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#### Recommended Citation

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## SOFTWARE PIRACY IN CHINA

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According to the Business Software Alliance (BSA), business software piracy rates worldwide have fallen from nearly 50 percent in 1994 to 36 percent in 1999 (Gruenwald 2001). However, the illegal reproduction and distribution of copyrighted computer software continues to be a major problem encountered by software manufacturers in the Chinese market. BSA statistics indicate that 94 percent of the software used by Chinese corporations was pirated during 2000 as compared to 91 percent in 1999 (BSA 2001). Even in 1996, Chinese officials estimated software piracy to be a \$16 billion per year problem (Smith 1996). The 3 percent increase in software piracy between 1999 and 2000 was due to an increase in computer usage and a decline in government enforcement efforts. Since the Chinese government does not consistently prosecute piracy violators, the sale of illegal software has increased. There are over 20 plants in China that manufacture pirated software, many of which are state-owned (Ho 2001). Obviously the Chinese government engages in and profits from the piracy trade. The BSA estimates that the revenue lost from pirating in China represents one fourth of the loss from the entire Asian-Pacific region. Software piracy first emerged as a problem in Hong Kong, and quickly spread to Mainland China and other surrounding countries. Many Chinese citizens believe sharing software is not stealing. Furthermore, most software purchased is already pirated.

Research shows that most pirated software is first obtained in the United States and sent to factories in China for copying, testing, and distribution domestically and internationally. Pirated software is often sold in "Mom & Pop" stores for up to 300 times cheaper than the non-pirated price. For example, the market price for a copy of Windows Operating System is \$1200 USD but the pirated version is only \$5 USD. When people are convicted for pirating, the fine is small – pennies compared to the profits generated. Interestingly, software developed in China is not pirated due to very low prices and out of respect for their fellow citizens.

The purpose of this paper is to examine factors that affect software piracy in China, with the aim of understanding its root causes, and formulating countermeasures. This study draws upon interviews of various users in China, materials gathered from trade associations, government publications, business journals and studies, a survey conducted by the authors, and personal experience from living in China. The paper is divided into five sections. The next section addresses past and current copyright laws in China. Factors affecting software piracy are described in section three and form the heart of the paper. The fourth section examines how some businesses and organizations try to lower piracy rates in China. Lastly, the paper concludes with a discussion of how difficult fighting software piracy is in China.

### COPYRIGHT LAWS IN CHINA

Chinese copyright laws have only been on the books slightly more than a decade. In June of 1991, the Law of Copyright was put into effect, which listed computer software as protected. Also, this law charged the National Copyright Administration with copyright enforcement, and empowered it to force criminals to pay compensation to copyright owners (Ho 2001). Before this law, China had no law that protected software.

In October of 1991, Computer Software Protection Regulations were enacted. Article 2 of these regulations defined software as a computer program, its source code, its object code, and the text of the code. All of these parts and the software as a whole are regarded as the same work under the law. In 1992, China began conforming to its foreign counterparts and joined the Berne and Universal Copyright Conventions. The Berne Convention for Protection of Literary & Artistic Works established in Paris, France in 1971, protects the rights of authors of many different fields, such as literacy, scientific, cinematographic, maps, and three-dimensional pictures. The Universal Copyright Convention also created in 1971 in Paris, France provides protection for the rights of authors and other proprietors in literacy, science & art, writing, music, drama, cinematography, painting, engraving, and sculpting. To abide by the rules of these conventions, in October of 1993, China removed a provision in the Copyright Law that allowed Chinese nationals the use of works, which had not been protected by the law.

In 1994, two significant events relevant to piracy occurred. In July, *Regulations on Punishment for Crimes against the Law of Copyright* were established that allowed confiscation of profits and any materials and tools used to pirate. Criminals convicted of manufacturing or distributing pirated copies for their own personal gain face fines and a maximum prison sentence of seven years. Although punishments are specified, it is questionable whether individuals are adequately punished once convicted. Also, Chinese customs officials were given the ability to refuse the import or export of pirated materials (Ho 2001).

### FACTORS AFFECTING SOFTWARE PIRACY IN CHINA

Why is software piracy such a problem in China? An examination reveals five key factors affecting software piracy in China: culture, public awareness, government policies, accessibility of illegal software, and attitudes of software manufacturers.

#### Eastern Cultures Encourage Sharing

The protection of intellectual property is “a pre-dominantly Western concept” thus making it foreign to Chinese citizens. Western societies, like the United States, place individual freedom and rights above all else. China and many other Asian nations “traditionally believe that copyright is a Western concept created to maintain a monopoly over the distribution and production of knowledge and knowledge-based products” (Ho 2001). The notion of sharing ideas and works is one of the core philosophies of communism, mandated by various communist nations, including China. Before the introduction of copyright laws, any creative materials or expressions were state property (Ho 2001). In China, society is placed above the individual. Table 1 details the top five countries by piracy rates. Interestingly, four of the five top software piracy offenders in 2000 were either communist nations or former communist nations (BSA 2001).

Table 1. Top 5 Countries by Piracy Rate

	1999	2000
Vietnam	98%	97%
China	91%	94%
Indonesia	85%	89%
Ukraine/Other CIS	90%	89%
Russia	89%	88%

#### Lack of Public Awareness

Although intellectual property laws were first introduced in the late 1980s, they were not promulgated until the 1990s. With over a billion citizens and a complicated government system, K.L Tan noted in *The Chinese Business Review*, “given the low level of legal knowledge in China, the people may be unaware that its activities violate Chinese intellectual property laws” (Ho 2001).

Consumers in China lack awareness of the consequences (legal or commercial) of pirating software. Even a survey of Americans showed that “most Americans perceived the copying of software would do no harm to anyone, regarding piracy as a non-evil act” (Ho 2001). This survey raises a very important point: if U.S. citizens, who have been exposed to intellectual copyright protection laws for decades, do not believe software piracy is a legitimate problem, how can one expect the Chinese, who until recently have never been exposed to copyright protection, to adhere to software copyright protection laws?

#### Government Policies Concerning Enforcement

The unwillingness to enforce copyright protection laws has left many software companies wondering how serious the Chinese government is about software protection. American trade officials estimated that 75 million counterfeit software packages are produced and distributed every year in Mainland China and other parts of world (Faison 1997). State-owned plants continue to conduct illegal activities without any government interference, thus at least suggesting the Chinese government passively “supports” software piracy. Other “underground” counterfeiting plants owned and operated by Chinese business owners are also unlikely to be shut down due to their “connection” to regional and city governments. Government officials are compensated for their protection, thus providing little incentive to close down these factories (Faison 1997). Even if software companies are successful legally, the fines levied are minimal at best as evidenced by the \$2600 Microsoft won in a copyright infringement lawsuit.

### Accessibility of Illegal Software

The abundant supply of counterfeit software, coupled with low prices, and large selections makes illegal software accessible and affordable to consumers. Factories in China manufacture large quantities of pirated software. With improvements in digital recording technology, their productivity will increase assuming laws are not enforced. High tariffs levied on imported computer software to China can increase the retail price by 50 percent. Personal experience suggests that the number of CDs a software package requires determines price. Moreover, vendors are so confident in the quality of their illegal software, they allow consumers to exchange software that does not meet their expectations, making it very difficult for legitimate vendors to compete.

### Attitudes of Software Manufacturers

Attitudes of software manufacturers concerning software piracy in China are most interesting. The lack of success combating software counterfeiting has altered businesses' approach on the issue. It is both difficult and unrealistic to assume consumers who purchased pirated copies would have purchased legitimate copies in the first place assuming illegal versions were unavailable. Some companies have redeveloped their marketing strategy to reflect the above assumption. Rather than fighting the problem, they deliberately allow such activities in the hope that their software will become an established industry standard (BSA 2001). Once that happens, software firms will vigorously pursue all means necessary to stop piracy.

### Survey

Chinese citizens were surveyed concerning software purchasing in China. The BSA believes if people were educated more about the laws, then piracy would be reduced greatly. Also, they tend to believe that people who make more money, will pirate less. These questions among others formed the foundation of the survey.

The results of the survey were interesting. The first and most obvious conclusion was that some of the questions must have been too personal or alarming because respondents would not answer them. The first step in analyzing the data was to examine the demographic information. The distribution of gender was fairly even with 52 percent female and 48 percent male. Figure 1 shows the age distribution for respondents. The ages of survey respondents centered around 19 to 25. As shown in Figure 2, the income levels showed an unexpected result. The higher income levels corresponded to better educated respondents.

The next set of questions pertained to compact disc media and pirated software. The first question asked what kind of labels their software had on them. Professional CDs have their labels printed or laser etched onto their disks so it produced an opportunity to see how many people had pirated software. The Chinese participants (as shown in Figure 3) answered that most of their CDs had stickers or handwriting on them, which meant they were most likely copied. The next question addressed instruction manuals and how often they came with the software. The results reinforced the earlier conclusion that they had pirated software with their answer of 54 percent never having a manual, 13 percent always having a manual and 28 percent sometimes having a manual. Figure 4 displays these results.

Figure 1. Age Distribution for Respondents

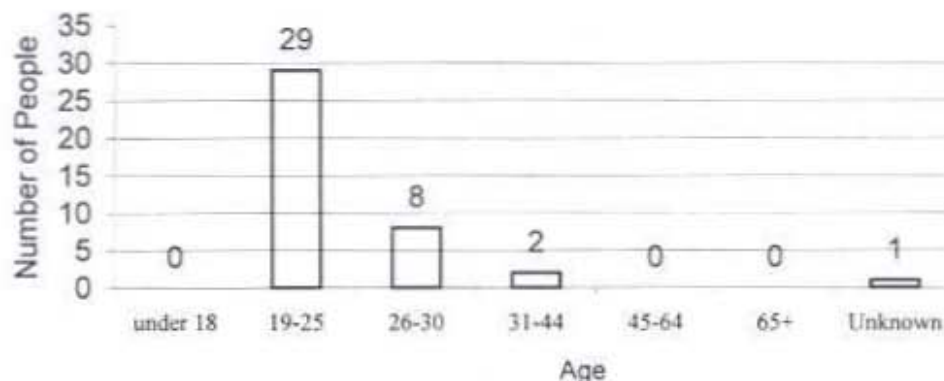


Figure 2. Income Levels for Respondents

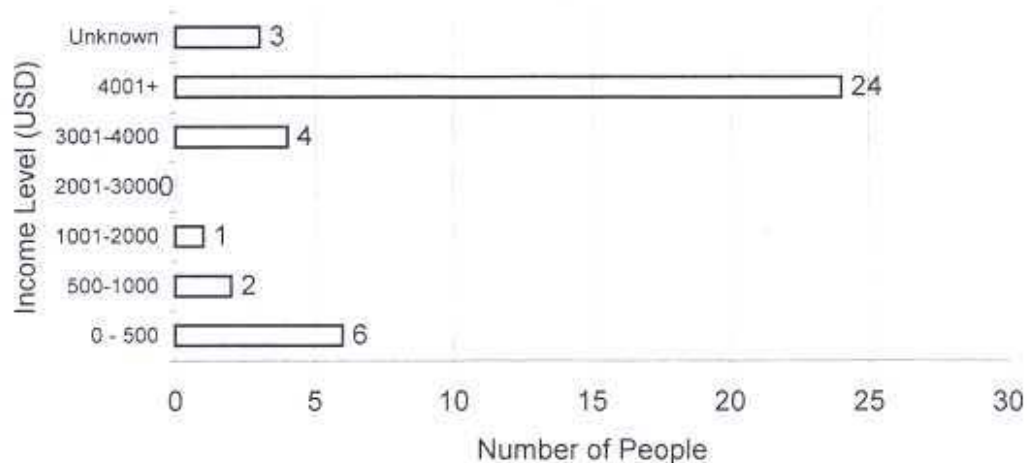


Figure 3. Software Labels

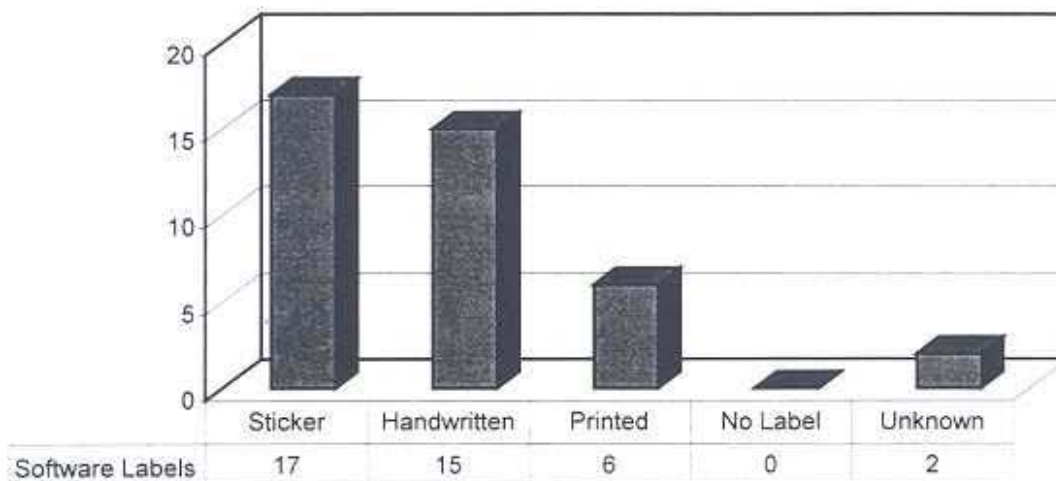
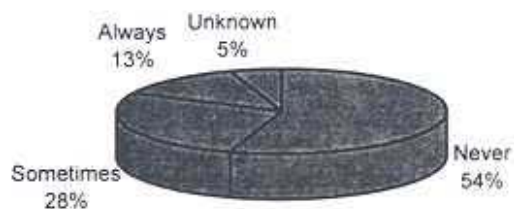


Figure 4: Does Software Come with Instructions in China?



The next three questions about contact information for the manufacturer, packaging, and registration cards strengthened the conclusions that Chinese participants had pirated software. The next three questions dealt with pirating and where they purchased their software.

The last two questions were situational, where a hypothetical scenario was given and the participants were asked to put them in order of importance. The first question asked if a person was in a store and could buy a real version or a counterfeit version, why would he/she get the copied version? The Chinese participants believed the copied version would be chosen because of its price compared to the real version.

The next question was the opposite of the previous one. It asked if a person had a choice of a counterfeit or real version, why would they take the real version? The Chinese said that they would buy it because of its quality appearance and would not want to get into trouble. From the data collected, there is a possible argument that education does not play a significant role in piracy but rather price. The survey showed that not only are men and women participating in pirating, but that someone that has a college degree and knows it's wrong does not mean they are less likely to do it. The income levels tend to show that people with or without money will pirate. This data leads to the conclusion that more data needs to be obtained in various age groups, education groups and income levels. Also, the data shows a trend that culture plays a major role in how people view piracy.

## **FIGHTING SOFTWARE PIRACY**

### **Business Software Alliance (BSA)**

In 1988, the BSA was established. This non-profit organization's mission is to strengthen intellectual property rights around the world and reduce piracy by corporations. Currently, their offices are located in more than 65 countries. The BSA cooperates with the affiliated government agency of each country. The BSA also uses letters and mass media urging compliance coupled with randomly targeting businesses in selected cities. Large corporations like Apple Computer and Microsoft Corp. are the primary participants in the BSA.

### **Microsoft Anti-Piracy Efforts**

Microsoft has good reason to actively combat piracy. During 2000, approximately 5 million units of Microsoft's products, valued at about \$1.7 billion, were seized worldwide (Simpson 2001). Its anti-piracy efforts are multi-faceted. Since the Internet provides pirates new avenues for distribution of their illegal wares, Microsoft uses a "smart" search engine that identifies suspected sites that are reviewed by one of its investigators. If there is an indication that the site is selling counterfeit Microsoft products, Microsoft may file a lawsuit or work with local authorities to secure arrests (Buckman 2000). In addition, Microsoft is using new technology in its attempts to reduce software piracy. Product activation technology is included in Microsoft Office XP, Visio 2002, and Windows XP (Microsoft 2001). Software acquired from licensed retailers requires activation. To activate, consumers must complete the following steps:

1. The user is prompted to activate the product after installation.
2. There is a 30-day grace period in which the software will operate without being activated.
3. The user selects a method of communication to activate the software: phone, Internet, and mail.
4. Microsoft processes the activation, verifies the software legitimacy, and records the user's hardware configuration.
5. Activation confirmation is delivered to the user's PC and processed silently or the telephone operator provides the user with a confirmation ID
6. The user's software is activated.

Although this is the first active approach taken by Microsoft in its war against software piracy, it offends and punishes legitimate consumers. Moreover, software pirates have already successfully bypassed the activation technology and Office XP is currently being distributed by illegal vendors for HK \$80 (US\$10), while the legitimate version is priced at HK \$3,500 (US\$500) to \$4,000 (US\$550).

### **Real Networks**

Recently, Real Networks debuted a new piracy prevention strategy that allows companies to track the sale and use of songs or movies over the web. The objective of the software is to stay within the copyright laws and take advantage of the popularity of sites like Napster, and make a profit. An example of this would be renting a movie via the Internet. This software system ensures the complete transmission of the movie to the person and makes sure it is not copied or shared. This package could also tell the company how many times it was played and for how long a consumer watched or listened to it. One of the first companies to use the Real System Media Commerce Suite will be Sony Pictures Digital Entertainment (Linn 2001). They hope it will protect movies they distribute over the web, and save them millions of dollars they would have lost to piracy.

## CONCLUSION

Although this paper focused on China, software piracy is indeed a worldwide problem. The list of countries other than China with very active counterfeiting rings in long indeed and includes Colombia, Peru, Venezuela, Brazil, Argentina, Malaysia, Philippines, Singapore, Taiwan, Thailand, United Kingdom, Romania, Hungary, Germany, Poland, Canada, and of course the U.S. (Simpson 2001). Software piracy is a serious and daunting challenge for foreign software manufacturers in the Chinese market for several reasons: (1) Accepting Western ideas and beliefs are extremely difficult since Chinese society does not easily accept foreign ideas. (2) It is difficult for communist countries to adopt copyright protection laws because it goes against their fundamental principles. (3) Chinese government officials lack the willingness and motivation to promote or enforce their software piracy laws due to government corruption.

Is there a remedy that will ease the software piracy problem in China in the short term? Research and interviews suggests no. Laws must be enforced, and even so, it will take time to change Chinese culture. Businesses have few alternatives to prevent piracy except by incorporating security measures into their software that makes it more cumbersome to replicate. A "self destruct" technology that destroys the program if it encounters certain situations is another possibility. These solutions could limit pirating. In the end, no matter how many different solutions are put forth, more than likely, the problem will continue.

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