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A Study on The Economic Contribution of Copyright and Related Right Industries in Indonesia

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Abstract

This study aims at calculating the economic contribution of copyright and related right industries in Indonesia, in terms of Output, Value-added, and Employment. The magnitude of such contribution will highlight the importance of copyright-based industries in national economy. This study broadens the scope of discussion of copyright which traditionally covers only legal framework. Recognition on the economic contribution of copyright-based industries therefore will bring policy implications on the development of the industry and protection of copyrights in Indonesia. Copyright issue is crucial in the era of entrepreneurship and creative economy since it protects one's invention and enables the inventor to own, buy, sell, and use their property in a market economy. This study adopts World Intellectual Property Organization's (WIPO)framework and methodology to quantify the contribution of copyright and related right industries in Indonesia in terms of output, value-added, and employment. Following WIPO's methodology, the copyright and related right industries are categorized into four layers, that is, core copyright, interdependent copyright, partial copyright, and non-dedicated support industries. This study has three objectives, that is (1) identifying the copyright-based industries, which are categorized to the four categories of industries, (2) calculating the economic contribution of the four categories of copyright industries, and (3) comparing the results with those of other countries.

Keywords: copyright; economic contribution; WIPO; Indonesia

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1. Introduction

Copyright is as one of the main branches of intellectual property and applies to "every production in the literary, scientific, and artistic domain, whatever may be the mode or form of its expression" (WIPO, 2002, p. 13). Unlike protection of inventions (covered under patent laws), copyright protects only the form of expression of ideas, not the ideas themselves. Further, WIPO defines copyright laws as protecting the owner of property rights in literary and artistic works against those who copy or otherwise take and use the form in which the original work was expressed by the author.

The research takes the definition of copyright as proposed by World Intellectual Property Organization (WIPO). WIPO is a specialized agency of the United Nations which plays a continuing role in the global governance of Intellectual Property Rights (IPR), the establishment of the World Trade Organization (WTO) with a new overarching agreement on intellectual property (that is, the TRIP's agreement) as of its key elements (May, 2009; Yu, 2009). The research also adopts methodology of World Intellectual Property Organization (WIPO) for calculating the economic contribution of the copyright-based industries to Gross Domestic Product (GDP).This methodology has been applied in at least 32 (thirty-two) countries, including Argentina, Brazil, Chile, Paraguay, Uruguay, Singapore, Canada, and Hungary.

WIPO's objective is to assist developing countries in their development of promoting their industrialization, their commerce, and their cultural, scientific, and technological development through the modernization of their industrial property and copyright systems and in meeting some of their needs in scientific documentation and the transfer of technology and technical know-how (World Intellectual Property Organization Report as cited in May, 2009).

WIPO also promotes studies copyright industries beyond their traditional scope of legal perspective. While the nature of copyright, the scope of its protection, enforcement, and infringement have been the object of extensive research (Frankel, 2009; Gervais, 2009; Gillespie, Krishna, and Jarvis, 2001; May, 2009; Shultz and Saporito, 1996), attempts to study the economic aspect of copyrights are at early stage. Research on the economic aspects of copyright industries as cited in the first paragraph of this paper has offered a new focus of studies on copyrights. Such a new perspective is quite relevant since copyright has a role in our daily lives in almost all fields – production, distribution, and consumption. Studies on the economic value of copyright will also respond to business' concerns for their increased involvement in licensing, investment, trade, and transfer of creations.

WIPO attempts to develop a practical instrument in calculating the size and contribution of a nation's copyright-based industries. Wide and consistent adoptions of WIPO's methodology will provide international comparison. While definition of copyright and related rights in different countries may vary based on each country's legislation, largely the definitions are consistent with the provisions of the Berne Convention for the Protection of Literary and Artistic Works, the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (commonly known as the Rome Convention), the Agreement on Trade-Related Aspects of Intellectual Property Rights (or TRIPS Agreement), and the WIPO Copyright Treaty of 1986 and the WIPO Performances and Phonograms Treaty of 1996 and some other relevant international conventions.

This study discusses the framework for studying the economic contribution of copyright and related right industries in Indonesia using WIPO methodology. Since definition of copyright in different country may vary, this paper reviews the legal framework of copyright protection in Indonesia. Some harmonization with Indonesian legal framework and adaptation of WIPO methodolgy is therefore needed and proposed in this study. This studythen identifies the copyright industries in Indonesia and calculates their contribution to Output, Value-added, and Employment. Some development of the key players in copyright industry in Indonesia is also reported. Lastly, we present some international comparison of the contribution of copyright industries in Indonesia vis-à-vis other countries.

This study has three objectives, that is (1) identifying the copyright-based industries, which are categorized to the four categories of industries, (2) calculating the economic contribution of the four categories of copyright industries, and (3) comparing the results with those of other countries.

2. Copyright Legal Framework in Indonesia

Indonesia's legal framework on copyright protection was firstly established by the issue of the first law on copyrights in 1982 of Law No. 6. This law had been amended three times, that is, in 1987 as Law No. 7, in 1997 as Law No. 12, and in 2002 as Law No. 19. Law no. 19 in Chapter 4 Article 12 outlines the 12 items of products which are protected with copyrights. The 12 items are:(1) books, computer programs, phamplets, layout of written published materials and all of other written materials;(2) public talks, lectures, speeches, and other related creation; (3) display tools made for education and science purposes;(4) songs or musics with or without lyrics;(5) dramas or musical dramas, dances, coreography, shadow puppeting, and mimes;(6) arts in all forms such as paintings, pictures, carving, calligraphy, sculpture, collage, and applied arts;(7) architecture;(8) maps;(9) batik arts;(10) photography;(11) cinematography; and, (12) translation, interpretation, adaptation, anthology, database, and other creations of transferring of forms.

The law includes the protection of batik arts which is country specific to Indonesia. The protection of Batik arts also includes protection of other traditional fabrics, such as twining and woven textile (ikat and songket). The law also covers new technological developments such as databases.

Internationally, Indonesia also signed the World Trade Organization (WTO) agreement in 1994, which includes the agreement on Trade-related Aspects of Intellectual Property Rights. Indonesia also ratifies both in 1997 the Berne Convention for the Protection of Artistic and Literary Works and the World Intellectual Property Organization (WIPO) Copyrights Treaty.

3. Framework and Methodology for Calculating the Economic Contribution of Copyright and Related Right Industries

In addressing the economic contribution of copyright-based industries, there are several basic concepts which have to be stated to get the build the same perception. Firstly, this study takes the definition of copyright as individual property right. While there may exist the so called communal copyright, the basis of studying the economic contribution of copyright is the recognition of copyright as private property right. Property rights are defined as "the ability of individuals to own, buy, sell, and use their property in a market economy" (WIPO, 2002, page 19).Being a property right, the economic values of copyright can be measured and calculated with a particular methodology.

The methodology developed for calculating the economic contribution of copyright is based on understanding on the difference between a work which is protected by copyright and the "means of delivery" by which the work appears in the market and is made available for consumption. WIPO (2002, page 19) states that the principal difference between a protected work and a means of delivery is that the first has characteristics of a public good, while the means of delivery is typically a private good. For example, a song is protected by a copyright, but a music CD is a means of delivery. Copyright itself only refers to the intellectual property aspect, and not the means of delivery. However, the means of delivery is the intermediary of the copyright to be consumed by the markets. The functional relationship between production of and trade with means of delivery is interdependence. Therefore, the methodology developed to calculate the economic contribution of copyright include some proportions of the activities in the delivery of the copyright products.

The calculation of the economic contribution of copyright-based industries has to firstly define the copyright-based industries. Copyright-based Industries refer to cluster of activities which can be identified, are statistically measurable, and have a certain scale and structure (WIPO, 2002, p. 26). Therefore, we have to identify industries which are predominantly based on copyright and the ones which less dependent on copyright.

WIPO defines the copyright industries into four layers of core copyright, interdependent copyright, partial copyright, and non-dedicated support industries. Each of the industry is defined as follows (WIPO, 2002):

3.1 Core Copyright Industries

These are industries that are wholly engaged in creation, production, and manufacturing, performance, broadcast, communication, and exhibition, or distribution and sales of works and other protected subject matter. In other words,

the core copyright industries are industries that would not be in existence if not for their copyright subject matter. This category includes 9 (nine) groups of: (1) press and literature; (2) music, theatrical productions, and opera; (3) motion picture and video; (4) radio and television; (5) photography; (6) software and databases; (7) visual and graphic arts; (8) advertising services; and (9) copyright collective management societies.

1) Interdependent Copyright Industries

This category includes industries that are engaged in production, manufacture, and sale of equipment whose function is wholly or primarily to facilitate the creation, production, or use of works and other protected subject matter. This group is divided into core interdependent and partial interdependent industries, based on their complementary with the core copyright industries.

The first group of core interdependent industries includes manufacture, wholesale and retail of TV sets, radios, VCRs, DVD players, and other similar equipment, computers and equipment, and musical equipments. Products of this group are jointly consumed with the products of the core copyright industries, e.g., the transmission of entertainment programmes would need TV sets.

The second group consists of manufacture, wholesale and retail of photographic and cinematographic instruments, photocopiers, blank recording material, and paper. These industries are not exclusively related to copyright products but significantly facilitate their use. Therefore, the value assigned to them is based on judgment made based on careful analyses on this matter.

2) Partial Copyright Industries

These industries are characterized by a portion of their activities which is related to works and other protected subject matter and may involve creation, production, and manufacturing, performance, broadcast, communication and exhibition or distribution and sales. This group consists of nine groups of:(1) apparel;(2) jewelry and coins;(3) other crafts;(4) furniture;(5) household goods, china, and glass;(6) wall coverings and carpets;(7) toys and games;(8) architecture, engineering, and surveying;(9) interior design; and, (10) museums.

In calculating their economic contributions, we need to assign a certain percentage to each of the industry. The assignment of the percentages is based on judgment of the research team, based on a careful and detailed analysis of each of the industry.

3) Non-dedicated Support Industries.

This category consists of industries where a part of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matter, and not included in the core copyright industries. These industries include general wholesale and retailing, general transportation, and telephony and internet.   Measuring the effects of this industry will again involve a qualified judgment to estimate a fraction their activities which is related to copyright products.

To quantify the economic contribution of those industries, WIPO's framework include measurements of the percentage of the Gross Domestic Product (GDP) attributable to them, the value-added, and the employment in the copyright-based industries.

In calculating the relative size of these industries in the OUTPUT, value added approach is recommended as most appropriate (WIPO, 2002, p 36). Value added approach has been preferred because of three reasons as follows (WIPO, 2002, p 38):

a) it is an industry-centered approach which accords with the desire to identify the contribution of the copyright-based industries;

b) it reduces the chances of double counting, and

c) value added input-output tables (and the surveys underlying them) are readily available to many countries.

Since employment in these industries oftentimes is not permanent or full-time basis, the measure of employment should be on FTE bases. Employment in these industries can be measured by using several ways as follows (WIPO, 2002, p. 41):

a) from input-output tables;

b) from industry-specific studies conducted by official statistical agencies, government bodies, or private parties; and

c) from census results.

The analysis of the international trade position needs to capture two elements (WIPO, 2002, p.42) as follows:

1) The physical trade in copyright products and services. The data can be obtained from:

   a) national statistical agencies and central banks;

   b) supra-national statistical agencies (e.g., databases from International Monetary Fund and World Bank);

c)   major industry associations; and
d)   specially-developed surveys.

3.2 *Royalty flows.*

While adoption of a standard methodology and framework will facilitate international comparison, there will be some variation in definition and identification of the copyright-based industries. The following section discusses the harmonization of WIPO methodology and Indonesia's specific factors, resulting in the inclusion of several creative industry categories in the WIPO's copyright-based industry categorization.

Earlier sections have argued that the methodology proposed by WIPO is a complete and standard one and does not contradict the legal framework of copyright protection in Indonesia. Adoption of the methodology will also offer international comparisons since growing numbers of countries also employ it in calculating their copyright-based industries' economic contribution. However, a few adaptations are needed to harmonize it with the existing legal protection in Indonesia and the existing development roadmap of creative industry development. The first adaptation is on the inclusion of handicraft industry in the copyright industry. This category will include crafts and batik arts.

Crafts industry itself is included in the 14 (fourteen) sectors of creative industry in Indonesia. Further, batik arts (including the other traditional fabrics, such as twining and woven textile (ikat and songket)) are protected by Law no 19/2002. This category is necessary to accommodate the country-specific factor since handicrafts are main export commodities of many regions in Indonesia and batik arts have been just acknowledged by UNESCO as world's cultural heritage. Therefore, in terms of list of industries to be studied, the core copyright industries should include handicrafts industries or based on KBLI, this category will consist of woven textile industry, twining ('Ikat') woven textile industry,batik industry, and woodcarving industry (excluding furniture).

Survey on these sectors reveal that these industries contain copyright elements in their products. The motif and design are copyright protectable. However, other elements contained in the final products are non-copyright protected. Referring to WIPO's definition of the four categories of copyright-based industries, these industries belong to the partial copyright industries.

The second adaptation concerns with the status of architecture industry in the copyright-based industry. Architecture is acknowledged both by Law no 19/2002 and the creative industry definition as main copyright-based industry. However, WIPO's classification of copyright-based industry regards architecture only in the partial copyright industries. The implication is that only a relatively small portion of this industry's size is included in the calculation. WIPO (WIPO, 2002) argues that architecture contains a relatively big portion of service components which are not necessarily about production of works protected by copyright and have to be separated. Architecture is indeed a particular case, therefore, a careful and detailed analysis of each of the industry is needed. We have to understand its structure and process in a given country and only then a decision is made on the percentage of the architecture industry taken as copyright-based.

Other minor differences can be easily resolved. For example, while Law no 19/2002 protects maps, WIPO does not explicitly mention it. However, maps can easily be lumped in the category of books. Another minor difference is on the separate categories of photography and visual graphic arts by WIPO while they are of one category by KBLI.

Having reviewed the existing legal framework of copyright protection in Indonesia, the creative industry development roadmap, and WIPO methodology, this paper proposes a list of industries to be studied in measuring the economic contribution of the copyright and related right industries in Indonesia as presented in Appendix.

4. Method and Sources Data

Following the methodology of WIPO, data for the purpose of calculating economic contributionof copyright and related right industries in Indonesia are collected by Indonesia Central Bureau of Statistics. All data are benchmarked to those of 2005's data, because the already completed Input-Output Table at the moment of data collection is the 2005's I-O Table. To calculate the economic contribution of copyright and related industries, the sources of data are:

- I-O Table of 2005 of 175 sectors.
- Economic Census of 2006.
- Between-Census Survey (SUPAS) 2005.
- Employment Survey (Sakernas) 2005.
- Other relevant sources of data.

    Beside extracting data from secondary sources, this study also conducted a small-scale field survey for the purposes of estimating copyright factors, especially for the handicraft industries. There were 50 respondents mainly from handicraft industries.

    The calculation of economic contribution of copyright and related right industries include analysis stages as follows:

4.1 Identification of copyright and related right industries (ICR).

    Identification of copyright and related right industries is based on their industry codes as classified by KBLI ('Klasifikasi Baku Lapangan Usaha Indonesia'or Indonesia's Standard of Industry Classification). This results in a list of industries identified as copyright and related right industries (ICR) and categorized into the four layers of WIPO's classification of Core Copyright Industries, Partial Copyright Industries, Interdependent Copyright Industries, and Non-dedicated Support Industries (see Attachment 1).The identified copyright and related right industries are then estimated their sizes in terms of OUTPUT, value added, and employment.

4.2. Data Collection. The sources of data are already stated earlier.

    The data were primarily collected from the I-O table, with some additional and supporting data from other sources as identified above. Specifically, the calculation of the employment of the copyright industries was also based on the Employment Survey conducted in 2006.

4.3.Data Analysis

    Data are extracted from the I-O table using some dis-aggregation and aggregation of data. These were employed since the copyright-based industries are often recorded in different sectors in the I-O table. One sector in the I-O table may contain both copyright and non-copyright industries. For example, Sector 87 in the I-O table records Household Appliances Industry which include Furniture Industry (which belong to copyright-based industry) and the other non copyright industries. For this case, we employed dis-aggregation of data to separate out the copyright from the non-copyright industries. Other necessary sources were referred to complete as well as to be used as a reference to provide best estimates of the required information.

    Aggregation of data were employed when data from one type of copyright industry are recorded in different sectors in the I-O Table. For example, furniture industry is recorded both in sectors 87 and 109 in the I-O Table. In arriving at best estimates of data, other necessary sources (for example from the Economic Census) were always consulted.

4.4 Estimation of Copyright Factors to determine the percentages of the sizes of Partial Copyright Industries, Interdependent Copyright Industries, and Non-dedicated Support Industries which are copyright-based.

    In the four groups of copyright industries, there is a basic assumption in the methodology that only the core copyright industries receive 100% inclusion of their size, while the other three groups (partial copyright industries, interdependent copyright industries, and non-dedicated support industries) are presumed different in terms of the degree of relationship to copyright and related rights. Therefore, thecontribution of copyright and related rights of each group should be adjusted with the 'copyright factor' corresponding to their degree of depending on copyright and related rights.
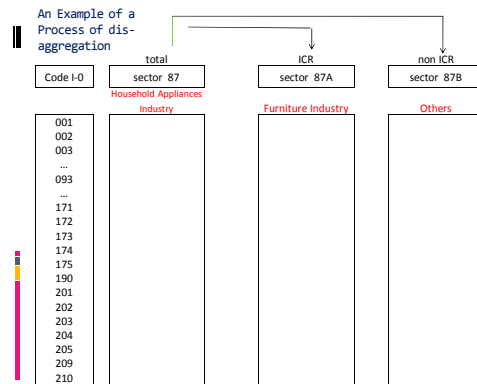
Fig. 1. An Example of Dis-aggregation Process

The copyright factor for the partial copyright and interdependent copyright industries were estimated using proxies of those copyright factors of Singapore, Thailand, and Malaysia which are neighbour countries of Indonesia. These countries have a lot similarities with Indonesia and share same characteristics in terms of copyright and related right industry.

The copyright factor of non-dedicated support industries was derived from the methodology suggested in the WIPO Guide. The formula for the copyright factor of the non-dedicated support industries is written below. The nominator is the aggregate of value-added of the group of core copyright industries, the group of interdependent copyright industries and the group of partial copyright industries. The denominator is the country's GDP less the summation of the value-added of the sub-sector wholesale and retail and that of the transportation sub-sector.

$$\text{Copyright factor of non-dedicated support industries} = \frac{\text{value-added (core+interdependent+partial)}}{\text{GDP} - \text{value-added (wholesale and retail+transportation)}}$$

Fig. 2. Copyright factor of non-dedicated support industries

4.5 Data Presentation.

Data are then presented in absolute size of the copyright industries in terms of OUTPUT, Value-added, and Employment and their contribution to those economic indicators. Results are also compared with other countries to provide some sense of international comparison.

5   Results

5.1 Survey Results to Gain Insights on the Copyright Factors

Table 1. General Profile of the Respondents

NO.	Survey Item	Description	Freq	%
1.	Respondent's position in the company	Manager Owner	7 43	14% 86%
2.	Industry	Handicraft (many kinds) Press and publication Advertising Artistic Photography	44 3 2 1	88% 6% 4% 2%
3	Ownership status	Foreign National Local Mixed	1 5 42 2	2% 10% 88% 4%
4	Year of establishment	<5 years ago 5-10 years >10 years	2 21 27	4% 42% 54%
5	Variety of products	*Batik*-based handicraft, Woven products, Leather handicrafts, Ceramics handicrafts, Books, leaflets, Photographs, Advertisements		

Table 2. Output and Costs of Production of the Companies

No	Description	Category		Freq	Percentage
1	Total Turnover/ Sales per year	>1 billion 501 millions – 1 billions 200 – 500 million <200 millions		2 13 18 17	4% 26% 36% 34%
2	Production costs	Production costs vary, many respondents stated "not certain" (depend on costs of production factors), some stated "90%", some stated "40-50%".			
3	Management costs	<10% 10%-25% >25%		47 3 0	94% 6% 0%
4	Depreciation costs	<10% 10%-25% >25% Don't know		35 4 0 11	70% 8% 0% 22%
5	Number of Employees	Full Time Part Time	<10 10-100 >100 <25 25-100 >100	35 15 0 8 30 12	70% 30% 0% 16% 60% 24%

Some questions in the survey tried to get information on turnover and production costs of the respondent companies (see the results depicted in the Table 1.2 below). As a consequence of the selection of SMEs as respondents, total turnover of the companies were not so big, where majority of respondents fall into "less than 500 millions" category. Question on production cost was difficult to answer, since some respondents didn't really know their exact percentage of production costs while some others were not willing to reveal their data. Question of management costs confirmed the semi informal status of respondent companies, where the owners were usually also the managers. The respondent companies seemed to have more part timers than full timers, perhaps due to the typical characteristics of SMEs in Indonesia where the employees prefer to work but were still able to take care their families.

Survey results on items on the importance of copyright reveal that respondents felt that copyrights were supposed to be very importance in their daily operations (see Table 1.3). Design and innovation on use of materials were supposed to be protected. However, since the idea of copyright in Indonesia was still alien. Therefore, data of the importance of copyright in this case pertain to the protectable areas or supposedly protected. Companies, other than publishers, did not neither pay nor receive royalty.

Table 3. Importance of Copyright

1	Importance of Copyright in daily operations		
	Strongly disagree (0%) Disagree(0%) Agree (2%) Strongly Agree (94%) Not Sure(4%)		
	Interview results revealed some protectable elements in the products, that is: design, coloring techniques, and color-locking techniques.		
	Many kinds of handicrafts are hand-made and custom-made. *Batik* paintings particulary are produced only 1 piece per item.		
2	Income from Royalty	Yes (0%)	Don't have (100%)
3	Royalty payment	Yes (8%) Especially by publishers	No (92%)
4	No of employees work as deisgner/in the design department or R&D department	None 1-2 More than 2	47 (92%) 3 (6%) 1 (2%)
	Interview result revealed that respondents (just like most of handicraft companies or SMEs in Indonesia don't have specified Design/R&D department). However, informally, the owner of senior craftmen are the designers themselves.		

5.2 Results of The Economic Contribution of Copyright Industries In Indonesia

The economic contribution of copyright indutries in Indonesia is calculated by industry category (that is, Core Copyright Industries, Interdependent Copyright Industries, Partial Copyright Industries, and Non-dedicated Support Industries). The economic contribution is measured in terms of Output, Value-added, and Employment.

The economic contribution (absolute terms) of Core Copyright Industries is depicted in Table 2.The biggest contributors to Output were Radio and Television; Press and Literature; Photography; Advertising Services, and Motion Picture and Video. In terms of value-added, the biggest contributors were Radio and Television; Press and Literature; Photography; Advertising Services; and Music, Theatrical Productions, and Operas. In terms of employment, Press and Literature employed the biggest number of employees, followed by Radio and Television; Photography; Advertising Services; Music, Theatrical Productions, and Operas, and Software and Data bases.

The contributions of Core Copyright industries to Total National Output, Value-added, and Employment are also shown in Table 3. The total contribution of Core Copyright Industries were 0.784% (to National Output), 0.698% (to National Value-added), and 0.42% (to National Employment). The 'big five' in the Core Copyright industries contributed 0.326%, 0.283%, 0.049%, 0.034%, and 0.029%, respectively, to Output. In terms of Value-added, Radio and Television contributed 0.3% to National Total Value-added, while Press and Literature was the second biggest contributor of 0.225%. However, in terms of employment, Press and Literature contributed more than Radio and Television, with 0.20% and 0.11% contribution, respectively.

In the Interdependent Copyright Industries, the biggest sizes of the industries in terms of Output were TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, and Electronic Industry; Paper; Musical Instruments; Computers and Equipment; and Photographic and Cinematographic Instrument. In terms of Value-added, the rank of

the biggest contributors was slightly different where the 'big five' were TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, and Electronic Industry; Paper; Computers and Equipment; Musical Instruments, and Photographic and Cinematographic Instrument. However, in terms of employment, Paper industry absorbed the largest number of employees, followed by TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, and Electronic Industry; Photographic and Cinematographic Instrument; Musical Instruments, and Blank Recording Materials. These data are presented in Table 4.

The contributions of Interdependent Copyright industries to Total National Output, Value-added, and Employment are shown in Table 5).The total contribution of Interdependent Copyright Industries was 0.465% (to National Output), 0.335% (to National Value-added), and 0.061% (to National Employment). The 'big five' in the Interdependent Copyright industries contributed 0.243%, 0.192%, 0.014%, 0.006%, and 0.004%, respectively, to Output. In terms of Value-added, TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, and Electronic Industry   contributed 0.178% to National Total Value-added, while Paper was the second biggest contributor of 0.137%. However, in terms of employment, Paper contributed more than TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, and Electronic Industry, with 0.031% and 0.018% contribution, respectively.

In the Partial Copyright Industries, both in terms of Value-Added and Employment, the biggest contributors were the Handicraft Industries, followed by Apparel, Textiles, and Footwear; and Furniture. The other industries in the Partial Copyright were considerably behind these three industries (see Table 5).

The contributions of Partial Copyright industries to Total National Output, Value-added, and Employment, in percentage (%), are shown in Table 4). The total contribution of Partial Copyright Industries was 1.066% (to National Output), 0.781% (to National Value-added), and 1.528% (to National Employment). The 'big three' in the Partial Copyright industries contributed 0.405%, 0.393%, and 0.187% , respectively. In terms of Value-added, Apparel, textiles, and footwear industry was the biggest contributor, followed by Handicraft and Furniture contributed 0.28%, 0.276%, and 0.150% to National Total Value-added, while Paper was the second biggest contributor of 0.137%. However, in terms of employment, Paper contributed more than TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, and Electronic Industry, with 0.031% and 0.018% contribution, respectively.

The contributions of Partial Copyright industries to Total National Output, Value-added, and Employment, in percentage (%), are shown in Table 6. The total contribution of Partial Copyright Industries was 0.20% (to National Output), 0.103% (to National Value-added), and 0.003% (to National Employment). In terms of Output, General Transportation was the biggest contributor (0.135%), followed by Telephony and Internet (0.042%) and General Wholesale and Retailing (0.025%). In terms of In the Non-dedicated Support Industries, the biggest size of the industry in terms of Output was General transportation, followed by Telephony and internet and General wholesale and retailing. This pattern was also the same for the industries in terms of Value added and Employment (see Table 7). In terms of Employment, the rank was slightly different, that is, General Transportation, General Wholesale and Retailing, and Telephony and Internet, with contributions of 0.002%; 0.001%; and 0.0003%, respectively.

The economic contribution (absolute terms) of Total Copyright Industries is shown in Table 8 The biggest contributors to Output was Partial Copyright Industry, followed by Core Copyright, Interdependent Copyright, and Non-dedicated Support Industries. In terms of value-added, the biggest contributor was also Partial Copyright Industries, but followed by Core Copyright, Non-dedicated Support Industries, and the last of Interdependent Copyright Industries. In terms of employment, the rank was exactly similar to that of contributions in terms of Value-added.

Table 4. Contribution of the Partial Copyright Industries

Code	Description of Industry	OUTPUT (Million IDR)	% Output to Nat'l Output	Value Added (Million IDR)	% Value Added to Nat'l Value Added	Employment	% Emp. to Total Nat'l Emp.
	TOTAL Partial Copyright Industries	60,651,218.37	1.066	22,480,751.14	0.781	1,458,523.43	1.528

3.1	Apparel, textiles, and footwear	22,352,442.75	0.393	8,063,367.86	0.280	253,148.70	0.265
3.2	Jewelry and coins	748,069.32	0.013	184,163.18	0.006	24,698.15	0.026
3.3	Other crafts	1,098,907.23	0.019	416,656.09	0.014	418,034.40	0.438
3.4	Furniture	10,628,704.97	0.187	4,305,310.18	0.150	237,880.30	0.249
3.5	Household goods, china, and glass	12,086.35	0.000	4,621.49	0.000	82.72	0.000
3.6	Wallcoverings and carpets	12,737.72	0.000	1,297.90	0.000	152.62	0.000
3.7	Toys and games	935,256.47	0.016	377,067.67	0.013	11,007.32	0.012
3.8	Architecture, engineering, surveying	1,380,607.23	0.024	795,214.54	0.028	3,049.00	0.003
3.9	Interior design	428,544.37	0.008	359,816.67	0.013	6,188.65	0.006
3.10	Museums	42,182.89	0.001	26,556.37	0.001	1,042.36	0.001
3.11	Handicraft Industry	23,011,679.09	0.405	7,946,679.20	0.276	503,239.20	0.527

Table 5. Contribution of the Non-dedicated Support Industries

Code	Description of Industry	Output (Million IDR)	%Output to Nat'l Output	Value Added (Million IDR)	% Value Added to Nat'l Value added	Employ-ment	% Emp to Nat'l Emp
	TOTAL Non-Dedicated Support Industries	11,531,823.07	0.20	5,861,243.18	0.103	187,630.28	0.003
4.1	General wholesale and retailing	1,411,815.05	0.025	922,912.18	0.016	45,109.00	0.001
4.2	General transportation	7,705,616.73	0.135	3,053,331.56	0.054	122,631.30	0.002
4.3	Telephony and internet	2,414,391.30	0.042	1,884,999.44	0.033	19,889.98	0.0003

The contributions of Copyright industries to Total National Output, Value-added, and Employment, in percentage (%), are shown in Table 8. The total contributions of Total Copyright Industries were 2.518% (to National Output), 1.021% (to National Value-added), and 0.037% (to National Employment). In terms of Output, Partial Copyright Industry was the biggest contributor (1.066%), followed by Core Copyright Industry (0.784%), Interdependent Copyright (0.465%), and Non-dedicated Support Industries (0.203%). In terms of Value-added, Partial Copyright was also the biggest contributor (0.395%), followed by Core Copyright and Interdependent Copyright.

Table 6. Contribution of Total Copyright Industry

Code	Description of Industry	OUTPUT	% Output to Nat'l Output	Value Added (Million IDR)	%Value Added to Nat'l Value Added	Employment	% Emp to Nat'l Emp
	TOTAL COPYRIGHT	143,227,378.51	2.518	58,055,674.73	1.021	2,102,140.97	0.037
1	Core Copyright Industries	44,583,372.46	0.784	20,084,088.49	0.353	397,283.60	0.007
2	Interdependent Copyright Industries	26,460,964.61	0.465	9,629,591.92	0.169	58,703.66	0.001
3	Partial Copyright Industries	60,651,218.37	1.066	22,480,751.14	0.395	1,458,523.43	0.026
4	Non-dedicated Support Industries	11,531,823.07	0.203	5,861,243.18	0.103	187,630.28	0.003

Table 7 presents the Copyright Factors applied to Interdependent Copyright Industry and Partial Copyright Industries. As mentioned earlier in the method section, in the four groups of copyright industries, only the core copyright industries receive 100% inclusion of their size. The contribution of copyright and related rights of each group should be adjusted with the 'copyright factor' corresponding to their degree of depending on copyright and related rights. The copyright factor for the partial copyright and interdependent copyright industries were estimated using proxies of those copyright factors of Singapore, Thailand, and Malaysia which are neighbour countries of

Indonesia. These countries are presumed to have similarities with Indonesia and share same characteristics in terms of copyright and related right industry. Copyright factors for the interdependent and partial copyright industries were formulated also based on the survey conducted on copyright industries. Meanwhile, the copyright factor of non-dedicated support industries was derived from the methodology suggested in the WIPO Guide.

Table 7. Copyright Factors (Indonesia)

Interdependent Copyright Industries	Copyright Factor (2005)
TV Sets, radios, VCRs, CDs, and DVD players	31.7%
Computers and equipment	32.5%
Musical instruments	25.0%
Photograhic and cinematographic instruments	31.7%
Photocopiers	23.3%
Blank recording materials	21.7%
Paper	18.3%
Partial Copyright Industries	
Apparel, textiles, and footwear	15%
Jewellery and coins	18%
Other crafts	35%
Furniture	35%
Household goods, china, and glass	0.5%
Wall coverings and carpets	1.29%
Toys and games	36.23%
Architecture, engineering, and surveying	14.5%
Interior design	14.5%
Museums*)	8%
Handicrafts**)	80%
Non-dedicated Support Industries	
General wholesale and retail	2.54%
General transportation	2.54%
Telephony and internet	2.54%

Table 8.1. International Comparison: Contribution of Copyright Industry to Value Added and Employment

Country	Value-added	Employment
Australia	10.40%	8.68%
Colombia	3.54%	5.67%
Korea	8.68%	10.40%
Malaysia	5.70%	4.48%
The Philippines	4.83%	3.54%
Singapore	5.67%	4.83%

Thailand	4.48%	5.70%
Indonesia	1.02%	2.01%

Table 8.2. International Comparison of Economic Contribution of Copyright Industries to Value-Added by Group

Country	Core Copyright	Interdependent Copyright	Partial Copyright	Non-dedicated Support Industries
Australia	7.30%	2.00%	0.40%	0.70%
Colombia	1.90%	0.95%	0.26%	0.43%
Korea	4.04%	2.79%	0.36%	1.49%
Malaysia	2.90%	2.10%	0.60%	0.10%
The Philippines	3.54%	0.96%	0.04%	0.29%
Singapore	2.85%	1.76%	0.09%	0.97%
Thailand	2.21%	1.02%	0.71%	0.54%
Indonesia	0.353%	0.169%	0.395%	0.103%

Table 8.3. International Comparison of Economic Contribution of Copyright Industries to Employment by Group

Country	Core Copyright	Interdependent Copyright	Partial Copyright	Non-dedicated Support Industries
Australia	4.97%	1.80%	0.57%	0.65%
Colombia	1.69%	0.74%	1.87%	1.49%
Korea	2.15%	1.06%	0.31%	0.79%
Malaysia	4.70%	1.60%	0.90%	0.20%
The Philippines	8.81%	1.40%	0.20%	0.60%
Singapore	3.64%	1.24%	0.18%	0.75%
Thailand	1.50%	0.29%	0.68%	0.39%
Indonesia	0.42%	0.06%	1.53%	0.003%

6. Conclusion and International Comparisons

If we compare the economic contribution of copyright industries in Indonesia with those of other countries, generally Indonesia's figures are lower. In terms of Value-added and Employment, the total contribution of Copyright Industries in Indonesia were recorded 1.02% and 2.01% respectively. These are still lower than ASEAN counterparts of Malaysia, The Philippines, Singapore and Thailand (see Table 8.1).

If we divide the copyright industries into the four categories of core copyright, interdependent copyright, partial copyright, and non-dedicated support industries, the comparative results of Indonesia vis-à-vis other countries are slightly different (see Table 8.2). The contribution of core copyright industries in Indonesia is still the lowest amongst other countries, both in terms of Value-added and Employment. However, contribution of the Partial Copyright industries in Indonesia is considerably higher. That is, 0.395% in terms of Value-added and 1.53% in terms of Employment. In terms of Value-added, contribution of the Partial Copyright Industries in Indonesia is lower than those of Thailand, Malaysia, and Australia, but higher than those of Korea, Colombia, Singapore, and the Philippines. In terms of Employment, the Interdependent Copyright Industries in Indonesia contributes 1.53% which is the highest number compared to other countries (see Table 8.3).

Acknowledgements

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