

Will Stronger Copyright Protection Encourage Development of Copyright Sectors in Indonesia? Survey Evidence

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1. Introduction

From the standpoint of economic development, the primary reasons for a developing country to adopt and enforce stronger copyright laws are to encourage creative activity by local artists and firms and to support the transformation of that activity into products that reach the domestic and export markets. If successful, stronger copyright regimes can generate significant income streams for creative people and firms.

At the same time, those new rights may be expected to raise the prices of copyrighted goods by reducing the supply of pirated versions. This price impact is damaging for consumers, though they gain from having higher quality products and support services on the market. Copyright strengthening also may be expected to cut sales of imitation products over time. To the extent that those imitators and their employees are domestic, the short-term impact could be higher unemployment and adjustment costs in the labor market. In many developing nations fear of these short-term impacts on employment and prices is widespread.

While recognizing this problem, our primary interest here lies in studying whether and how the development of creative media and entertainment products, including software, books and publishing, film, and music, has been hampered by weak copyright protection in Indonesia. Indonesia is a society with a tradition of cultural activity in music, dance, and literature, but relatively little of this has been transformed into modern economic activity. There are numerous factors underlying this structural difficulty, one of which might be the absence of effective copyright protection for the works of artists, musicians, writers, and software developers.

Why Indonesia?

This research project assesses the evolving copyright situation in Indonesia. That country has a strong cultural tradition in music and dance but local artists fail to achieve much revenue from recording and selling these creations. This failure could stem in part from weakness in business models, copyright enforcement, and supporting institutions. Moreover, a limited legal tradition in this regard may limit the use of contracts that effectively allocate rights in artistic creations to artists, recording companies and film producers, broadcasters, and distributors. No systematic study of this situation has been performed to date. Indonesia also has a small and growing applications software industry, which seems to be tied closely to growth in the demand for personal computers and internet connections. It is important to study the competitive nature of this sector, the types of software products developed, the likelihood of growth in this industry within the context of the broader information technology sector, and problems software developers face associated with weak copyrights.

The Indonesian government, like many others in East Asia, has targeted information technology sectors as key sources of economic growth over the medium term. These sectors include, among others, software, computer products and peripherals, telecommunications, and recorded entertainment products. Indonesian authorities claim

that copyright protection is central to promoting these industries. Thus, an important objective of this research is to assess how firms in these sectors view the importance of stronger copyrights for their ability to expand output and exports.

At the same time, there seems to be substantial employment in copyright-infringing activities in Indonesia, including copying and distributing unauthorized software and entertainment products. The amount of employment (or profits) bear on the political feasibility of effective reforms and the adjustment costs they would generate. For obvious reasons, it is not possible to survey firms engaged in piracy in order to develop solid data on the extent of infringement and employment, but interviews of developers, distributors, and government enforcement officials should provide rough estimates that may be used to assess the short-term implications of stronger copyrights.

Economics of Copyrights and the Link to Poverty

The overall theme of the Flagship Report is an assessment of how trade liberalization is affecting poverty in East Asia. It should be stressed that IP protection is different from traditional tariff cutting. Eliminating tariffs typically removes inefficient taxes on trade and may be expected to expand real GDP. Intellectual property rights, however, are a form of domestic business regulation that sets background incentives for innovation of new information and diffusion of that information into consumption and competition. It is possible to establish IP standards that are too weak to support local innovation and product introduction, causing an inefficient slowdown in growth. It is also possible to adopt standards that are excessively protectionist, limiting the access consumers and rivals have to new technologies. This problem can also limit long-term growth prospects. Thus, a delicate balancing is required between the interests of innovative businesses and the users of new products and technologies.¹

In general, it is important for developing countries to foster conditions under which intellectual property protection can improve business development prospects, while attempting to maintain a liberal degree of fair use by consumers and minimizing transition costs as the system improves. An essential form of IP rights is the copyright, which provides creative artists and firms the rights to control copying and distribution of particular expressions of music, art, film, and literature. In recent years copyright protection has been extended in many countries to such “industrially useful” expressions as software, data compilations, performances, television broadcasts, and satellite transmissions, while it has also been applied to controlling the use of electronic copies downloaded from the internet.

The common view of copyright problems is that weak enforcement encourages uncompensated copying (“piracy”) of recorded music and films and of computer programs, with the copies distributed widely at low cost. This process is thought to be most damaging to global producers of recorded entertainment products and major software platforms, which are developed overwhelmingly in the rich countries, primarily

¹ Maskus (2000) discusses these tradeoffs extensively.

the United States. In this context, many developing countries question the wisdom of stronger protection and enforcement, as the impact could be mainly to reduce supplies of low-cost digital products, while transferring profits to foreign producers.

To the extent that workers in the imitative firms are poor, stronger copyrights can expand poverty, at least in the short term. Moreover, impoverished households may be the primary beneficiaries of low-cost pirated versions of movies and music, if not computer software. At the same time, excessive protection can raise costs to the use of protected materials for purposes of education and scientific and technical advance.

However, it is likely that weak copyright protection limits development prospects for the creative industries in developing countries, thereby restraining local growth of some of the most dynamic sectors in the economy. Among these are publishing, recorded music, film, and software. There are a number of reasons why weak copyrights can limit creative activity and business formation in developing countries. Most obvious is that music and film piracy may be aimed at local artists. We know little about how this process affects decisions by local film, recording and publishing companies to operate and it is useful to research the issue on the ground.

A second problem is that creative industries require well-specified rights to share in revenues from intellectual property across several parties, including artists and programmers, directors, producers, agents, and distributors. Copyrights provide a legal mechanism for allocating such claims and their absence can seriously impede development of local industries (Penna and Visser 2001; Caves 2000).

A third problem is weakness in related institutions. One example is that a significant source of demand for recorded music is for repetitive plays on radio and in public places but the transactions costs are so significant that collection agencies are required to achieve and distribute revenues. Such institutions are unlikely to develop in the absence of copyright protection. However, their ability to acquire and distribute revenues on behalf of artists and musicians is important for generating incomes.

For stronger copyrights to reduce poverty they must open new economic opportunities for impoverished artists to develop, record, and sell their products. Further, mechanisms must be put into place to ensure that these artists realize higher incomes from the exploitation of their works. One objective of this research is to investigate the scope for these poverty-reducing processes to be put into place in Indonesia.

2. Research Approach

Two basic forms of research underlie the analysis in this paper. First, the author spent time in Jakarta in May and June, 2002 in order to interview key participants in creative industries and the government about their views of the adequacy of the copyright system. Some initial observations from that episode are provided in the following section. Second, a series of formal questionnaires were administered to 70 firms in four central copyright sectors (music, software, publishing, and film making) in order to get

more systematic evidence from Indonesian businesspersons. These firms include developers, manufacturers, and distributors. Questions asked relate to firm size, age, ownership, and major products, along with a series of questions about the use of copyrights, license fees and earnings, distribution systems, and other relevant factors. The surveys are analyzed with basic statistics and results are reported here.

Returning to the first part of the research, the interviews conducted earlier this year provided groundwork for understanding the emerging copyright system and business development in Indonesia. What follows is a description of salient findings.

3. Information from Interviews on Legal Structure and Enforcement

In this section I discuss the main insights gained from interviews of significant actors in the software and music industries and of government officials associated with copyrights, education, and information technologies.

Legal Structure

In the last five years Indonesia has adopted new laws governing patents, trademarks, integrated circuits, and industrial designs. A new copyright law was introduced in 1999 as well but it was only in the final stages of legislative debate as of June 2002. Officials expected that the law would be promulgated by the end of July 2002 and implemented into law six months later. This law would replace the 1997 copyright law, which was itself virtually compliant with the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). However, the new law establishes a regime of neighboring rights (consistent with the Rome Convention) and significantly increases civil and criminal penalties for infringement. It also improves procedures for arbitration and dispute resolution and clarifies that copyright cases can be appealed in a streamlined fashion to the Commercial Court. It evidently also increases the authority of the police to undertake enforcement actions on their own initiative; under the prior law private complaints had to be registered with the police before any action could take place. Perhaps most significantly, it makes end-use piracy a criminal offense, with a maximum five-year prison term.

In Indonesia software and databases are protected by copyrights, providing protection for 50 years, while firms are also registering patents on computer programs. The new copyright law may substantially limit fair use provisions. In addition to the prior restraint that a user of a computer program could only make one archival copy, the new law declares decompilation (reverse engineering of computer code) to be illegal. Educational users of software and printed materials will be permitted only one copy for their use before they are required to attain licenses for multiple copies.

Note also that Indonesia has adopted the WIPO Copyright Treaty and intends to ratify the WIPO Performance and Phonograms Treaty. Among other things, these changes will make it illegal for internet users to circumvent electronic protection devices on binary files and transmission protocols. Finally, the new law would increase

government regulation of collective rights societies, in an attempt to increase transparency in these organizations (there is currently only one, in music) and to improve rights management.

In total, these legal provisions amount to a strong copyright regime on paper. One official described the system as having the strongest compliance with TRIPS in Southeast Asia. Indeed, it may be overly strong from the standpoint of Indonesia's development needs, in terms of the limitations on fair use and provisions for patenting software. According to at least two officials, however, the purpose of the legal structure is to encourage development of the Indonesian software industry (discussed below). Thus, the government views copyrights as an inducement to innovation in a sector it has identified as key for Indonesian growth.

Enforcement

As might be expected, the capacity to undertake effective enforcement actions against copyright infringers is limited. There are a number of difficulties to mention.

- The basic source of the problem is extensive piracy, largely of recorded movies and music. The incentives to copy and distribute such goods are enormous and this has become a significant industry. Even a well-funded enforcement agency would find it difficult to make much of a dent in its scope.
- Funding for the police is extremely low. According to one police official in Jakarta, his department's budget for copyright enforcement is around \$200 per action, but each case costs perhaps \$1,000 - \$1,500. The police therefore accept payments from complainants (e.g., music recording companies) to defray their costs. This system limits incentives of legitimate companies to complain and, in itself, is a questionable practice from the standpoint of honest and efficient enforcement.
- There is a considerable scarcity of customs authorities and police personnel devoted to IPR issues. For obvious reasons these officials may have higher priorities. The copyright office itself devotes some effort to making raids and raising awareness but is heavily understaffed. And, as is usually the case in developing countries, the number of qualified judges, prosecutors, and IP lawyers is far below levels needed for effective enforcement. Computerized systems are virtually non-existent.
- Centralized authorities in Jakarta and Bandung find it impossible to undertake enforcement activities in Indonesia's widely flung urban and rural areas and coastlines. They rely on local governments to manage the problem and those governments often have other priorities or may have interests in weak enforcement.
- Under prior law, a complainant had to come to court in Indonesia to make a claim of infringement. Foreign companies (and certainly individual artists) often find it not worth the time and effort. The new law is supposed to permit outside copyright owners to retain Indonesian legal representation in such cases.

The government is making some progress in combating piracy. A new law requires registration of CD, DVD, and VCD pressing machinery, which is entirely imported. By controlling this input, authorities hope to limit local production of pirated goods. The number of enforcement cases in the copyright area has increased from 44 in 1999 to 109 in 2001, with 1999 cases by early June in 2002.² Virtually all such cases involve pirated movies and music, with enforcement actions against both production facilities and retail shops.

There were no cases to date in 2002 involving software copying, because of a significant limitation in the law. Specifically, complainants must provide original software code to the courts to sustain a claim of infringement, so that the authorities can compare the code to that of the defendant. Many software companies prefer not to reveal their machine language in an environment where it may be released to competitive rivals.

Note, however, that the local agent for a major foreign software firm sued five firms in two cases in 2001 on the basis of their loading the firm's products into personal computers without authorization. The agent was able to do so under the consumer fraud statutes and achieved judgments against all defendants. The money the agent received from resulting fines evidently was contributed to a program to purchase computers for schools.

4. Interview and Survey Results in Specific Sectors

In this section I present information on particular copyright industries in Indonesia, along with their views of copyright protection and anticipated changes in business in the event of stronger enforcement. This information was gained from direct interviews of enterprise officials and from questionnaires implemented by AC Nielsen in Jakarta in July and August, 2002.

State of the Software Industry

On the basis of interviews with several software developers and distributors, a few central observations may be made. First, the government of Indonesia has designated software development to be a “strategic” sector for leading growth and recovery. This decision is based on the fact that writing code for programs and games is fairly straightforward and labor intensive, offering prospects for absorbing large numbers of reasonably educated young people into the labor force. Indeed, several interviewees commented that Indonesia offers a good basis of semi-skilled workers for the industry, though one significant structural constraint is the limited amount of English training. Software is also seen as a dynamic industry that should experience rising global and domestic demand over the long term, particularly as the Indonesian economy makes greater use of information technologies. Thus, the government has established a number

² This increase seems to have come at the expense of fewer trademark cases. Source of these data is national police force.

of incubator programs that provide incentives for software developers. The programs are too new to assess but they seem to be well structured for this purpose.

Next, the industry itself has two essential characteristics. First, it consists of three distinct components, which have different business approaches. One component is a small (but growing) group of sophisticated software firms that produce programs largely under contract to foreign companies. This is a newer and smaller version of the software export sector in India and, in fact, some of this programming is done under sub-contracts from Indian firms. Revenues and employment in these companies are expanding relatively rapidly and Indonesian companies, now concentrated in Bali and Bandung, appear to be establishing a solid global reputation for this service. The Indonesian government provides extensive support for this activity and sees it as a promising (and environmentally clean) avenue to greater employment and structural change. Game software for foreign markets is also written largely in this environment. These export-oriented firms are interested in stronger IPR protection for software in Indonesia (including patents) but it is not a driving concern for them. Some expressed the view that a stronger domestic copyright system would encourage them to write programs with broad appeal in the local economy.

The next component consists of a larger number of small and medium-sized enterprises (SMEs) that produce specific applications software for the Indonesian market and occasionally for neighboring countries. Software applications in finance, accounting, engineering, process control, health care, and other areas have the advantage of being designed for such a specific purpose that there is little risk that a rival would pirate the software for commercial sales. Some firms have distinguished themselves sufficiently to sell a particular program (typically with customization options) to multiple consumers and achieve some degree of economies of scale. Most are small, however, and write programs on a for-hire basis without generating these economies.

The third component is representatives and distributors of global software companies. Some of these distributors represent systems integration programs (eg, SAP, Oracle, PeopleSoft), in which the real value added lies more in installation, training, and service than the software itself. Such programs bear no risk of illegal copying because unlicensed firms would find it difficult or impossible to offer these complementary services. Other distributors represent firms offering operating systems and applications that are widely used in PC's. As might be expected, one firm dominates this segment of the Indonesian market. Given the size of Indonesia's economy, the sales volume in this market is surprisingly small, perhaps \$100-140 million per year overall. Clearly, these distributors are most interested in stronger Indonesian copyright protection, claiming that their revenues would be far larger if piracy rates (currently estimated at 95-96%) were brought down even moderately. Undoubtedly there is extensive unauthorized copying of Windows, Office, and other products through over the counter sales, inclusion of copies on PC's, and file sharing across users. Generally officials in these distributors view Indonesian copyright law as adequate (though concerns are expressed about a phase-in provision of the new law) but that enforcement is ineffective.

The second major characteristic of Indonesia's software sector is that it is surprisingly small in comparison to the economy's size and population. As will be discussed in the survey results, there are few (formal) firms and legitimate sales volumes are small in relation to other Southeast Asian economies. Virtually all firms are located in Jakarta and Bandung. The obvious reason for the small sector is that the home market is limited due to a remarkably low rate of PC use. Annual sales of PC's are running around 400,000 – 450,000 per year and the total number of computers in use is estimated to be around 1.5 million. Internet use is far smaller and limited to a few households in Jakarta. One reason for that seems to be inadequate and high-cost telecommunications services. Thus, as incomes expand and telecommunications become more competitive (the government is undertaking further deregulation currently) demand for PC's and software should rise rapidly.

Whether weak copyright enforcement significantly restrains growth of the sector is difficult to say on the basis of simple interviews. It was singled out as important by the Indonesian software association (ASPILUKI), which actively lobbies for improvements. Many of its members are medium-sized producers of applications and game software, some of which (especially the latter) is subject to widespread copying. It is likely that weakness in the copyright system limits incentives to expand production and extend marketing beyond Jakarta or Bandung.

With this background, consider essential results from the surveys. Full results are summarized in a series of tables in Attachment A. Here I summarize the key findings, starting with a description of the industry. There were 25 software firms surveyed, 16 of which were founded since 1995. Thus, this is a relatively young industry. Over half of the firms surveyed are medium in size (26-100 employees), while five are small and seven are large on an employment basis. In terms of sales volume somewhat more firms are small, with annual revenues below US \$500,000. Eighteen firms are strictly domestic, and most of these are privately owned. Seven firms are affiliated to foreign enterprises, either as affiliates or joint venture partners. Only eight of the 25 firms report the existence of a separate research department within the firm and most of these eight are medium in size.

Part II of Attachment A provides estimates offered by respondents about the number of firms and average sales and employment in the software sector in Indonesia. There is a remarkable range of estimates offered. The median estimate is that there are 10 large software firms, 70 medium-sized firms, and 150 small firms, with a range over all firm sizes of 32 to 800. Even taking the high range, this is a remarkably small number of software enterprises for a country the size of Indonesia, reflecting numerous restraints to entry and expansion. Median estimates of employment are 80 workers in large firms, 50 in medium-sized firms, and 10 in small firms. If we combine the median estimates, survey respondents believe that there are perhaps 800 total employees in large software firms, 3500 in medium enterprises, and 1500 in small firms, for a total of 5800 workers. Again, this is a small level of employment for an economy of Indonesia's size. Note that this estimate does not include employment in firms engaged in unauthorized copying, which cannot be reliably estimated.

Part III of the survey considers problems facing this sector in starting or expanding a business. Among the major factors considered "very important" as a constraint limiting business start-up, the largest number of firms (17) list "concern over unauthorized copying" and another four firms listed this as "somewhat important". Thus, the threat of software piracy is perceived to be a significant entry barrier in the industry. Other major problems include strong competition, shortages of skilled labor, the existence of dominant producers, and concern over weak copyrights in neighboring countries.

Interestingly, 24 of the 25 firms indicate an intention to expand output over the next two years, suggesting firms in the formal software sector anticipate a growing market. The most significant problems for firms considering expansion are weak telecommunications infrastructure and internet services, shortages of skilled labor, and concern over unauthorized copying. Uncertainty about the economy is listed as "very important" or "somewhat important" by 22 firms.

Within the sample only seven firms export software, with very few doing so under foreign contract.³ At present this is not an export-intensive sector overall. As may be noted in Part VI, however, most of the firms, even the small ones, purchase licenses to use software (typically foreign) as a basis for developing their own products and also buy licenses for distribution rights. In this context, foreign software platforms are significant inputs into the development and sales of programs in Indonesia. In contrast, virtually no firms buy production rights, indicating that little formal production of licensed software takes place in Indonesia. Some medium and large enterprises derive revenue from selling licenses to distribute their own software.

The perceptions of survey respondents about piracy are summarized in Part VII. One clear finding is that piracy rates vary considerably across types of software. Business applications and network applications are difficult to copy and sell, both because markets are small and specialized and because such programs require complementary business and technical services. However, operating systems, major applications, and games are widely copied in Indonesia. In some degree, this difference in piracy rates helps explain the product mixes offered by Indonesian software firms. In the detailed surveys (not reported here), firms were asked to list their major software products. The highest number of respondents listed specialized business applications software for niche markets. Not many attempted to write game software and none was contemplating development of major applications for the Indonesian market. Respondents believe that households, small enterprises, university students, and government offices commonly copy software for their own uses or sale.

Respondents were asked whether software piracy constitutes a problem for them. Curiously, given the earlier common answers that such copying is a problem in establishing and expanding business, all of the small enterprises in the sample answered

³ It should be noted that the surveys were undertaken in the Jakarta area, so the firms producing under export contract in Bali and Bandung are not included.

that pirated software is "no problem" for them. In fact, this reflects again their product mix; none of the small firms produced software that would have a large enough market currently to warrant piracy. Eight of 13 medium-sized firms answered that piracy is a "modest problem" or "significant problem", while four of the seven large firms answered similarly. Overall, however, the results suggest that piracy is at most a modest problem for the bulk of Indonesian formal software producers.

Despite this view, the overwhelming majority of respondents claim (in Part VIII) that the Indonesian government's efforts to reduce piracy are "far too little" or "too little". This again suggests that software firms perceive a significant problem in the country with weak copyrights but accommodate that weakness through their own decisions on which products to sell. Respondents were also asked whether they would expand their business or engage in more investment if copyrights were more strongly enforced. Small firms anticipated no increase in either activity, while around half the medium and large enterprises indicated that they would expand modestly or significantly.

Overall, the surveys present a mixed picture about the prospects for stronger copyright enforcement to expand opportunities for the domestic software sector. Virtually all respondents think that piracy is endemic and would prefer to see stronger efforts to reduce it. However, small enterprises do not consider it a problem for them and only one would expand output and investment in the event of stronger rights. Medium-sized enterprises would be more likely to expand their activity and develop new products, presumably into wider applications for the Indonesian market. Larger enterprises would also expand in some degree on average. It would seem, therefore, that copyright enforcement offers fairly moderate scope for encouraging additional business activity, at least over the medium term. Presumably that expansion would increase net incomes for software developers and employees in the industry, even as it reduces employment opportunities in copying.

It is possible to be more optimistic over the longer term. As noted earlier, the size of the software sector is quite small in relation to what might be expected for an economy of Indonesia's magnitude. Moreover, the country has a reasonable basis for expanding the sector in terms of human capital resources. Stronger software protection should improve those prospects in some degree. However, it is likely that significant expansion would not be possible before the economy overcomes its current sources of instability and uncertainty, and also improves its infrastructure for telecommunications services.

State of the Recorded Music Industry

According to representatives of ASIRI, the Sound Recording Industry Association of Indonesia, weak copyrights are a major problem for music publishers. ASIRI has 128 members, including the five international majors. Most are losing money or in imminent danger of bankruptcy. It is impossible to tell at this point how much of this problem reflects competition from illegal copying and how much may be attributed to the economic situation. However, pirated copies of Indonesian music appear to be more

prevalent than those of foreign music, largely because of strong Indonesian preferences for domestic music types. Copying of video products is aimed at foreign movies (mainly US and Indian) for there are relatively few Indonesian film producers and they tend not to produce films for the broad popular market.

There is a rather small price premium for legitimate music and movie recordings over pirated versions in Jakarta, perhaps ranging from a multiple of 2 to 4 or 5. Indonesian music producers feel it necessary to bring their prices down to a competitive range in relation to pirated copies in order to gain an acceptable market share.

Representatives of the music industry claimed unambiguously that their business would expand considerably in the presence of more transparent and effective enforcement. If so it would help Indonesian musicians considerably. The music collection rights society (KCI) only provides royalties to around 3,000 Indonesian composers and artists, a remarkably small number in that economy. Virtually all of these musicians reside in the major cities. Thus, considerable scope exists for finding new artists in the countryside and extending income to them through royalties and copyright licenses as the sector expands. It should be noted that the new copyright law proposes to place additional regulations on the operation of KCI and other such societies to be founded in the future, suggesting that there are concerns about their methods of operation.

As suggested earlier, internet use is very small in Indonesia. There is not currently a "Napster" problem in terms of downloading electronic files, mainly because there are so few PC's in Indonesia, nearly all of which are in workplaces, not homes. Further, bandwidth is inadequate for the purpose and Indonesian music producers tend not to place their files on the internet. This latter decision reflects both technical difficulties and concern over copying. Use of MP3 technologies for file sharing is rising and a concern for music producers.

Turn next to the tables in Attachment B summarizing the survey results for the music recording companies in Jakarta. There were 25 firms surveyed, 17 of which were formed before 1995. Eleven are small in terms of employment and 12 are medium in size, though if we use a sales measure of size, 16 of the 25 firms are small, with less than \$500,000 in annual revenues. Twenty-one of the firms are domestic and all of these are private. Thus, the recording industry in Indonesia is highly domestically oriented and made up primarily of small firms. The median estimated numbers of firms are 40 small, 12 medium, and five large, for a total of 57 in the entire country. The range of this estimate is from 16 to 165. Again, 57 recording companies, the bulk of them quite small, is a markedly small number for an economy of Indonesia's size. Estimated median employment per month is 1,460.

According to Part III of the survey, 24 of the 25 firms list "concern over unauthorized copying" as the most significant impediment to starting a recording business in Indonesia (the other firm finds it to be "somewhat important"). This is also the primary factor listed as a constraint on the ability to expand output, as 24 firms claim

this to be "very important". Other difficulties include uncertainty about the economy, access to finance, and shortage of skilled labor. Three firms expect to expand business significantly over the next two years, 14 to expand modestly, and eight firms plan no changes or a contraction. From these results it is evident that music piracy is a significant problem for the Indonesian sector.

As with software, not many firms export their products, though both of the large firms do. The primary export markets are Singapore and Malaysia, attesting to the fact that the industry focuses on local cultural and pop music. Only one of the 25 firms actually records and publishes music under contract to foreign firms. Again, this is an industry dominated by activity developed in, and sold to, the domestic market. However, as noted in Part VI, there is extensive domestic licensing activity in terms of buying rights to distribute music, record songs, and to include songs in a firm's own recordings. About half the firms also indicate that they sell such licenses as well as purchase them. From this perspective it appears that the industry relies considerably on cross-fertilization of music and talent. Respondents estimate that the median royalty rates are around 10-15 percent of sales.

The ability of a music industry to distribute income to songwriters and performers depends crucially on the effectiveness of its collection society. There are major transactions costs involved in attempting to determine how much a public user of recorded music (such as a radio station or restaurant) should pay in license fees to individual artists. Thus, an intermediate institution is required to work out terms of licenses and formulas for distribution. In Indonesia the collection society is called Karya Cipta Indonesia (KCI). As indicated in Part VII of the survey, there is a high degree of awareness about KCI's activities and the enterprises are satisfied with its operations. Fully 21 of the 25 firms claim that they are satisfied with KCI in terms of its efficiency in collecting fees, 20 are satisfied with its transparency, and 19 are satisfied with its fairness to song writers and musicians. Indeed, the degree of perceived transparency is admirable. Thus, those firms that have established themselves in the marketplace find little to criticize about the agency. No doubt this reflects a substantial selection bias in the survey, for most of the firms are members of the society. Unfortunately, it is impossible to locate firms that would exist (hypothetically) if KCI were even more efficient or inclusive.

Despite these positive views, the existence of KCI has not overcome the smallness of the Indonesian formal music sector. According to survey estimates, the median number of songwriters that receive royalty payments from KCI is 1,000, and the median number of recording artists is 100 (this contrasts with the interview-based estimate of 3,000 artists from the director of KCI). Moreover, among small and medium-sized firms a substantial minority (nine of 23) of enterprises have the opinion that KCI should be subject to government regulation. It is fair to claim that there is substantial scope for expanding the number of small firms and of artists receiving such income as the copyright regime and its supporting institutions are strengthened.

In Part VIII information is provided on the nature of music piracy in Indonesia. In all three types of recording media presented -- cassettes, CDs, and VCDs -- the estimated piracy rate for domestic products is at least as high as for foreign products. Firms perceive domestic copying as the major source of piracy. Relatively few are concerned about imports of unauthorized copies, for such products do not have a sizeable market in Indonesia. Further, downloading from the internet is not particularly threatening at this time, given the small penetration of PCs into Indonesian use. Piracy is considered a problem by firms of all sizes, with 19 of 21 labeling it a "significant problem". An important channel through which these firms must compete with copies is prices. All 11 of the small firms, eight of the 12 medium-sized firms, and both of the large firms claim that they must "significantly reduce" their prices in order to compete.

Given these perceptions, it is not surprising that virtually all of the recording companies find that the government is doing "far too little" in terms of trying to stop piracy. Moreover, the intended reactions to stronger copyright enforcement are instructive. Nine of the 11 small firms would adopt a modest or significant expansion in business. All 11 of the medium-sized enterprises, and both of the large firms, would do so as well. Note that if just 25 firms were to double their average employment from 50 to 100, the industry-wide employment would rise by 1,250, or perhaps 85 percent of current employment. Again, there is reason to believe that such impacts would be considerably larger in the long run because of Indonesia's size. It is also noteworthy that 10 of the small firms and 11 of the medium-sized firms would invest more in developing new song writers and recording artists.

State of the Film Industry

The survey covered 16 film producers, 11 of which were founded before 1995, as shown in Attachment C. Most of these firms are small, whether measured by employment or sales. All are privately owned and only one is in a joint venture with a foreign firm. The median estimates of the number of film producers add to 27, with a range between 13 and 240. Median monthly employment in the industry is estimated to be 1,125. All 16 of the survey respondents listed "concern over local unauthorized copying" as "very important" or "somewhat important" impediments to starting a business. Other important factors were shortage of finance, strong competition (often from foreign films), and taxation. Thirteen filmmakers are considering a modest expansion in business over the next two years. In terms of constraints on the ability to expand, 10 list concerns about copying as important, which is a smaller problem in this regard than are uncertainty about the economy and shortage of finance. From these results it seems that film producers are bothered by the threat of piracy but it ranks somewhere in the middle of their economic concerns.

As with firms in other sectors, film producers emphasize the domestic market. Only two firms actually export movies and only two firms have licenses from foreign entities to produce or manufacture films. A few firms buy licenses to distribute films (mainly domestic) and none buys rights to manufacture another firm's movies. Licensing among domestic firms does happen and the royalty rates are similar to those in music.

One difference from the music industry is shown in Part VII, where the estimated share of piracy is higher for imported VCDs and DVDs than for domestic versions. Nevertheless, 15 of 16 firms consider domestic copying to be an important source of piracy. Fourteen of the 16 firms list pirated films as either a "significant problem" or "modest problem" for their businesses. The perception that piracy is a significant difficulty holds particularly for small firms, which is interesting. Note that their ability to finance new projects is heavily constrained and the prospect of rapid and uncompensated copying may in itself be a source of this constraint.

As in the case of music, the overwhelming share (13 of 16) firms answer that government is doing "far too little" to reduce piracy. However, the expected impact of stronger copyright enforcement on their activity is not as dramatic as in music recording. Among the film companies, nine of 16 would attempt to expand modestly or significantly, while six of the small firms would anticipate no impact or a small contraction. At the same time, 14 of 16 firms (including six small firms) list an intention to invest in more filmmaking capacity in the event of stronger copyrights. Thus, while the signals are somewhat mixed there seems to be a reasonable suggestion that the film industry would expand as copyrights become more strongly enforced.

State of the Print Publishing Industry

Information about the publishing industry is provided in Attachment D. Sixteen firms were surveyed, 13 of which were founded prior to 1995. Fourteen of these were small or medium-sized by employment, while all were in these categories in terms of sales. All firms are private and one is in a joint venture. All 16 firms directly employ creative talent such as writers and editors. The firms cover books, newspapers, and periodicals. Respondents provide a median estimate of 185 firms (the range is from 63 to 480) and employment of 2,550. Thus, this industry is also rather small in Indonesia but larger than the music and film sectors.

The major problem to beginning a business in this industry in Indonesia is perceived to be a shortage of finance. Concern over unauthorized copying is listed by 12 of 16 firms. Interestingly, all 16 firms intend to expand business over the next two years. In this context, 13 firms list copying as a "very important" or "somewhat important" constraint on such expansion. Publishing is more oriented toward export than the other sectors. Nine of 16 firms export, with the major markets being Singapore, Malaysia, and Australia. Three firms actually write pieces under contract to foreign firms, while four firms publish under such contracts. Licensing among domestic firms for rights to distribute, to produce other firms' publications, and to include other firms' articles in publications is relatively common, with royalty rates of 8-15%.

Survey recipients provide median estimates of piracy rates of 30% for books and 5% for magazines and newspapers. Thus, the industry is insulated from this problem in comparison with software and music. Nevertheless, 11 respondents claim that domestic

copying is an important source of piracy on the market, while all 16 believe that use of pirated publications by university students and professors is common. Further, 13 of the 16 firms claim that pirated publications present a modest or significant problem for their operations.

Consistent with the other sectors, virtually all the publishers find that the government devotes far too little effort to reducing copying. However, the anticipated impact of stronger copyrights on business expansion would be modest (seven firms claim "no impact" and seven claim "modest expansion"), though rather more small firms would invest in more publishing capacity. Based on this survey, it seems that the publishing sector in Indonesia is constrained by weak copyrights in some degree but the ability of stronger protection to encourage its growth is moderate, at least over the short term.

5. Assessment and Conclusions

Based on information from interviews and the surveys of copyright sectors, it is difficult to reach strong conclusions. However, the evidence supports the following inferences.

- The Indonesian copyright law is TRIPS-compliant and in some ways goes beyond TRIPS requirements. An assessment might be made of whether the extra protection is appropriate for the economy.
- Enforcement suffers from considerable structural difficulties, including weak capacity, chronic underfunding, limited access to enforcement procedures, and non-transparency. This situation is unlikely to change for some time.
- There is considerable scope for growing the software sector, both domestically and for export markets. Copyright protection will be one element in this task.
- Unauthorized copying is common in certain forms of software. The largest proximate losers are foreign software suppliers of operating systems and standard applications, or more accurately their local distributors. However, the price differentials between legitimate copies and pirated copies are quite large and incentives to copy will continue. In terms of the development of local software firms, copyright infringement has been a problem only for certain segments but promises to become more constraining over time.
- The recorded music industry may suffer the largest damages from local copying. It is difficult to link their problems closely with such issues as poverty of musicians in rural areas. Nonetheless, the evidence points to a remarkably small number of musicians gaining revenue from the current system. While KCI is lauded by its members for its transparency and efficiency, it fails to distribute revenues to more than a small number of artists. A more sophisticated system, including professional rights management systems and collection societies, should help considerably in this regard. The primary prospect for expanding income opportunities for poor artists lies in the anticipated expansion of activity by music recording companies, which also intend to invest more in artist development.

- The film industry is small but growing. Small film producers are particularly concerned about domestic copying and could benefit from stronger enforcement.
- While domestic publishers perceive considerable amounts of book piracy, their sector suffers modest damage and would not expand much in the event of stronger protection.
- The survey respondents overwhelmingly would prefer stronger government efforts to reduce piracy. This is not surprising as it would remove some costs from the private sector while expanding demand for their products.
- Overall, the copyright sectors stand to gain income and activity from stronger copyrights and this process is likely to intensify over time. Nevertheless, it needs to be understood that stronger copyrights would generate some hardship over the short term for firms and workers engaged in unauthorized copying and distributing. While it is impossible to measure with confidence, it seems probable that employment in copying and selling pirated versions of music, movies, and software is significant in the larger cities. Accordingly, there will be an adjustment problem if stricter enforcement tends to reduce this activity.