage and trust). The **virtual word of mouth** also contributes to the social networking, because it stimulates heavy usage and enhances the customer loyalty by reinforcing consumption. In another aspect, firms are paying more and more attention to user opinions, which is the fourth sub-factor of social networking – **increasing consumer power**. (Wirtz et al., 2010)

b. Interaction Orientation

Interaction orientation presents company's ability to efficiently manage the increasing customer demand of a more intense and trustworthy conversation between company and customer. Interaction orientation is composed of four aspects. Firm needs to regard customers as the focal spot of all business activities and reconfigure its organizational structure to assist user interaction process, referring to the first aspect – **customer centricity**. Another aspect is **interaction configuration** concerning the whole processes of interaction. The **customer response** pertains to the capability of managing the conversation with customers and codifying the obtained information to amend future dialog between company and customer. The last aspect – **corporative value generation** represents the capacity that a firm integrates consumers into

business operations as other business partners, helping firm get first hand information about products, services and processes in order to maintain a "customer-led competitive advantage". (Wirtz et al., 2010)

c. Personalization and Customization

Personalization and customization is reflected on three aspects – personal customization, group customization and social customization. The **personal customization** refers to the ability of redesigning website based on their own special needs and preferences, such as changing the interface of a website. The **group customization** enables the whole group to create and control new configurations due to the rising connectedness and convenient information transmission. The social customization represents that Internet businesses provide specific customized products to different social layers. (Wirtz et al., 2010)

d. User-added Value

The concept of user-added value has become one of the most lively discussed parts of Web 2.0. It contains a broad range of phenomena, including user-generated content, creativity and innovations, and sources of revenue. One of the trends among second-generation Internet users is that people want to create profiles, whole websites and all kinds of media, which is so-called **user-generated content**. The flourishing open source programs and APIs are strong evidences of **user-generated creativity**. Moreover, the **user-generated innovation** becomes popular when have a glance at the open software industry. Another consequence of Web 2.0 is the Internet user activities offer a great opportunity for firms to optimize and expand product range and as a result broaden **sources of revenue**. For instance, the Microsoft XNA Creators Club project allows customers to create their own video games and share them with others, and they receive a part of sales profit in return. (Wirtz et al., 2010)

2.4. Value-adding Strategy

The investigation of adding value to company's offerings is a broad field, including understanding the nature of customer needs, realizing how customer evaluates offerings and capturing elements of relationship marketing. (Devlin, 2000) No matter whether offerings are

physical goods or virtual services, the value-adding processes should be taken place both in both physical world and virtual space. (Rayport and John, 1995) In next step, theories of relationship marketing and the "value-adding mix" model to will be presented to further understand how to add value for firm's products or services.

Ravald and Grönroos (1996) mentioned that value is an important component of relationship marketing and company's capacity to offer distinguished value to its customers is one of the most powerful competitive advantages. Company concerns adding more value to the main products, such as improve product quality and provide supporting services, so that it could improve customer satisfaction and the customer loyalty is achieved as well. In another words, the value-adding strategies should carefully take the objectives of relationship marketing into consideration. According to Grönroos (1994), the relationship marketing is to establish, maintain and improve relationships with partners and customers so that their objectives are achieved. Moreover, the Forrester analyst – James McQuivey holds a similar opinion for digital businesses: it's not just about video, music or any other specific types but it's about "digital customer relationships". (Mangalindan, 2013) Therefore, we start analyzing how to improve customer relationships in order to add value for users.

There are two options to increase value offered to consumers: either increasing the benefits or reducing the sacrifice. The goal of increasing benefits can be done by adding something to the main product that customer thinks important, unique and beneficial value. For example, providing supporting services, such as home delivery, warranties and after-sale services, with high quality core product can increase benefits for users. In another way, the two elements – benefits and sacrifice are mutually dependent, which means increasing benefits will result in a reduction of the customer-perceived sacrifice. Therefore, another option is reduce the customer-perceived sacrifice, so that company could improve its performance and benefit customers at the same time. Mentioning "add value", the first thought usually is something needs to be added, such as an extra product feature or a supporting service. But if company considers things from a customer's perspective, it's clear that company has to lower customer's unexpected costs based on "a thorough understanding of customer's value chain". This unexpected cost comes from an inefficient supply chain management and the increased supplier relationship costs. The supplier relationship costs have two forms. One is indirect cost such as costs due to the delayed delivery

or the costs for time to find out incorrect invoices. The other is psychological cost, which means the cognitive effort. For instance, buyer worries about whether the supplier will fulfill promises and this requires mental capacity that could be more effectively. Furthermore, the accurate, flexible and zero-defection production, delivery and after-delivery processes enhance the internal efficiency and overall productivity, so that the profitability of company will be increased as well. In consequence, the supplier relationship costs should be minimized to reduce sacrifice and increase perceived value, and then the customer is clear about the product he gets and the money he spends. (Ravald and Grönroos, 1996)

In another respect, differentiating one's goods or services from others' offerings is regard as another method in the process of adding value. (Devlin, 2000) Mathur (1992) advanced that a crucial company capability to be succeed in a particular market competition was a bundle of unique, difficult-to-replicate and competitive benefits or value. However, when offerings are services that are nature of highly cognitively, mentally and intangible, the strategies for adding value is quite different from adding value to the physical offerings. It highly relies on customer's experience and credence qualities in the consuming process. Based on the market-led perspective that regards company's offerings as the key point of competitive advantage, a model was designed by Devlin to analyze service's value adding process, containing four factors: basic features and quality of main services, the quality of providing or delivering service, image and reputation of the company, and price of service and customer perception". (Devlin, 2000)

In the "value-adding mix" model, the factor of basic features and quality of main services can be presented by the blocks of value proposition and key activities in the reviews of business model ontology, since both of them describe the services provided for customers. The main channels of digital music services are websites and the mobile apps. To measure the quality of providing or delivering service, the quality of websites and mobile apps need to be considered, such as user-interface (Wan, 2002), usability and security (Yang, 2005), community (Ho, 2007), site effectiveness and responsiveness (Voss, 2003) and other dimensions. According to Bei (2001), the lower perceived price reduces customer's perceived sacrifice. Then, he/she feels more satisfied and the overall transactions are increased at last.

3. RESEARCH METHODOLOGY

This chapter begins with an explanation of research framework applied in the empirical study based on the findings of reviewed literature. Then, followed by an introduction of research methods, the selected research method, research sample and data collection methods will be discussed and justified. In the end, the quality of this research will be evaluated in names of reliability and validity.

3.1. Research Framework

Figure 11: Research Framework

The Figure 11 displays the procedure of empirical study. As mentioned in the chapter 1, the whole study contains two main steps, which are business model evaluation and China market study. The business model evaluation focuses on the external environment highlighting different features of foreign music sites. The China market study concentrates on the internal environment to gather background information and build foundation for studying possible revenue models of digital music service. In the end, by comparing the elements of business models applied by foreign music platforms with the local digital music environment, the final objective of this study – a feasible revenue model with specific features will be achieved.

The first step is based on the business model evaluation served as benchmarking study. According to the reviewed literatures, the digital music platforms are divided into four catalogs based on the different revenue models – pay-per-download, subscription, broadcasting and artist-to-consumer. Each type has one example platform to be carefully examined through the business model framework. The business model framework has ten elements – **target customer, value proposition, key activities, key resources, key partners, channels, customer relationship, value-adding services, revenue streams and cost structure**, which build on the business model canvas (Osterwalder and Yves, 2010), e-business model framework (Osterwalder and Yves, 2002) and the value-adding service strategy. Due to the concepts listed in chapter 2, the block of value-adding services here means extra features or functions that music website owns to enhance listening experience beyond the basic listening features such as searching bar, browse new songs, and create playlists. Since some parts are also existed in the business model framework, such as value proposition, key activities and key partners (Osterwalder and Yves, 2010; Osterwalder and Yves, 2002), and adding value for serviced is used to improve customer relationship and maintain customer base, the rest part of value-adding is located in the customer retention block. In order to differ from the revenue models, which are used to divide types of music sites, the revenue stream in the business model framework presents methods that are used by music sites to generate profits.

The second-step study of China market is comprised of **local digital music industry** and the **consuming behavior of Chinese audience**. The study of local digital music industry will be presented in SWOT analysis to gather the advantages and disadvantages of digital music market that the platforms face to. Studying the consuming behavior is used to build background

information, which is crucial for reflecting business models used by foreign music sites to the Chinese market.

In the last, the objective of proposing feasible revenue models for the Chinese digital music platforms will be addressed by the two-step study, and the applicable business features will be gained as well.

3.2. Selection of Research Method

According to Sachdeva (2009), there are three different type of researches in business – exploratory research, descriptive research and causal research. The exploratory research is used to collect primary information to conduct hypotheses and define problems. Furthermore, this study is designed to gather useful features and possible methods to stimulate the music website's revenues, which apparently is an exploratory research. Exploratory research is based on the secondary research that is formed by reviewing documents and literatures, or through qualitative approaches. Thus, the empirical part of thesis relies on the **qualitative method** to answer the questions of why those music websites can gain high success and how to apply their attributes in Chinese market.

To carry out more credible results, the different research strategies that are suitable for each single situation should be studied beforehand. Yin (2003) pointed three conditions used to distinguish research strategies, including type of research problems, researcher's control of behavioral events and contemporary or historical events. The research strategies had five types – experiment, survey, archival analysis, history and case study, and each of research strategies was targeted at separate situation. The case study method answers type of "how" and "why" questions and focuses on the contemporary phenomenon in the reality. Additionally, it is appropriate for examining the events which investigator has little control. Therefore, the case study method is highly capable of solving research problems and achieving research objectives. The figure listed below presents four distinguish research strategies based on the relevant situation in context of three different conditions.

Strategy	Form of research question	Requires control over behavioural events?	Focuses on contemporary events?
Experiment	How, why	Yes	Yes
Survey	Who, what[a], where How many How much	No	Yes
Archival analysis (e.g. economic study)	Who, what[a], where How many How much	No	Yes/no
History	How, why	No	No
Case study	How, why	No	Yes

Note: [a]"What" questions, when asked as part of an exploratory study, pertain to all five strategies.

Table 1: Different Research Strategies (Yin, 2003)

Four major types of revenue model are existing in the modern digital music platforms. The research method should be narrowed down to the **multi-case study** so as to find out the differences and similarities of business model elements among different revenue model types and discover the embedded relationship between them. Using of multi-case study enables researchers to describe and analyze emerging constructs independently and reciprocally, and further to explore complementary aspects of the events. (Santos & Kathleen, 2004) Therefore, this research uses multi-case study to illustrate business operation features of the popular worldwide digital music platforms, to elaborate the relation between features and revenue models, and to investigate situations that can be applied in the local market (in this case –China). (Yin, 2003)

3.3. Research Sample and Data Collection

Four typical case companies providing digital music services are carefully selected as the example of each revenue model type. ITunes that occurred in the early days offering music download service is selected to examine pay-per-download revenue model. Spotify is taken as a representative example for exploring subscription model in the empirical part. Not merely because it is a pioneer of subscribing music, but also because its high conversation rate of paid user has a great significance for generating revenues. Rdio offers music in the form of music stations, which makes it to be a good case of broadcasting model. Soundcloud which is an artist-community music website represents artist-to-consumer model.

Yin (2003) summarized six commonly used methods to collect data in the case study: "documentation, archival records, interviews, direct observations, participant-observation, and physical artifacts". In this research, the data collection mainly relies on the author's observations and experiences of the selected case companies, and as well as relevant documents and archives. Through frequent use of selected music websites and meticulous examination of their characters and functions, information of some parts in the research framework could be gathered, such as value proposition, key activities, value-adding services and other parts in the business model. The use of documents and archives fulfills the rest part in the business model, which might be difficult to achieve from outside, such as revenue streams, cost structures and others. Additionally, the relevant documents and archives as secondary data also confirm and validate results from experiences. The four cases are evaluated separately in the first place, and then a horizontal comparison is conducted to gain different and similar features in the context of different revenue models. Since the goal of this study is draw feasible revenue models for Chinese music platform from the international leading music websites, the distinguished local environment cannot be ignored. A deep study of China market and consumer behavior is necessary and important, so that the superior business features and strategies can adapt to the local situations to generate and increase revenues for Chinese digital music service providers. In the end, the research questions will be answered and research objective will be achieved.

3.4. Reliability and Validity

Researches have to meet certain requirements to ensure the result trustworthy and credible. Since qualitative and quantitative researches have big differences, the methods to assess their quality are different. Quality evaluation of qualitative research can be done by applying conventional criteria like validity, reliability and generalizability. (Mays & Pope, 2000) Miller (1986) pointed out that reliability and validity are necessary for the scientific work. A systematic method is commonly used by all social science researches, which is composed by four tests: construct validity, internal validity, external validity and reliability. The picture below displays applicable case study tactics for four design tests. (Yin, 2003)

TESTS	Case Study Tactic	Phase of research in which tactic occurs
Construct Validity	• Use multiple sources of evidence • Establish chain of evidence • Have key informants review draft case study report	data collection data collection composition
Internal Validity	• Do pattern matching • Do explanation building • Address rival explanations • Use logic models	data analysis data analysis data analysis data analysis
External Validity	• Use theory in single-case studies • Use replication logic in multi-case studies	research design research design
Reliability	• Use case study protocol • Develop case study database	data collection data collection

Table 2: Case Study Tactics for Four Design Tests (Yin, 2003)

Construct validity refers to developing a set of correct and sufficient operational measures. The following two steps can identify construct validity: firstly selecting the events to be studied and secondly demonstrating the selected measures do indeed meet the specific events that have been selected. During the case studies process, three tactics are considered to improve construct validity during doing case studies, which adopted multiple sources of evidence, established a chain of evidence and goty reviews of the initial case study report from key informants. The first two tactics are conducted in the data collection phase and the last one occurs at composition phase. (Yin, 2003)

Internal validity, according to Yin (2003), is applied only in explanatory or causal researches. It establishes a causal relationship in which certain conditions are confirmed to lead to other conditions, differentiating from false relationships. Five analytic tactics to address internal validity comprise pattern-matching, explanation-building, addressing rival explanations and the use of logic models.

The third test refers to external validity to establish the domain where could generalize findings. Since the case study is based on analytical generalization and conducted in a very small set of samples, the researcher is striving to extend results to broader theory. In the case study, researcher can use theory in single-case studies and replication logic in multiple-case studies to achieve the external validity. (Yin, 2003)

Reliability test is used to make sure operations of the study can be repeated and produce the same results, such as data collection procedures. To allow later investigations can be repeated in same procedures, the investigators have to make documentation of earlier studies. Yin suggested using a case study protocol and developing a case study database, when collecting data. (Yin, 2003)

As an exploratory study, the internal validity test and its case study tactics are not applied in this research. To ensure the construct validity, the author used observations and experiences as the primary data, and documentation and archives as the secondary data. Furthermore, the review of relevant literatures, selection and analysis of appropriate cases and examination of local market and audience as the chain of evidences also enhance this study's credibility. In this study, the application of multiple-case study is to test similar and different attributes in the four types of revenue model, which implies the replication logic and further address the external validity. To increase the reliability, the operations of this study follow the case study protocol proposed by Yin, which includes an overview of case study project, field procedures, questions and a guideline of the report. (Yin, 2003)

4. BUSINESS MODEL EVALUATION

This chapter illustrates the approaches of the selected case companies operating their businesses by using the modified business model mentioned in Chapter 3. The author will present each business model element of the four different revenue models – pay-per-download, subscription, broadcasting and artist-to-consumer and make the comparison. This study is regard as the benchmarking of current leading digital music platforms so that the Chinese platforms could use for reference.

4.1. ITUNES MUSIC STORE

Apple was not the first company that invented MP3 player, and iPod is neither the only successful MP3 player. But it truly is the one that is popular for a very long time, since 2001 the first time it launched. The huge success of iPod cannot be separated from iTunes. ITunes was firstly released in 2003 as the auxiliary management platform for iPod and then has been expanded to the online platform offering digital music, films, books and other digital contents. Indubitable, iTunes Music Store is in favor all the time, no matter what new digital music platforms are launched. Some typical reasons might react the longtime outstanding, which will be investigated in this part.

4.1.1 Basic Information

The original iTunes Music Store was introduced to public in 2003 as a software-based online digital media store. It made agreements with five major record labels – EMI, Universal, Warner, Sony Music Entertainment, and BMG, and over 2000 independent labels, offering more than 37 million legally high-quality DRM-free songs. It became the largest digital music vendor in the world since 2010. By 2013 February 6th, totally 25 billion songs had been sold worldwide. And by 2013 June, iTunes store have possessed 575 million active user accounts internationally. (Wikipedia, 2014 & Apple, 2014)

The invention of iTunes Music Store could be regard as a milestone of Apple Inc., since it created new business opportunities by selling music and it also increased sales of iPod and separated it from other MP3 players. On the other side, the appearance of iTunes makes record

companies believe the possibility of licensed music on the Internet and profitability of selling digital music.

4.1.2 Business Model Analysis

Product Innovation	Target Customer	Music fans over the world
	Value Proposition	• Discover everything that you want or even you don't know you want • More than just high-quality music: music videos, movies…
Infrastructure Management	Key Activities	• Development and maintenance of digital media platform • Update digital music library • Promotion/advertisement
	Key Resources	• Massive licensed music • PC Desktop application • DRM Fairplay technique • Talented IT people • Auxiliary electronic devices: iPod, iPhone, PC, etc.
	Key Partners	• Record labels • Music aggregators • Third-party websites • Mobile devices manufactures
Customer Retention	Channels	• Software-based online digital media platform • Official website
	Customer Relationship	• Brand effect • Online helpdesk • Online communities owned by third-parties
	Value-adding Services	• ITunes festivals • Compilations and soundtracks • "Mastered for iTunes" • Integration with social networks to share music

Profit Structure	Revenue Streams	• Pay-per-download
		  • Single song: $0.69, $0.99, $1.29
		  • Whole album/EPs: depend on the products
		• Gift cards sales

	Cost Structure	• Royalties for record labels • Brokerage for music aggregators • Commission fee for "affiliate program" • Maintenance cost of the platform • Promotion fees

Table 3: ITunes Music Store Business Model

a. Product Innovation

ITunes covers almost all the countries and areas in the world. Thus, the ***target customer*** is every music fan who supports the legal high-quality music with no limitation in region or age. But due

to the special format of songs, the only compatible devices to run the music are Apple's electronic products. The main customer group is music fans holding apple devices, such as iPod, iPhone, and other Apple hardware. With the vast amounts of music, iTunes music store's ***value proposition*** is offer "everything you want and even you don't know you want". Customers download licensed music from the iTunes store and play them on multiple Apple devices wherever they are. With the extension to other categories, users can shop for other digital contents such as music videos, movies, TV shows, apps, games and books.

b. Infrastructure Management

Before running the whole business, a digital music media platform needs to be developed and maintained. The interface design of iTunes is simple and clear. The main background color is white-black-grey, which is corresponding to the electronic device's interface. The functions of the platform include free music trials, purchasing and downloading music, rating and writing reviews, sharing with friends via social network accounts. To enhance customer experience and help users discover their favorite songs, it also provides ranks for single songs and albums, and recommends music based on the purchasing history. A digital music library is necessary for managing and updating songs. ITunes gets new songs from record labels and music aggregators and upload them to the library daily, and then each Tuesday the new songs stored in the library are updated to the iTunes store (Wikipedia, 2014). To promote the digital music service, it carries out "affiliate program", which enables third-party websites lead users to purchase on iTunes store. Additionally, Apple launches new version of iTunes store regularly to improve existed features and add new ones. Each time before new version is released, an announcement will be presented to customers. Generally, the ***key activities*** include development and maintenance of digital media platform, update new songs and promotions.

ITunes provided digital music service through a simple way – the PC desktop application. Now it is adapted in both Windows and iOS systems. Besides, the DRM Fairplay technique ensures the downloaded audio files can't be played on unauthorized computers. Besides, series of auxiliary electronic devices are necessary to play these digital media files, such as iPod, iPhone, etc. Behind these high-tech applications and products, talented people are essential to manage all the

stuff. Thus, the ***key resources*** are composed of massive licensed music, PC desktop applications, DRM Fairplay technique, auxiliary Apple devices and talented IT people.

ITunes' ***key partners*** include record labels, music aggregators, third-party websites and apps and the mobile device manufactures. It has partnership with 5 major record labels and massive independent labels. The person who don't belong any companies can publish his work on iTunes through music aggregators. The third-party websites and apps that join "affiliate program" are capable of leading users to iTunes to purchase digital music. In addition, manufacturers those produce Apple's devices to run the platform are also part of partners.

c. Customer Retention

There are two ***channels*** for users to get the service – official website and PC desktop application. Customers download iTunes from Apple's website and install it on the desktop of PC. The downloaded application is a software-based online digital media platform with abundant of music. ITunes attracts new users, remains existed users, solve their questions and manages the **customer relationship** just through the trustworthy brand and online helpdesk. Beyond iTunes itself, some third-parties create online communities for Apple lovers to share comments and solve problems. Moreover, Apple's products are building an ecosystem by its hardware and software. The hardware brings more customers to use software including iTunes and vice versa.

The **value-adding services** have two main types – online features and offline activity. One of online feature is "mastered for iTunes", which offers high fidelity songs to create a fresh and new audio feast. As described, ordinary users can enjoy music as artist or sound engineer. The "mastered for iTunes" is exclusively designed for iTunes including current prevalent songs and old recordings. The special works for mastered for iTunes is updated frequently as well. The purchase method is alike other songs: either buying single track or the whole album. Another feature is "compilations and soundtracks" offering music collections from various artists and the collection always follows a theme. It enriches user's choices, likewise the value proposition: "you didn't even know you wanted". ITunes integrates with social networks, so that users could easily tell their friends what they are listening now by a simple click of "share". The offline activity named of iTunes festival that is a month-long music concert held annually. ITunes users

and music fans can get free ticket through localized prize draws and others watch the performance for free through streaming service on iTunes and Apple TV.

d. Profit Structure

The **cost structure** of iTunes is comprised of royalties for record labels, brokerage fee for music aggregators, commission fee for the third-party websites joining "affiliate program", the maintenance cost of platform and regular promotion fees.

ITunes has a very simple and clear ***revenue-generation mechanism*** along with the pay-per-download model. Users can buy either single songs or whole albums with difference prices. There are three different prices for single track – $0.69, $0.99 and $1.29 based on the date of release. The price for a whole album is always cheaper than separately purchasing all songs in the album. Different albums have different prices with range from $4.99 to $17.99. Moreover, songs and albums in "mastered for iTunes" and the compilations and soundtracks share same pricing tiers as other normal options. Despite of sales of music, iTunes also sells gift cards to users as another revenue stream.

4.1.3 Strategies of Generating Revenues

Although the royalties that iTunes pays for record labels are confidential, we can get some ideas from an example listed on the Internet. For a popular digital music platform, selling $9.99 means record company takes $5.35 and the platform keeps the remaining. (Reed, 2011) We can assume that iTunes would pay 50% of sales as the royalties for record labels and music aggregators. Besides these royalties, it also needs to pay for third-party in the affiliate program, maintenance of the platform and regular promotions. Obviously, the margins are very thin. On the other side, the value-adding services don't bring real profits, since the online features apply normal pricing mechanisms and the offline iTunes festival even doesn't make money at all. Why iTunes insists on these "non-valuable" value-adding services and even expands their scopes? And where did the real profit come from?

In the business model, one mystery thing that doesn't appear in the value proposition but existed in the key resources. It is the auxiliary Apple mobile devices referring to iPod, iPhone, iPad. After downloading music from iTunes, users store them in those devices and listen to them

anytime and anywhere. We cannot recognize whether iPod became popular at first or iTunes, but we do know they can't be separated. IPod as high-tech products has a substantial profit. Hence, iPod brings solid user base and financial base for iTunes. Under the close-cooperation and interaction, their parent company – Apple gains good returns and iTunes become the largest digital music platform worldwide. However, it isn't just satisfied with the success of iPod and iTunes music store. iTunes music store expands market horizontally to movies, TV shows, books, apps and other digital contents, following the rapid growth of mobile devices market. Furthermore, the extension of iTunes store avoids risks in the saturated MP3 Player market and the emerging on-demand music service.

The three value-adding services are tightly related with value proposition: discovering everything and high-quality music experience. Although all of them don't bring direct profit, they enhance iTunes' brand and expand the popularity. ITunes have already become a quality guarantee system for music enthusiasts and a trend indicator in the music market. The iTunes chart of music is recognized in the world. Even if people don't have apple devices or use iTunes, they regard its authority. In 2014 May, Apple acquired Beats Electronics for $3 billion (Wikipedia, 2014). It intends to expand the HD product market to improve customer experiences with hardware and software, which shares similar performance with iPod & iTunes.

4.2. SPOTIFY

4.2.1 Basic Information

Spotify is a commercial on-demand streaming music service launched in 2008 in Sweden. It's a shining star among digital music platforms due to its fast growth, large number of paid-user and high conversion rate. After two years since the first launch, it already had about 10 million users, including 2.5 million paid-users. Till 2014 May, 40 million people are using Spotify with 10 million paid subscribers. It can be run on most of smart phones and PCs, such as Andriod, iOS, Windows and Windows mobile, Linux, Blackberry, MeeGo, and more. Now Spotify is available in 57 market offering over 20 million songs and each day more than 20,000 new songs are added. (Wikipedia, 2014; Spotify, 2014)

4.2.2 Business Model Analysis

Product Innovation	Target Customer	• Global music fans, especially young people • Advertisers
	Value Proposition	• Seamless music for everyone at every moment • Accurately and effectively target at ads audience
Infrastructure Management	Key Activities	• Provide streaming music through PC desktop applications, mobile phone and tablet applications • Gather and process customer data to offer personalized music recommendation and advertisements • Maintenance and development of applications
	Key Resources	• Millions of legal music • Cookies on the Internet • Funding • Human resources
	Key Partners	• Record labels and music aggregators • Venture capital providers • Third-party websites and APP providers • Data processing companies • Telecom operators
Customer Retention	Channels	• Official website • Applications on PCs, mobile phones, tablets • Gift card retailer
	Customer Relationship	• Self-service (FAQ & online instruction) • Spotify online community
	Value-adding Services	• Share any music/album/own playlist with others • Embedded app services • Bundle service with telecom operator
Profit Structure	Revenue Streams	• Fixed subscription fee: $9.99 per month • Advertising fee • Gift card sales
	Cost Structure	• Royalties for record labels and music aggregators • Commission fee for embedded app providers • Bandwidth costs • Maintenance cost of applications • Marketing and promotion fees

Table 4: Spotify Business Model

a. Product Innovation

Spotify is a typical two-sided platform with music users as subsidy side and advertisers as money side. Due to the two-sided platform, it has different **target groups** and **value propositions** for each side. For the subsidy side, basically it is a mass market towards the global music fans. But because it is mainly dominated by pop-music, young people are regard as the main target group. Thus, spotify hammers at seamless listening experiences for everyone at every moment. For the

money side, it provides accurate, personalized and high-efficient advertising service for the advertiser.

b. Infrastructure Management

The **key activities** also aim at two parties according to the different value proposition. The main activity for music listeners is providing massive tracks. To serve users around world, Spotify uses more than 50 languages (Spotify, 2014) and designs the interface of website and applications in cool and casual style which is fit for young people. Users can browse new songs from many catalogues, generate their own playlists, follow others', and share them with friends through the integrated social network function. The major difference of Spotify from iTunes is no need of storage space for songs, since it applied Internet virtual space to cache music. Another useful feature is personalized recommendation based on related artists and genres. For the advertisers, Spotify has several types of ads to ensure the effectiveness, including audio ads played during listening, display ads showed as banners and posters, co-operative brand playlists ("BMW road trip playlist generator") and embedded third-party apps. (Biernacki, 2013; Spotify, 2014) Furthermore, Spotify promotes right ads to the right customer, which means it sends specific ads to separate users by gathering and processing their personal data left in cookies.

To complete the whole service, millions of legal music is essential **resources**, since ample music bring people to this site and remain them. The cookies on the Internet are fundamental resources to analyze music users data and listening history, so that Spotify is able to offer customized recommendation lists and ads. As a startup company, funding from investors is necessary to purchase expensive copyright and improve services, as well as human resources. **Key partners** relying on the key resources are composed of record labels and music aggregators, third-party websites and apps providers, data processing companies, telecom operators and venture capital providers.

c. Customer Retention

Spotify's users can listen to the digital music either from PC desktop applications or from apps on the mobile devices, and applications can be downloaded from the official website. For the mobile users, they can also get the app from mobile app market. Besides, Spotify sells gift card

as well, which can be bought from physical retail store and the online store. These are **channels** that customer reaches services. To manage **customer relationships**, Spotify lists guidelines and FAQ (frequently asked questions) for beginners to get familiar with the service. Furthermore, it creates an online community to solve user's problems and let customer's interact with each other.

Spotify gives its users exclusive experiences that other music websites don't offer through the **value-adding services**. Firstly, it is a pioneer in the integration with social networks. Not only it opened this function in a very early stage, but also it brings a smoothly transformation between social networks and the music application. People can easily post a single track, an album or a playlist created by himself on the social networks with just pressing the "share" button. His friend who see this post and click on the "play" button can be directly linked to Spotify to play this song. Another creative feature is the embedded apps offering various services related to music listening. For example, the app named "find my festival" publishes concerts hold recently and shares repertoire lists. Musixmatch provides lyrics for songs user is listening to. Moreover, the premium version is bundled with telecom operators of some countries. When people purchase operator's subscription plans, they will get premium Spotify for fee. (Markendahl et al., 2013)

d. Profit Structure

Spotify's **revenues** come from two sides -- advertisers and music users. Obviously, it charges companies for the different formats of ads as names displayed on its websites – "audio, display, billboard, homepage takeover, branded playlist and advertiser page" (Spotify, 2014). On the other side, two versions are provided to users: free model and premium model. Free model has limited functions, for instance, un-eliminated advertisement, limitation of listening hours and songs. The unlimited premium model costs $9.99 per month. It is more than just fulfilling the limited functions of free model, and adds the download service and listen offline with the high-quality audio. Surprisingly, the revenues generated from premium subscribers accounts for 75% of total revenues. Additionally, a small portion of revenues is from sales of gift cards.

The heaviest **cost** is royalties for record labels and music aggregators. Besides, it also needs to pay for the third-party offering apps. Because it is based on peer-to-peer technology, another cost

is the bandwidth. Similar to other music platforms, the maintenance fee and marketing fee is needed.

4.2.3 Strategies of Generating Revenues

The biggest success of Spotify is the surprisingly high conversion rate of paid-users. As mentioned before, although the subsidy side is advertisers, main revenues come from premium subscribers. Thus, next we will examine factors that stimulate the conversion rate and reasons of making profits.

At first, we look into the advertiser side. For companies, they want their advertisements to reach as many potential users as they can. Hence, Spotify discards traditional mass advertising and carries out a new plan to target different group of users with specific ads by analyzing personal data, which is more cost efficient. On the other side, the different types of advertisements make customers feel comfortable with them, let alone most ads are presented as music or related with music. Nevertheless, the capability of the whole plan is build on the large scale of music users.

For music users, the most important value of a music website is the great amount of music. Spotify provides its customers with various methods to find new tracks. For example, the basic feature of browse lists recently released songs and albums, pop charts and music collections based on genres and moods. The “share” button and embedded apps are also designed to offer more options for users, which are closely bound up with value proposition. Moreover, the intelligent music recommendation and “radio” function know well about user’s taste of music through personal data analysis. All these functions just hit what customers expect, so that more and more people are attracted to Spotify. After using it for a period of time, users are familiar with its interface and functions and have all favorite songs on this platform. It is difficult for users to change to another platform, which is in terms of high switching cost, so that they will stick on this platform. Due to the audio ads that are appeared frequently, limited music choices and limited listening time, customers might want to transfer to the premium version with better listening experience. In addition, the collaboration with local telecom operators is a smart strategy, which is beneficial to expand popularity in a new market and increase the number of paid subscriber directly. In conclusion, as a two-sided platform, great number of users in the subsidy side attracts more advertisers in the money side and more advertisers result in more

revenues that Spotify could use to improve functions and purchase more songs, which lead to more music users. Thus, Spotify creates a virtuous cycle.

4.3. RDIO

4.3.1 Basic Information

Rdio is a broadcast-style online streaming music service founded in August 2010 in San Francisco. At first, it only served paid subscribers. But it added freemium subscription in the beginning of 2014 and expanded to 60 countries over the world to attract more customers, in order to confront with fierce competition in the streaming music services. It offers more than 25 million songs for users to discover, listen and share through website player, PC desktop application and mobile apps. (Wikipedia, 2014; Rdio, 2014) In 2013, Entertainment Weekly elected Rdio to be the best music service because its simplest app and online interface makes database search and playlist curation easy. (Anderson, 2013) Customers could listen to the existed stations and playlists or create their own music lists.

4.3.2 Business Model Analysis

Product Innovation	Target Customer	• Global music fans
	Value Proposition	• A ground-breaking new way to discover, listen to and share music as a radio-style digital music service
Infrastructure Management	Key Activities	• Provide streaming music through websites, PC desktop applications, mobile phone and tablet applications • Gather and process customer data to offer personalized music recommendation • Maintenance and development of applications
	Key Resources	• Millions of legal music • Funding • Human resources
	Key Partners	• Record labels and music aggregators • Venture capital providers • Third-party API providers • Advertisers • Cumulus Media, Car brands
Customer Retention	Channels	• Official website • Applications on PCs, mobile phones, tablets
	Customer Relationship	• “Help” session on website • Twitter Account
	Value-adding Services	• Follow others in the community • Share any music/album/own playlist with others

		• Gapless playing

Profit Structure	Revenue Streams	• Fixed subscription fee:
		  • $4.99 per month for web streaming
		  • $9.99 per month for mobile streaming
		  • $17.99/22.99 per month for 2/3 family subscribers
		• Advertising fee
		• Gift card sales

	Cost Structure	• Royalties for record labels and music aggregators • Commission fee for API providers • Maintenance cost of applications • Marketing and promotion fees

Table 5: Rdio Business Model

a. Product Innovation

As other streaming music services, Rdio also has a massive **target customers** all over the world. As it describes on the website, Rdio offers a ground-breaking new way to discover, listen to and share music as a radio-style digital music service.

b. Infrastructure Management

The **key activities** consist of development and maintenance applications and Internet website, provide streaming music with basic functions, and new songs recommendation for specific customer based on his/her listening history. Rdio has a very simple homepage compared with Spotify. On the homepage, users firstly follow their friends, the favorite artists, record labels or other music lovers, and then Rdio displays what they are listening and recommend the music for him/her. The homepage of Rdio is just a customized personal music lists. Besides, it is fulfilled with other functions such as search bar, top charts and new releases, just as other streaming music service. After listening to several songs, the user's own station will be set up and can be played endlessly. To operate the whole business, Rdio needs several **resources**, including access to millions of songs, funding and human resource, especially the talented IT people to continuously develop website and apps. The **key partners** are record labels and music aggregators, venture capital providers, advertisers, third-party API providers. The API providers mainly focus on the mobile apps to provide some services related with Rdio. Besides these partners, Rdio also works with car brands – Tesla Motors in Europe to provide default dashboard audio service (Wikipedia, 2014). Cumulus Media is another partner that Rdio provides an online outlet for it.

c. Customer Retention

There are three **channels** to receive Rdio's music service – online website, PC desktop application and mobile apps. It is available on Android, Blackberry, Windows phone and iOS mobile systems, and the Mac OS X and Windows PC systems. Users can find instructions for beginners and other FQAs on the "Help" session on the website. If customer has problems, he/she could leave a message in the "Help" session so that employees could answer and solve the problem. Rdio also has a Twitter account to communicate with its customers and manage the **customer relationship**.

As mentioned before, Rdio creates an online community existed on the platform and users can browse their interested people or organizations to follow. Based on user's following people, recommend lists and albums will be displayed on his own home page. Similar to Spotify, it also integrates with social networks for people to share songs or playlists. It also adds a "collection" function, which can help user better manage their songs, instead of massive playlists. As a broadcasting music service, the embedded user own station could accomplish a gapless playing of customized music lists according to the listening history. All these activities are used to improve customer experience and add more value for them.

d. Profit Structure

Rdio just began the freemium trial services depending on different locations and different devices. For users in U.S. and Australia, people can get free music service from website and PC desktop applications supported by audio advertisement. For anywhere else, people get a six months free trial. For the mobile devices, users can only have a free trial for 14 days.

The paid subscribers can either choose a $4.99 per month for web streaming, or a $9.99 per month for mobile streaming. To encourage more paid users, Rdio has a discount for family users with monthly price of $17.99 for two users and $22.99 for three users. Thus, the main **revenue** comes from paid subscription and the advertising as supplement.

Similar with other digital music services, the major **cost** is royalties for record labels and music aggregators. Rdio also needs to pay commission fee for API providers, maintenance costs of

applications and website, and the marketing fees for internationalizing the streaming music service.

4.3.3 Strategies of Generating Revenues

A news published in 2013 November depicted that Rdio laid off near one-third of the entire employees to improve cost structure and guarantee a long-term stable business model. (Welch, 2013) After the news was reported, Rdio introduced the freemium subscription model to the market. We can infer that at that time the revenues generated from paid subscribers was not enough to pay off royalties for the record labels, so that it needed to increase the user number and encourage them become paid users. But it is truly difficult for Rdio to get more paid users directly, since various digital music platforms are already existed in the market. Rdio had to carry out freemium version to attract more potential users. However, does this measure really work?

From the major two subscription tiers, we could conclude Rdio expects its users could transfer to the mobile streaming service at last. It provides full functions on the websites, including the value-adding services, so that every person can use them. Rdio has the fastest and easiest way to discover and listen to new tracks compared with other streaming music services. Unlike Spotify, people just set up some information by choosing several people to follow and listening to several songs, and then Rdio will create user's own station. With the gapless playing without any audio ads, the experience is just like customized radio station. However, on the free mobile streaming, all the functions are restricted but the station. Thus, it pushes customers to purchase the mobile service.

4.4. SOUNDCLOUD

4.4.1 Basic Information

Soundcloud is founded in 2007 in Berlin by two person with the music background. The original intention is for a small group of independent musicians to share recordings, but now it expands to major record labels and becomes a publishing tool for all the artists. This is also the reason that it belongs to the artist-to-consumer model. Additionally, every minute average of 12 hours of

audio are uploaded to the platform by both small-time artists and mainstream stars. Till July 2013, 200 million users listened music and 40 million users registered on Soundcloud. (Wikipedia, 2014)

4.4.2 Business Model Analysis

Product Innovation	Target Customer	• Normal listeners • Track creators
	Value Proposition	• Worldwide online social platform gives anyone to create and upload their own songs and share with others
Infrastructure Management	Key Activities	• Ensure uploading and playing songs and other functions on Internet websites, PC desktop applications, mobile phone and tablet applications • Gather and process listening data • Maintenance and development of applications
	Key Resources	• Millions of music and podcasts • Venture capitals • Human resources
	Key Partners	• Record labels and independent labels • Third-party API providers • Venture capital providers
Customer Retention	Channels	• Official website • Mobile devices apps
	Customer Relationship	• "Help" session on website • Social network accounts
	Value-adding Services	• Integration with social networks to share tracks with others • "Moving sounds" • "Groups" share music • Statistics about uploaded tracks • Highlight uploaded tracks and playlists on user's profile

Profit Structure	Revenue Streams	• Subscription:
		  • Free
		  • Pro: €3 per month or €29 per year
		  • Unlimited: €9 per month or €99 per year

	Cost Structure	• Commission fee for API providers • Maintenance cost of applications • Marketing and promotion fees

Table 6: Soundcloud business model

a. Product Innovation

Soundcloud can be seen as an audio version of YouTube which is quite different from other digital music platforms, since it allows users themselves to upload their own tracks. Therefore, the **target customer** is divided into two groups – normal listeners and track creators referring to

the record labels, independent musicians, DJs and others. The **value proposition** of Soundcloud is a worldwide online social platform giving anyone to create and upload their own songs and share with others.

b. Infrastructure Management

The main **activity** of Soundcloud is to ensure the tracks uploading and playing and other functions on the Internet website and mobile phone and tablet apps. It has the suitable version for iPhone, iPad and Android. Another activity is to help users gather listening information about his uploaded songs and make statistics of them, so that users know how many times the specific track played and who listened to it. Furthermore, it also needs continuous development and maintenance of the websites and mobile apps. Similar to other streaming music, the **key resources** include millions of music and podcasts, venture capitals and human resources. And the key partners also stay as the same, including record labels and independent labels, third-party API providers, and venture capital providers.

c. Customer Retention

Users can **get the service** through official website and mobile apps for iPhone, iPad and Android. Soundcould has a series of "help" pages for guiding new users, posting questions for staff to answer. In addition, it also creates social network accounts to promote Soundcloud and serve more users.

Because of the special value proposition, Soundcloud has distinguishing **value-adding services** that cater to the needs of normal listeners and track creators. If a user uploads his tracks, he can highlight them on the top of his profile page to attract other's attention. And users could review the comments that other listeners left below the music, count the number of plays, likes, and downloads. For some serious track creators, the pro version and unlimited version provide more detailed statistics and analysis for their uploaded music. Audience can create a group or join other's group to find more music. Soundcloud also integrates with social networks to allow users share tracks with friends and scan other's share. Furthermore, another feature named of "moving sound" is designed for all kinds of users, which provides a dynamic reviews from listeners with a

flowing sound track, as shown below. This is an interesting new way to glance over the reviews, instead of scrolling the webpage.

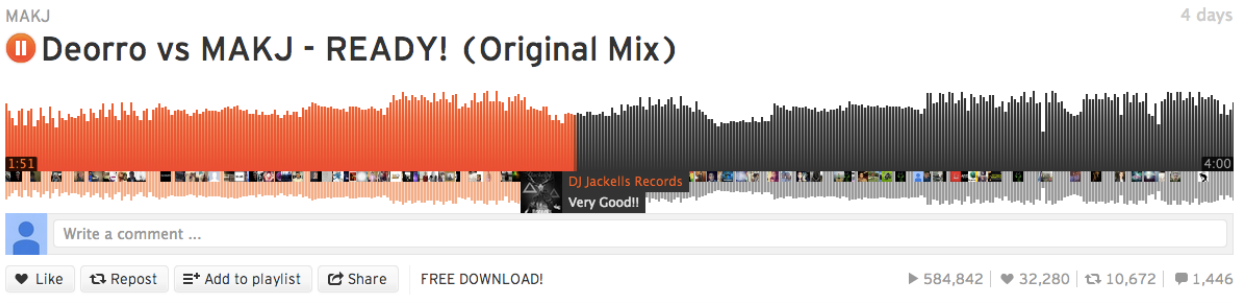

Figure 12: Moving Sound

d. Profit Structure

Since Soundcloud insists with a no-ad platform, the **revenue** comes only from subscriptions. It provides three subscription options – free version, pro subscription and unlimited subscription. The free version offers two hours upload in total, access to basic statistics such as number of plays, likes, and comments, and other basic functions. It is mainly for the normal listeners. The pro subscription is €3 per month or €29 per year. It offers four hours upload, more detailed statistics, highlight tracks and other features, which is appropriate for amateurish track creators. The unlimited subscription is €9 per month or €99 per year filling with all of the functions, which is designed for the professional musicians. The **costs** are composed of maintenance cost of apps and websites, commission fee for API providers and the marketing and promotion expenditure. Since the tracks on Soundcloud are uploaded by single users and tracks are also original, there isn't royalties it needs to pay. However, with more and more popular stars and main record labels will be presented, Soundcloud claims that they will divide some portion of revenues for those who have millions of followers and listeners. (Keeble, 2014)

4.4.3 Strategies of Generating Revenues

As Soudcloud spends little royalties, it doesn't have so much pressure of earning back margins. The nature of song-writers and singers is they want their music can be heard by more people, so that they will pay some money to let their songs played on the Internet. Additionally, a "buy"

button drags listeners to the purchase page that is provided by other website. Thus, the problem is how to attract more music listeners to use this platform.

First of all, Soundcloud is a totally free service without ads. Although it mainly focuses on the independent musicians and DJs, for the people who are indie music lovers or remixed music fans, Soundcloud is the best place to go. Additionally, with integration of social networks, users share music on their social network accounts, so that their friends can see this post and notice this platform. Therefore, Soundcloud chooses a niche market and targets a small group of customers at first step, and then expands market to the mainstream music market.

4.5. Summary of Key Findings

1. All of the four companies integrate with social networks, no matter which revenue model it applies.

The social networks like the virtual word-of-mouth. The users of each digital music platform can be connected with their social network accounts to share what they are listening to and to see what their friends are listening to. Especially for the newly coming digital music services, the integration with social networks is the best way to increase public's awareness and gain credibility. Once one person shared he was listening on a particular music website, his friends, colleagues and relatives on that social network would know songs and as well as the music website. For the comparatively mature digital music services, this integration is an important way to encourage more users to get involved in the activities hold by music service providers. Additionally, it also stimulates the conversion rate of paid-users indirectly. When users get used to one platform, they will stay on this platform due to the habitual customer interface and website operations, and high switching costs. And when they want to get more fluent experiences, such as no ads and high-quality tracks they will become the paid subscribers.

2. Every digital music service represents a typical music service catalogue, which in terms of revenue models in the study – pay-per-download, subscription, broadcasting and artist-to-consumer. However, some functions of the four types are gradually merged together.

This situation is mainly happened in the subscription model and broadcasting model. For example, Spotify also builds out customized personal radio station in its services, which is the main function of broadcasting model. But Rdio as a typical broadcasting music service, simplifies processes of discovering new songs so that the experience would be more smooth. Almost all the platforms add download function as supplement. Besides the pay-per-download model, other models install the feature of downloading for paid subscribers. Thus, the digital service providers needs to consider other methods to distinguish themselves, for instance, Soundcloud enables musicians and artists introduce and promote music to listeners.

3. The online streaming music services take full advantage of big data.

The high utilization of bid data is fully embodied in the online streaming music services. Customization has become a powerful slogan to attract more users into the platform. The customized service completely relies on the gathering and analyzing user data. Spotify also applies big data to its advertisers. Companies that post advertisements on Spotify will be targeted at specific user group based on their locations, ages and other results from data analysis. The application of big data in online streaming music services is built on high-volume users and actually increases revenues.

4. The value-adding services are closely related with value proposition, and most of them can be applied in the free subscription.

Most of the value-adding services provided by music websites can be achieved in the free subscription, such as share playlists with other friends on Spotify, gapless playing on Rdio and moving sound on Soundcloud. In Addition, they are tightly connected with their value propositions. Thus, the value adding service doesn't increase profits directly, either stimulates the conversion rate straightly. On the contrary, they mainly focus on improving customer's listening experience. For these music websites, the major differences between free and paid subscription are the basic features, such as with ads and without ads, restricted listening time, or the access to listen offline.

5. Almost all of the digital music services barely afford the expensive royalties, except Soundcloud where the user is the copyright owner.

The highest risk for all the digital music services is royalties paid for major record labels, independent labels and music aggregators, in order to use their tracks legally. Even iTunes music store with over 10 years' history cannot avoid the predicament of revenues barely covering royalties. As start-up companies, most of them have tight budgets and they are in sore need of venture capitals to support business operations. On the other side, music service has a typical long-tail effect. In order to satisfy customer's various demands, the online digital music website has to purchase as many copyrights of songs as it can, so that new customers can be attracted to this platform and old users can remain here. The number of users and the growth rate of users are two measurements affecting investor's decision of providing financial support or not. Thus, the digital music website still needs to modify continuously its business model to maintain a competitive position.

6. The streaming music services can't avoid advertisement. The only concern is how to make users feel comfortable with them and accept them easily.

Rdio's example told that the online streaming music services can't avoid advertisement, at least in the beginning. Before a music website becomes completely developed, advertisements are helpful supplements for low profit margin. Especially, the advertisements enhance the feasibility of free subscription. However, most users don't welcome advertisement. Although Spotify's advertising model gains positive appraisement from relevant partners, its users are still skeptical about them, especially for the audio ads. Some users switch to another music platform that has a free version without ads, just because they don't want to be interrupted by audio ads during listening music. For those websites relying on selling advertisements, they should rethink about ways of displaying ads and try to make users feel comfortable with them, so that they could reduce the loss of audience.

7. All the four digital music services don't leverage the power of artists, musicians and stars enough.

From analysis of revenue streams, we can conclude that the major revenues of pay-per-download model, subscription model and broadcasting model come from selling music or the music service and selling advertising spaces. The last model of artist-to-consumer relies on the sales of online music spaces for artists. However, none of them leverage the power of artists, musicians and

singers enough, even the Soundcloud. As an artist-to-consumer model, it allows musicians create their own profiles and post tracks, but there is no function that gets them involved in the online community. Audience can only leave comments below the song or communicate with other listeners in the “comments” area. But for music fans, probably they want to interact with their favorite musicians and singers or have some other activities. The celebrity has the power to attract more people and make the platform more active. Furthermore, the involved celebrity function could be simple through integrating with their social network accounts, and it could be comprehensive with more features through creating their own online fans group on the music platform. Therefore, the online music websites could build collaboration with musicians and artists to gain more users and increase revenues, and the musicians could also use the platform as promotional channels.

5. CHINA MARKET STUDY

In this chapter, the author will examine current situation of digital music industry in China to find out reasons that hinder development of online music platforms and the difficulty that they face to. The results of digital music industry analysis will be displayed in the form of SWOT. Moreover, studying the consuming behavior towards digital music products and services will establish knowledge of necessary features and beneficial value-adding services that music websites should have. In the end, based on the previous business model analysis, feasible revenue models with unique features that could be implemented in China will be gained.

5.1. Digital Music Industry in China

Although the digital music industry in China has developed for more than ten years, it is still far behind of the developed countries. With the development of computer network and communication technology, the big growth spurt of this industry has taken place since 2004. According to iResearch, the growth rate of the online music market revenue in 2004 was 241% reaching 45 million RMB and the growth rate of user scale was 117.6% with the user number of 78 million. Furthermore, after 2004 it maintained at a constant level of growth. Moreover, the huge market potential also opened a door to a more fierce competition and stimulated miscellaneous companies participating in this value chain. For example, the content providers (CP), which are the record labels or music studios, offer digital music to the service providers (SP) referring to music websites and telecom operators (TO). And users can either listen on the website or download to their computer directly from SP or download through TO to their mobile phone or buy them as the ringback tones.

Therefore, to distinguish the source of music in this study, Online Music represents the digital music gained directly from Internet on PC and the Mobile Music refers to those from Mobile Internet or the telecom operator. The revenue of digital music is summation of online music and mobile music. The figure below displays the constant increase of revenue in digital music and online music from 2007. The revenue gap between online music and mobile music is apparent in this chart. Because of the free downloading from Internet, the main source of online music revenue is advertisements, while the mobile music could gather revenue from ringback tone,

advertisements and other sources. But this situation was changed from 2012, since SPs on the Internet started to promote the paid music service. Nevertheless, the average paying user of SPs is still less than five in a thousand (Qu & Hu, 2013).

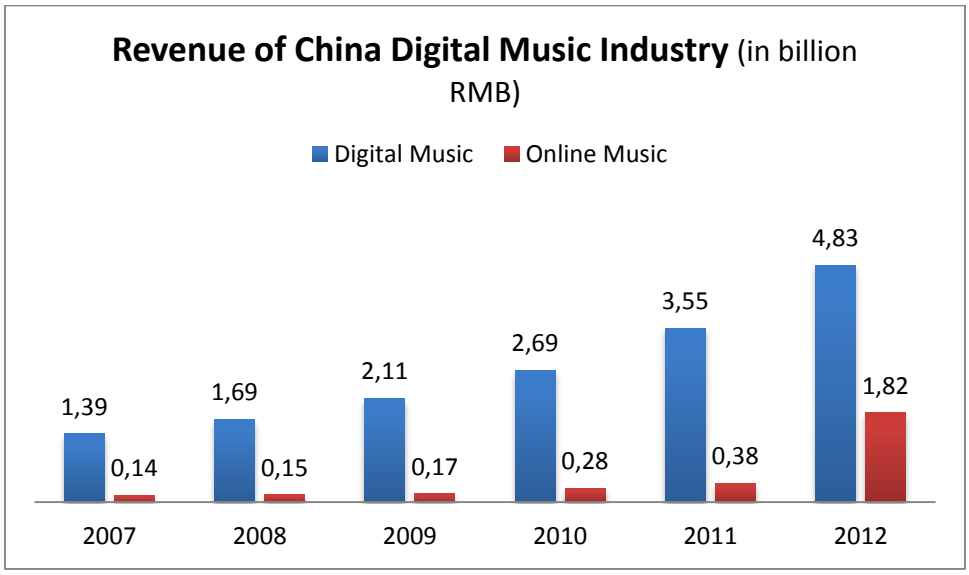

Figure 13: Revenue of China Digital Music Industry (source: www.chyxx.com)

On the other hand, the pirated music download service also threatens SPs that offers licensed music. The formal music websites barely afford high royalties to record labels and music studios and maintain a stable profit (Yang & Cai, 2008). In addition, government departments are enhancing the supervision of copyright on the Internet while making more stringent laws and regulations. The record labels and music studios that provide music contents are paying more attention to protect their benefits. Therefore, the digital music websites have to modify the business model and find profitable revenue streams to face to the strict market environment, which is also the objective of this study.

Thus, the author provides a SWOT analysis of local contemporary digital music market, finding out obstacles of the development and strengthens to enlighten better revenue models for Chinese music websites. The digital music here refers to the music offered by online network (the Internet) and mobile network. Strengthens, weaknesses, opportunities and threatens of the Chinese digital music market are summarized in the chart below and explained in details as follows.

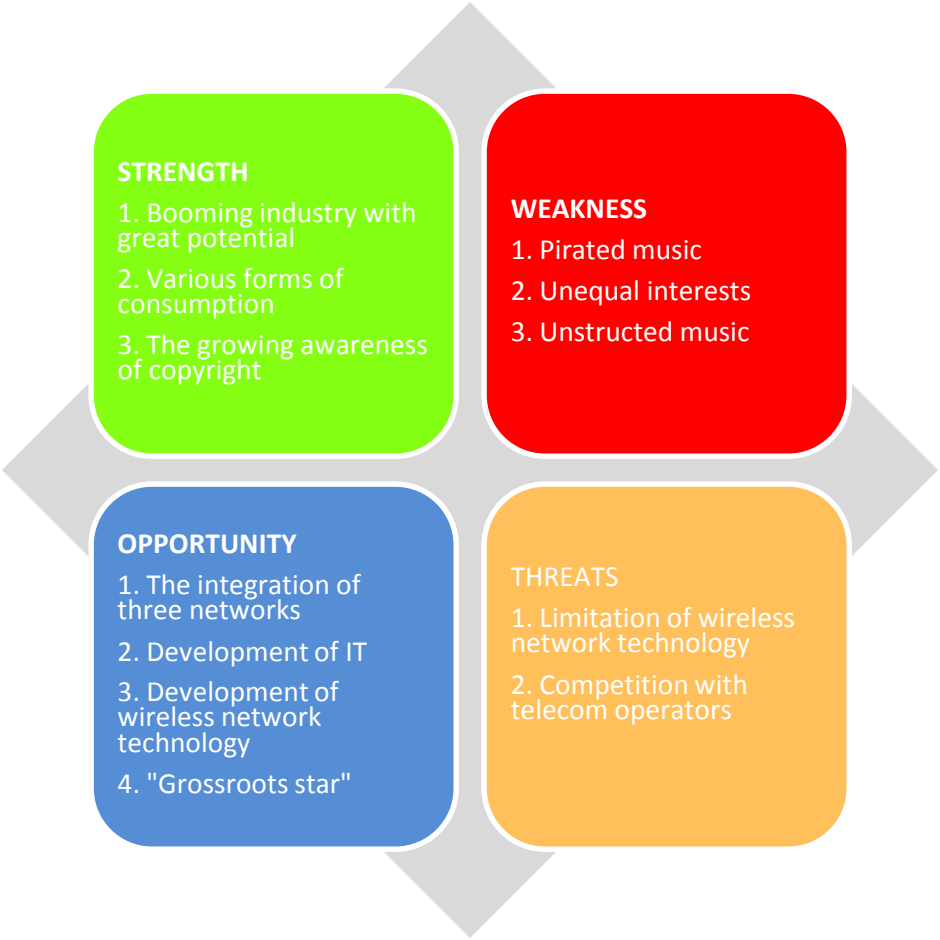

Figure 14: SWOT analysis of Chinese Digital Music Market

5.1.1 Strengthen

Firstly, the increasing number of digital music consumers and content providers and musicians bring a new momentum to the industry. According to information statistics, about 400 million users get music service from the Internet in the Mainland China. (Li, 2014) IResearch (2012) concluded through the survey that more than 40 percentage people use the Internet music services each day. With the popularity of smart phone and the development of mobile network, much more users increase the usage of mobile devices to listen to music or download music directly from digital music service providers. Furthermore, almost all the service providers have launched both the online websites and mobile apps, which facilitate the account-sharing and simplify the process of listening music, so that the number of digital music users is growing

continuously. All this statistics and information clearly indicate that the digital music market has **great development potential**.

Secondly, the **various forms of digital music consumption** boost the appeal of Internet music service. The sharp decrease of physical music sales makes musicians and record labels put more emphasis on the network channels. For example, some singers choose to release digital album through the Internet instead of traditional physical album. (Qi, 2009) Besides, the live concert, fan club, online chatting between stars and fans, and other entertainments start to show up on the Internet. Therefore, the new channel – Internet network with the possible of manifold consumptions bring more value to both consumers and musicians.

Lastly, **public's growing awareness of copyright** brings new vigor and vitality to the digital music market. In the past time, music websites were inundated with the pirated music and the copyright disputes between record companies and music websites were very common, since either the websites or consumers have strong copyright consciousness. Lots of music websites cannot afford the penalty for the copyright infringement, if records labels and musician found out this issue and took the websites to court. However, this situation changes a lot due to the growing awareness of copyright. The formal online music service providers are searching for a sound relationship with record companies to use their music legitimately.

5.1.2 Weakness

Firstly, **the pirated music** is still existed on the Internet and holds a big problem to the record labels and regular music websites. The number of illegal websites is high and the size of those websites is small, so that record labels and related government's department cannot recognize and control each of them. For users, some of them want to get free music content so they download them through illegal websites on purpose. For instance, fans want to have the record of a concert, which the record company doesn't provide. Hence, fans who attended music concert recorded the live and put it on the Internet for other fans to download. However, most users can't realize the differences between licensed music and pirated music, so that they get the pirated music unintentionally. Hence, pirated music websites weaken the meager interests of formal websites and threaten their survival on the Internet. To prevent the occurrence of such problems, government needs to enhance supervision. More importantly, the formal music websites have to

modify their digital music contents and provide more valuable services to differentiate from the pirated websites.

Secondly, the profits in each part of the digital music industry haven't been distributed equally, which further hinder the development of this industry. Currently, the telecom operators that provide the Internet access for PCs and mobile phones take 94 percent of the whole profit. The service providers hold 4% ~ 5%, and the content providers only have about 1% profit. (Li & Liu, 2011) The **unequal distribution of interests** is not able to protect the copyright owners and the regular service providers. As a result, the music producers lose their passion for creating new songs and the service providers can't keep balance between costs and revenues. To relief this issue, not only the government has to publish related regulations to balance the benefit of each part in the industry, but also service providers need to build new partnerships with the telecom operators to save their costs.

Lastly, the Chinese pop-music doesn't have long history and the classification of pop-music is not complete. Especially, the "South Korean fad" and the European and American popular songs impact **the existed instructed music** library in China nowadays. The unclear classification of songs makes it even more difficult to measure user's data and recommend songs that match their tastes.

5.1.3 Opportunity

The first opportunity for developing the digital music industry is **the integration of broadcast network, telecommunication network and the Internet**. In 2001, the government came up with a preliminary concept of integrating the three networks in the "Tenth Five-Year Plan". And then the related industries and organizations started to work on this plan. Currently, the fundamental technical conditions, network infrastructure and market space have been established. The integration of three networks makes usage of network resources more effectively, simplifies the network management procedures and reduces the operation and maintenance costs. (Hou & Zheng, 2013)

The **development of information technology** improves customer experiences of the Internet music services. For example, the theory of web 2.0 connects social networks with simple music

websites, which enables interactivity of music websites. The payment methods have been improved as well. More significantly, the implementation of cloud computing helps users to synchronize their user accounts in the online websites and the mobile platforms at the same time. Thus, the developed IT makes the online music services more and more attractive by adding beneficial functions.

Furthermore, the **wireless network technology** also has been improved. According to Google (2013), the penetration rate of smartphone in the mainland of China was 47%, which came in the Sixth in the world, while South Korea had the highest penetration rate of 73%. Till the end of 2013, the number of 3G users had reached 420 million, increasing 11.8% over the last year. (MIIT, 2014) On the one hand, the number of smartphone and 3G users has dramatically increased, and the mobile music market is expanding day by day as consequence. On the other hand, the speed of cable network, 3G and wireless network also has been improved considerably, which enhances the audio-visual experiences.

Last but not least, the increasingly popular **talent show** and the great amount of **"grassroots stars"** give new power to the digital music market. Because most singers from TV shows don't have any agents or companies, the online music websites provide an easy and inexpensive way to publish their new songs and update news. Besides, online platform is also a direct way to communicate with fans for those singers whom can't throw a fans meeting in practice. Therefore, the grassroots stars bring important business opportunities to the online music websites.

5.1.4 Threats

Although the wireless technology has been developed largely, it is still in the early stage. The **3G networks cannot reach all the areas**. The speed and capacity are quite different between cities and countries. For example, the economic development of northwest China lag behind the average level and consequently the signal coverage of 3G networks in those areas is very low. Moreover, another fact that restricts the development of digital music industry is the **high price of wireless and cable networks**. The expense of broadband is 83.8 RMB per month, 18 times of South Korea and 51.5 times of Japan (Huang, 2011).

Lately, **the competition between telecom operators and the online music websites** becomes more and more fierce. The online music websites promote their mobile phone apps to enter the mobile music market, while telecom operators launched their mobile music services for customers to download music, buy ring tones, watch MVs and participate in other activities. An apparent advantage of telecom operators is the massive user base, especially for the exclusive ring tones service.

5.2. Consuming Behavior of Chinese Audience

This sub-chapter peeks at the attitudes and preferences of Chinese audience towards the digital music, and provides a base of analyzing suitable value-adding services in the next chapter. There are two parts to illustrate the current situation – consumer profile and consumer preferences. Consumer profile includes age, occupation, channels of getting new music and other basic attributes. Consumer preferences focus on other facts impacting the selection of music websites. In general, the consuming profile is based on the survey made by iResearch (2013), and the study of consumer preferences is on the basis of long-time observation and topical subjects.

5.2.1 Consumer Profile

According to iResearch, among the digital music users, the proportion of male users and female users are basically flat, where the ratio of male users is 55% and female users hold 45%. Most of the digital music users are young people, whose ages are under 30-year old, and the ratio is above 66%. The age distribution is displayed in the chart below.

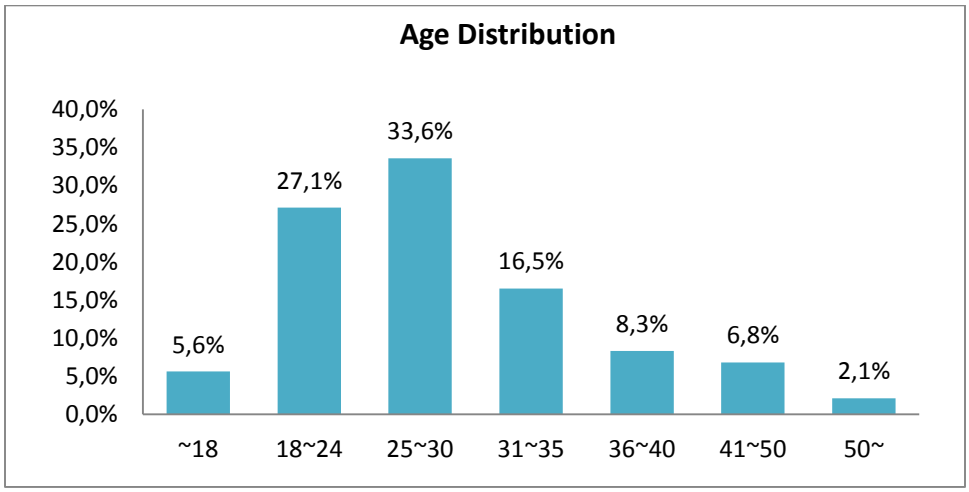

Figure 15: Age Distribution of China digital music users (iResearch, 2013)

Correspondence with the age distribution, more than 70 percent of digital music users are students or jobholders. Additionally, more than half of users are highly educated with bachelor or higher degrees. This situation indicates most of current users are awareness of copyright and willing to pay for the licensed music. However, due to the younger age of main user groups, most of their monthly incomes are under 5000 RMB. There are 33.5% of the whole users whose monthly incomes are between 3001 and 5000 RMB. The proportion of whose monthly incomes are between 1501 and 3000 is 27.1%. 6.5 percent of users' incomes are under 1500 per month. (IResearch, 2013) Thus, the digital music service providers should carefully consider the payment standard for users.

The main ways of discovering new music include music charts, friends' recommendations and website's recommendations based on the keyword matching. (IResearch, 2012) Music chart is convenient and timely method to get new songs and it has been popular for a long time. Recently, due to the development of data analysis, most music websites have the function of automatic recommendation according to user's listening history. Furthermore, the combination of music websites and social network allows music users to share music lists with their friends.

Since this research focuses on the revenue models of digital music websites, user's willingness-to-pay should be taken into consideration. According to iResearch (2013), the vast majority never paid for music service. The rest users had paid for downloading music, ring tones services, background music for blogs and the subscription services. In spite of the mainstream free digital music services, most customers would to pay for higher quality music. Other major factors that influence customer's willingness-to-pay include cheap price, updating new songs in time, and the abundance of music. Furthermore, the three different occupations – freelance, jobholder and students have similar result in this subject. The detailed information is displayed in the chart below.

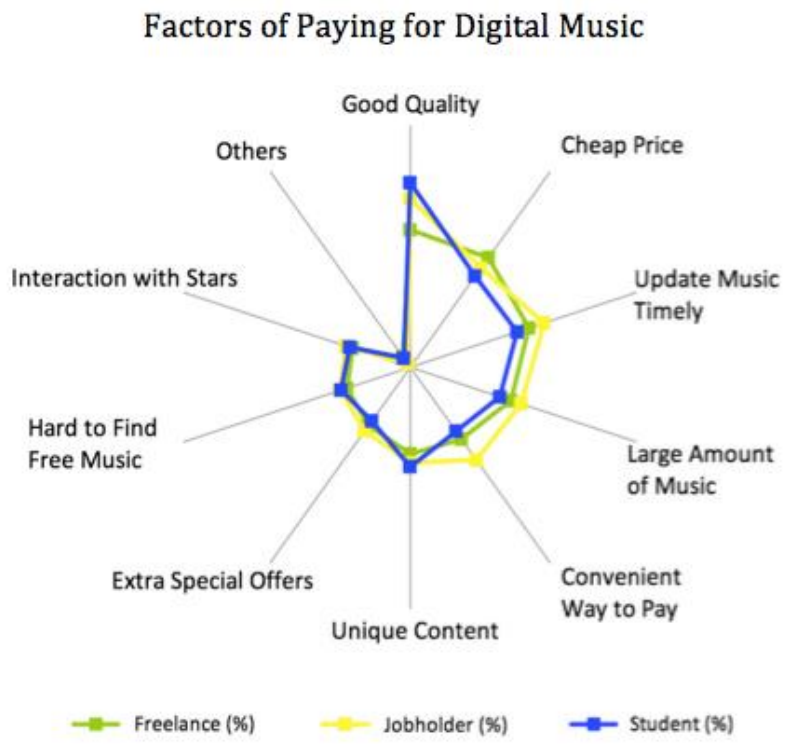

Figure 16: Factors of Paying for Digital Music (IResearch, 2013)

5.2.2 Consumer Prefernces

The most noticeable phenomenon is the celebrity effect, especially for younger people. Fans want not only to catch up with latest news of stars and musicians, but also to have direct communication with them. For example, fans always leave messages on their favorite singers' official websites and fan pages, and they are eager to get responses from them. But in fact, fans didn't get any replies in most times. For some stars, they would like to share parts of personal life, so they post them on the fan pages or their own social networks. But a famous star might have several different accounts such as official website, fan page, Sina Weibo, Tencent Weibo, Wechat, Facebook, Twitter and others. Fans cannot reach every single social network account, and also they might miss lots of updated information. The online music website is a perfect place to remedy this situation. A function of the website is named of fan group page, which is based on separate singers and allows users and singers to communicate directly and post information on the pages or move contents from other sources to this page.

Another trend is that the online music website isn't only a website for people to listen to music or to download music. Instead of basic function – music audition, a series of interactive and entertaining functions are catching customer's eyes. These functions influence customer's decision of preferred music websites, and even affect their willingness-to-pay. Currently, most online music websites are capable of providing several terminals – mobile app, PC desktop application and online websites to integrate music from different sources. Besides, users can generate their own music lists on the websites, link the social network account with the music websites, and leave reviews for songs. Hence, the unsolved issues are how to charge these existing functions and what else additional services could be developed to enhance customer experience.

One obvious attribute of young people is trendy and stylish, which is also embodied in listening behavior. Almost all of the digital music users would update their music lists regularly. This means when users heard enough of current songs in the list, they will actively search for new songs. But if they have already updated the list, most of them will ignore the recommendations. Thus, digital music service providers have to think about new ways to recommend new songs and the frequency of recommendation. Moreover, young people prefer expressing themselves by making tags, which can be applied to the music recommendation as well. By linking with social network account, music websites may record and scan user information and listening history, so that they could define tags for each customer to make corresponding recommendations.

The last concern is user's attitudes towards online advertisements. Most digital music users don't care about advertisement and they can accept creative, concise and interesting advertisements. For some users, they would like to know further about products in ads. The friendly and acceptable advertisements might be related with audio products or services, such as singer's new albums, live concerts, new movies, or audio players. Because users often listen to the music without staring at the webpage, the traditional web banners and video advertisement can't attract enough attention. Hence, the better ad format would be embedded in audio.

6. EMPIRICAL FINDINGS TARGETED AT CHINA

Based on the results of business model evaluation of four case companies and the research of Chinese online digital music service, the author will sum up key findings and propose some managerial suggestions in this chapter. The whole part is split up into two sub-chapters – suggestions of revenue models and revenue streams, and recommendations for value-adding services.

6.1. Suggestions of Business Model and Revenue Streams

1. **The online music websites could be transferred to the multi-sided platform with audience side, musicians/artists/pop-singers side, and the advertiser side.**

   Currently, most online music websites are the one-sided platforms that the music collected from content providers is listed straightly on the websites for the audience. Between the website and audience, there is no other tiers, since the advertisers are the partners, who are not involved in the main services for music listeners. According to the previous research, Chinese audience's willingness-to-pay is quite low. If the free music service still exists on the market, the listeners have a fair chance of switching to the free music. Thus, a multi-sided platform is necessary. The advertisers are regarded as the major income source. The audience side is a supportive element to increase revenues, because the large scale of users is a good base for user data analysis to improve the accuracy and efficiency of advertising, which is valuable for advertisers. The third layer is celebrity including musicians, artists, pop-singers and other relative person. This layer could be seen as cooperative users, which means the website is a propaganda tool for celebrity to promote new albums or live concerts. Because of the popularity of talent show and massive grassroots-stars, this is a good way for them to increase exposure, especially for those who just become popular and don't want to sign up with any record labels. As payback, the platform gets a chance to lower royalties with record labels and independent musicians, and therefore it is a three-wins platform. The more features and benefits for each side will be explained in next.

   However, the most important factor is how to get pop-stars involved in this platform. This music platform is very attractive to the musicians and artists who haven't become famous,

since it offers a low-cost and convenient channel to open the market. The pop-stars who have got the fame may less notice it. Nevertheless, the pop-stars will bring more users and further encourage free-user become paid-user because of their large number of fans. In general, it is difficult to pull the famous musicians into the multi-sided platform in the beginning and requires a relatively substantial initial capital to operate the whole business.

2. **The overall revenue model is suggested as artist-to-consumer model.**

As explained earlier, the main revenue models of music platforms are pay-per-download model, subscription model, broadcasting model and artist-to-consumer model. The author thinks the artist-to-consumer model is more appropriate to Chinese digital music platforms. On one side, from analyzing the leading international music platforms, we can conclude that the other three models highly depend on the paid users and all of them are struggling for pushing the free user to purchase music or the music services. But almost all the Chinese audiences don't want to pay for music due to the habit of free downloading formed in the long history. On the other side, the strong celebrity effect can pull more potential users into this platform in the early stage of development. Through adding some additional features and functions about celebrities, the platform could make free users become paid users.

In general, the artist-to-consumer model turns the role of simple music platforms to the online music community, which ensures the communication and interaction between musicians and listeners. Thus, music listeners and especially the fans of pop stars will choose this platform to listen to music and join other activates provided by the platform, and abandon others. Furthermore, the embedded online community on the music platform should create new features and functions to differ from others, since various online communities and social networks that involve stars have already existed on the Internet.

3. **The digital music service platform should apply big data to enhance the accuracy and efficiency of advertising to attract more advertisers and modify advertising model to let users accept ads more easily.**

According to the People Daily, the number of online music users was over 360 million in 2010. The great number provides a good base for applying big data. Like any other

international platforms, the local platforms could present more specific and personalized advertisements to users to enhance the accuracy and efficiency of company's advertising campaigns, through gathering and processing the user's personal data such as location and other preferences.

Furthermore, users don't like audio advertisements because they interrupt the listening experience, but the audio ads do guarantee the effectiveness of advertising since no one will miss them. Therefore, company might analyze user data to improve the audio ads. For example, according to the different celebrities that each single user likes, the platform can display advertisements about news or information of new albums, live concerts or movies that singer involved to the specific users. To make users feel comfortable with the audio ads of products messages, platform could add the background music to the audio messages, so that the music playing looks like seamless. By analyzing user's tastes of music, platform can add different tracks to the audio messages and send them to the specific group of users who have similar music tastes. Therefore, user's attention is still on the music and become comfortable with the audio message ads. Although this action will increase the cost of advertising, it improves the efficiency of advertisements and produces more value to the enterprises.

4. **The digital music service platform could also gather data about user listening experiences and sell them to the record labels, live concerts contractors and other relevant organizations as a revenue source.**

Since the sales of physical music albums are decreasing year by year, record labels couldn't get enough important information from the sales to help them know their musicians better and make wise decisions about the style of next album or promotion strategies. Thus, the digital music platform has massive powerful resources to play the role of wise statistics. With the solid foundation of music listeners, the platform can proceed statistics and analysis. For instance, the platform can easily measure which new singers have great number of listeners and have the most growth potential. It can test the target audiences of different musicians, so that the record labels know who are their target audiences and concerts contractors know well about the suitable places to hold live concerts. However, the platform

should remain the massive user base and take the confidential issue of using user data into careful consideration.

5. **The further difference between free subscription and paid subscription needs to be increased by applying different value-adding services.**

   Although most audiences prefer free listening and downloading, the digital music platform should carry out the two versions of free subscription and paid subscription. Through providing more values to the paid users with various value-adding services, the differences between free users and paid users will be increased. However, the main concerns of value-adding services should extend the values by adding more functions to the value-adding services, instead of just removing some restrictions of listening experience. But the music platform operators need to carefully consider the basic features and functions for the entire user group and the extra services for the paid-user group. If the free account has too many restrictions, the users will be pushed to other music platform. However, if the differences between free-user and paid-user were too small, the users will stay at the free account and result in a low conversion rate. More detailed contents of value-adding services will be introduced in the next sub-chapter.

6. **Besides revenues generated from advertisers, record labels and relevant organizations, and part of paid-users, there are also other potential revenue sources: coopetition with telecom operators, cooperation with smartphone brands.**

   Inspired by Spotify's collaboration with the local telecom operators, for the Chinese digital music platforms, they have to turn into coopetition with the telecom operators. Since the telecom operators have their own digital music platform focusing on ringback tone service, their services actually have a good customer base. However, the ringback tone service is not as popular as several years ago, and the number of users also decreases currently. Thus, this is a good time for digital music platforms and telecom operators to work together. For telecom operators, the cooptation will increment revenues of music service and more customers will be attracted. For the digital music platform, this is a fast and effective way to open a new market. More importantly, users pay for the telecom operators as a part of telephone charges, instead of paying for music service directly. It is an effective way to

encourage the paid users and increase revenues, since the audiences take less notice of the paid music service.

Another revenue source coms from cooperation with smartphone brands to embed the mobile music app on the system. When audiences purchase a new phone, they will be straightly connected with this music platform. For audience who doesn't have a frequently used music platform, it is the best way to bring the music service and encourage him/her to remain on this platform. For those who already have some regular used music platforms, they can try and feel the new service. If they think this platform satisfies them better, they will probably switch to it. Therefore, though no direct revenues come via the embedded app on mobile phone, it does expand the user base and provide a benefit potential. Moreover, the similar applications can be extended to work with smart-TV manufactures, tablets and other mobile devices producers.

In addition, both of them require the music platform operators make contracts with the third party, so that the distribution of interests need to be negotiated. Furthermore, both of them are very easy to imitate by the competitors.

To further sum up the suggested features of business model and strategies of raising revenue, the table below lists each of them with their advantages and risks.

Functions/Strategies	**Advantages**	**Risks**
Multi-sided platform	- Multiple revenue sources - Close relationship among users, musicians and artists, and advertisers - None similar platforms in China	- Difficult to get pop-stars involved - Require a relatively substantial initial capital
Artist-to-consumer model	- Fully apply the power of celebrity - More attractive to the public than other music platforms - Increase user's sense of belonging based on their favorite artists	- Differ from similar online fans communities and social networks
Using big data to enhance efficiency of ads and improve the format of ads	- More attractive to the enterprises with higher advertising efficiency - Improve user's experiences of audio ads	- Increase the costs of producing advertisements
Sell user data to the record labels, live	- Another revenue stream, releasing the profit margin pressure on	- To implement this strategy, a massive user base is

concert contractors, and other related organizations	paid-user - Help record labels produce popular songs and improve the sales of physical albums - Improve the location selection and other operations for the concert contractors	necessary - Private issue of using the customer data
Applying different value-adding services to differ free-user group and paid-user group	- Stimulate the conversion rate of paid-user - Increase total revenue	- Risks of pushing free-user to other music platforms - Risks of lowering conversion rate of paid-user because of the non-significant difference
Co-opetition with telecom operators; Cooperation with the producers of smartphone or other hard devices	- Expand market and popularity of the music platform - Increase the number of paid-user - Increase total revenue	- Distribution of the interest - Easy to imitate by competitors

Table 7: Advantages and Risks of Suggested Features

6.2. Recommendations of Value-adding Services

1. **Chinese digital music service providers should rethink of value-adding services, instead of simply following what the foreign websites have done.**

   Since the whole different market environment, the Chinese providers need come up with some services that directly and genuinely bring extra values to the music listeners. As described in the previous chapter, the legal online music service industry is still being developed with inadequate supervision of government and insufficient copyright consciousness of public, people could easily find many free digital music services on the Internet, such as free download, free subscription without ads and other options. Thus, the adaptive value-adding services for China market have to add actual extra values to drag users to the platform, instead of just removing advertisements or restricting some functions as the foreign websites did. But at the same time, these extra value-adding services would increase the operation costs and reduce the profit margin. In addition, a relatively large capital is required to implement all the features.

2. **The value-adding services should be combined with online features and offline campaigns and all of them need to tightly around the value proposition.**

For Chinese people, they always want pay for something that is real and touchable. There is no exception for the digital music service either. If the digital music platforms want the audience pay for this service, they needs to offer some stuffs that are more physical and practical. This means combining online features with offline campaigns in the value-adding services will make music users think the music service is more worthy to pay. Additionally, due to the attribute of online platform, all the functions, including basic ones and extra services for adding value, should mainly focus on the online features and supplement with offline campaigns. For instance, as an online music community, it needs to ensure the basic features of music listening and interacting with others to be opened for every user. The extra functions for paid users could include the capability of getting star's news in the earliest time and communicating with them, or the chances of gaining physical albums or live concert's tickets as reward. Therefore, audiences receive services from the online features, and feel and touch the service through offline campaigns.

In another aspect, the value-adding services have to be closely linked with the value propositions. For the proposed artist-to-consumer model, the most valuable resources are music and artists. Hence, the value proposition could be "your home of music with your favorable musicians".

3. **The digital music platforms should leverage celebrity effects in value-adding services for the purpose of adding more values for the paid users and increasing the further difference between free users and paid users.**

As explained before, the differences of functions between free users and paid users would stimulate the conversation rate of the paid user. Thus, the author gives some managerial examples of value-adding services to illustrate the difference.

The digital music platform can hold online chatting rooms among users and artist, when the artist releases new albums or EPs. For the paid users, they can ask questions to the artist, get replies and review the conversation between other paid users and the artist. But for the free

users, they only can review the conversation. The platform could organize live concerts or any other types of performance. Some of the paid users might receive free tickets as the reward, and those who don't get tickets can watch the performance online. But the free users can neither get free tickets nor watch online.

4. **More than just music recommendations, the music platform could let its users add music tags for themselves as the identity symbol.**

   By marking with music tags, the audience could easily find people who have similar music tastes with him/her among a large pool of strangers on the Internet and make friends with them to build new social networks, so that the connectivity and activity of the platform would be excited and enhances. As a result, more users would be dragged into this platform. Furthermore, the platform should ensure that users build their own music tags when they first registered accounts, so that it could make intelligent music recommendations for the audiences immediately. It is also helpful to improve the preciseness of music recommendation for the long term, since tags made by users themselves build a solid foundation for further analysis.

5. **The function of downloading music should remain free or involved in the free subscription, while the function of listen offline could be only offered in the paid subscription.**

   The three music listening functions provided by digital music platforms are listen online, listen offline and music download. Most of the platforms are charging for listen offline and music download. But for China market, the platform should open the music download for free and charge the listen offline function. This situation has two reasons. On one side, the low speed and high costs of 3G networks make more users to download music from Internet and move them to the phone to listen. But on the Internet, there are lots of music websites or search engines that provide music downloading service without paying. Even if the digital music platform restricts downloading function for its free users, they still have access to get music for free. The paid download function might push its users to other websites to get free music. On the other side, the listen offline provides a similar function of listen to the music without Internet connection. But the listen offline improves listening experiences by

reducing the tedious process of searching, downloading and moving to the phone, which the download function cannot do. Thus, music platforms may monetize the listen offline function, but should keep the music download for free.

7. CONCLUSIONS

The final part of this thesis consists three sections. At first, a review of research objectives and processes of solving research problems will be conducted to summary the entire research. Next, the author will discuss limitations of the research. At last, suggestions for further researches will be illustrated.

7.1. Review of Research Objectives and Questions

The motivation of this research comes from the emerging online streaming music service and its impressive fast speed of growth. But due to Chinese audience lacking of copyright awareness, currently the development of China digital music service relatively lags behind the Western digital music service. Despite of this, the Chinese digital music platforms are still struggling to promote the copyright protection and looking for new business opportunities to face with the forthcoming paid-music era. Hence, the author wants to find out feasible revenue models for Chinese digital music platforms through the investigation of international leading digital music platforms and study of the Chine digital music industry. Based on this objective, the research questions were proposed as followed:

1. How the leading international online music platforms operate their businesses and generate revenues?
2. How the value-adding services attract more users and stimulate conversion rate?
3. What is the current situation of the digital music industry in China?
4. What can be learned from the international online music platforms and how to adopt them to China market?

Firstly, the author reviewed key concepts to build the research framework for the whole study. The business model review started with an introduction of business model canvas and then focused on the e-business model ontology. The revenue models that are used to classify major types of current music websites were also stated in this part. The review of Web 2.0 introduced the current trend of Internet communities, which provides a base of analyzing features that the music websites have. In the end, the theory of value-adding services was reviewed.

After literature review, the author presented the research framework consisting of a two-step study. The first step is evaluation of selected four different international music platforms based on a modified business model with ten business elements – target customer, value proposition, key activities, key resources, key partners, channels, customer relationship, value-adding services, revenue streams and cost structure, which are built on the reviewed literatures. The second step is China market study comprising study of China digital music industry in the format of SWOT analysis and the consuming behavior research of Chinese audience. The first step plays a role of benchmarking and the second step is used for adopting the shining points gained from benchmarking study to fit for Chinese environment. The research methodology part also stated reasons of choosing multi-case study method as the research method. The quality of whole study was introduced in terms of reliability and validity.

The empirical study and key findings follows the research questions closely. Each music platform has different revenue streams, but some of them are similar. The iTunes music store is a typical pay-per-download model and its main revenues come from sales of digital songs and albums. Spotify uses a subscription model and the revenue sources include advertising and paid subscriptions. Rdio is a broadcasting model. Similar to Spotify, its main revenues are also from advertising and paid subscription. Soundcloud, as an example of artist-to-consumer model, has a quite different revenue streams and costs structure. The revenues are generated from paid users, since it is an ad-free service. The main difference of costs structure between four websites is Soundcloud doesn't need to pay the expensive royalties for record labels and music aggregators, since the users who upload tracks is the copyright owners.

The value-adding services are tightly connected with their own value propositions and the common value-adding service of four websites is the integration with social network accounts. Moreover, iTunes's value-adding services also include iTunes festival, compilations and soundtracks and "mastered for iTunes". Spotify offers various embedded app services and bundle service with telecom operators. Rdio has an embedded online community where users could follow musicians and it also provides a gapless playing. Soundcloud's value-adding services are comprised of "moving sounds", "Group" share music, special statistics about uploaded tracks and the function of highlight uploaded tracks on user's profile. Generally, all the value-adding services are opened for both free users and paid users. They don't increase profit margin directly,

but they do expand the popularity, attract more users and stimulate the conversion rate by motivating the vitality of the platform and improving the listening experiences.

The Chinese digital music industry is a booming industry with a great development potential. The various digital music consumption forms, growing awareness of copyright, the integration of Internet, Mobile network and Broadcasting networks, development of 3G and IT and the popular "grossroots star" give a strong confidence to digital music platforms. But they are still facing with the challenges of pirated music on the Internet, unequal interests in the digital music value chain, the unstructed music, limitation of 3G and wireless network and the competition with telecom operators. The biggest problem is the Chinese audiences don't have the habit of paying for the digital music services.

After analyzing the advantages and disadvantages of Chinese digital music industry, some findings and managerial suggestions are concluded. Firstly, the Chinese digital music platform could turn into a three-sided platform with music listeners, musicians and artists, and the advertisers. The revenue model should follow the artist-to-consumer model, so that platform leverages power of celebrities to attract more users and stimulate conversion rate. Furthermore, the author also explains the application of big data to attract advertisers and improve listening experience, and some details about value-adding services that are suitable for China market.

7.2. Limitation of the Research

This study has several limitations should be clarified. The first one is appeared in the modified business model which is derived from business model canvas, e-business ontology and value-adding strategy. It might have some limitations for analyzing the music websites' business models. Since most of the websites are multi-sided platforms, a bilateral perspective needs to be involved. The modified business model element of value-adding service is derived from the theory of value-adding strategy. But it didn't give a clear definition of value-adding services or make any catalogues. So the author herself distinguished value-adding services of digital music platforms from the basic features. This might make the final result loss some information and reduce the degree of preciseness.

On the other side, although this study applied qualitative research methods, such as multi-case study, direct observation and documents and archives to guarantee the validity and credibility, the lack of in-depth interviews still lowers the degree of validity. If the author found professionals or industry insiders to conduct interview, it would make the result trustworthier.

7.3. Suggestions for Future Research

The topic of online streaming music services is quite new and novel. There doesn't have many literatures about how they operate the business, especially the value-adding service. The future researches could start from this perspective to examine what kinds of value-adding services are more attractable to the music listeners and what kinds increase company's revenues directly. Additionally, how could companies and organizations improve the value-adding services so that it would bring more users.

For the further research of digital music service in China, researches could look into the factors behind the low willingness-to-pay and how to improve this situation. Additionally, an explicit business model for Chinese digital music service providers also needs to be investigated further, such as the detailed tiers of free subscription and paid subscription with relatively specific prices.

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