

## UNAUTHORIZED COPYING AND COPYRIGHT ENFORCEMENT IN DEVELOPING COUNTRIES: A VIETNAM CASE STUDY

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ABSTRACT. At present, Vietnam is regarded as the most notorious country regarding copyright infringement. China, joining WTO in 2001, has since implemented strict copyright measures. Even though Vietnam has laws covering intellectual property rights, enforcement is almost non-existent. We investigated how unauthorized P2P file-sharing affects copyright infringement in Vietnam. We assumed, before visiting Vietnam, that P2P file-sharing was more popular than pirated CDs and DVDs. However, few people there knew of its existence. Even when they did, they were unwilling to use it. Another astonishing fact was how pirated CDs play a role in promoting singers who relied on stage performances. Singers were not eager to support copyright enforcement. In this paper we consider these situations and explain how such behavior is commonplace in Vietnam.

### 1. INTRODUCTION

Copyrights on digital content, such as music CDs and DVDs, have been infringed upon by Peer-to-Peer (P2P) file-sharing on the Internet. In attempting to cope with this situation, authorities and copyright holders in developed countries have implemented strict copyright protection and in extreme cases have sued.<sup>1</sup> However, there continue to be numerous infringements, suggesting that usefulness is superior to the risk of apprehension. Meanwhile, major music labels, facing such a situation, have begun services for downloading music tracks to cope with file-sharing. This has been effective in decreasing the number of P2P file-sharing users, and changing the way of accessing music.

There are various opinions about P2P file-sharing among authorities, content holders, and users. However, these are based on the situation in developed countries where Internet prevails under strict laws for copyright protection. In developing countries, such as Vietnam, a few measures for copyright protection have been implemented but with a continued spread of pirate markets and unauthorized copying. According to a report of Business Software Alliance (2006), the penetration rate of unauthorized copies of business PC software in Vietnam amounted to more

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This paper was supported by Grants-in-Aid for Scientific Research for the Promotion of Science ((B) 17402022) in Japan. We appreciate helpful comments by an anonymous referee, Richard Watt and participants in a seminar at InfoCom Research Inc.

<sup>1</sup>Authorities in Japan and the US have recently tried to expand illegal areas to software for P2P file-sharing. This is very controversial, since the software can be useful for legal purposes and Internet itself is based on information sharing.

than 90%<sup>2</sup> in 2005. From this data, it may be assumed that, due to infrequent apprehension of illegal users, those who can access Internet use P2P file-sharing more often than those in developed countries. We shall examine this hypothesis.<sup>3</sup>

Our conclusion is surprising, that is, Internet users in Vietnam do not use P2P even in those cases when they do know of this system. Internet is popular among the younger generation, who use it as those in developed countries. However, P2P does not prevail. The reason may be explained by economic factors: transaction costs to use Internet and P2P. This paper considers these and shows essential economic conditions for a P2P file-sharing expansion. We also note that singers do not always dislike pirated CDs. They believe that pirated CDs play a role in promoting larger audiences for their performances. Since even top singers in Vietnam have to give many performances to earn money, this effect is not lost on newcomers who have less money with which to promote themselves.

Many economic discussions consider the situation of strict copyright enforcement in developed countries, as summarized by Landes and Posner (2003). However, the situation in developing countries has not been focused on this such literature. In developed countries, the main focus of copyright issues has been coping with the emergence of new copy technologies, such as photocopy machines, home-video recorders, and P2P file-sharing on the Internet. To determine the appropriate limit of private copies is always controversial. In other words, the problem is to define the realm of “Fair Use” under a new copy technology.

A paper by Ordover and Willig (1978) provides a theoretical analysis relating to the fair use of copyrighted goods. Although their consideration relates to photocopying of journals in a library, we can observe the same critical factor, transaction costs, by Gordon (1982) in the Betamax case. Users of journals decide whether to subscribe to them or photocopy them in the library, taking into account their transaction costs, that is, the inconvenience of using a library. Because users of a library<sup>4</sup> are restricted to the members of an institution, they indirectly pay a fee to copyright holders. In such a case, the problem for copyright holders is that users share content in a library.<sup>5</sup> As a common feature of information goods, there is a large initial (sunk) cost for production compared to marginal costs, resulting in a decreasing average cost. In a static situation, Ordover and Willig (1978) considered a benchmark for the Ramsey pricing for a social optimum.

Liebowitz (1985) also considered copying in a library. insisting that it is not harmful to copyright holders because benefits stemming from copying can be charged. He pointed out two kinds of appropriability of revenue: direct and indirect. A direct one takes place when a copyright holder charges purchasers for using content only for themselves. In this case, the charges depend on the purchaser’s benefits. The second one occurs when purchasers permit others to copy their content. In this case a copyright holder can charge extra fees to purchasers due to the benefits from copying by others. As a result, Liebowitz concluded that copying in a library was not a problem.

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<sup>2</sup>International Intellectual Property Alliance in the US reports a yearly statistic of copyright infringements. See <http://www.iipa.com>.

<sup>3</sup>This research was done in June and October 2005, June 2006, and March 2007.

<sup>4</sup>Although public libraries are free to use, the users indirectly pay a charge since libraries are funded by tax payers.

<sup>5</sup>This type of shared goods is analyzed in a simple model by Varian (2000).

In a static situation an incentive for copyright holders is profit from existing copyrighted goods. However, the incentive dynamically affects the future creation of content. Johnson (1985) focused on this issue and concluded that whether copying is harmful for society as a whole is unclear. He used the product differentiation model in which the producer's number, representing a variety of products, was variable. In the long-run, profit losses from copying cause an exit of producers from the market and a decrease in variety, while consumers' surpluses increase from copying.<sup>6</sup> Effects of copying on the social welfare depend on parameters of the model.

Besides these theoretical considerations, there are empirical ones which discuss the effects of P2P file-sharing on market sales of music CDs. Liebowitz (2003) considered a historical trend of sales in the US, and concluded that the effects of P2P file-sharing on revenues were negligible although sales of single CDs drastically declined. Interestingly, he indicated that, with media developments, a demand curve for music content has shifted outward since the benefit to users has increased. That is apparent when we consider a media shift from vinyl records to CDs, and finally the emergence of portable players. These phenomena suggest that, in spite of illegal copying, an incentive to create content may continue since profits are barely affected. Oberholzer and Strumpf (2004) also statistically demonstrate the minor impact of P2P on market sales.

These considerations are based on situations in developed countries. In Vietnam, these are not applicable due to ineffective copyright enforcement. From an economic perspective, we will consider what happens in Vietnam. In Section 2, we explain important factors of P2P file-sharing in developed countries. In Section 3, we show facts, investigated in Vietnam, regarding illegal copies and the Internet situation for users. In Section 4, we consider the reason why P2P file-sharing is not attractive to Internet users in Vietnam, compared to users in developed countries. In Section 5, we consider incentives for Vietnamese singers, under ineffective copyright enforcement, and show how pirated CDs indirectly contribute to their earnings. Finally, in Section 6, we conclude our considerations.

## 2. FACTORS OF P2P FILE-SHARING EXPANSION IN DEVELOPED COUNTRIES

Before comparing developed and developing countries as far as unauthorized file-sharing goes, we consider factors which make it beneficial in developed countries. There exist the following considerations regarding P2P file-sharing:

### 1) *Time to search and download*

This opportunity cost is a major factor affecting the efficiency of P2P file-sharing, since the Internet drastically reduces this cost. Before online download services for music tracks were available, we had to purchase CDs at a store or on the street. The transportation costs and time spent were not negligible. If consumers did not mind a lack of a jacket and text, P2P file-sharing saved time as well as money.

### 2) *Risk of apprehension*

There is a risk of being apprehended. The probability is extremely low, compared to other illegal situations. However, recent indictments against P2P users have been effective in reducing such users, although there is still a large number. Each user

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<sup>6</sup>There are papers concerning the effects of a copyright protection on the social welfare. See Novos and Waldman (1984) and Conner and Rumelt (1991). Regarding a summary of economics on copyright, see Introduction and Chapter 1 in Watt (2000).

considers the expected damages if he is apprehended, and decides whether to use P2P or not.

### 3) *Low quality*

To share files efficiently on the Internet, they are compressed to, for example, about 1/10 by the MP3 format. However, the sound of compressed files is degraded. The extent of the degradation is dependent on the method of compression.

How these factors affect users depends on the characteristics of an individual user. Since college students, for example, have relatively lots of free time, their opportunity costs are low. The consequences from their apprehension would be much lower than those of workers. Comparing these costs with prices in stores, users decide whether or not to use P2P file-sharing.<sup>7</sup>

To compete with P2P file-sharing, major labels have begun to sell music files online at a lower price than in stores. Price is another important factor in analyzing the advantage of P2P file-sharing. In addition, portable hard disk players, like i-Pods, are accelerating online sales and quickly making CDs an old-fashioned medium.

In developed countries, the spread of P2P file-sharing depends upon both transaction costs and online prices.<sup>8</sup> If online stores become common, the number of P2P file-sharing users will decrease due to low online prices and no transportation costs involved in purchasing a CD.

In the following sections, we will examine whether these considerations hold in developing countries where copyright protection is lax. It is important to recognize the situation they face in terms of telecommunication services and infrastructures as well as copyright protection. These significantly influence transaction costs for P2P file-sharing.

## 3. CONDITIONS FOR P2P FILE-SHARING IN VIETNAM<sup>9</sup>

**3.1. Stores for CDs and DVDs.** There are two ways to purchase CDs and DVDs<sup>10</sup> in Vietnam. The most popular way is to purchase pirated CDs. Stores selling such CDs are all over Hochiminh City (HCMC) where we did our research. This fact suggests that authorities implement few measures to protect copyrights.<sup>11</sup>

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<sup>7</sup>In such a situation, Domon and Yamazaki (2004) considered the pricing of digital content.

<sup>8</sup>Major labels are introducing Digital Rights Management (DRM), which controls how to use content purchased on the market. A typical case is a copy control CD which cannot physically copy content. In Japan it failed, since many consumers did not accept such a system. Meanwhile, online stores devise flexible menus of DRM which do not restrict private copying as a copy control CD. When we consider the merits of purchased content, DRM is an important factor (see Domon (2006) and Domon and Joo (2006)).

<sup>9</sup>This section is based on research in June 2005 and March 2007.

<sup>10</sup>There is a third media, VCD, in Vietnam. This is a movie whose screen quality is worse than that of a DVD. Due to its low price, it is common in Vietnam.

<sup>11</sup>The authorities have made an effort to get rid of piracy, but it has had little impact on the pirate markets. See reports in <http://www.phamassociates.com.vn/English/Index.htm>. Since most such shops deal in pirated CDs, at the time of inspection, they are fined US \$100 per 150 pirated CDs on site and these are confiscated. Of note is the fact that they are only fined for pirated CDs of domestic artists and not of artists from overseas. Without pirated CDs they would not be in any type of trouble. However, they are forced to sell these pirated items since other shops do so and they would lose valuable profits without following suit. Therefore, market competition, under lax copyright enforcement, compels them to enter into such market practices.

Prices for a pirated CD and DVD are respectively about 12,000 Vietnam Dong (US \$0.80) and 17,000 Vietnam Dong (US \$1.13)<sup>12</sup> at most stores. An interesting phenomenon is that a large pirate store also sells copyrighted content. When pirated CDs, as listed in a recent hit-chart,<sup>13</sup> are sold out, people must purchase the copyrighted ones.

**Fact 1:** Pirated and legal content coexist in the market and are differentiated from each other.

This fact indicates that copyright enforcement does not work well in Vietnam. In fact, authorities rarely protect the copyright of both domestic and foreign content. However, a price system works under such a situation. The first difference between a pirated and a copyrighted CD is in the package. The jacket of a pirated CD is a thin color copy of the original and there are no printed lyrics. The second difference is in quality. There are imperfectly copied pirated CDs. The price of a copyrighted CD is about 32,000 Vietnam Dong (US \$2.13), which is about three times as high as that of a pirated one. Vietnamese sometimes purchase a copyrighted CD when it is a favorite, or as a gift.

In suburban HCMC, stores dealing in both original and pirated CDs obtain 2000 Vietnam Dong (US \$0.13) in marginal profits from each type of CDs. While stores in the center of HCMC set marginal profits at between 3000 and 5000 Vietnam Dong. According to managers, in both areas they set prices by themselves in a very competitive market.<sup>14</sup>

Without copyright protection, pirated content is differentiated from legal ones both in terms of quality and packaging. Also various kinds of domestic music have been supplied for the market in spite of almost non-existent copyright protections. This suggests that musicians earn their main income from concert performances. CD sales, including pirated ones, contribute as a promotion for live concerts. This relationship is contrary to that in developed countries with their strict copyright protections.

**3.2. Internet Access Fees and Price of PCs.** Fees for Internet access are important to consider in the extent of P2P file-sharing. Even if Internet is available, people do not use it if there is a high fee. There are three services available at home to use Internet: dial-up, ISDN, and DSL.<sup>15</sup> They also use Internet cafes in Vietnam to access the Internet. The rate there is about 20 cents per hour. The cheapest access is at an Internet cafe, since a dial-up access service at home costs about 60 cents per hour. The average cost to use ADSL at home is about US \$20 per month, which is expensive in Vietnam. The other problem in using Internet is the speed (bandwidth) of networks. The average speed is about 100 kbps at an

<sup>12</sup>The price level in HCMC is about one tenth as high as that in Tokyo.

<sup>13</sup>The government operates an FM radio station, but there are no private ones in HCMC. Thus there is free-to-air radio play, but very little opportunity to access one's favorite music. The same phenomenon holds regarding TV broadcasting. There are only two public TV stations. While people can watch cable and satellite TV, the source for domestic music is limited to public TV. Regarding cable TV in HCMC see <http://www.hvtv.com.vn>.

<sup>14</sup>There are three wholesale companies dealing in original CDs and DVDs (and VCDs) in HCMC along with many pirate dealers with their own factories for copying.

<sup>15</sup>In 2001, Internet access service was open to private sectors. There are several major ISPs in Vietnam. See <http://www.vnnic.net.vn>. Regarding regulatory reform of telecommunications industries in Vietnam, see European Union's Asia IT&C Programme (2004) and International Telecommunication Union (2002).

Internet cafe where people can easily have access to the Internet. The speed at home is similar to, or less than, 100 kbps. Therefore, the real fee per bps is also very high in Vietnam.

There is another problem when people use Internet at home. It is the fact that PCs are priced at the same level as in developed countries. Vietnamese typically set up a PC by choosing the necessary parts by themselves. However, the cheapest one a college student can purchase costs about US \$600. Since GDP per capita in Vietnam is about US \$530, according to 2003 statistics, few can afford to purchase a new PC.<sup>16</sup> Students usually purchase a second-hand PC obtainable for about US \$150. Most college students have a PC,<sup>17</sup> according to our interview, while the penetration rate of the Internet in Vietnam, including users at Internet cafes, was 6.55% in 2004.

**Fact 2:** The bandwidth of networks is narrow in spite of DSL. In addition, Internet access fees are very high and a PC is expensive compared to Vietnamese income levels.

**3.3. Internet Cafes.** Internet cafes are popular in Vietnam, because most people cannot afford to purchase PCs and subscribe to ISPs. A typical case is children playing online games. Since the hardware price of computer games is the same as those in developed countries, children cannot afford to buy them. Instead, they play online games at Internet cafes which are found on the main streets of every town. Especially, in the rural areas, Internet cafes are haunts for children.

In contrast, Internet cafes in HCMC are used for gathering information, e-mailing, making materials, so on. There are users playing online games, but the percentage is much lower than it is in rural areas.<sup>18</sup> According to students<sup>19</sup> we interviewed, there are college students using Internet cafes to save money instead of subscribing to ISPs.

Only a few of the PCs at an Internet cafe we visited in HCMC had a CD-R driver or a USB. PCs with such functions were set on the front counter at shops to watch what users do. According to a manager of an Internet café, there are few people using P2P file-sharing. Moreover, according to college students, most users do not know how to use it.

**Fact 3:** P2P file-sharing is seldom utilized at Internet Cafes and is not well known to Internet users.

This fact is expected from the speed of a network at an Internet café. Certainly, in spite of a narrow band like a dial-up access, millions of subscribers in the US are using P2P to obtain content. However, that is explained by the fixed rate of subscriptions in the US. If a fee was dependent on the time to gain access, the merit of P2P file-sharing would drastically decrease. This is taking place in Vietnam.

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<sup>16</sup>The cheapest DVD player, made in China, costs about US \$25. Most families have a DVD player for listening to CD music as well as for watching DVDs.

<sup>17</sup>It is noted that they can obtain a portable hard-disc player, popular in developed countries, and have promoted file-sharing based on the MP3 format. However, only the wealthy can afford to buy one due to its relatively high cost.

<sup>18</sup>At resorts, as in HCMC, many tourists use an Internet café.

<sup>19</sup>College students can also access the Internet at a computer laboratory in the university. A large university will have such a laboratory, but small ones do not. Moreover, they must pay for the use as they do at Internet cafes.

#### 4. EFFECTS OF NEARLY NON-EXISTENT COPYRIGHT PROTECTION ON P2P FILE-SHARING

In developed countries copyrights have been strictly protected, and infringers have been apprehended by authorities. Since developed countries have never experienced a situation in which copyright enforcement does not work, due to ineffective measures by the authorities, it is difficult to imagine what would take place in such a situation.

Our research in Vietnam shows us that two of the three factors mentioned in Section 2, risk of apprehension and low quality, do not seriously influence Vietnamese use of P2P file-sharing. The first factor does not exist, since the authorities do not implement effective measures to prevent pirated CDs. In such a situation Internet users do not worry about an infringement. The second factor apparently does not seriously affect users, since most of them usually purchase pirated CDs. These factors have positive effects on the spread of P2P file-sharing. Nevertheless, in our interviews, we found that most people do not even know of the existence of P2P file-sharing. This indicates that there is no merit for them to use it. There are two reasons, technical and institutional ones, to explain this fact.

The first of the technical reasons is Internet network speed. As mentioned in Section 2, downloading time, dependent on speed, is very important for P2P file-sharing due to its opportunity costs. Even though content is free, people are not willing to download when the time to do so is lengthy. Therefore, a broadband network or a fixed usage fee is necessary. The second technical reason is the price of a PC compared to income. If a PC is priced several times higher than monthly income, most people cannot afford to buy one. The third reason is a subscriber's ISP fee which is as prohibitive as PC costs. As a result, even if people could freely obtain content by P2P file-sharing, its transaction costs are relatively higher than its merits.

The institutional reason is the pirated content market which widely penetrates Vietnamese life. In developed countries, P2P file-sharing competes with a legal content market, whereas in Vietnam it competes with a pirated one. Therefore, there are fewer advantages of P2P file-sharing in Vietnam than in developed countries.

How infringement on digital content takes place depends significantly on the level of copyright protection and Internet access fees. We consider four general patterns in Figure 1.

Area I indicates the situation faced by developed countries before the 90s. Then, people purchased CDs in a store, or borrowed them from friends to privately copy. Even though pirated CDs existed, the percentage was very small since authorities could easily detect and apprehend infringers who were selling such CDs to the public.

Area II is the situation after P2P software was developed and became familiar to Internet users under the spread of broadband access services. Due to a drastic reduction in an access fee per bps as well as an increase of costs to detect and apprehend infringers on the Internet, transaction costs for P2P file-sharing are reduced to a level at which a considerable number of users can obtain benefit from it. Coping with it, major labels have started online download services, but there still remain millions of P2P users. This is the current situation in developed countries.

Area III is the situation in developing countries, such as Vietnam, where authorities actually do not effectively protect a copyright. Since Internet access and a PC

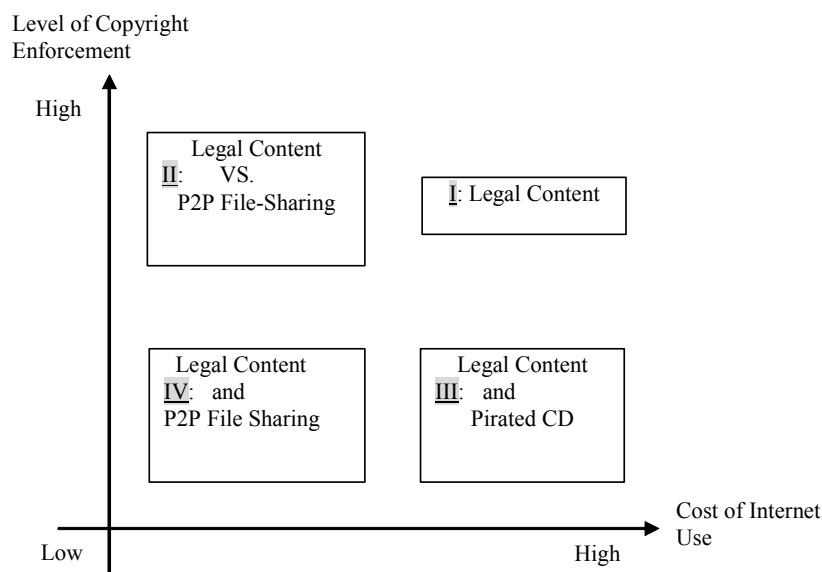


FIGURE 1. Four Situations of Copyright Infringement

are relatively expensive in such countries, P2P file-sharing is uncommon. Pirated CDs have been produced for a long while and coexist with legal ones. This situation will not change until people can use a broadband access service or afford to buy a PC.

Finally, Area IV is a situation which we have not experienced.<sup>20</sup> This situation is ideal for P2P file-sharing, since it becomes more convenient than pirated CDs. Most people may think that, in such a situation, there are no benefits for singers to release CDs, resulting in no market. However, as we will consider in the next section, they release CDs without profit. Vietnamese singers release CDs without profit due to the promotional effects that result from pirated CDs. These increase earnings for live performances. Therefore, in this area, legal CDs may coexist not with pirated CDs, but with P2P file-sharing.

##### 5. MEANING OF CD SALES FOR SINGERS<sup>21</sup>

Finally, we consider the influence of ineffective copyright enforcement on incentives for musicians to produce CDs. In our research, it turned out that, under

<sup>20</sup>It turned out, from our first research in Beijing in Oct 2005, that Chinese college students in dormitories were sharing their private CD and DVD files within campus with high-speed LANs by using FTP. This situation is similar to that of Area IV. The monthly fee is only about only US \$4. According to an interview, they enjoy the latest movies on their PCs. Furthermore, music files are easily obtainable on the Internet by using the famous search engine, Baidu, in China. They seldom purchase CDs and DVDs.

<sup>21</sup>This section is based on interviews in October 2005 and June 2006.



ineffective copyright enforcement, most singers cannot recover expenses<sup>22</sup> by releasing CDs. The reason for releases is promotion of their songs through pirated CDs.

According to a manager, there are three groups of professional singers: a top class earns about US \$1,000 per 30 minute performance of 6 songs. There are about 20 singers in this group. The second class earns about US \$600 per 30 minute performance of 6 songs. About 100 singers belong to this class. The third class earns about US \$200 per 15 minute performance of 3 songs.<sup>23</sup> There is a considerable number of singers in this class.

Vietnamese singers earn money basically from live performances. Their fees reflect the size of audience they can gather. In such a situation, they want to advertise their songs, using any method. Due to a lack of experience with strict copyright enforcement, most of them do not realize that they could earn royalties from CD sales, while they instead use these pirated CDs as promotional tools. There is a huge gap in the role of CD sales between strictly copyright-protected countries and Vietnam.

Considering such an effect of pirated CDs, Vietnamese singers believe they face a dilemma between revenues from legal CDs and performance fees.

## 6. CONCLUDING REMARKS

Prior to this research, we thought that P2P file-sharing might be more popular in Vietnam than in developed countries, since we found that more than 90% of PC software in Vietnam is pirated. Yet, reality was more complicated than we anticipated. Most people do not use P2P file-sharing in spite of the fact that copyright protection is almost non-existent. We found two main reasons: expensive Internet usage fees and cheap pirated CDs. Facing such a situation, Vietnamese Internet users cannot derive benefits from P2P file-sharing. This suggests that not only copyright enforcement but also expenses to use copy technology determine the extent of both a piracy market and P2P file-sharing. In addition, during the research, we found that there are singers who do not complain about the fact that their CDs are pirated. They think that their earnings for live performance increase due to such CDs.

In developed countries, we do not know what would happen to the modern music industry with nearly non-existent copyright enforcement. Most people fear that the number of and the quality of songs would decrease with reduced incentive to create. However, in Vietnam, we saw many kinds of domestic CDs in shops and their quality was at the same level as those in developed countries. Varieties of domestic songs were not as numerous as those in developed countries, but this may reflect the Vietnamese economic and cultural situation.

In order to consider economic welfare, we must take into account both consumers' and producers' surpluses. It is apparent that the level of copyright influences both of them. In the modern era, we think that copyright is necessary to create content. However, this thinking is not always right in terms of music content. Without

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<sup>22</sup>According to an interview, the expenses of the first release of 1,000 CDs are at least US \$5,000. Thus, a CD price must be US \$5 to recover costs. However, the price is about US \$2.13. If pirated CDs are 90% of total sales, then the first release supplies 9,000 pirated CDs for the marketplace at a lower price.

<sup>23</sup>The majority of performances are done by only a few singers.

copyrights some musicians lose earnings, but there is the possibility of increasing economic welfare due to increased listeners. This case study of Vietnam clearly demonstrates that.

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