

The Economic Contribution of Copyright-Based Industries in Brunei Darussalam



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* The Registry Division has since been restructured and a new unit, Intellectual Property Division, was formed on 5th July 2011.



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Executive Summary

At the request of the Brunei government, WIPO commissioned a consultant to undertake a study on the economic contribution of Brunei copyright-based industries to the economy. The study was jointly conducted with the Registry Division in the Attorney General's Office and the Department of Economic Planning and Development in the Prime Minister's Office.

The study adopts WIPO's classification of copyright and related rights-based industries to estimate their share in:

- (a) value added or GDP;
- (b) national employment; and
- (c) share in foreign trade.

WIPO has categorized the industries into four groups. A brief definition and an industry example for each group are as follows:

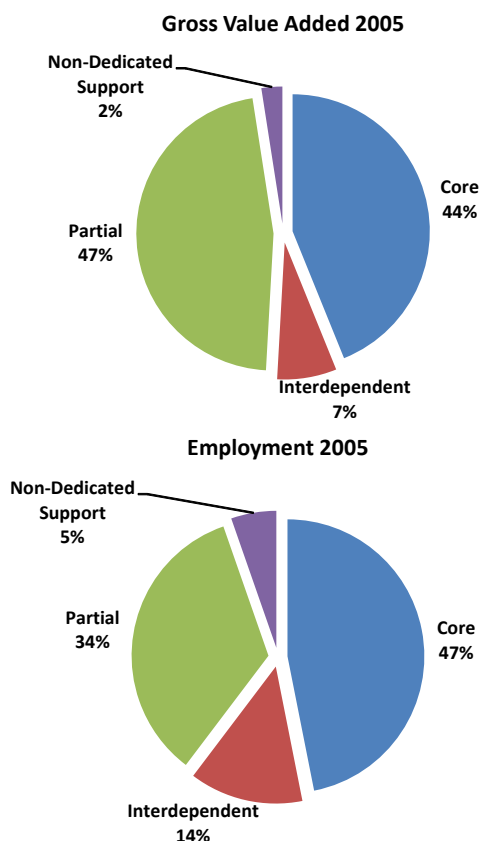
- (i) Core copyright industries are fully engaged in copyright works that are protected under the country's copyright law, e.g. press and literature.
- (ii) Interdependent copyright industries support the core copyright industries by supplying manufacturing and sale of equipment that are required in the production and dissemination of copyright works, e.g. TV sets.
- (iii) Partial copyright industries have activities that are partly associated with copyright works, e.g. museums.
- (iv) Non-dedicated support industries have a portion of their activities involved in facilitating the dissemination of copyright works, e.g. general wholesale and retail trade.

A total of 77 industries in the Economic Census 2006 were identified and grouped into 23 copyright-based industries. Census data on the copyright industries and trade data on copyright items were extracted for the reference years 2005 and 2006. A survey was conducted on a sample of partial copyright industries for estimation of the copyright factors, as only a portion of the activities are copyright-related.

On the whole, the copyright-based industries in Brunei Darussalam accounted for:

- 2.0% of GDP in 2005 and 1.6% in 2006;
- 3.3% of total employed workers in 2005 and 3.2% in 2006;
- 0.8% of total retained imports in 2005 and almost 0.7% in 2006.

Of the 2% contribution to GDP as measured by Gross Value Added in 2005, the largest share was from the partial copyright industries, accounting for almost half (47%) of copyright GDP. Following closely in second place was the group of core copyright industries (44%). The remaining portions were from the interdependent copyright industries (7%) and the non-dedicated support industries (2%). The employment shares of the four copyright groups differed considerably from those of the GDP shares. While the employment share of partial copyright industries was smaller than the GDP share, that of the other three copyright groups was larger, implying that the partial copyright industries were more productive as indicated by value added per worker.



In 2005, the group of copyright industries was comparable in size to the construction industry in terms of GDP share (2.6% vs copyright's 2%). However, the latter was a much larger employer (16.6% vs copyright's 3.3%). The workforce in the copyright group was comparable to that in transport and communication (3.2%), which had a higher share in GDP (2.9%). The implication is that productivity (as measured by value added per worker) in copyright industries was higher than that in construction, but lower than that in transport and communication. On a national basis, four copyright industries posted higher productivity than the national value added per worker of BND 97,927 in 2005. These four industries are:

- software and databases and radio and television in the core copyright group;
- architecture, engineering and surveying in the partial copyright group; and
- telephony and Internet telecoms in the non-dedicated support group.

An international comparison of the economic contributions of 12 countries with that of Brunei Darussalam was attempted from WIPO studies in the past years. Some of the observations were:

- Brunei's total copyright share in GDP of 2% in 2005 was almost the same as Bulgaria's share of 2.1% in 2003. Bulgaria's total copyright share rose to 2.8% in 2005. The United States' total copyright share of 11.1% in 2005 was the highest, followed by Hungary's 6.7% in 2002 and China's 6.4% in 2006.
- Brunei's total copyright employment of 3.3% in 2005 was slightly higher than Jamaica's 3.0% in the same year. In comparison, the United States' total copyright employment share was 8.5% and those of Hungary and China were 7.1% and 6.8% respectively.
- The contribution of copyright industries to GDP and employment tends to rise over time. There is also a tendency for the core copyright industries to become larger than the non-core copyright industries. Moreover, there is a consistent pattern of the copyright industries having a greater impact on employment than on GDP, as reflected in the larger employment share over that of GDP.

There is thus a potential for the core copyright industries in Brunei Darussalam to grow over time and provide another channel for the diversification of the economy. The core copyright industries comprise, in descending order of value added in 2005:

1. Radio and Television
2. Software and Databases
3. Press and Literature
4. Advertising Services
5. Visual and Graphic Arts
6. Music, Theatrical Production and Operas
7. Photography
8. Motion Picture and Video.

Based on the comments and suggestions from the survey on partial copyright industries, the recommendations for promoting copyright industries are to:

- (i) explore avenues to help enterprises to tap into other sources of design activities, to obtain exposure to new developments in design, and to market innovative designs;
- (ii) promote creativity through competitions and exhibitions, and encourage the use of local resources in creative activities;
- (iii) protect architectural designs and drawings as copyright works belonging to the respective company or firm that produced them, and educate the public on the need to obtain permission for use of copyright works;
- (iv) liberalise the architecture industry in the employment of foreign professionals;
- (v) enhance the demand for Brunei copyright works through marketing activities overseas and to tourists.

Moreover, the study findings suggest that certain copyright-based industries could be developed further for a more balanced economic structure and a larger creative and knowledge-based sector. The study has identified copyright-based industries which are above the national average in productivity and worker earnings or possess the potential for growth. However, in-depth research is needed to examine and determine copyright-based industries which best meet the country's development priorities. Given Brunei's small population, the development of selected copyright-based industries may need to consider overseas markets as well as niche areas. One way to maximize resources is to endorse and support international collaborations in copyright-based industries and develop joint projects with interested countries in promoting copyright activities, such as the development of more talents and professional approaches.

This study is the first in Brunei Darussalam, similar to many of the WIPO studies in other countries. The findings could be considered as an initial attempt at measuring the size of the copyright industries and their economic contribution to the country. It would be useful to track the development of the copyright industries, as knowledge-based and creative activities are being promoted in an increasingly competitive world. For the follow-up to this study, the following is proposed:

- (a) To disseminate the findings to top management of copyright industries and interested parties through, for instance, a seminar. The seminar can be used as a channel for feedback and policy inputs. It can also raise support for efforts to promote copyright activities in the country.
- (b) To update the estimates on the copyright industries' contribution to the economy when the 2010 Economic Census data become available.
- (c) To include estimates on the multiplying effects of copyright industries when the input-output table, which is being compiled presently, is completed. The multipliers of copyright industries will provide another dimension for policy formulation.

1. Introduction

Upon the request of the government of Brunei Darussalam for a study to estimate the economic size of the copyright sector, an exploratory mission was made in late February 2008 to Bandar Seri Begawan by Dimiter Gantchev of WIPO and Singapore IPA research fellow Chow Kit Boey. The mission team met with representatives from several government organisations, coordinated by staff of the Registry Division under the Attorney General's Chambers. A briefing on studies based on WIPO's framework (*Guide on Surveying the Economic Contribution of the Copyright-Based Industries*) and an outline of the Singapore study were presented by the mission team. Some information and data on the Brunei economy were provided to the mission team to assist in determining the scope and methodology for the requested study.

In consideration of the manpower constraint in Brunei Darussalam, WIPO commissioned Ms Chow to undertake the study as its principal researcher. The study team comprised staff from the Attorney General's Chambers, and the Department of Economic Planning and Development in the Prime Minister's Office of Brunei Darussalam. A technology transfer element was incorporated in the study report to facilitate future updating of the study's estimates for monitoring the development of copyright activities in Brunei Darussalam. The aim and scope of the study are detailed below, together with the structure of the final report.

1.1 Objective

The study aims to quantify the economic contribution of copyright-based industries in Brunei Darussalam in terms of:

- (i) share in value added or GDP;
- (ii) share in national employment; and
- (iii) share in foreign trade.

1.2 Scope

The study covers almost all the industries in the four categories of the WIPO's Guide.¹ Government copyright activities parallel to WIPO copyright industries are also included. Unpublished data using the four-digit Brunei Darussalam Standard Industrial Classification (BDSIC) 2007 are obtained from the 2006 Economic Census, which also provides data for 2005. Trade data on copyright products are extracted for imports, domestic exports and re-exports.

A survey of the group of partial copyright industries was conducted in order to determine the copyright factors. Owing to the small number of firms in many industries, a hybrid sampling method was adopted. A target of 150 returns was set, based on the total number and composition of firms in the partial copyright industries. Indicators of the intensity of copyright and intellectual property content in each industry were obtained. The factors were determined partly from a comparison of copyright factors in eight of the studies published under WIPO's Creative Industries Series, and two recent country reports.²

The shares of Brunei copyright industries to the national economy were estimated for operating revenue, gross value added, employee compensation, employment and number of businesses in 2005 and 2006. An international comparison of the contribution of Brunei copyright industries to GDP and employment was compiled mainly from WIPO's Creative Industries Series.

¹World Intellectual Property Organization, *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*, Geneva: 2003, WIPO Publication No. 893(E).

²World Intellectual Property Organization, *National Studies on Assessing the Economic Contribution of the Copyright-Based Industries*, Creative Industries Series No.1, Geneva: 2006, WIPO Publication No. 624e, and Creative Industries Series No.2, WIPO Publication No. 1009E.

1.3 Project Team

The team was led by WIPO consultant Chow Kit Boey. Representatives from the government of Brunei Darussalam were:

- (i) Attorney General's Chambers
 - (a) Dayang Naimah Md Ali, Assistant Solicitor General
 - (b) Nur Al-Ain Dr Haji Abdullah, Counsel, Registry Division
 - (c) Amiriah Haji Ali, Legal Officer, Registry Division.
- (ii) Department of Economic Planning and Development, Prime Minister's Office
 - (a) Hajah Mariah Haji Yahya, Acting Director, Department of Statistics
 - (b) Hajah Norhaslina Tamin, Acting Senior Officer, Department of Statistics
 - (c) Titisutinah Hj Mohd. Diah, Statistics Officer, Department of Statistics
 - (d) Hajah Sharipah Juriah Haji Wan Junaidi, Statistics Officer, Department of Statistics
 - (e) Aslina Abdulkhan, Assistant Statistics Officer, Department of Statistics
 - (f) Halimah Haji Abdul Rahman, Assistant Statistics Officer, Department of Statistics
 - (g) Hairol Nizam bin Haji Abd Hamid, Senior Economic Officer, Department of Planning
 - (h) Siti Maisarah Haji Majid, Economic Officer, Department of Policy and Coordination.

The allocation of tasks and responsibilities in the project was as follows:

- (i) Attorney General's Chambers:
 - (a) formation of study team;
 - (b) coordination of meetings;
 - (c) response to enquiries from surveyed firms;
 - (d) preparation of report section on copyright system in Brunei Darussalam.
- (ii) Department of Economic Planning and Development, Prime Minister's Office:
 - (a) extraction of Economic Census data on copyright industries for 2005 and 2006;
 - (b) extraction of trade data on copyright goods;
 - (c) conduct survey;
 - (d) survey data input.
- (iii) WIPO consultant:
 - (a) identification of Brunei copyright industries;
 - (b) survey questionnaire design and sampling recommendation;
 - (c) analysis of survey returns and estimation of partial copyright factors;
 - (d) estimation of copyright shares in national economy;
 - (e) preparation of report;
 - (f) presentation of findings.

1.4 Structure of Study

The study encompasses an executive summary and the following chapters:

1. Introduction – project background, objective, scope, team composition.
2. Brunei – special characteristics of the country.
3. Overview of the copyright system in Brunei Darussalam.
4. Methodology – data collection and survey of partial copyright industries.
5. Estimation of copyright factors for partial copyright industries.
6. Estimation of economic contribution of copyright-based industries.
7. International comparison of copyright-based industries.
8. Conclusions and Recommendations.

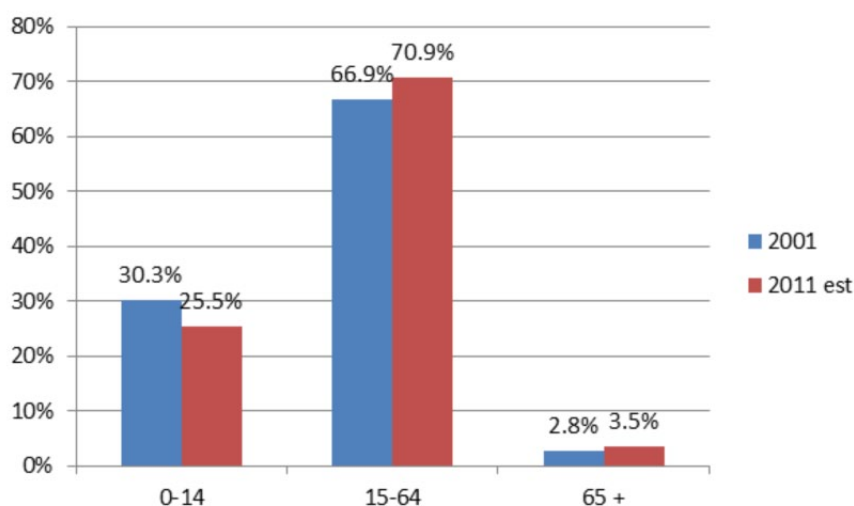
2. Brunei in Brief

With the world's 9th highest per capita GDP in 2010 (estimated at BND 40,703), Brunei Darussalam has also been ranked second among South East Asian countries in the Human Development Index.³ Its full name in Malay is Negara Brunei Darussalam ("Negara" means State in Malay, and "Darussalam" means "Abode of Peace" in Arabic). Brunei is heavily dependent on crude oil and natural gas. It is Southeast Asia's third largest oil producer and the world's fourth largest exporter of liquefied natural gas. Economic growth has become much slower since 2005, but the country commands the highest rate of macroeconomic stability in Asia. It has been noted that Brunei escaped partially from the fallout of the global financial crisis in 2008-2009, owing primarily to its conservative economic policies. This chapter looks at a few aspects of the country for a better understanding of the role of copyright industries in the economy.

2.1 People

Brunei Darussalam has a relatively young population (Chart 2.1). Seven in every ten of its people are in the age group of 15-64 years.⁴ A decade ago, the proportion was two-thirds. Those aged above 65 years constitute only 3.5%. Hence the dependency ratio is low, unlike in many neighbouring countries.

Chart 2.1: Population by Age Group 2011 versus 2001



The majority (66%) of the population (estimated at 406,200 in 2009) are Malays. Chinese constitute slightly over one tenth (11%) and the rest (23%) includes the indigenous group. The literacy rate (among those aged nine years and above) has been rising, from 80.3% in 1981 to 89.2% in 1991 and 93.7% in the latest census year of 2001.

More than half of the work force (188,800 in 2008) consists of foreign temporary residents (estimated at 100,000). The unemployment rate is relatively low at 4.0% in 2006, 3.4% in 2007 and 3.7% in 2008. The people enjoy free medical services and free education to university level. Rice and housing are subsidized and there is no personal income tax.

2.2 Gross Domestic Product

GDP increased rapidly from 2002 to 2006, largely due to rising prices in crude oil and natural gas (Chart 2.2). Real GDP expanded at a much slower pace, and was just 58% of the current values in 2008 (constant BND 11,754 million versus current BND 20,398 million).

³Estimated in CIA, *The World Factbook*, updated 16th March 2011.

⁴Figures for 2011 are from the above source.

Chart 2.2: Gross Domestic Product, 2002-2008 (BND million)

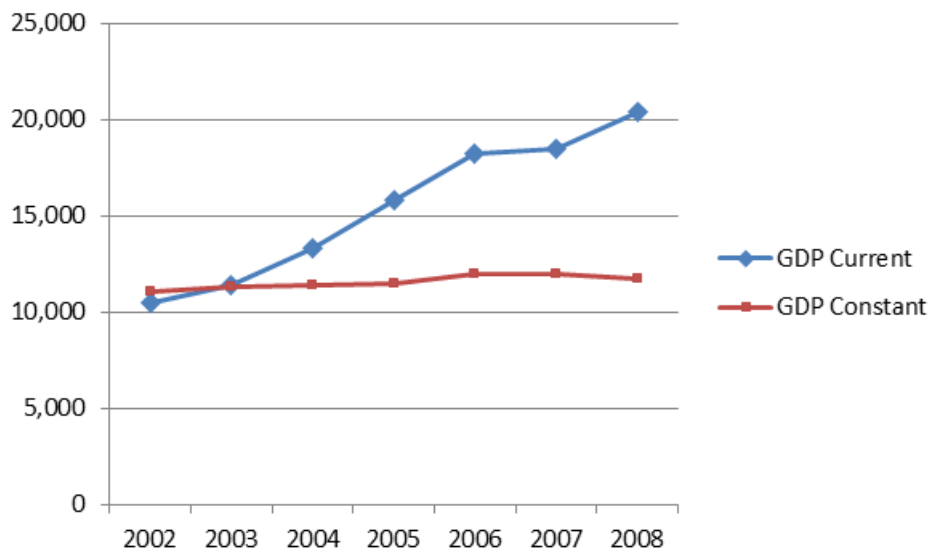
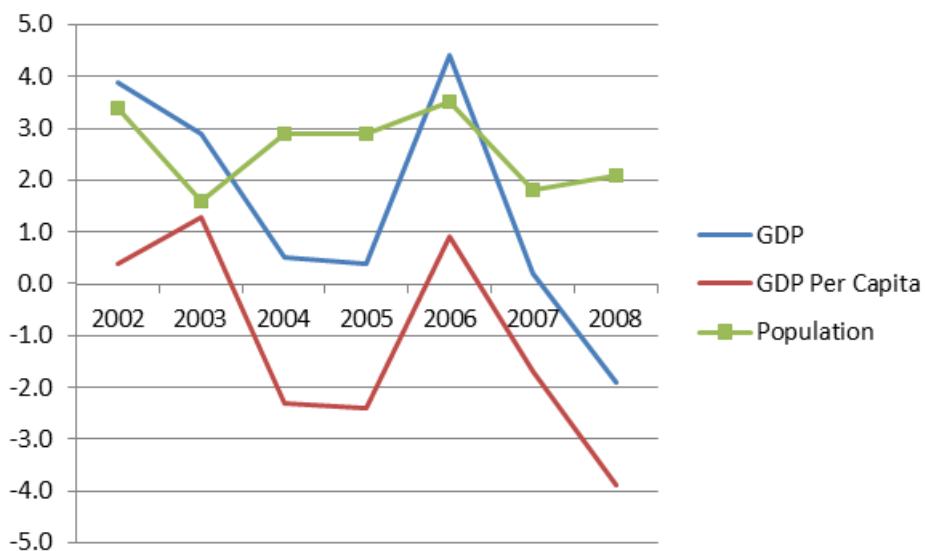


Chart 2.3 traces the growth rates of real GDP and per capita real GDP and population. The years 2002, 2003 and 2006 were good growth years for real GDP and per capita GDP. Real GDP grew above population growth and hence per capita GDP rose. But in the other years, population grew at a faster rate than that of real GDP, resulting in lower per capita GDP (negative growth rates). The year 2008 is the worst performing one with real GDP falling by 1.9% compared to the previous year, and per capita real GDP declining by 3.9% while population increased by 2.1%.

Chart 2.3: Growth Rates, 2002-2008 (%)



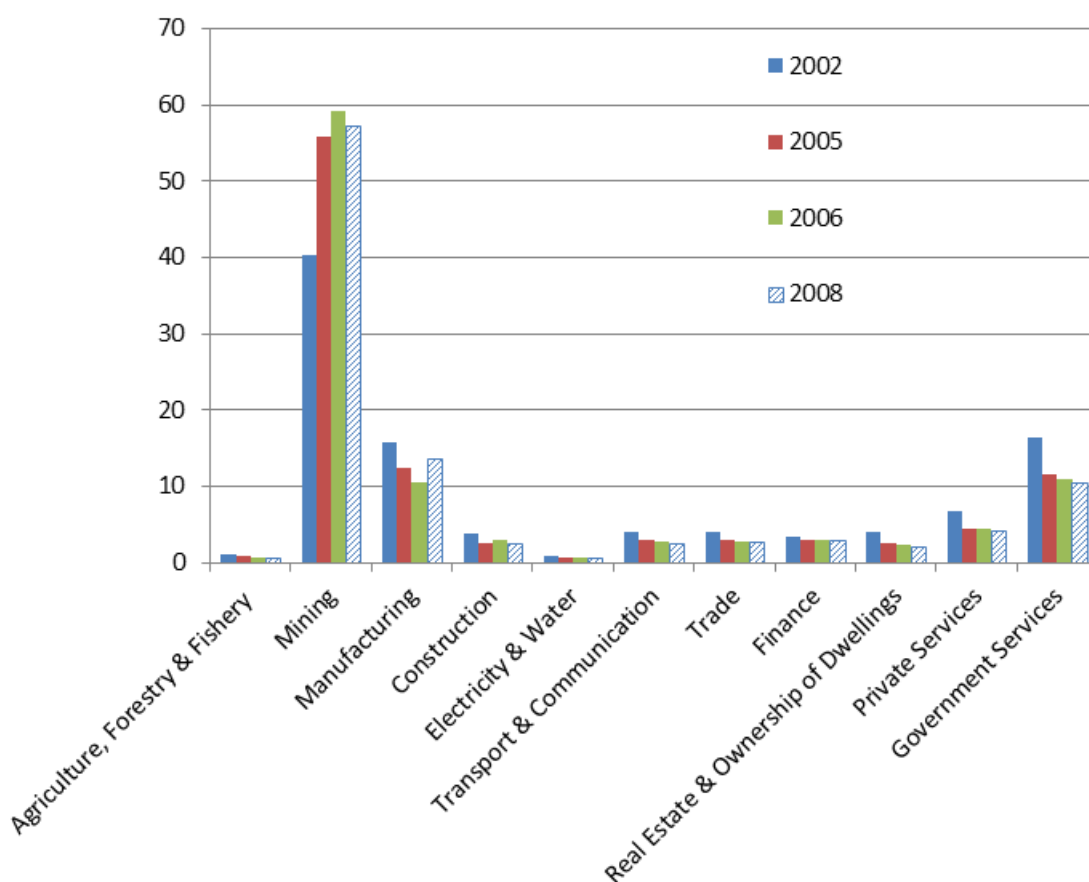
The primary cause of the near stagnation in real GDP in 2007 and contraction in 2008 can be seen in Table 2.1, which presents the price and production levels of oil and LNG in 2006-2008. While the price of oil rose by 45% from US\$69.59 per barrel in 2006 to US\$100.99 per barrel in 2008, production has fallen by 20% from a daily 219,000 barrels to 175,000 barrels over the same period. Similarly, the price of LNG doubled in the same period – the increase occurred mostly in 2008. Production of LNG, however, declined by 5%. This pattern of change explains the divergence between current and constant prices of GDP (in Chart 2.2).

Table 2.1: Price and Production of Oil and LNG

	2006	2007	2008
Price			
Oil (US dollars/barrel)	69.59	79.09	100.99
LNG (US dollars/MMBtu)	5.9131	6.2954	12.9262
Production			
Oil (thousand barrels/day)	219	194	175
Gas (MMscf/day)	1,250	1,215	1,182

Apart from oil, what is the relative size of the other sectors? Chart 2.4 displays the composition of GDP (in current prices) by sectors in 2002, 2005, 2006 and 2008. The two years 2005 and 2006 correspond to the copyright estimation period. Mining (the oil sector) captured 40% of GDP in 2002, expanded to 59.1% in 2006 and diminished slightly to 57.2% in 2008. The other sectors, thus, had their highest share in 2002. The government services sector captured the second largest share in 2002 at 16.3%, but was overtaken by manufacturing in 2008. Manufacturing is the only sector that expanded in 2008. It grew to 13.7% of GDP from 10.6% in 2006. The shares of the other sectors remained constant with less than half of one per cent change between the years 2005, 2006 and 2008.

Chart 2.4: Distribution of GDP by Economic Activity (% in Current Prices)0



Brunei's oil proved reserves, estimated in January 2010 at 1.1 billion barrels, have been ranked the world's 40th largest, and its natural gas proved reserves, estimated at 390.8 billion cubic metres, the world's 36th largest. The oil reserves are expected to last 25 years and natural gas reserves 40 years. In view of this, the government has embarked on an economic diversification programme in the past 10 years. Another available

indication of the development of sectors is the real growth rates. Charts 2.5a and 2.5b show the real growth rates in 2004-2008 for the nine major economic sectors against real GDP growth.

In Chart 2.5a, the growth rates of the mining sector and GDP exhibit the same pattern. The rates coincided in 2006; otherwise the growth rates in mining are lower than that of GDP. The manufacturing sector displays a similar pattern as GDP until 2008, when it grew much faster whereas GDP contracted. The transport and communication sector expanded at higher rates than GDP, except in 2004 and 2006. In 2007, its growth surpassed 10%. The construction sector grew in a similar pattern as transport and communication and increased slightly above 10% in 2007.

Chart 2.5a: Real Growth Rates of Sectors, 2004-2008 (%)

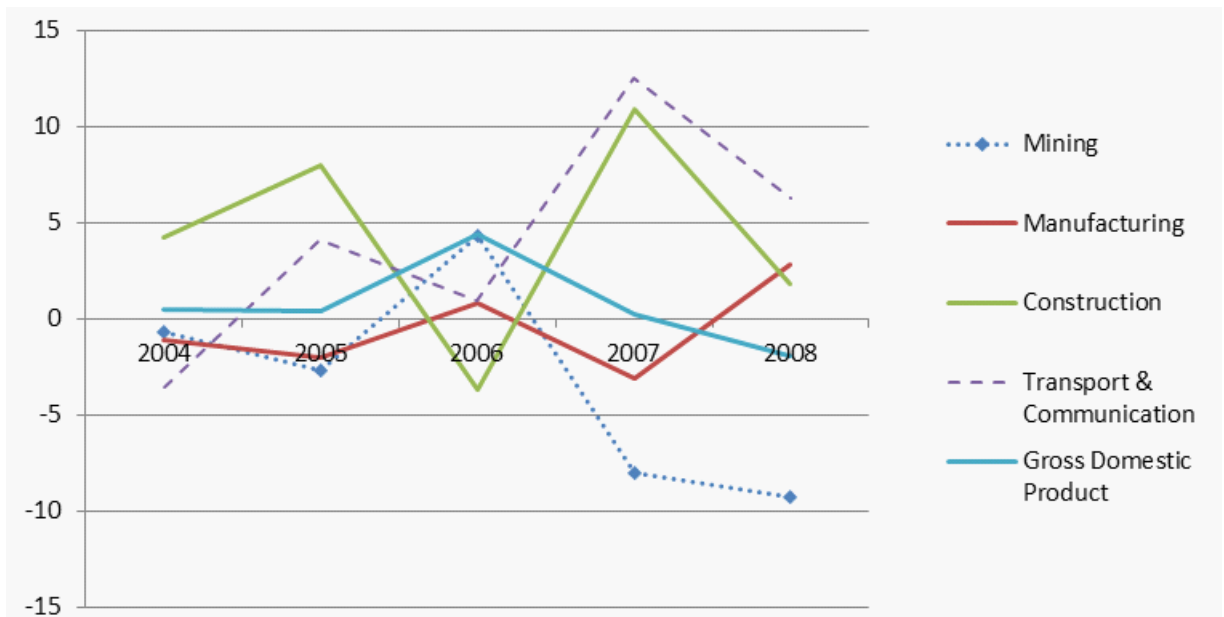
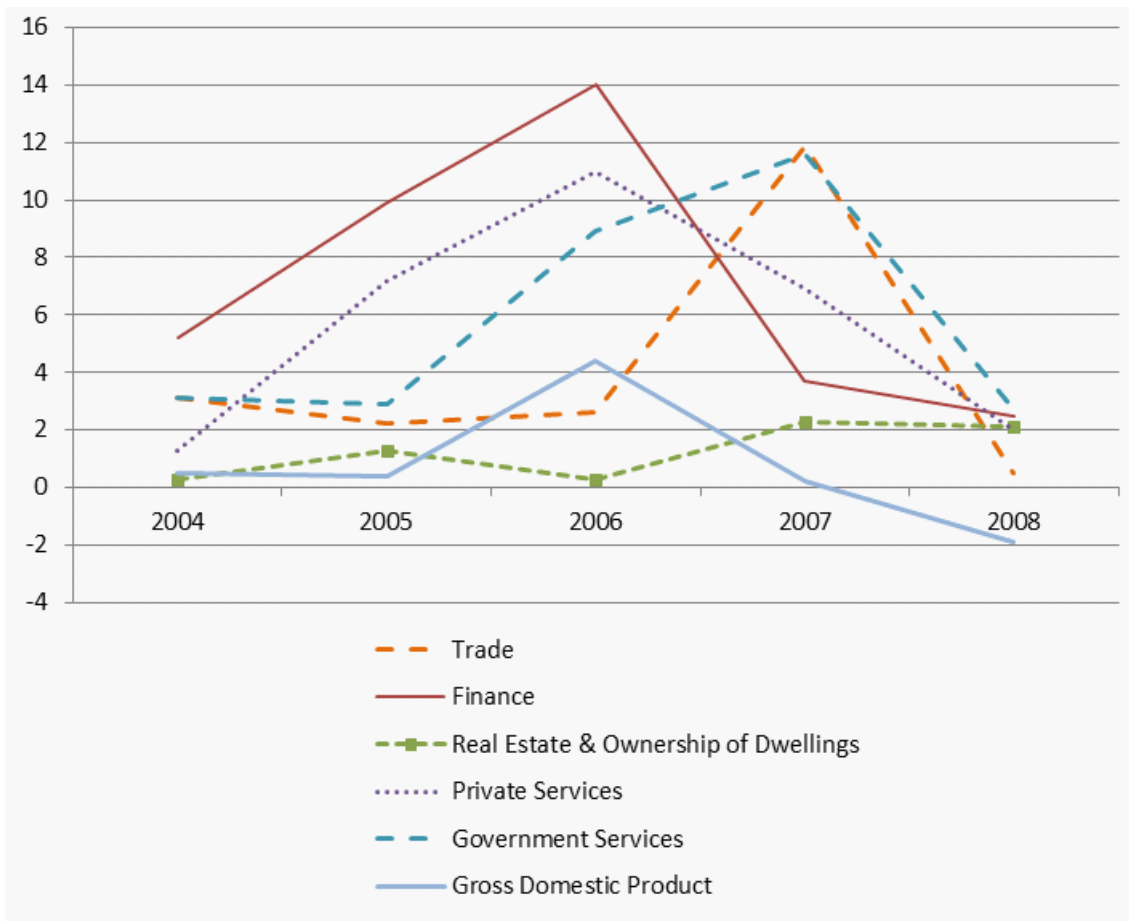


Chart 2.5b covers five sectors that did not contract in the five-year period. An anti-cyclical behaviour in the real estate and ownership of dwellings sector is detected. The government services sector started to grow faster in 2006, reached a peak growth at 11.6% in 2007, and fell to 2.7% in 2008. The growth rate in the trade sector stagnated in 2004-2006, escalated to 12% in 2007 and plunged to 0.5% in 2008. Private services expanded at a faster rate each year, reaching 11% in 2006, and slowed down to 2% in 2008, displaying a symmetrical pattern in growth rates. Among the nine sectors, finance was the fastest growing sector in 2004-2006 reaching a peak rate of 16%. Its growth plummeted to 3.7% in 2007 and 2.5% in 2008.

In real terms, the economy has become more diversified in 2008 compared to 2004. While other sectors grew more slowly in 2008, the manufacturing sector grew faster compared to the previous year. In 2008, when the finance sector was impacted by the worldwide crisis, transport and communication became the fastest growth sector at a creditable rate of 6.3%. With the exception of 2006, mining has become increasingly smaller, contracting by 9.3% in 2008.

Chart 2.5b: Real Growth Rates of Sectors, 2004-2008 (%)



2.3 Trade

Brunei has a trade ratio (exports and imports to GDP) of 83% in 2004 and 91% in 2008. Its re-exports constitute a small portion of total exports, 3.8% in 2004 decreasing to 1.3% in 2008. As expected, domestic exports exceed retained imports (imports less re-exports) by a large margin (reflected in Chart 2.6). Due to the small population, retained imports are low, only equivalent to around one quarter of domestic exports. Retained imports have been rising each year over the five-year period. Domestic exports also have been increasing, except in 2007. Hence, the trade balance shows the same direction of change as domestic exports.

Chart 2.6: Trade. 2004-2008 (BND million)

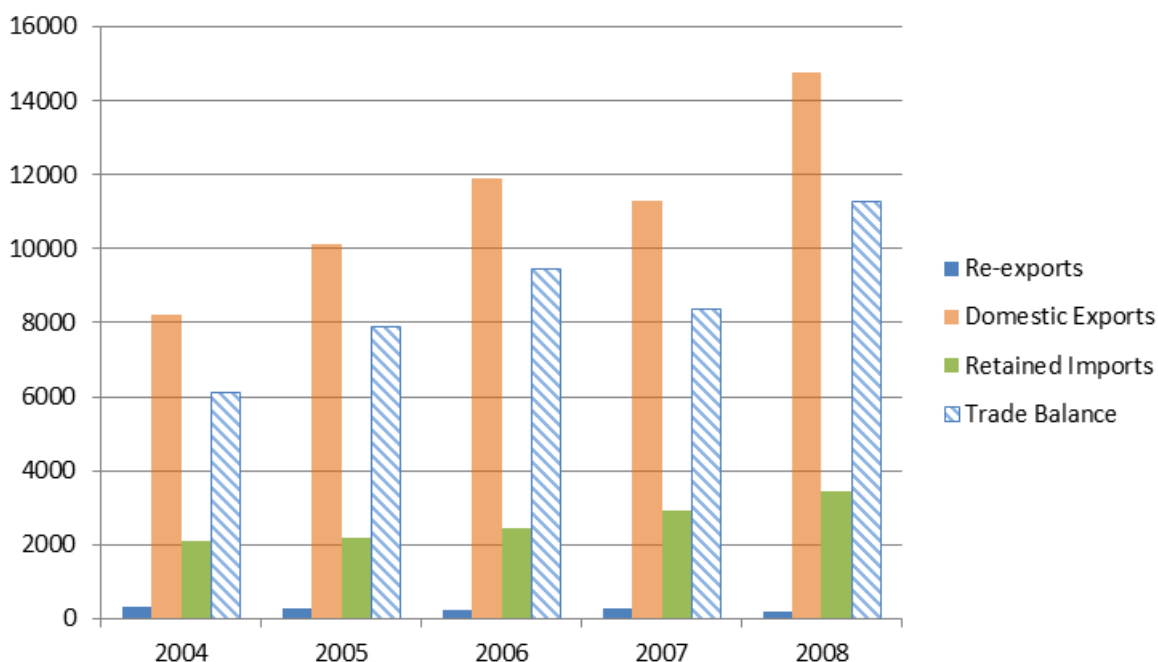


Table 2.2: Domestic Exports by Major Item and Country, 2008 (BND million)

	2008	Share
Domestic Exports	14,743.38	100%
Crude petroleum	7,948.50	53.9%
<i>Indonesia</i>	2,985.30	37.6%
<i>Australia</i>	1,545.20	19.4%
<i>Rep. of Korea</i>	1,519.40	19.1%
Natural gas	6,666.80	45.2%
<i>Japan</i>	5,975.20	89.6%
<i>Rep. of Korea</i>	691.6	10.4%
Garments	121.1	0.8%
<i>USA</i>	91.2	75.3%
<i>Singapore</i>	28.6	23.6%
Others	6.98	0.05%

The three major export items are crude petroleum, natural gas and garments. Their combined share in total domestic exports was 95% in 2008, with crude petroleum accounting for 54% and natural gas 45% (Table 2.2). The major destination countries of crude petroleum are Indonesia, Australia and the Republic of Korea; for natural gas, they are Japan and the Republic of Korea. Hence the top four countries for Brunei's domestic exports are, in descending order, Japan, Indonesia, the Republic of Korea and Australia. Garment exports constituted less than 1% of domestic exports in 2008. The garment industry has been negatively affected by the termination of the United States quota system in 2004. The United States, nevertheless, remains the largest market, absorbing 75% of the garment exports in 2008, while Singapore took 24%.

Machinery and transport equipment are the largest import items, accounting for over two-fifths (44%) of total imports in 2008. The second largest is manufactured goods with slightly over one-fifth (22%) share. Food items form the third largest group of imports at 12%. The major country sources of imports are Singapore, Malaysia, Japan, the United States and China. Japan is also a top market for Brunei's exports.

Table 2.3: Composition of Imports, 2008 (BND million)

	2008	Share
Imports	3,647.30	100%
Food	449.8	12.3%
Chemicals	262.8	7.2%
Manufactured goods	801.1	22.0%
Machinery & transport equipment	1,598.70	43.8%
Miscellaneous manufactured articles	303.3	8.3%
Others	231.6	6.3%

2.4 Mass Media

There are three daily local newspapers. Two of them are commercial newspapers in English (*Borneo Bulletin* and *Brunei Times*) and one is in Malay (*Media Permata*). A weekly newspaper in Malay (*Pelita Brunei*) is published by the government and distributed gratis to the public. The English newspapers had a circulation averaging 24,000 copies per issue during 2004-2008 (Table 2.4). This circulation volume was stable during the five-year period except for a spike to 27,000 in 2005. The Malay newspapers had a wider and increasing average circulation at 25,000 copies per issue in 2004, rising to 42,000 in 2007-2008.

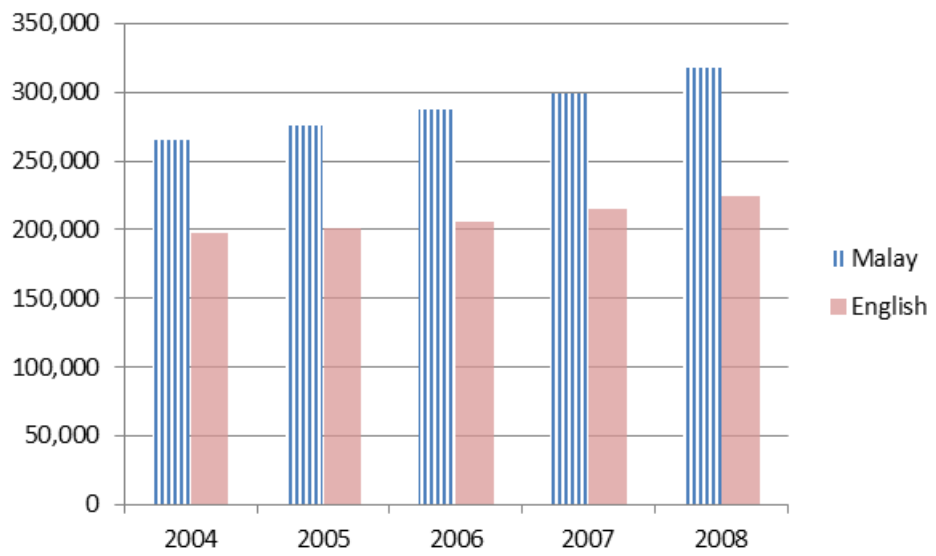
Table 2.4: Circulation of Local Newspapers

Language	Total Circulation per issue ('000)				
	2004	2005	2006	2007	2008
Malay	25	25	33.5	42	42
English	24	27	24	24	24

Besides newspapers, the government is also engaged in broadcasting and telecasting activities. It owns and operates one television channel and three radio stations. One other radio station and cable television service is provided by a private company.

An indication of activity in the press and literature field (a copyright industry) is the changes in book volumes in libraries. Available published data pertain to the book volumes at the Language and Literature Bureau under the Ministry of Culture, Youth and Sports. Chart 2.7 shows the volume of books in Malay and English at the Language and Literature Bureau. The volume of Malay books has been growing; at 4% in 2005-2007, and at a faster rate of 6% in 2008. That of English books has increased at lower rates; from almost 2% in 2005 to 4% in 2007-2008. The total volume, including books in other languages, has been enlarged by 17% over the five-year period.

Chart 2.7: Volume of Books at the Language and Literature Bureau



3. An Overview of Copyright Laws and Institutions in Brunei Darussalam⁵

3.1 Introduction

Brunei Darussalam's copyright legislation is quite new, as it was only on 1st May 2000 that the Emergency (Copyright) Order 1999 came into force. Before commencement, the copyright legislation in Brunei Darussalam was referred to the English Copyright Act 1911, by virtue of the Application of Laws Act 1951, which came into force on 25 April 1951.

Section 2 of this Act states:

“Subject to the provisions of this Act and save in so far as other provision has been or may hereafter be made by any written law in force in Brunei Darussalam, the common law of England and the doctrines of equity, together with statutes of general application, as administered or in force in England at the commencement of this Act, shall be in force in Brunei Darussalam.

Provided that the said common law, doctrines of equity and statutes of general application shall be in force in Brunei Darussalam so far only as the circumstances of Brunei Darussalam and of its inhabitants permit and subject to such qualifications as local circumstances and customs render necessary.”

As Brunei Darussalam was a British protected state until she gained her independence in 1984, Brunei Darussalam inherited the British legal system. In fact, the Emergency (Copyright) Order 1999 was modelled on the English Copyright, Designs and Patents Act 1988. The decision to enact her own copyright legislation stemmed from Brunei Darussalam's membership of the World Trade Organisation in 1995, as well as the realisation of the importance of copyright and intellectual property.

3.2 Protection of Copyrights

Copyright protection is automatic and thus there is no registration system. However, for the work to be protected, the work must:

- (i) be reduced to writing or some other material form;
- (ii) be original;
- (iii) be subject to the conditions for subsistence under the Copyright Order; and
- (iv) be qualified for protection under Brunei legislation.

Copyright Works

The works in which copyright can subsist under the Copyright Order, subject to the conditions for subsistence being met, are described in section 3(1) of the Order as follows:

- (a) dramatic work, including a work of dance or mime;
- (b) literary work, meaning any work other than a dramatic or musical work, including a table or compilation and a computer program;
- (c) musical work;
- (d) artistic work;
- (e) sound recordings;
- (f) films;
- (g) broadcasts;
- (h) cable programmes; and
- (i) typographical arrangement of published editions.

Works of these descriptions in which copyright subsists are referred to as copyright works.

⁵This chapter is prepared by Nur Al-Ain Dr Hj Abdullah, Legal Counsel/Deputy Registrar, Registry Division, Attorney General's Chambers, Brunei Darussalam.

Qualification for Copyright Protection

Copyright does not subsist in a work unless the requirements set out in Part I of the Order with respect to qualification for copyright protection are met. The Order provides two bases on which copyright protection may be obtained:

(a) **Qualifying person**

A qualifying person is defined as: a citizen of Brunei Darussalam; a person domiciled or resident in Brunei Darussalam or another country to which the relevant provisions of Part I extend; or a body corporate incorporated under the laws of Brunei Darussalam or of another country to which the relevant provisions of Part I have been applied.

(b) **Qualification by reference to country of first publication**

A literary, dramatic, musical or artistic work, a sound recording or film, or the typographical arrangement of a published edition qualifies for copyright protection if it is first published in Brunei Darussalam, or in another country to which the relevant provisions of the Order have been applied.

In the case of broadcasts and cable programmes, it will be the country from which the broadcast was made or the cable programme was sent. A broadcast qualifies for copyright protection if it was made from, and a cable programme qualifies for copyright protection if it was sent from Brunei Darussalam; or a country to which the relevant provisions of Part I have been applied.

Copyrights belonging to the government and Legislative Council

Where work is made by His Majesty the Sultan and Yang Di-Pertuan or by a public officer in the course of his duties, or is made by under the direction or control of the Legislative Council, then the work qualifies for copyright protection whether or not the general qualifying conditions by reference to the author, the place of publication or in the case of broadcasts and cable programmes, the place of transmission, are satisfied.

Application of other works in the Copyright Order

The Order applies to a work that is eligible for protection in Brunei Darussalam by virtue of an international convention or other international agreement to which Brunei Darussalam is a party.

Brunei Darussalam is a signatory to the Berne Copyright Convention and the TRIPs Agreement. As a result, if a work is first published in or transmitted from a Berne or TRIPs country, or if the author of the work is a citizen of or is domiciled in a Berne or TRIPs country, the owner will be able to take action for infringement in Brunei Darussalam. Similarly, works first published or transmitted in Brunei Darussalam, or having an author who is a Brunei citizen or is domiciled in Brunei Darussalam, will be protected in all other Berne or TRIPs countries.

Scope and Duration of Protection

(i) **Literary, dramatic, musical and artistic work**

Copyright will expire at the end of the period of 50 years from the end of the year in which the author dies.

Unknown Authorship

Copyright will expire at the end of the period of 50 years from the date on which the work was either made, first made available to the public or first published, whichever date is the latest, provided that the author's identity is revealed or is no longer in doubt before the expiration of that period.

(ii) **Computer-generated Works**

Copyright will expire at the end of the period of 50 years from the end of the year in which it was made.

(iii) **Sound Recordings and Films**

Copyright expires at the end of the period of 50 years from the end of the year in which it was made; or if it was released before the end of that period, 50 years from the end of the year in which it was released.

A sound recording or film is released when it is first published, broadcast or included in a cable programme service; or in the case of a film or film soundtrack, the film is first shown in public, provided that in each case no account is to be taken of any unauthorised act.

(iv) **Broadcast and Cable Programme**

Copyright expires at the end of the period of 50 years from the end of the calendar year in which the broadcast was made or the programme was included in a cable programme service.

Copyright in a repeat broadcast or cable programme expires at the same time as the copyright in the original broadcast or cable programme.

(v) **Typographical Arrangement of Published Editions**

Copyright expires at the end of the period of 25 years from the end of the calendar year in which the edition was first published.

(vi) **Government and Legislative Council**

Government

The maximum period of copyright protection for all literary, dramatic, musical and artistic works, if they remain unpublished, will be 125 years from the end of the calendar year in which they were made.

In the case of any such works which are published commercially before the end of the period of 75 years from the end of the calendar year in which they were made, then such works continue to enjoy copyright protection for a further period of 50 years from the end of the year in which they were first published.

Legislative Council

Copyright in a literary, dramatic, musical or artistic work subsists until the end of the period of 50 years from the end of the year in which it was made.

3.3 Infringement of Copyrights and Remedies

Infringement

Copyright infringement has two categories: Primary (direct infringement) and Secondary (indirect infringement).

(i) **Primary Infringement**

Copyright in a work is infringed by a person who, without the licence of the copyright owner, does, or authorises another to do, any of the acts which are designated as being 'acts restricted by the copyright'. Such acts, which are the acts which the owner of the copyright has the exclusive right to in Brunei Darussalam, are as follows:

- (a) in relation to all categories of works, to copy the work;
- (b) in relation to all categories of works, to issue copies of the work to the public;
- (c) in relation to literary, dramatic and musical works, to perform the work in public, and, in relation to sound recordings, films, broadcasts and cable programmes, to play or show the work in public;
- (d) in relation to literary, dramatic, musical and artistic works, sound recordings, films, broadcasts and cable programmes, to broadcast the work or include it in a cable programme service;
- (e) in relation to literary, dramatic and musical works, to make an adaptation of the work, or to do any of the acts specified in the previous paragraphs in relation to an adaptation of the work.

The Order specifically provides that the doing of any such act is restricted, whether done in relation to the work as a whole or as a substantial part of it, or whether done directly or indirectly.

(ii) Secondary Infringement

The copyright of a work is infringed by any person who, without the licence of the copyright owner:

- (a) possesses in the course of a business;
- (b) sells or lets for hire, or offers or exposes for sale or hire;
- (c) in the course of a business exhibits in public or distributes; or
- (d) distributes otherwise than in the course of a business to such an extent as to prejudicially affect the owner of the copyright,

an article which is, and which he knows or has reason to believe is, an infringing copy of the work.

The copyright in a work is also infringed by any person who, without the licence of the copyright owner, imports into Brunei Darussalam, otherwise than for his private and domestic use, an article which is, and which he knows or has reason to believe is, an infringed copy of the work.

The Order also provides that copyright will be infringed by a person who, without the licence of the copyright owner:

- (a) makes;
- (b) imports into Brunei Darussalam;
- (c) possesses in the course of a business; or

sells or lets for hire, or offers or exposes for sale or hire;

an article specifically designed or adapted for making copies of that work, knowing or having reason to believe that it is to be used to make infringing copies.

It is an infringement if the manufacture or importation for sale or rental of any device or means:

- (a) is specifically designed or adapted to circumvent any device or means intended to prevent or restrict reproduction of a work, sound recording or broadcast, or to impair the quality of any copy thereof; and/or
- (b) is susceptible to enable or assist the reception of an encrypted programme broadcast or otherwise communicated to the public, including by satellite, by any person not entitled to receive that programme.

It is also an infringement if the removal or alteration of any electronic rights management information without authority as well as any distribution, importation for distribution, broadcasting communication or making available to the public, without the authority, of a work, performance, sound recording or broadcast, by any person knowing or having reason to believe that electronic rights management information has been removed or altered without authority.

(iii) Other Infringement

The Order also imposes criminal liability for making, dealing with or using illicit recordings in relation to performances and empowers the court in criminal proceedings to make delivery up and disposal orders.

Remedies

The remedies available are civil remedies and criminal penalties.

(i) **Civil Remedies**

Any infringement is actionable by the copyright owner. However, an exclusive licensee has, except as against the copyright owner, the same rights and remedies as the copyright owner, which run concurrent with those of the owner. Nevertheless, an exclusive licensee will be able to take action only if the infringement concerns the subject matter of the licence agreement.

The civil remedies available for copyright infringement are: damages, injunctions, account (of profits), additional damages (i.e. punitive damages) and delivery up.

(ii) **Criminal Penalties**

Aside from the usual penalties, which are imprisonment and fines, the order also provides search warrants and delivery up.

Search warrants can be obtained by a police officer from a magistrate, authorising the police officer to enter and search premises, using such reasonable force as necessary. The warrant remains in force for 28 days from the date of its issue.

The Order also provides for delivery up where the order may be made by the court before which proceedings are brought against a person for an offence under Section 205 of the Order (i.e. criminal liability for making illicit recordings etc.).

Border Enforcement Measures

These measures allow copyright owners and licensees to request the detention of suspected pirated goods while they are subject to the control of the Royal Customs and Excise. Border enforcement measures do not, however, apply to goods imported by a person for their private and domestic use.

Right holders can request the assistance of the Royal Brunei Customs and Excise, lodging notices of their goods subject to copyright protection. When a notice has been lodged, Customs is able to detain unauthorised copies of goods subject to copyright protection.

Customs can detain goods subject to a notice for a period of ten working days. Notices are valid for either five years, after which they are renewable, or until the period of copyright protection expires. If Customs becomes aware that suspected infringing goods have been imported and an applicable notice is not in place, it can advise the right holder (if known) of the importation and advise them to lodge a notice with Customs.

Where goods are detained, Customs notifies right holders so that they can determine whether the goods are pirated. During this detention period, right holders must also decide whether they will pursue proceedings to prove that the goods infringe their rights. Suspected goods will be detained by Customs pending the decision of the court. If a right holder does not commence proceedings within the 10-day period, Customs is required to release the goods to the importer.

To help prevent the importation of unauthorised copies of goods, the copyright owner can give a notice to Customs requesting the detention of the goods.

When lodging a notice with Customs, the copyright owner must also deposit a sum of money that, in the opinion of Customs, is sufficient to reimburse the government of Brunei Darussalam for any liability or expense it is likely to incur as a result of the detention of the copies.

3.4 Institutional Framework for Copyright Protection

The institutions that are responsible for upholding the copyright legislation and to ensure adequate copyright protection in Brunei Darussalam are:

- (a) Attorney General's Chambers
- (b) The Royal Brunei Police
- (c) The Royal Customs and Excise.

However, there are other government bodies and a statutory board that assist in protecting copyright works. Examples are:

- (a) Radio Television Brunei
- (b) Ministry of Culture, Youth and Sports
- (c) Brunei Economic Development Board
- (d) University of Brunei Darussalam.

The Copyright Order has provisions for a Copyright Tribunal and Collective Management Organisation. However, so far, there are none established in Brunei Darussalam.

4. Methodology

To estimate the economic contribution of copyright activities, the following tasks need to be carried out first:

- (i) Identify Brunei Copyright Industries;
- (ii) Extract Unpublished Data from the Economic Census 2006;
- (iii) Identify Copyright Items in Foreign Trade;
- (iv) Extract Unpublished Data on Tradable Copyright Products;
- (v) Conduct Survey on Partial Copyright Industries;
- (vi) Estimate Partial Copyright Factors.

4.1 Copyright Industries in Brunei Darussalam

This study adopts WIPO's classification of copyright industries.⁶ WIPO's four categories of copyright industries reflect the degree of copyright activities. They are:

- (i) **Core Copyright Industries**
These are industries engaged fully in copyright works protected under the country's copyright law. Activities of the core copyright industries cover:
 - (a) creation, production and manufacturing (i.e. producing);
 - (b) performance, communication and exhibition (intangible forms of disseminating); and
 - (c) distribution, sales and services (distribution or intangible dissemination)" of copyright works.⁷

- (ii) **Interdependent Copyright Industries**
These are industries that support the core copyright industries by supplying (manufacturing and sale of) equipment that is required in the production and dissemination of copyright works. The equipment could be essential or primarily employed in the creation, production or use (consumption) of copyright works. Some examples of such equipment are TV sets, radios, VCRs. CD/DVD players, computers, and musical instruments. Equipment that is not primarily required by the core copyright industries includes photographic and cinematographic instruments, photocopiers, blank recording material and paper.

- (iii) **Partial Copyright Industries**
Part of the activities of partial copyright industries are associated with copyright works. As there are numerous industries partially related to copyright, WIPO has listed 10 major industries under this group. Copyright factors need to be estimated to capture the copyright content in the output of these industries, and subsequently the contribution of copyright to the economy.

WIPO stated that, "Some partial copyright industries have significant service components, which are not necessarily about production of works protected by copyright and have to be separated. For architecture, for example, various studies take between 65% to 75% of the architectural industry as having a copyright component and 25% to 35% as being related services."⁸

- (iv) **Non-Dedicated Support Industries**
A portion of the activities of this group of industries are "related to facilitating broadcast, communication, distribution or sales of works and other protected subject matter".⁹ These are general industries and do not specifically serve the three groups of copyright industries. Therefore copyright factors are needed to reflect the proportion of activities of non-dedicated industries that are associated with copyright.

⁶WIPO, *Guide*, op. cit.

⁷*Ibid*, p29.

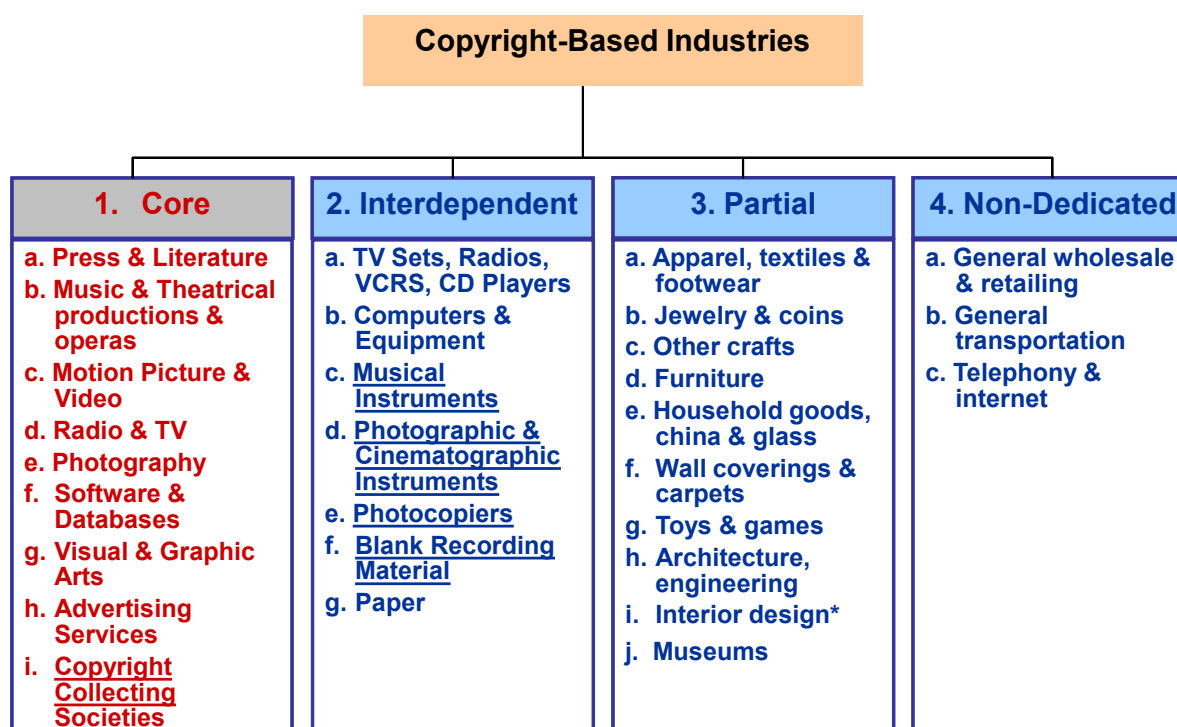
⁸*Ibid*, p34.

⁹*Ibid*, p35.

Chart 4.1 shows the composition of WIPO's four categories of copyright industries. As at the time of the study, one of the nine core copyright industries – namely, copyright collecting societies – is absent in Brunei Darussalam.¹⁰ According to the country's Economic Census 2006 and based on Brunei Darussalam Standard Industrial Classification (BDSIC) 2007 at the four-digit level, three of the seven interdependent copyright industries are found, namely TV sets, radios, VCRs, CD players, etc.; computers and equipment; and paper. Of the 10 partial copyright industries, data are available for nine (interior design is excluded). All three non-dedicated support industries are represented in the study. The copyright industries not covered in the study are underlined in the chart.

Appendix Table 1 provides details on the coverage of each copyright industry at BDSIC four-digit classification. Table 4.1 gives a summary of the number of four-digit BDSIC industries under each WIPO copyright industry. It shows that data for 77 BDSIC industries are needed for each of the reference years of the study.

Chart 4.1: WIPO Classification



Note: Underlined industries are excluded in Brunei study.

*Interior design is renamed specialized design activities in ISIC Rev.4 and has been reclassified under Core Copyright visual & graphic arts,

¹⁰However, since 2010, there are two collective management organizations. One is called BeAt Berhad, which represents authors and composers while the other is called BruCop Sdn Bhd, which represents sound recording.

Table 4.1: Composition of Brunei Copyright Industries at 4-Digit BDSIC Level

WIPO Category and Main Group		No. of four-digit BDSIC2007 Industries	WIPO Category and Main Group		No. of four-digit BDSIC2007 Industries
	Core (8)	(19)		Partial (9)	(26)
1	Press and Literature	7	12	Apparel, Textiles and Footwear	8
2	Music, Theatrical Productions, Operas	1	13	Jewellery and Coins	2
3	Motion Picture and Video	3	14	Other Crafts	2
4	Radio and Television	2	15	Furniture	3
5	Photography	1	16	Household Goods, China and Glass	8
6	Software and Databases	3	17	Wall Coverings and Carpets	1
7	Visual and Graphic Arts	1	18	Toys and Games	1
8	Advertising	1	19	Architecture, Engineering, Surveying	1
	Interdependent (3)	(6)	20	Museums*	-
9	TV Sets, Radios, VCRs, CD Players, etc.	3		Non-Dedicated (3)	(26)
10	Computers and Equipment	2	21	General Wholesale and Retailing	10
11	Paper	1	22	General Transportation	12
			23	Telephony & Internet	4
			* Not covered in Economic Survey.		

4.2 Data Collection for Copyright Industries

Data on Brunei copyright industries are extracted from the 2006 Economic Census for the years 2005 and 2006 by the Department of Statistics. The variables needed for the study are operating revenue, gross value added, employee compensation, employment and number of businesses. Out of a total of 214 industries covered in the survey at BDSIC four-digit classification, 77 pertain to copyright and related industries.

A report on the 2002 Economic Census has been published. From it, some comparative data with that extracted from the 2006 Economic Census are obtained in Table 4.2 below. Among the four years, 2001 recorded the highest number of businesses and total employment. But operating revenue, value added and employee compensation were lower than that in 2000. In 2006, the number of businesses has remained the same as in the previous year. However, operating revenue and total employment have increased, whereas employee compensation has declined. This implies that 2006 obtained, on a per business basis, higher operating revenue and employment, but the average salary fell.

Table 4.2: Selected Census Data on Total Businesses

	Operating Revenues (BND'000)	Compensation of Employees (BND'000)	Number of Businesses	Total Employment	Gross Value Added (BDN'000)
2000	13,620,041	1,115,389	3,319	63,266	7,751,362
2001	12,833,895	1,115,051	3,438	66,128	6,878,767
2005	20,684,023	1,689,586	3,345	59,242	
2006	23,839,861	1,241,533	3,345	63,719	

An attempt is made to include the copyright activities in the public sector. Brunei Darussalam Statistical Yearbook 2008 contains a section on government, in which Table 7.5 provides expenditure by ministry. Five public units with copyright activities are identified. They are Government Printing and Radio Television Brunei in the Prime Minister's Office; and Language and Literature Bureau, History Centre and Museums in the Ministry of Culture, Youth and Sports. The classification of these units is as follows:

Core Copyright

- a. Press and Literature
 - Government Printing
 - Language and Literature Bureau
 - History Centre
- d. Radio and Television
 - Radio Television Brunei

Partial Copyright

- j. Museums

4.3 Copyright Items in International Trade

Based on the United Nations Standard International Trade Classification Revision3 (SITC Rev 3), 20 items at the seven-digit level are selected for collection of copyright trade (Table 4.3). The trade series contain imports, exports, domestic exports and re-exports for the four years 2000, 2001, 2005 and 2006. The data are extracted by the Department of Statistics. The source of the trade information is the customs clearing forms required by the Royal Customs and Excise Department, Ministry of Finance.

Table 4.3: Copyright Items

SITC	Description
*8921200	Children's Picture, Drawing or Colouring Books
*8921300	Maps, Hydrographic & Similar Charts
*8921600	Printed Books
*8921900	Brochures, Leaflets & Similar Printed Matter
*8922100	Newspapers, Journals & Periodicals
*8924100	Transfers (Decalcomanias)
*8924200	Picture Postcards & Greeting Cards
*8928100	Labels of Paper or Paperboard
*8928200	Industrial Plans & Drawings
*8928400	Calendars of Any Kind Incl. Calendar Blocks
*8928500	Music, Printed or in Manuscript
*8928600	Advertising Material, Commercial Catalogues etc.
*8928900	Other Printed Matter Incl. Pictures & Photographs
*8986110	Video Tapes, Discs, Recorded
*8986120	Tapes, Discs, Packs, etc. For Computers, Recorded
*8986130	Discs for Reproducing Sound & Other Media for Laser Reading Systems, Recorded
*8986190	Other Recorded Media
*8987100	Gramophone Records
883	Cinematographic Film
896	Works of Art

4.4 Survey on Partial Copyright Industries

As partial copyright industries are not totally engaged in copyright works, estimation of the proportion of copyright activities in each of these industries is needed. A special survey is conducted to obtain indicators on the extent of copyright involvement in the partial copyright industries. The indicators are:

- (i) Importance of Copyright In Daily Operations of the Business;
- (ii) Per cent of Total Annual Expenditure on Royalties, Patents or Other Licensing Fees;
- (iii) Per cent of Annual Turnover Attributable to Copyright or Creative Activities;
- (iv) Number of Workers Involved in Creative Activities (full and part time).

The survey questionnaire also covers the primary activity of the business, turnover/sales in 2008, employment in 2008 and suggestions on enhancing creativity. The section on copyright questions includes a short paragraph on copyright and examples of copyright work. The questionnaire is bilingual (Malay and English).

The cover letter is signed by the Director of Statistics, PG HJ Osman, for the Director General, Department of Economic Planning and Development (JPKE), Prime Minister's Office, Brunei Darussalam. A copy of the survey letter and questionnaire is attached in the appendix.

From the industry description of BDSIC 2007 codes (which is virtually the same as ISIC Rev.4, the latest revision of the UN International Standards of Industrial Classification), 22 industries are selected as belonging to the partial copyright group (excluding the distribution industries). All industries with a small number of firms are included in the survey. A sample is taken of any industry with more than 50 businesses. The sample covers proportionately more large firms. A target return of 150 fully completed questionnaires is set. A mail survey is conducted, followed by telephone calls. At the close of the survey, there are 147 responses because of duplicates. As the responses represent an acceptable portion of the population, no attempt is made to obtain three more responses. The list of 22 identified partial industries, the number of businesses and the response rates are given in Table 4.4 below. With nine industries non-existing and one under the public sector, the survey returns cover 12 partial copyright industries in Brunei Darussalam.

Table 4.4: Selected Partial Copyright Industries for Survey

BDSIC 2007	Industry	No. of Companies	Sample Returns	
			Number	Response Rate
1322	Manufacture of made-up textile articles, except apparel	17	9	53%
1323	Manufacture of carpets and rugs	0	0	
1411	Manufacturing of wearing apparel, except fur apparel	14	5	36%
1412	Custom tailoring & dressmaking*	274	84	61%
1420	Manufacture of articles of fur	0	0	
1430	Manufacture of knitted and crocheted apparel	0	0	
1512	Manufacture of luggage, handbags and the like, saddlery and harness	0	0	
1520	Manufacture of footwear	1	1	100%
2310	Manufacture of glass and glass products	3	1	33%
2391	Manufacture of refractory products	2	2	100%
2393	Manufacture of other porcelain and ceramic products	0	0	
2396	Cutting, shaping and finishing of stone	1	1	100%
2399	Manufacture of other non-metallic mineral products n.e.c.	0	0	
2593	Manufacture of cutlery, hand tools and general hardware	0	0	
2599	Manufacture of other fabricated metal products n.e.c.	5	4	80%
3100	Manufacture of furniture	16	10	63%
3211	Manufacture of jewellery and related articles	0	0	
3212	Manufacture of imitation jewellery and related articles	1	1	100%
3240	Manufacture of games and toys	0	0	
3290	Other manufacturing n.e.c.	2	3	100%
7111	Architectural and land surveying activities	39	26	67%
9102	Museum activities and operation of historical sites and buildings	0	0	
	Total**	375	147	62%

* Sample of 138 companies surveyed. ** Total sample size is 239 companies.

The overall response rate stands at 62% with 147 returns from 239 companies in the survey sample. Among industries with more than five companies, architecture captured the highest response rate of 67%, followed by furniture at 63%, and custom tailoring and dressmaking at 61%. As expected, the Industry with the largest number of returns is custom, tailoring and dressmaking. Given that the total number of businesses in the partial copyright group in 2008 is 375, the 147 returns is equivalent to 39.2%, i.e. four out of every 10 businesses in the population participated in the survey.

Some data are obtained from the 2006 Economic Census on the partial copyright industries in 2006. Table 4.5 reveals that the surveyed partial copyright industries have expanded between 2006 and 2008 in terms of number of businesses, except for four industries (manufacture of footwear; manufacture of refractory products; cutting, shaping and finishing of stone; and manufacture of imitation jewellery and related articles).

Table 4.5: Partial Copyright Industries, 2006

BDSIC 2007	Survey List	Census 2006			
	No. of Companies	Operating Revenues	Compensation of Employees	Number of Businesses	Total Employment
1322	17	5,088,840	1,422,734	15	107
1411	14	75,911,765	10,746,983	10	1,944
1412	274	18,768,965	7,559,874	255	1,526
1520	1	51,619	24,481	1	4
2310	3	396,417	147,467	1	8
2391	2	237,868	148,182	2	28
2396	1	203,920	103,774	1	16
2599	5	1,833,507	444,276	4	44
3100	16	15,791,852	3,197,692	14	311
3211/3212	1	131,000	36,000	1	3
3290	3	-	-	-	-
7111	39	445,000,000	7,444,227	36	290
Total	375	563,415,753	31,275,690	340	4,281

Shaded rows are industries that registered lower number of businesses in 2006 compared to 2005.

An attempt is made to detect changes between the Census data of 2006 and the survey data of 2008. Two indicators are computed: operating revenue or sales per firm, and employment per firm. Since the sales question in the survey asks for 2008 turnover/sales in ten 10 brackets of values, the computation of sales using the mid-value (except for the lowest and highest brackets) may tend to give underestimates. For the less sensitive employment variable, the unstructured answers provide specific values and thus more accurate estimates.

Table 4.6 indicates that at least two partial copyright industries have expanded between 2006 and 2008 in sales and employment. They are custom tailoring and dressmaking and manufacture of jewellery and related articles. The average size of firms in these two industries is bigger, as measured by sales value and number of employees, in 2008 than in 2006. While the number of firms in custom tailoring and dressmaking increased, that in imitation jewellery has stayed constant. The single firm in imitation jewellery has recorded phenomenal growth in two years. By contrast, two industries have diminished workforce in 2008, namely manufacture of footwear and manufacture of other fabricated metal products. The fabricated metal products industry, however, has strong growth in sales. This could well imply productivity growth in the industry.

Table 4.6: Census versus Sample

BDSIC 2007	Industry	Operating Revenue/Sales Per Firm			Employment Per Firm		
		Census 2006	Sample 2008	Sample vs Census	Census 2006	Sample 2008	Sample vs Census
1322	Textiles articles	339,256	336,667	0.992	7.1	11.2	1.573
1411	Wearing apparel	7,591,177	1,617,000	0.213	194.4	376.6	1.937
1412	Custom tailoring	73,604	119,702	1.626	6.0	10.7	1.794
1520	Footwear	51,619	15,000	0.291	4.0	3.0	0.750
2310	Glass	396,417	350,000	0.883	8.0	10.0	1.250
2391	Refractory pdts	118,934	192,500	1.619	14.0	14.0	1.000
2396	Stone	203,920	150,000	0.736	16.0	19.0	1.188
2599	Fabricated metal pdts	458,377	1,375,000	3.000	11.0	9.0	0.818
3100	Furniture	1,127,989	1,126,000	0.998	22.2	29.3	1.319
3211/2	Imitation jewellery	131,000	5,000,000	38.168	3.0	47.0	15.667
3290	Other manufacturing*		620,000			8.7	
7111	Architectural	12,361,111	585,577	0.047	8.1	9.4	1.170
	Total	1,657,105	414,388	0.250	12.6	24.4	1.941

Shaded cell denotes a higher sample value than that of census.

* Industry absent in 2006 Economic Census.

Overall, the survey sample of firms reflects well the partial copyright industries in Brunei Darussalam. An analysis of the surveyed firms' responses to copyright indicators is carried out next to derive partial copyright factors for estimating the contribution of copyright to the economy.

5. Derivation of Partial Copyright Factors

The survey indicators on copyright – importance of copyright in daily operations, IP payment or revenue, employees engaged in creative activity – are analysed for the intensity of copyright in the industry. Partial copyright factors are then derived from the survey findings supplemented by a reference to factors adopted in similar studies published or conducted by WIPO.

5.1 Significance of Copyright

The survey question is reproduced below:

B1. How important is copyright in the daily operations of your business?

- | | | | |
|----------------------------|------------------|----------------------------|----------------------|
| <input type="checkbox"/> 1 | Very significant | <input type="checkbox"/> 3 | Slightly significant |
| <input type="checkbox"/> 2 | Significant | <input type="checkbox"/> 4 | Insignificant |

Preliminary scores given to the answers as follows:

1 = 0.9. 2 = 0.6 3 = 0.3 4 = 0

Some statistics are computed from the responses and presented in Table 5.1: the proportion of firms with answers 1 to 3, the average of all answers, the most common answer, and the score for the answers based on the above preliminary values assigned to the answers.

Table 5.1: Significance of Copyright

BDSIC 2007	Industry	Survey	Importance of Copyright in Daily Operations			
		Number of Firms	% Important*	Average	Mode	Factor
1322	Textiles articles	9	56%	2.38	2	0.49
1411	Wearing apparel	5	80%	2.60	2	0.42
1412	Custom tailoring	84	74%	2.46	2	0.44
1520	Footwear	1	100%	2.00	-	0.60
2310	Glass	1	100%	1.00	-	0.90
2391	Refractory pdts	2	100%	2.50	-	0.45
2396	Stone	1	100%	1.00	-	0.90
2599	Fabricated metal pdts	4	50%	3.00	4	0.30
3100	Furniture	10	60%	2.75	4	0.38
3212	Imitation jewellery	1	100%	1.00	-	0.90
3290	Other manufacturing*	3	100%	2.00	-	0.60
7111	Architectural	26	88%	1.85	1	0.66
	Total	147	76%	2.33	2	0.50

* % Impt = % of firms answering 1 – 3 (very significant – slightly significant)

Average = arithmetic average of all answers

Mode = largest group of answers

Three quarters of the firms (76%) indicated that copyright is important in the daily operations of their business. Apart from the four single-response/firm industries with 100% holding important copyright views (footwear, glass, stone, jewellery), two other industries have high responses (other manufacturing 100% and architecture 88%). The average rating on the scale from 1 – 4 is the highest for four industries: glass, stone, jewellery and architecture are rated above the significant level of 2. Additionally, architecture registers a mode of 1, i.e. the largest group of firms in the industry viewing copyright as very significant. This gives a preliminary factor of 0.66, which is the highest, except for single-response industries (glass, stone and jewellery).

5.2 IP Payment and Revenue

The survey covers expenditure on and revenue from intellectual rights. The questions are phrased as follows:

B2. Does your business receive or pay any form of payments for the use of intellectual rights in the form of royalties, patents or other licensing fees?

1 Yes 2 No Please proceed to B.5

(%)

B3. On average, what percentage of the annual total expenditure does your business spend on royalties, patents or other licensing fees?

(%)

B4. In your opinion, what percentage of turnover in your business is attributable to copyright or creative activities? (For example, design fees).

Table 5.2 captures firms that pay for or receive revenue from IP. These firms are grouped under IP payments only, IP revenue only and both IP payments and revenue. Almost a quarter (24%) of the surveyed firms are involved in IP payments and/or receipts. Two fifths (15 firms or 43%) of those who are involved have both IP payments and receipts. There are slightly more firms receiving IP revenue only than those making only IP payments. The proportions of IP spending in total expenditure, and that of IP revenue in total revenue in firms that are engaged in both, tend to be lower than the respective proportions in firms that undertake only one form of IP transaction. This is an observation from the returns in two industries, namely custom tailoring and dressmaking, and architecture. Architecture has a higher proportion of firms (58%) involved in IP spending/revenue than custom tailoring and dressmaking (15%). It also has more firms with IP revenue, whereas custom tailoring and dressmaking has more firms making IP payments. Across industries with expenditure on IP, the spending share in total expenditure ranges from 1% (fabricated metal products) to 80% (custom tailoring and dressmaking). The range for IP revenue in total revenue is 1% (fabricated metal products) to 100% (architecture).

Table 5.2: IP Payment/Revenue

BDSIC 2007	Industry	Survey	Expenditure/ Revenue on IP	IP Spending in TE	IP Revenue in TR	IP Spending and Revenue	
		% of Firms	# Firms (%)	# Firms (Range)	# Firms (Range)	# Firms	Range (TE) (TR)
1322	Textiles articles	9	0 (0%)	0 (0%)	0 (0%)	0	-
1411	Wearing apparel	5	1 (20%)	1 (4%)	0 (0%)	0	-
1412	Custom tailoring	84	13 (15%)	4 (4 – 80%)	1 (80%)	8	(2-75%) (2-75%)
1520	Footwear	1	0 (0%)	0 (0%)	0 (0%)	0	-
2310	Glass	1	0 (0%)	0 (0%)	0 (0%)	0	-
2391	Refractory pdts	2	1 (50%)	0 (0%)	1 (20%)	0	-
2396	Stone	1	1 (100%)	1 (70%)	0 (0%)	0	-
2599	Fabricated metal pdts	4	2 (50%)	1 (1%)	1 (1%)	0	-
3100	Furniture	10	1 (10%)	1 (30%)	1 (20%)	0	-
3212	Imitation jewellery	1	0 (0%)	0 (0%)	0 (0%)	0	-
3290	Other manufacturing*	3	1 (33%)	0 (0%)	1 (5%)	0	-
7111	Architectural *	26	15 (58%)	1 (15%)	6 (25-100%)	7	(1-25%) (12-100%)
	Total	147	35 (24%)	9	11	15	

TE = Total Expenditure

TR = Total Revenue

* One firm did not respond to the magnitude of IP payment/revenue.

5.3 Employees in Creative Activity

Another indicator of copyright intensity is the employment of creative persons. The question pertaining to this is:

B5. *How many of the workforce in your business are involved in creative activities? Creative activities include product/service creation and development, for example "A jewellery craftsman drawing the designs for his jewellery".*

Full-time personnel in creative activities _____ **persons**

Part-time personnel in creative activities _____ **persons**

Table 5.3 indicates that one tenth (9%) of the workforce in the surveyed firms are engaged in creative activity. The largest proportion of creative employees in the workforce is in glass manufacturing, followed by custom tailoring and dressmaking and architecture. Part-time creative employment is used extensively in the textile articles and imitation jewellery industries where more than half of the part-time workers are involved in creative activity. On the whole, almost four in ten part-time workers are employed in creative work. In total, a majority of firms (56%) employ creative workers on a full-time basis and one-tenth on part-time. Only one industry (stone cutting, shaping and finishing) does not employ creative workers either full time or part time. Three quarters (77%) of architecture firms have creative workers in full-time employment and almost one quarter (23%) of firms have part-time creative workers. This is the largest concentration of firms with creative employment apart from small industries with less than three firms.

Table 5.3: Persons in Creative Activity

BDSIC 2007	Industry	Creative Persons in Workforce		Firms with Creative Employment in Industry	
		Full Time	Part Time	Full Time	Part Time
1322	Textiles articles	9%	100%	44%	22%
1411	Wearing apparel	0%	40%	20%	20%
1412	Custom tailoring	23%	47%	57%	5%
1520	Footwear	33%	0%	100%	0%
2310	Glass	56%	0%	100%	0%
2391	Refractory pdts	18%	0%	100%	0%
2396	Stone	0%	0%	0%	0%
2599	Fabricated metal pdts	6%	0%	25%	0%
3100	Furniture	1%	0%	20%	0%
3212	Imitation jewellery	2%	67%	100%	100%
3290	Other manufacturing*	16%	0%	33%	0%
7111	Architectural *	33%	28%	77%	23%
	Total	9%	37%	56%	10%

5.4 Partial Copyright Factors

Firstly the copyright indicators are ranked for an overall perspective of the relative copyright intensity among the surveyed industries. The copyright scale is assigned scores with reference to the copyright factors in eight other studies under WIPO series. The copyright factors for Brunei partial copyright industries are then finalised for estimating the contribution to the economy.

Table 5.3 presents the ranking of selected indicators obtained from the survey. An additional indicator is added. It is the average copyright significance, weighted by the firm size as represented by its turnover/sales in 2008. The seven indicators are chosen to minimize the possible effect of bias in ranking owing to single-firm or single-response industries. The ranks for each industry across the indicators are added up. A final ranking of the total ranks is done. Accordingly, the manufacture of imitation jewellery industry possesses the most intensive copyright content, followed by architecture and the manufacture of glass. Two observations are noted. Firstly, the rank order of total ranks is close to that of average copyright significance or its weighted

counterpart. Secondly, architecture is ranked higher in total ranks than in copyright significance due to its greater involvement in IP payment/revenue and its employment of creative workers.

Table 5.4: Ranking of Selected Copyright Indicators

BDSIC 2007	Industry	Copyright Significance		Firms with IP Payment/ Revenue	% Workforce in Creative Work		% Firms with Creative Workers		Ranks	
		Av	Wt Av*	%Yes	FT	PT	FT	PT	Total	Ranking
1322	Textile articles	7	9	9	7	1	7	3	43	8
1411	Wearing apparel	10	8	6	11	4	10	4	53	10
1412	Tailoring	8	6	7	4	3	6	5	39	5
1520	Footwear	5	4	9	2	6	1	6	33	4
2310	Glass	1	1	9	1	6	1	6	25	2
2391	Refractory	9	12	3	5	6	1	6	42	7
2396	Stone	1	1	1	12	6	12	6	39	5
2599	Fabricated metal	12	11	3	8	6	9	6	55	11
3100	Furniture	11	10	8	10	6	10	6	61	12
3212	Jewellery	1	1	9	9	2	1	1	24	1
3290	Other mfg	5	7	5	6	6	8	6	43	8
7111	Architecture	4	5	2	2	5	5	2	25	2

Av = Average

Wt Av = Significance level weighted by size of firm as measured by turnover/sales in 2008.

Shaded cells indicate single firm or response industry.

Given the finding that the copyright significance indicator provides a good representation of the relative copyright intensity among the industries, an attempt is made to assign scores to the indicator to derive partial copyright factors. A reference is made to partial copyright factors adopted in other WIPO studies. A tabulation containing the factors of eight countries is produced in Table 5.5 below. The average of the factors for each industry is calculated and ranked. The top five copyright-intensive industries, in descending order, are:

1. Toys and games
2. Museums
3. Other crafts
4. Jewellery and coins
5. Architecture.

Coincidentally, the survey ranking for imitation jewellery and architecture is in line with that of the eight-country average since the survey does not cover the top three industries.

Table 5.5: Copyright Factors of Selected Countries

	Singapore	Latvia*	Hungary	Jamaica	Bulgaria	Lebanon	Malaysia	China	Average Factor	Rank
Apparel, textiles & footwear	0.4%	0.4%	0.5%	0.5%	0.6%	2.0%	15.0%	0.40%	2.48%	9
Jewellery & coins	25.2%	8.69%	25.0%	25.0%	20.0%	25.0%		8.00%	19.55%	4
Other crafts	42.0%		40.0%		40.0%		26.7%	40.00%	37.74%	3
Furniture	5.0%	41.00%	5.0%	5.0%	5.0%	5.0%	35.0%	5.0%	13.25%	6
Household goods, china & glass	0.6%		0.5%	0.5%	0.5%	2.5%	0.4%	0.3%	0.75%	11
Wall coverings & carpets	1.7%	1.65%	2.0%	0.5%	0.4%	2.5%	1.08%	2.0%	1.48%	10
Toys & games	42.0%	45.50%	50.0%	50.0%	40.0%	50.0%	26.7%	40.0%	43.03%	1
Architecture	8.3%		10.0%	50.0%	10.0%	10.0%	5.3%	6.0%	14.23%	5
Interior design	8.3%			2.0%			5.28%	5.0%	5.15%	8
Museums			50.0%	50.0%	50.0%	50.0%		0.5%	40.10%	2
Miscellaneous manufacturing		45.50%								
Wholesale & retail of partial copyright industries			5.0%	5.0%		6.0%			5.33%	7

* Average of Singapore and USA factors.

The Philippine study adopted Singapore's factors.

Mexico used the average of USA and Hungary factors.

Shaded cell denotes highest value in each industry.

The next step is to assign scores to the significance scale of 1 – 4 in the first question on copyright in the survey questionnaire. The highest factor of 50% in the eight-countries is adopted for the very significant answer 1. The copyright significance answers are given scores as shown in Table 5.6, and the weighted average answer for each industry is converted according to column 3 in the table.

Table 5.6: Copyright Significance Scores

Level of Significance	Significance Score	Score Range
1	50%	1 – <2 = 50% – > 30%
2	30%	2 – <3 = 30% – > 10%
3	10%	3 – <4 = 10% – > 1%
4	1%	4 = 1%

Using the score range, the weighted average significance values are converted to factors. This is presented in Table 5.7, which includes the significance values obtained from the survey responses. The factors in single-firm/response industries are adjusted based on a comparison of those in the eight countries and observations on IP involvement (in the last column of the table). They are adjusted downwards each with the highest value from the eight countries. For the imitation jewellery industry, the factor of Singapore's costume jewellery is taken. The factor for museums also adopts the highest factor of the eight countries.

Table 5.7: Conversion of Copyright Significance to Factor

BDSIC 2007	Industry	Significance	Factor	Adjusted Factor	Survey
		Average Weighted*	%	%	Observations on IP
1322	Textiles articles	2.30	24.00	24.00	No IP payment, moderate in-house IP work
1411	Wearing apparel	2.20	26.00	26.00	IP payment, high in-house IP work
1412	Custom tailoring	2.06	24.00	24.00	IP payment, high in-house IP work
1520	Footwear	2.00	30.00	15.00	No payment for IP, moderate in-house IP work
2310	Glass	1.00	50.00	2.50	No payment for IP, high in-house IP work
2391	Refractory pdts	3.73	2.70	2.70	No IP payment, moderate in-house IP work
2396	Stone	1.00	50.00	42.00	Payment for IP, no in-house IP work
2599	Fabricated metal pdts	3.42	5.80	5.80	IP payment, in-house IP work
3100	Furniture	2.41	21.80	21.80	IP payment, in-house IP work for medium firm
3212	Imitation jewellery	1.00	50.00	42.00	No IP payment, high in-house IP work
3290	Other manufacturing*	2.18	14.00	14.00	No IP payment, some in-house IP work
7111	Architectural *	2.04	29.20	29.20	IP payment, in-house IP work
Govt	Museums			50.00	

Govt = government

* Weighted by size of turnover/sales in 2008.

Industries with adjusted factors are shaded in blue.

Footwear, glass (household), stone (other craft), museums = highest in eight countries.

Jewellery = Singapore's costume jewellery in Appendix C.

The last step is to combine, where applicable, the four-digit BDSIC industries to WIPO partial copyright industries as listed in Appendix A. For two industries – wall coverings and carpets and toys and games – which do not have manufacturing activity in Brunei Darussalam, but specialized retail exists, the eight countries' highest value in each industry is used. The final set of partial copyright factors is presented in Table 5.8.

Table 5.8: Brunei Partial Copyright Factors

Partial Copyright Industries	Factor (%)
a. Apparel, textiles & footwear	22.3
b Jewellery & coins	42.0
c. Other crafts	42.0
d. Furniture	21.8
e. Household goods, china & glass	3.7
f. Wall coverings & carpets*	2.5
g. Toys & games*	50.0
h. Architecture, engineering, surveying	29.0
i. Museums	50.0

* Specialised retail only.

6. Economic Contribution of Copyright-Based Industries

After compiling BDSIC data at the four-digit industry level from the 2006 Economic Census and deriving the factors for the partial copyright industries, a few more tasks are needed for estimation of the economic contribution of copyright-based industries to Brunei Darussalam. Firstly, the four-digit industries data are grouped into copyright industries and WIPO categories based on the correspondence table in Appendix A. Secondly, government units engaged primarily in copyright activities are added. Thirdly, the partial copyright factors are applied to the partial copyright industries to obtain the portions that are involved in copyright work. Fourthly, the factors for the non-dedicated support industries are calculated using the combined share of core, interdependent and partial copyright industries in the economy.

6.1 Core Copyright Industries

From *Brunei Darussalam Statistical Yearbook 2006* Table 7.5 titled Government Expenditure by Department, the expenditures of three core copyright and one partial copyright activity are obtained. The financial data are converted to calendar year using simple proportions. The expenditure values are used as a proxy for revenue, a practice conventionally used for public units. For the other variables (value added, employee compensation and employment), the assumption of similar operations in the private sector is taken. The government units are:

- Government Printing (core)
- Language and Literature Bureau (core)
- History Centre (core)
- Radio Television Brunei (core)
- Museums (partial).

Table 6.1 shows the press and literature and radio and television core copyright industries augmented by the four government units. With the incorporation of government activity, press and literature becomes larger by half in 2005 and by almost half in 2006. Likewise, radio and television is expanded by three times in 2005 and by almost three times in 2006.

Tables 6.2 and 6.3 present the core copyright values for 2005 and 2006 respectively. The core copyright group of industries accounted for:

- 1% of Census total operating revenue in 2005 and 0.9% in 2006;
- 0.8% of GDP in 2005 and 0.7% in 2006;
- 501.6% of total employed workers in 2005 and 1.5% in 2006;
- 3.0% of Census employee compensation in 2005 and 3.2% in 2006;
- 5% of Census total number of businesses in both years as the firms are required to provide data for the two years.¹¹

¹¹There is little difference (less than 0.1%) in the percentages when government values are added to the Census data.

Table 6.1: Government in Core Copyright Category

BND '000 and Number

Core Copyright	Operating Revenues	Gross Value Added	Employee Compensation	Number of Businesses	Total Employment
2005					
a. Press & Literature	44,532	15,967	11,038	67	744
Government Printing	9,883	3,543	2,450	1	165
Language and Literature Bureau	10,648	3,818	2,639	1	178
History Centre	3,535	1,267	876	1	59
d. Radio & Television	14,821	12,546	1,356	2	90
Radio Television Brunei	47,730	40,405	4,367	1	290
2006					
a. Press & Literature	50,742	19,581	13,423	67	831
Government Printing	9,913	3,825	2,622	1	162
Language and Literature Bureau	11,020	4,253	2,915	1	180
History Centre	3,718	1,435	983	1	61
d. Radio & Television	16,004	13,440	1,483	2	53
Radio Television Brunei	48,108	40,401	4,458	1	159

Table 6.2: Core Copyright Industries, 2005

BND '000 and Number

	Operating Revenues 2005	Gross Value Added 2005	Employee Compensation 2005	Number of Businesses 2005	Total Employment 2005
Core Copyright (8)					
a. Press & Literature	68,597	24,595	17,003	70	1,146
b. Music, Theatrical Production & Operas	11,797	3,624	2,022	19	246
c. Motion Picture & Video	3,151	711	670	3	58
d. Radio & Television	62,551	52,951	5,723	3	380
e. Photography	7,202	2,338	1,515	22	127
f. Software & Databases	23,265	27,873	3,347	16	126
g. Visual & Graphic Arts	11,718	5,871	2,807	17	239
h. Advertising Services	16,002	16,503	3,225	18	220
Subtotal	204,282	134,466	36,312	168	2,542
% of National Total*	1.0%	0.8%	3.0%	5.0%	1.6%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment.

Table 6.3: Core Copyright Industries, 2006

BND '000 and Number

	Operating Revenues 2006	Gross Value Added 2006	Employee Compensation 2006	Number of Businesses 2006	Total Employment 2006
Core Copyright (8)					
a. Press & Literature	75,392	29,094	19,943	70	1,235
b. Music, Theatrical Production & Operas	13,216	3,804	1,892	19	257
c. Motion Picture & Video	2,930	813	563	3	53
d. Radio & Television	64,111	53,842	5,941	3	212
e. Photography	6,586	2,657	1,371	22	123
f. Software & Databases	21,681	9,411	3,723	16	148
g. Visual & Graphic Arts	13,593	4,122	2,682	17	244
h. Advertising Services	17,136	21,242	3,415	18	275
Subtotal	214,646	124,983	39,530	168	2,547
% of National Total	0.9%	0.7%	3.2%	5.0%	1.5%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment. Shaded cells denote lower values than in 2005.

Despite higher absolute operating revenue in 2006, the core copyright industries expanded more slowly than the average rate for the economy. The three core copyright industries with lower operating revenue in 2006 were motion picture and video, photography, and software and databases (which fell the most by BND 1.5 million). The smaller contribution of core copyright industries to GDP in 2006 is due to lower gross value added in visual and graphic art and software and databases (which declined by BND 18 million). The proportion of core copyright compensation to employees grew by 3.2% in 2006, up by 1.1% points from that in 2005. But four core copyright industries paid out less to employees, of which two also employed fewer workers in 2006. The two core copyright industries which registered higher values in the four variables (operating revenue, gross value added, employee compensation and employment) in 2006 were press and literature and architecture services.

There is market concentration in the core copyright group of industries. The three largest industries accounted for around 70% of the group's operating revenue, gross value added, employee compensation, employment and number of businesses (Table 6.4). The dominant industry is press and literature, which is among the top three in all variables except employee compensation. Four in 10 (42%) of the group's businesses are in the press and literature industry, which generated a third (25%) of the group's operating revenue, one fifth (23%) of gross value added and one tenth (11%) of jobs in 2006. The radio and television industry is almost as large as press and literature in terms of operating revenue and is in the top three in employee compensation. Software and databases is the third largest in operating revenue. Advertising services is another major industry, with the largest shares in gross value added (43% in 2006), employee compensation (50%) and employment (48%), reflective of a human capital-intensive industry. Motion picture and video overtook music, theatrical production and operas in the top three position in 2006 in gross value added, and is the third largest employer in both years. The latter is the second largest payroll master with the third largest number of businesses.

Table 6.4: Top Three Core Copyright Industries

2006		2005		
Operating Revenue				
1	Press & Literature	35%	Press & Literature	34%
2	Radio & Television	30%	Radio & Television	31%
3	Software & Databases	10%	Software & Databases	11%
Gross Value Added				
1	Advertising Services	43%	Advertising Services	39%
2	Press & Literature	23%	Music, Theatrical Production & Operas	21%
3	Motion Picture & Video	17%	Press & Literature	18%
Employee Compensation				
1	Advertising Services	50%	Advertising Services	47%
2	Music, Theatrical Production & Operas	15%	Music, Theatrical Production & Operas	16%
3	Radio & Television	9%	Radio & Television	9%
Total Employment				
1	Advertising Services	48%	Advertising Services	45%
2	Press & Literature	11%	Press & Literature	15%
3	Motion Picture & Video	10%	Motion Picture & Video	10%
Number of Businesses				
1	Press & Literature	42%		
2	Photography	13%		
3	Music, Theatrical Production & Operas	11%		

6.2 Interdependent Copyright Industries

Of the three interdependent copyright industries, paper is the only manufacturing industry in the group. The other two – TV sets, radios, VCRs, CD players, etc. and computers and equipment – consist solely of wholesale and retail trade. The copyright factor adopted for the interdependent copyright industries is one following the practice of recent WIPO studies.

Tables 6.5 and 6.6 present the interdependent copyright values for 2005 and 2006 respectively and the group's contributions to the economy. The estimates suggest that the interdependent copyright industries accounted for:

- 0.7% and 0.6% of Census total operating revenue in 2005 and 2006 respectively;
- 0.1% of GDP in both 2005 and 2006;
- 0.4% of total employed workers in 2005 and in 2006;
- 0.9% of Census employee compensation in 2005 and 1.0% in 2006;
- 2.3% of Census total number of businesses in both years as the firms are required to provide data for the two years.

Table 6.5: Interdependent Copyright Industries, 2005

BND '000 and Number

	Operating Revenues 2005	Gross Value Added 2005	Employee Compensation 2005	Number of Businesses 2005	Total Employment 2005
Interdependent Copyright (3)					
a. TV sets, Radios, VCRs, CD Players, etc.	21,835	11,798	2,584	18	123
b. Computers & Equipment	115,751	8,981	8,515	58	578
c. Paper	2,284	535	356	1	20
Subtotal	139,869	21,314	11,455	77	721
% of National Total	0.7%	0.1%	0.9%	2.3%	0.4%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment.

Table 6.6: Interdependent Copyright Industries, 2006

BND '000 and Number

	Operating Revenues 2006	Gross Value Added 2006	Employee Compensation 2006	Number of Businesses 2006	Total Employment 2006
Interdependent Copyright (3)					
a. TV sets, Radios, VCRs, CD Players, etc.	32,908	16,619	2,956	18	128
b. Computers & Equipment	107,613	7,362	9,316	58	623
c. Paper	3,214	536	359	1	19
Subtotal	143,735	24,517	12,631	77	770
% of National Total	0.6%	0.1%	1.0%	2.3%	0.4%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment. Shaded cells denote lower values than in 2005.

All the values of the three interdependent copyright industries are higher in 2006 than in 2005, except for the operating revenue and gross value added of computers and equipment. The decline of BND 8.1 million in operating revenue of the computers and equipment industry reduced the group's share in operating revenue by 0.1% point. The smaller gross value added of computers and equipment, however, did not offset the increase in the other two interdependent copyright industries and thus the group's share in gross value added remained constant.

Computers and equipment predominates in the interdependent copyright group of industries. It contributes the lion's share in operating revenue (83% in 2005 and 75% in 2006); employee compensation (74% in both years); total employment (80%); and number of businesses (75%). The industry with the largest share of gross value added is TV sets, radios, VCRs, CD players, etc., capturing over half of the group's total (55% in 2005 and 68% in 2006). This implies that the operating surplus margin in computers and equipment is lower than in the audio and visual equipment industry. The paper industry is the smallest in the group across all indicators, reflecting the small manufacturing base in Brunei Darussalam.

Table 6.7: Ranking of Interdependent Copyright Industries

2006			2005	
Operating Revenue				
1	Computers & Equipment	75%	Computers & Equipment	83%
2	TV sets, Radios, VCRs, CD Players, etc.	23%	TV sets, Radios, VCRs, CD Players, etc.	16%
3	Paper	2%	Paper	2%
Gross Value Added				
1	TV sets, Radios, VCRs, CD Players, etc.	68%	TV sets, Radios, VCRs, CD Players, etc.	55%
2	Computers & Equipment	30%	Computers & Equipment	42%
3	Paper	2%	Paper	3%
Employee Compensation				
1	Computers & Equipment	74%	Computers & Equipment	74%
2	TV sets, Radios, VCRs, CD Players, etc.	23%	TV sets, Radios, VCRs, CD Players, etc.	23%
3	Paper	3%	Paper	3%
Total Employment				
1	Computers & Equipment	81%	Computers & Equipment	80%
2	TV sets, Radios, VCRs, CD Players, etc.	17%	TV sets, Radios, VCRs, CD Players, etc.	17%
3	Paper	2%	Paper	3%
Number of Businesses				
1	Computers & Equipment	75%		
2	TV sets, Radios, VCRs, CD Players, etc.	23%		
3	Paper	1%		

6.3 Partial Copyright Industries

The copyright factors derived in Section 5 of this report are applied to the data on partial copyright industries compiled from the 2006 Economic Census and the government financial statement. Of the nine partial copyright industries, two – wall coverings and carpets and toys and games – are in retail trade only and can be expected to be small industries.

Tables 6.8 and 6.9 present the estimates for the partial copyright industries in 2005 and 2006 respectively. As a group, the partial copyright industries accounted for:

- 1.2% of Census total operating revenue in 2005 and 1.0% in 2006;
- 0.9% of GDP in 2005 and 0.7% in 2006;
- 1.1% of total employed workers in each of the two years;
- 1.4% of Census employee compensation in 2005 and 1.5% in 2006;
- 5.3% of Census total number of businesses in both years as the firms are required to provide data for the two years.

Table 6.8: Partial Copyright Industries, 2005

BND '000 and Number

	Operating Revenues 2005	Gross Value Added 2005	Employee Compensation 2005	Number of Businesses 2005	Total Employment 2005
Partial Copyright (9)					
a. Apparel, textiles & footwear	41,461	11,302	6,206	81	960
b. Jewellery & coins	10,866	3,071	1,692	24	131
c. Other crafts	20,500	5,657	2,761	34	288
d. Furniture	20,080	4,276	2,582	16	196
e. Household goods, china & glass	11,428	2,366	919	6	59
f. Wall coverings & carpets	62	38	14	0	2
g. Toys & games	1,791	597	392	5	33
h. Architecture, engineering, surveying	146,876	112,712	1,495	11	85
i. Museums	5,149	1,846	1,276	1	86
Subtotal	258,212	141,865	17,336	176	1,838
% of National Total	1.2%	0.9%	1.4%	5.3%	1.1%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment.

The combined operating revenue, gross value added and total employment of the partial copyright industries are lower in 2006 compared to those in 2005. The weaker performance is due mainly to architecture, engineering and surveying and apparel, textiles and footwear. The decline in operating revenue in 2006 is largely attributable to the fall of BND 18.9 million in architecture, engineering and surveying and of BND 9.1 million in apparel, textiles and footwear. The two partial copyright industries also encountered lower gross value added of BND 17.2 million and BND 1.5 million respectively. The slight decrease in total employment in 2006 is due primarily to a smaller workforce in apparel, textiles and footwear. In contrast, three industries expanded or did not contract in 2006. They are jewellery and coins, furniture and museums.

Table 6.9: Partial Copyright Industries, 2006

BND '000 and Number

	Operating Revenues 2006	Gross Value Added 2006	Employee Compensation 2006	Number of Businesses 2006	Total Employment 2006
Partial Copyright (9)					
a. Apparel, textiles & footwear	32,368	9,770	5,491	81	929
b. Jewellery & coins	11,417	4,074	1,806	24	136
c. Other crafts	19,329	6,136	2,557	34	281
d. Furniture	21,753	4,708	3,336	16	207
e. Household goods, china & glass	13,724	2,904	891	6	64
f. Wall coverings & carpets	60	41	13	0	2
g. Toys & games	1,709	544	383	5	35
h. Architecture, engineering, surveying	129,940	95,484	2,174	11	85
i. Museums	5,216	2,013	1,380	1	85
Subtotal	235,516	125,674	18,030	176	1,824
% of National Total	1.0%	0.7%	1.5%	5.3%	1.1%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment. Shaded cells denote lower values than in 2005.

Table 6.10: Top Three Partial Copyright Industries

2006			2005	
Operating Revenue				
1	Architecture, engineering, surveying	55%	Architecture, engineering, surveying	57%
2	Apparel, textiles & footwear	14%	Apparel, textiles & footwear	16%
3	Furniture	9%	Other crafts	8%
Gross Value Added				
1	Architecture, engineering, surveying	76%	Architecture, engineering, surveying	79%
2	Apparel, textiles & footwear	8%	Apparel, textiles & footwear	8%
3	Other crafts	5%	Other crafts	4%
Employee Compensation				
1	Apparel, textiles & footwear	30%	Apparel, textiles & footwear	36%
2	Furniture	19%	Other crafts	16%
3	Other crafts	14%	Furniture	15%
Total Employment				
1	Apparel, textiles & footwear	51%	Apparel, textiles & footwear	52%
2	Other crafts	15%	Other crafts	16%
3	Furniture	11%	Furniture	
Number of Businesses				
1	Apparel, textiles & footwear	46%		68%
2	Other crafts	19%		
3	Jewellery & coins	13%		

Architecture, engineering and surveying is the largest partial copyright industry in terms of operating revenue and gross value added (Table 6.10). It accounts for half of the group's operating revenue and three-quarters of the value added. However, it is much smaller in employee compensation, total employment and number of businesses. Apparel, textiles and footwear ranks second in operating revenue and gross value added, albeit much smaller than architecture, engineering and surveying. It is, however, the largest in the other three indicators for which architecture, engineering and surveying is not among the top three industries. Its payroll is around one-third of the group's employee compensation, while its workforce is half of the group's employment and it constitutes almost half of the number of businesses in the group. Furniture has become a more important industry as reflected in its ranking in operating revenue, employee compensation and employment.

6.4 Non-Dedicated Support Industries

As with other WIPO studies, there are three non-dedicated support industries. The copyright factors are based on the magnitude of the combined core, interdependent and partial industries in the economy. The assumption is that the broad non-dedicated support industries serve the copyright industries and other non-copyright industries in the same ratio as their respective size in the economy. Table 6.11 reproduces the data and the estimated factors. The factors for 2006 operating revenue, gross value added and total employment are lower than that for 2005. The lower gross value added factor was due to lower value added in the core and partial copyright groups, and that for operating revenue was due to the partial copyright group; whereas the lower total employment factor was due mainly to a large increase in national employment.

Table 6.11: Non-Dedicated Support Copyright Factors

BND and Number

	Operating Revenues	Gross Value Added	Compensation of Employees	Number of Businesses	Total Employment
2005					
National Total	20,684,023,351	15,864,100,000	1,228,786,290	3,345	162,000
Core, Interdependent, Partial	602,363,559	297,645,152	65,103,209	421	5,101
NDS Factor 2005	0.029122166	0.018762183	0.052981718	0.125993333	0.031488786
2006					
National Total	23,839,861,289	18,370,200,000	1,241,533,176	3,345	173,100
Core, Interdependent, Partial	593,896,704	275,174,934	70,191,502	421	5,141
NDS Factor 2006	0.024911919	0.01497942	0.056536147	0.125991629	0.02969886

* National values are those of Economic Census except for GVA and Employment, which are from Statistical Yearbook 2006.

Tables 6.12 and 6.13 present the estimated values for the non-dedicated support industries for 2005 and 2006 respectively. The non-dedicated support industries accounted for:

- 0.3% of Census total operating revenue in 2005 and in 2006;
- 0.1% of GDP in 2005 and 0.08% in 2006;
- 0.2% of total employed workers in 2005 and in 2006;
- 0.8% of Census employee compensation in 2005 and 0.9% in 2006;
- 1.5% of Census total number of businesses in both years as the firms are required to provide data for the two years.

Table 6.12: Non-Dedicated Support Industries, 2005

BND '000 and Number

	Operating Revenues 2005	Gross Value Added 2005	Employee Compensation 2005	Number of Businesses 2005	Total Employment 2005
Non-Dedicated Support (3)					
a. General Wholesale & Retailing	39,131	8,589	3,603	38	159
b. General Transportation	19,300	2,492	4,945	10	115
c. Telephony & Internet Telecomm	10,141	610	884	2	14
Subtotal	68,573	17,152	9,432	51	288
% of National Total	0.3%	0.11%	0.8%	1.5%	0.2%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment.

Table 6.13: Non-Dedicated Support Industries, 2006

BND '000 and Number

	Operating Revenues 2006	Gross Value Added 2006	Employee Compensation 2006	Number of Businesses 2006	Total Employment 2006
Non-Dedicated Support (3)					
a. General Wholesale & Retailing	37,429	7,284	4,148	38	163
b. General Transportation	17,675	2,752	5,731	10	114
c. Telephony & Internet Telecomm	11,775	4,792	1,605	2	38
Subtotal	66,879	14,828	11,486	51	315
% of National Total	0.3%	0.08%	0.9%	1.5%	0.2%

* Economic Census total for operating revenue, employee compensation and number of businesses, and GDP and total number of employed for gross value added and total employment. Shaded cells denote lower values than in 2005.

The operating revenue and gross value added of general wholesale and retailing, the largest industry in the group, fell in 2006 whereas employee compensation rose with a slight increase in the workforce. The decline in the group's gross value added is also attributable to a lower gross value added in the telephony and internet communication industry. The increase in operating revenue of telephony and internet communications is more than offset by the decrease in the other two industries, resulting in a lower overall operating revenue in 2006.

General wholesale and retailing dominates in all the indicators except employee compensation (Table 6.14). General transportation has the largest payroll, constituting half of the group's compensation to employees in both years but employs about four in 10 of the group's workers.

Table 6.14: Ranking of Non-Dedicated Support Industries

2006			2005	
Operating Revenue				
1	General Wholesale & Retailing	56%	General Wholesale & Retailing	57%
2	General Transportation	26%	General Transportation	28%
3	Telephony & Internet Telecomm	18%	Telephony & Internet Telecomm	15%
Gross Value Added				
1	General Wholesale & Retailing	49%	General Wholesale & Retailing	50%
2	Telephony & Internet Telecomm	32%	Telephony & Internet Telecomm	35%
3	General Transportation	19%	General Transportation	15%
Employee Compensation				
1	General Transportation	50%	General Transportation	52%
2	General Wholesale & Retailing	36%	General Wholesale & Retailing	38%
3	Telephony & Internet Telecomm	14%	Telephony & Internet Telecomm	9%
Total Employment				
1	General Wholesale & Retailing	52%	General Wholesale & Retailing	55%
2	General Transportation	36%	General Transportation	40%
3	Telephony & Internet Telecomm	12%	Telephony & Internet Telecomm	5%
Number of Businesses				
1	General Wholesale & Retailing	76%		
2	General Transportation	21%		
3	Telephony & Internet Telecomm	3%		

6.5 Overall Copyright-Based Industries

Table 6.15 gives an overview of the contribution of each category of copyright-based industries to the economy together with their combined total shares in the five indicators. Overall, the copyright industries in Brunei Darussalam captured:

- 3.2% of Census total operating revenue in 2005 and 2.8% in 2006;
- 2.0% of GDP in 2005 and 1.6% in 2006;
- 3.3% of total employed workers in 2005 and 3.2% in 2006;
- 6.1% of Census employee compensation in 2005 and 6.6% in 2006;
- 14.1% of Census total number of businesses.

Table 6.15: Economic Contribution of Copyright Industries

BND '000 and Number

	Operating Revenue	Gross Value Added	Employee Compensation	Number of Businesses	Total Employment
Core Copyright 2005	204,282	134,466	36,312	168	2,542
<i>% of National Total</i>	1.0%	0.8%	3.0%	5.0%	1.6%
Core Copyright 2006	214,646	124,983	39,530	168	2,547
<i>% of National Total</i>	0.9%	0.7%	3.2%	5.0%	1.5%
Interdependent Copyright 2005	139,869	21,314	11,455	77	721
<i>% of National Total</i>	0.7%	0.1%	0.9%	2.3%	0.4%
Interdependent Copyright 2006	143,735	24,517	12,631	77	770
<i>% of National Total</i>	0.6%	0.1%	1.0%	2.3%	0.4%
Partial Copyright 2005	258,212	141,865	17,336	176	1,838
<i>% of National Total</i>	1.2%	0.9%	1.4%	5.3%	1.1%
Partial Copyright 2006	235,516	125,674	18,030	176	1,824
<i>% of National Total</i>	1.0%	0.7%	1.5%	5.3%	1.1%
Non-Dedicated Support 2005	68,573	17,152	9,432	51	288
<i>% of National Total</i>	0.3%	0.1%	0.8%	1.5%	0.2%
Non-Dedicated Support 2006	66,879	14,828	11,486	51	315
<i>% of National Total</i>	0.3%	0.08%	0.9%	1.5%	0.2%
Total Copyright 2005	670,937	314,798	74,535	472	5,389
<i>% of National Total</i>	3.2%	2.0%	6.1%	14.1%	3.3%
Total Copyright 2006	660,775	290,003	81,675	472	5,456
<i>% of National Total</i>	2.8%	1.6%	6.6%	14.1%	3.2%
National Total* 2005	20,684,023	15,864,100	1,228,786	3,345	162,000
National Total* 2006	23,839,861	18,370,200	1,241,533	3,345	173,100

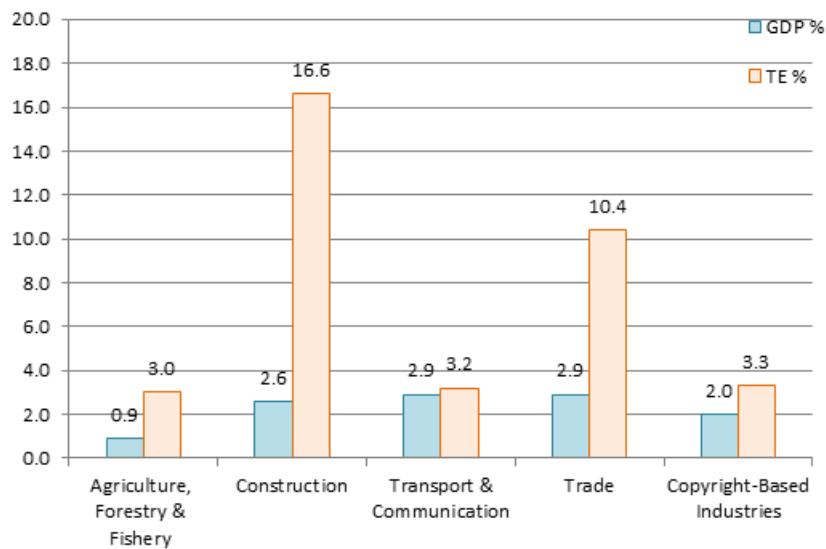
* National values are those of Economic Census except for GVA and Employment, which, are from Statistical Yearbook 2006.

The lower share in operating revenue in 2006 is primarily due to smaller operating revenue among the partial copyright industries. Gross value added in three of the four groups of copyright industries fell in 2006, resulting in a decline in the combined share of 0.4% points. Only the interdependent copyright group of industries performed better in gross value added in 2006. Employee compensation rose across the four groups of copyright industries, lifting the total share in the economy by 0.3% points. Total employment in copyright industries rose slightly, whereas national employment expanded by almost 7% in 2006.

The largest contributor to operating revenue and GDP is the partial copyright industries, which as a group is slightly larger than the core copyright industries group. The partial copyright group also accounts for a slightly larger share of the number of businesses than the core copyright group. The core copyright industries are, however, the largest employer and payroll master. The smallest group, across all indicators, is the non-dedicated support industries.

A comparison is made between the copyright-based industries with other sectors or industries in the Brunei economy. The industries are selected based on their proximity in size to the copyright industries and the availability of published data. In terms of GDP contribution to the economy, the group of copyright-based industries is closest in size to the construction industry in 2005 (Chart 6.1). However, the latter is a much larger employer. The workforce in the copyright group is slightly larger than that in transport and communication, which in turn is slightly higher than the employment in the agriculture, forestry and fishery sector. The trade industry is relatively labour-intensive given its GDP share in the economy, compared to the copyright industries.

Chart 6.1: Relative Size of Copyright-Based Industries, 2005



6.6 Per Worker Performance

From the Economic Census data, further insights to the copyright industries are obtained. The variables computed are per worker operating revenue, gross value added and employee compensation. The corresponding data for the whole economy are calculated and used as a benchmark. Charts 6.2 and 6.3 display the copyright industries, which are above or close to the national average for operating revenue in 2005 and 2006 respectively.

Of the 23 copyright industries in the study, nine registered per worker operating revenue above the Census average of BND 127,679 in 2005, and 10 above the Census average of BND 137,723 in 2006. The industry that obtained above-average operating revenue in 2006 is paper. The nine industries that attained above-average operating receipts in both years comprise:

- two core copyright industries (software and databases and radio and TV);
- two interdependent copyright (computers and equipment, and TV sets, radios, VCRs, CD players, etc.);
- two partial copyright (architecture, engineering and surveying, and household goods, china and glass); and
- all three non-dedicated support industries.

Architecture, engineering and surveying and telephony and internet telecoms are the two industries with respectively the highest and second highest operating revenue in both years.

A smaller number of copyright industries – four in both years – are above the national value added per worker of BND 97,927 in 2005 and 106,125 in 2006 (Charts 6.4 and 6.5). They are:

- two core copyright (software and databases, and radio and television) in 2005, and one (radio and television) in 2006;
- one partial copyright (architecture, engineering and surveying) in 2005 and 2006;
- one interdependent copyright (TV sets, radios, VCRs, CD players, etc.) in 2006; and
- one non-dedicated support (telephony and internet telecoms) in both years.

Three industries, which have higher value added per worker than the average for the total copyright group, are ranked higher in 2006, namely radio and television, TV sets, radios, VCRs, CD players, etc. and advertising. As in the case of operating revenue per worker, architecture, engineering and surveying attains the top position in value added per worker in both years. Its per worker operating revenue and value added in 2005 are almost 14-fold higher than the national average, while that in 2006 are about 11-fold higher. On the other hand, the total copyright operating revenue per worker is 98% of the national average in 2005 and 88% in 2006, while value added per worker is 60% and 50% of the national average respectively.

Chart 6.2: Copyright Industries with High Operating Revenue Per Worker, 2005

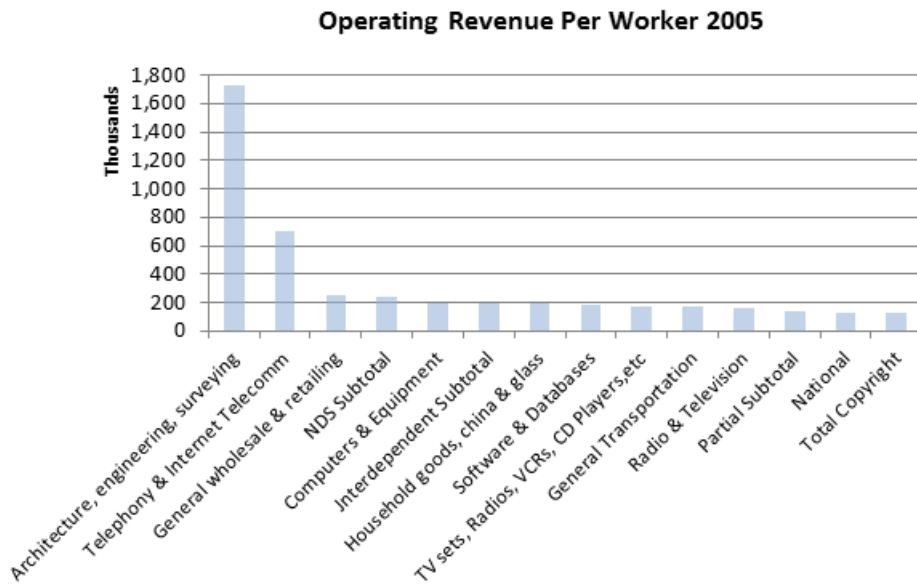


Chart 6.3: Copyright Industries with High Operating Revenue Per Worker, 2006

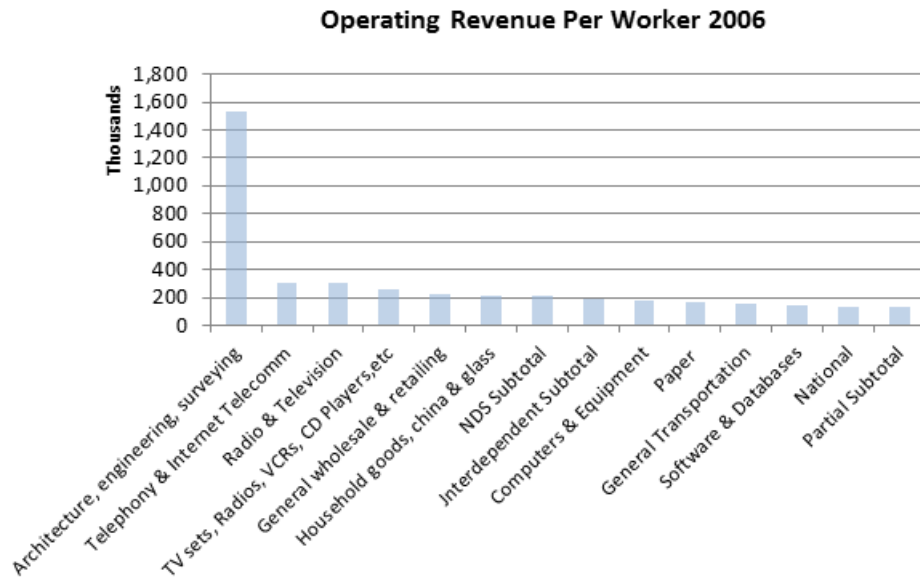


Chart 6.4: Copyright Industries with High Value Added Per Worker, 2005

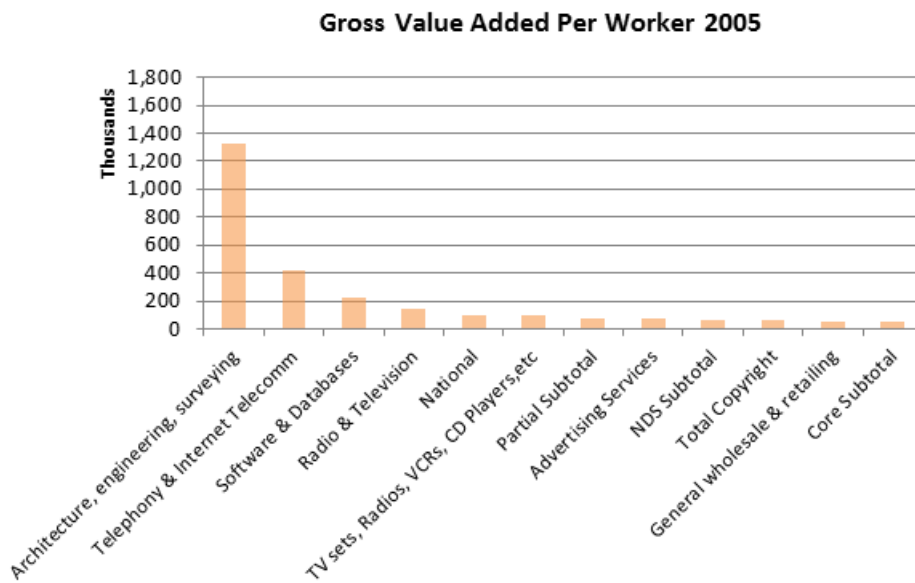
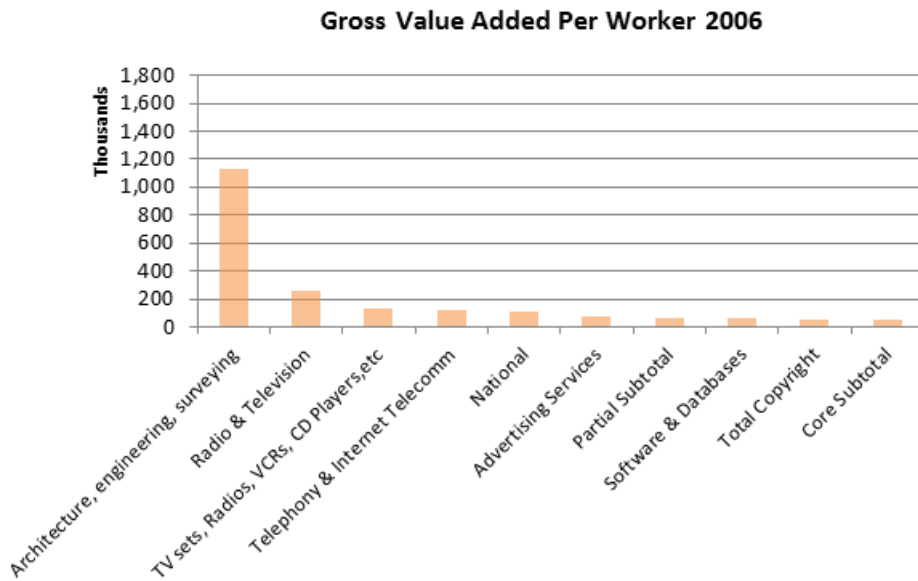


Chart 6.5: Copyright Industries with High Value Added Per Worker, 2006



In contrast to the previous two measurements of worker performance, employee compensation per worker in almost all copyright industries is above the Census (or national) average (Charts 6.6 and 6.7). The two exceptions are the partial copyright industries of apparel, textiles and footwear and wall coverings and carpets in both years. The average levels of employee compensation per worker for total copyright industries are respectively 1.8 times and 2.1 times higher than the national values of BND 7,585 in 2005 and 7,172 in 2006. The non-dedicated support industries are high paymasters. In particular, telephony and internet telecoms and general transportation are the two highest paying industries. Table 6.11 provides the estimates on per worker performance.

Chart 6.6: Copyright Industries by Employee Compensation Per Worker, 2005

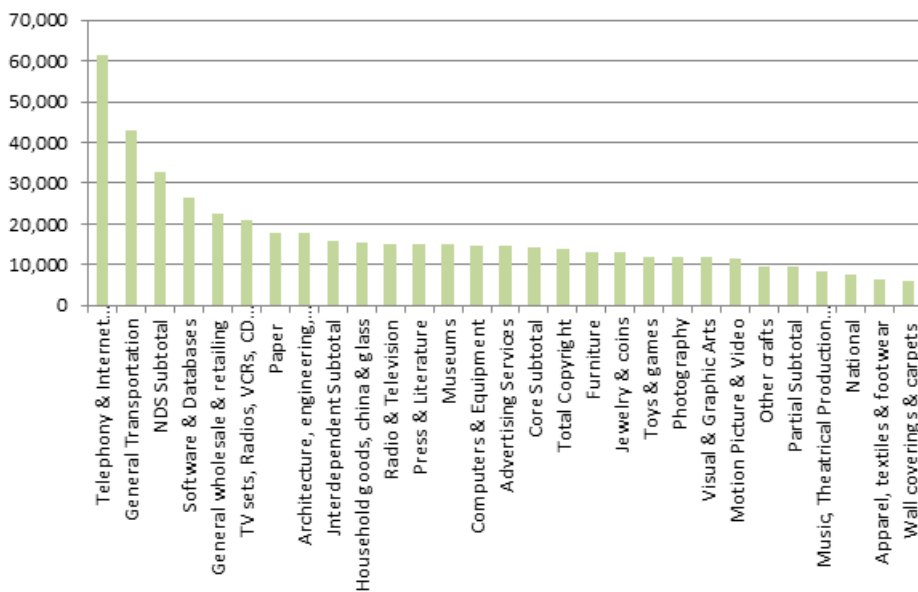


Chart 6.7: Copyright Industries by Employee Compensation Per Worker, 2006

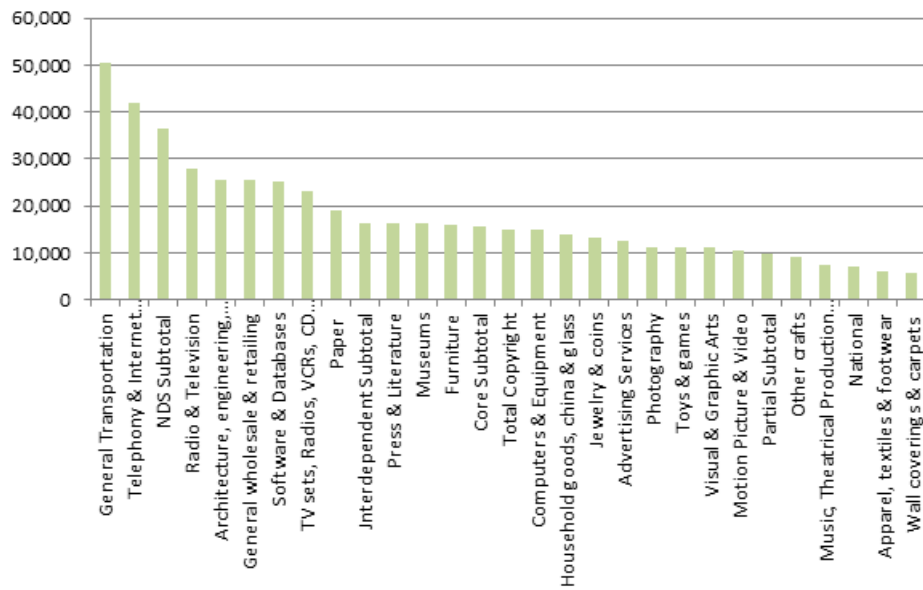


Table 6.16: Per Worker Performance

	Operating Revenue Per Worker 2006	Gross Value Added Per Worker 2006	Employee Compensation Per Worker 2006	Operating Revenue Per Worker 2005	Gross Value Added Per Worker 2005	Employee Compensation Per Worker 2005
Core Copyright (8)						
a. Press & Literature	61,061	23,564	16,153	59,854	21,461	14,836
b. Music, Theatrical Production & Operas	51,424	14,803	7,363	47,955	14,733	8,218
c. Motion Picture & Video	55,283	15,332	10,618	54,321	12,259	11,552
d. Radio & Television	301,960	253,591	27,982	164,673	139,402	15,067
e. Photography	53,543	21,600	11,147	56,705	18,406	11,929
f. Software & Databases	146,496	63,586	25,155	184,647	221,217	26,565
g. Visual & Graphic Arts	55,709	16,893	10,992	49,028	24,563	11,743
h. Advertising Services	62,315	77,242	12,419	72,737	75,014	14,659
Subtotal	84,274	49,071	15,520	80,366	52,900	14,285
Interdependent Copyright (3)						
a. TV Sets, Radios, VCRs, CD Players, etc.	257,093	129,834	23,096	177,519	95,919	21,005
b. Computers & Equipment	172,734	11,817	14,953	200,261	15,538	14,732
c. Paper	169,135	28,230	18,877	114,188	26,758	17,812
Subtotal	186,668	31,840	16,403	193,994	29,562	15,888
Partial Copyright (9)						
a. Apparel, Textiles & Footwear	34,853	10,520	5,913	43,205	11,777	6,467
b. Jewellery & Coins	83,902	29,936	13,269	83,185	23,508	12,954
c. Other Crafts	68,790	21,839	9,100	71,253	19,662	9,596
d. Furniture	105,035	22,731	16,108	102,687	21,868	13,203
e. Household Goods, China & Glass	214,002	45,290	13,889	192,569	39,864	15,481
f. Wall Coverings & Carpets	26,615	18,209	5,827	27,775	17,227	6,158
g. Toys & Games	49,550	15,773	11,114	55,122	18,368	12,050

Table 6.16: Per Worker Performance (Continued)

h. Architecture, Engineering, Surveying	1,534,483	1,127,586	25,670	1,734,483	1,331,034	17,655
i. Museums	61,061	23,564	16,153	59,854	21,461	14,836
Subtotal	129,131	68,906	9,886	140,464	77,173	9,431
Non-Dedicated Support (3)						
a. General Wholesale & Retailing	229,101	44,588	25,388	246,226	54,047	22,674
b. General Transportation	155,670	24,236	50,472	168,018	21,692	43,046
c. Telephony & Internet Telecomm	308,307	125,467	42,032	704,741	421,896	61,441
Subtotal	212,243	47,058	36,443	237,948	59,519	32,730
TOTAL COPYRIGHT	121,110	53,153	14,970	124,493	58,411	13,830
NATIONAL	137,723	106,125	7,172	127,679	97,927	7,585

6.7 International Trade

The list of copyright items identified for extraction of trade data consists of 17 items at SITC seven-digit level and two items at three-digit level (Table 6.12). Four of the seven-digit items (highlighted in yellow) are combined in the trade statistics and one item (highlighted in pink) is not traded. The trade variables are imports, exports, domestic exports and re-exports. To compute the trade balance, retained imports are estimated by subtracting re-exports from imports. The trade balance is the difference between domestic exports and retained imports.

Table 6.17: Copyright Trade Items

SITC	Description
*8921200	Children's Picture Drawing or Colouring Books
*8921300	Maps, Hydrographical & Similar Charts
*8921600	Printed Books
*8921900	Brochures, Leaflets & Similar Printed Matter
*8922100	Newspapers, Journals & Periodicals
*8924100	Transfers (Decalcomanias)
*8924200	Picture Postcards & Greeting Cards
*8928100	Labels of Paper or Paperboard
*8928200	Industrial Plans & Drawings
*8928400	Calendars of Any Kind Incl. Calendar Blocks
*8928500	Music, Printed or In Manuscript
*8928600	Advertising Material, Commercial Catalogues etc.
*8928900	Other Printed Matter Incl. Pictures & Photographs
*8986110	Video Tapes, Discs, Recorded
*8986120	Tapes, Discs, Packs etc. for Computers, Recorded
*8986130	Discs For Reproducing Sound & Other Media for Laser Reading Systems, Recorded
*8986190	Other Recorded Media
*8987100	Gramophone Records
883	Cinematographic Film
896	Works of Art

Note
8986100 Magnetic Tapes Recorded of a Width not Exceeding 4mm
None

Appendix E contains the trade data as well as the estimates for retained imports, trade balances and the shares of copyright items in total trade in 2005 and 2006. Table 6.13 summarizes the results. Expectedly, copyright trade is a very small proportion of total trade. It is less than 1% of imports, exports and re-exports. Retained imports of copyright items account for 0.8% of total retained imports in 2005. This share drops to almost 0.7% in 2006, owing to a fall in copyright retained imports while total retained imports rose. The trade balance in copyright goods is close to or the same as retained imports, as domestic exports of copyright items are low or nil (as in 2006). Due to of a rise in total trade balance in 2006, the share of copyright trade balance is lower at -0.17% compared to -0.23% in 2006.

Table 6.18: Share of Copyright Trade in Total Trade

	Copyright BND '000	National BND '000	Copyright Share %
2005			
Imports	18,519	2,480,990	0.75%
Exports	324	10,397,680	0.00%
Domestic Exports	26	10,105,000	0.00%
Re-Exports	297	292,680	0.10%
Retained Imports	18,222	2,188,310	0.83%
Trade Balance	-18,196	7,916,690	-0.23%
2006			
Imports	16,955	2,658,500	0.64%
Exports	555	12,117,120	0.00%
Domestic Exports	0	11,888,280	0.00%
Re-Exports	555	228,840	0.24%
Retained Imports	16,399	2,429,660	0.67%
Trade Balance	-16,399	9,458,620	-0.17%

Chart 6.8 shows the top five copyright items in retained imports in 2005 and 2006. Around three-quarters of copyright-retained imports comprise newspapers, journals and periodicals (30% in 2005), brochures, leaflets and similar printed matter (27%), and labels of paper or paperboard (27%). The fourth and fifth largest copyright trade items are other printed matter, including pictures and photographs (8%) and advertising material, commercial catalogues, etc. (4%). Unlike the three largest traded copyright items, which encountered lower retained imports in 2006, advertising materials recorded almost a doubling of retained imports, closely reaching the same value as other printed materials in 2006.

The other copyright trade items are covered in Chart 6.9, which shows five other copyright items with considerably higher retained imports in 2006. These are calendars, picture postcards and greeting cards, printed books, children's picture drawing or colouring books and cinematographic film. However, the combined expansion in retained imports is not sufficient to offset the contraction in other copyright items especially that of the two largest copyright trade items (newspapers, journals and periodicals and brochures and leaflets).

Chart 6.8: Top Copyright Retained Imports

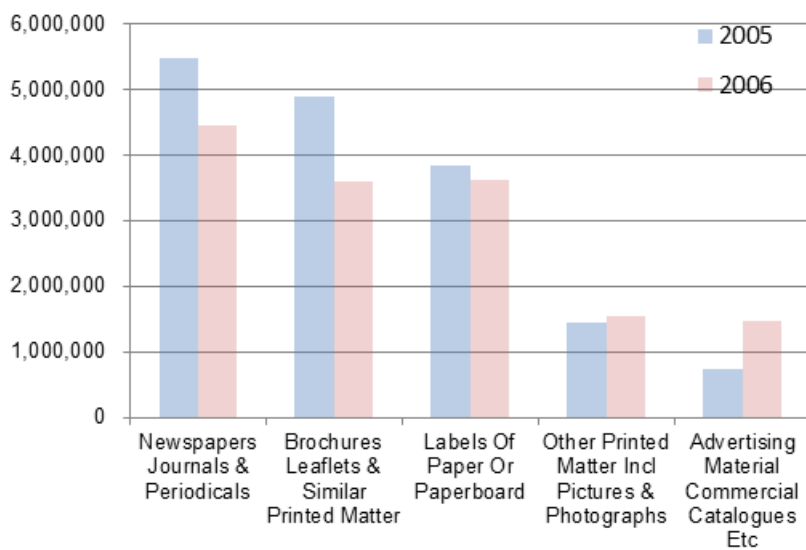
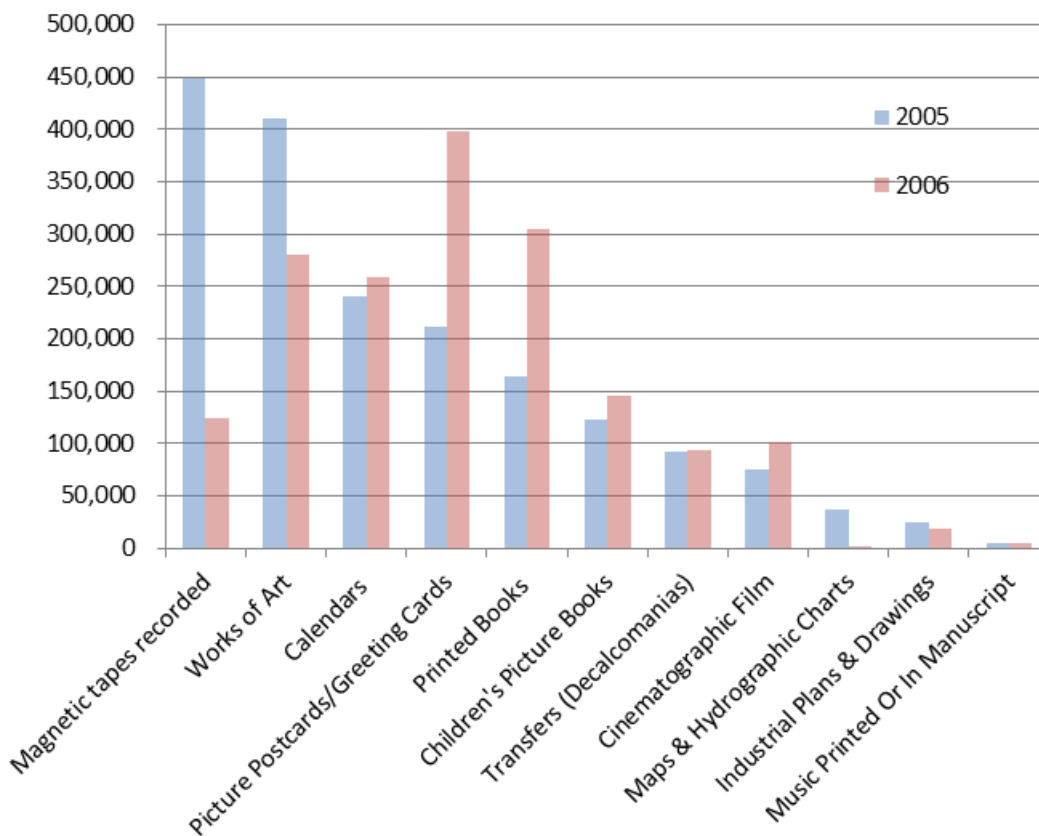


Chart 6.9: Other Copyright Retained Imports



7. International Comparison

The WIPO studies provide comparative estimates on the contribution of copyright industries to the respective economy. Twelve country studies are available for a comparative analysis at the core and total copyright level for GDP and employment.¹² The aim of this comparison effort is to identify the relative position of the copyright industries in Brunei Darussalam vis-à-vis other countries and at a specific period. Additionally, time series of three countries are included to gain insights into the development of copyright activities with respect to GDP and employment growth. Appendix F contains the extracted data from the WIPO studies.

7.1 Contribution to GDP

Chart 7.1 on the share of core copyright in GDP shows that Brunei core copyright share of 0.8% in 2005 is smaller than that (1.3%) of Bulgaria (in 2003) and Mexico (in 1998). Mexico's core copyright contribution to GDP rose to 1.5% in 2003, while that of Bulgaria rose to 1.6% in 2005. One other country – Jamaica – has a share of below 2% in 2005. The highest contribution is that of the United States at 6.6% in 2005. The remaining countries' shares range from 2.5% (Lebanon in 2005) to 4% (Hungary in 2002).

The contribution of total copyright to GDP is depicted in Chart 7.2 in which the countries are in the same sequence as in Chart 6.10; that is, the countries are arranged in descending order of core copyright share. The United States and Hungary remain the largest and second largest in total copyright share in GDP. Their non-core copyright shares are respectively 4.6% and 2.7% of GDP. Apart from the United States, countries with relatively large non-core copyright portions are Mexico, China and Jamaica with between 3.1% and 3.8%. Brunei Darussalam's non-core copyright share is 1.1%, close to that of Canada and Bulgaria (2005). Bulgaria has in 2003, however, a smaller non-core copyright segment (0.8%) than that of Brunei Darussalam. As a result of a larger non-core share in GDP, Brunei Darussalam's total copyright share in GDP of 2% in 2005 is almost the same as Bulgaria's share of 2.1% in 2003. Bulgaria's total copyright share rose to 2.8% in 2005. The United States' total copyright share of 11.1% is much larger than Hungary's 6.7% followed closely by China's 6.4%. The remaining nine countries have shares ranging from 4.5% (Canada) to 5.8% (Malaysia). Among them are four countries with equal shares of 4.8% (the Philippines, Lebanon, Jamaica and Mexico).

¹²All the WIPO studies follow the same framework and thus allow for a more comparative analysis than previously possible.

Chart 7.1: Share of Core Copyright in GDP

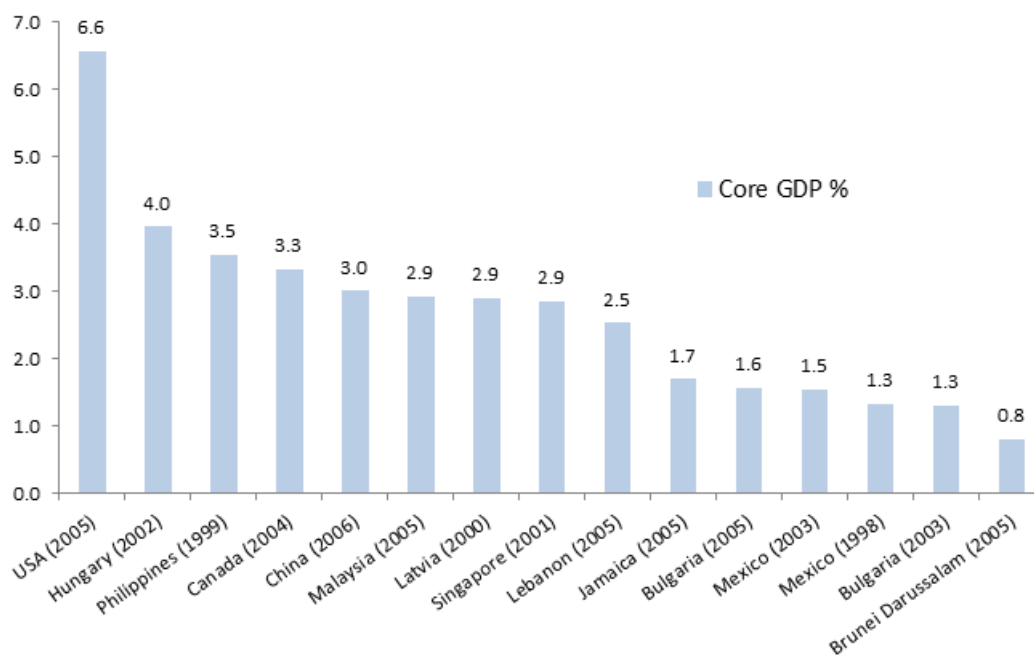
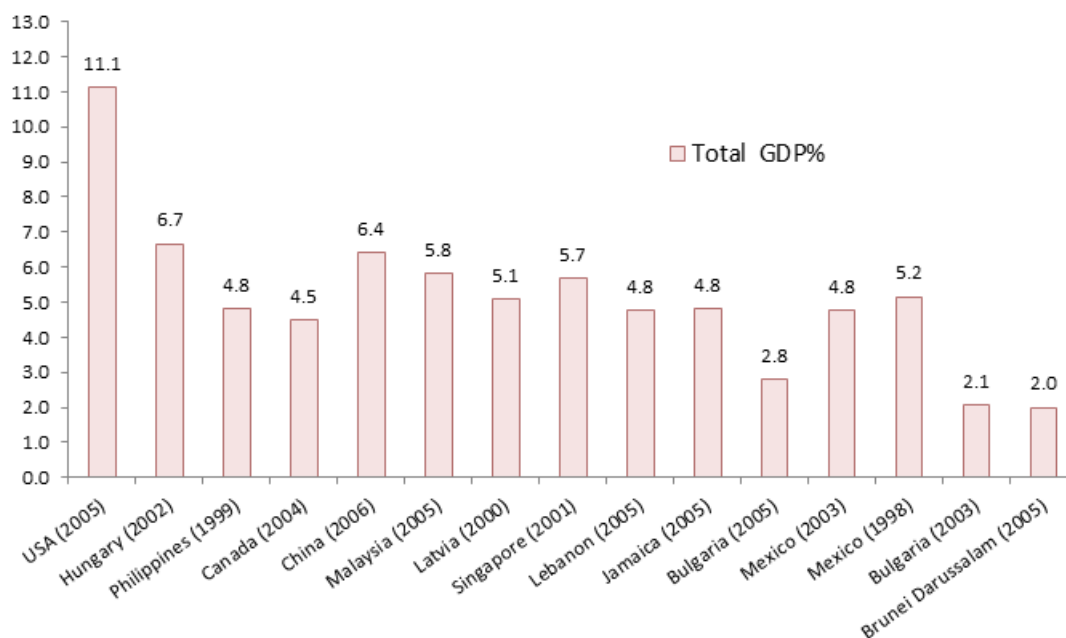


Chart 7.2: Share of Total Copyright in GDP

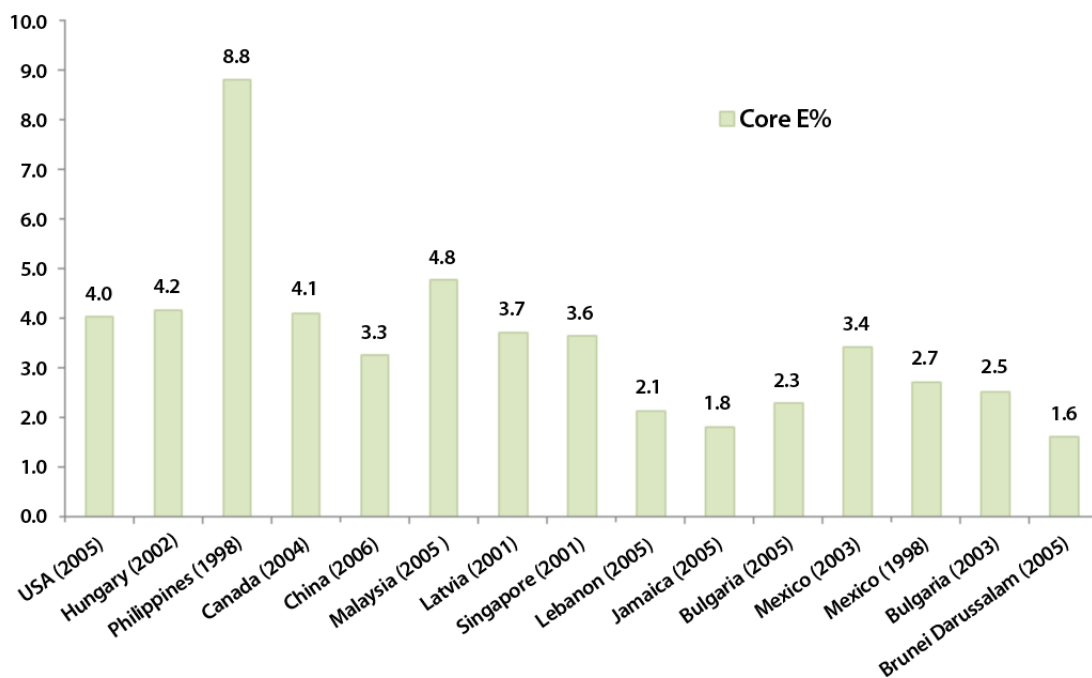


Note: Latvia's total copyright share in GDP is calculated by Chow Kit Boey from data in the country report.

7.2 Contribution to Employment

The shares of core copyright workforce in total employment, shown in Chart 7.3, reveal that the core copyright sector in the Philippines in 1999 is the most labour-intensive among the group of 12 countries in the comparison analysis. Its share of 8.8% of Philippine total employment is 4% higher than the second highest core copyright employment share of Malaysia. Three other countries, besides Malaysia, have core copyright employment shares of 4% – the United States, Hungary and Canada. In comparison, Brunei’s core copyright employment stands at 1.6%, which is slightly lower than Jamaica’s 1.8%.

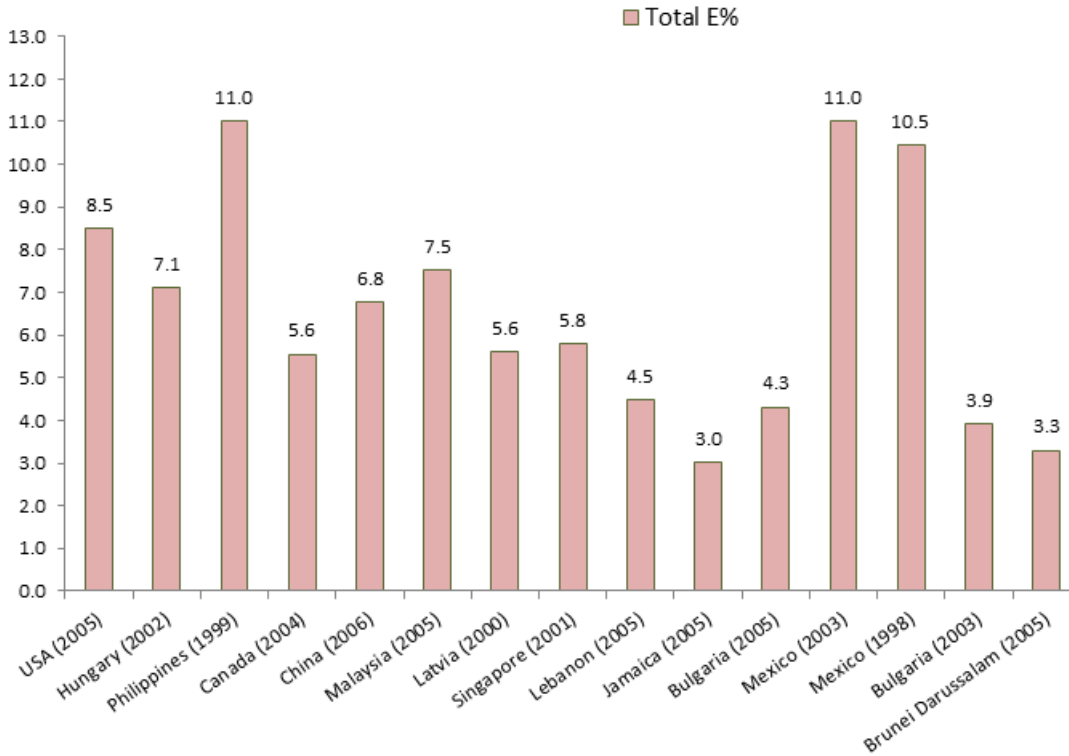
Chart 7.3: Share of Core Copyright in Employment



The shares of total copyright industries in employment show a very different pattern from that of core copyright employment and total copyright GDP (Chart 7.4). Total copyright employment accounts for 10% – 11% of the country’s workforce in Mexico and the Philippines. In other words, Mexico’s non-core copyright industries provide employment to 7.6% of the workforce; the highest among the group of 12 countries. The Philippine non-core employment, however, accounts for 2.2% of the country’s employment, much smaller than the core employment share of 8.8%.

The United States’ total copyright employment share is 8.5%, with the non-core component being slightly higher than the core. Other countries with slightly higher non-core copyright employment shares are China, Lebanon and Brunei Darussalam. Brunei’s total copyright employment of 3.3% is slightly higher than that of Jamaica’s 3.0% because of a larger non-core copyright employment share. Brunei’s non-core copyright employment share (1.7%) is larger than that of Jamaica (1.2%), Bulgaria (1.4%) and Canada (1.4%), and close to that of Latvia (1.9%).

Chart 7.4: Share of Total Copyright in Employment

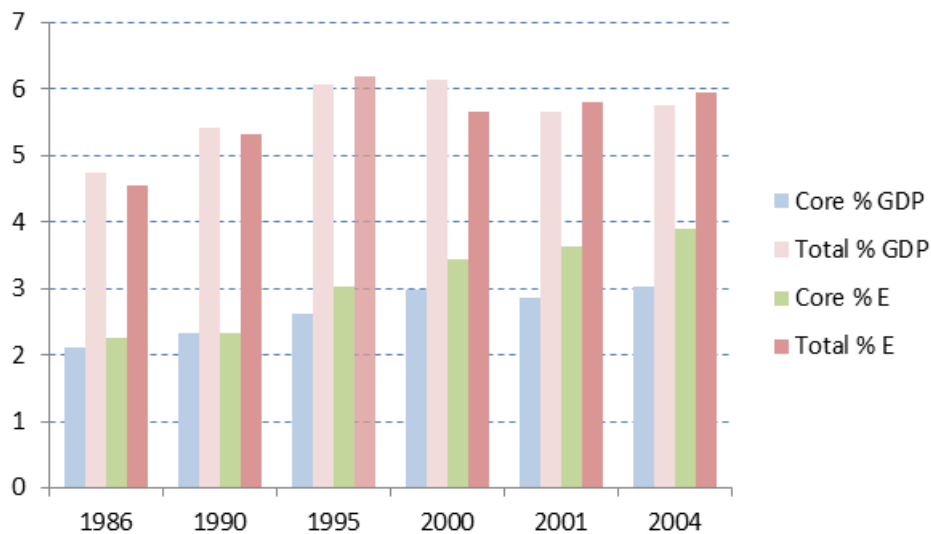


Note: Latvia's total copyright share in employment is calculated by Chow Kit Boey from data in the country report.

7.3 Copyright Contribution Over Time

Estimates of the contribution of copyright-based industries over a period of time are reproduced in the charts below for any identifiable pattern of change. Singapore's copyright estimates are shown in Chart 7.5, covering six specific years from 1986 to 2004. The core copyright contribution to GDP is lower than that of non-core in the first four periods (1986, 1990, 1995 and 2000). Similarly, core copyright employment share is lower than that of non-core in the first four years. Except in 2001, both core and total copyright shares in GDP are increasing, respectively from 2.1% to 3% and from 4.7% to 5.8%. Correspondingly, core copyright employment share rises from 2.3% to 3.9%, whereas total copyright employment contribution reaches a peak in 1995 at 6.2% and is at 5.9% in 2004, against 4.6% in 1986. Interestingly, both core and total employment shares are not lower when the GDP shares decline in 2001.

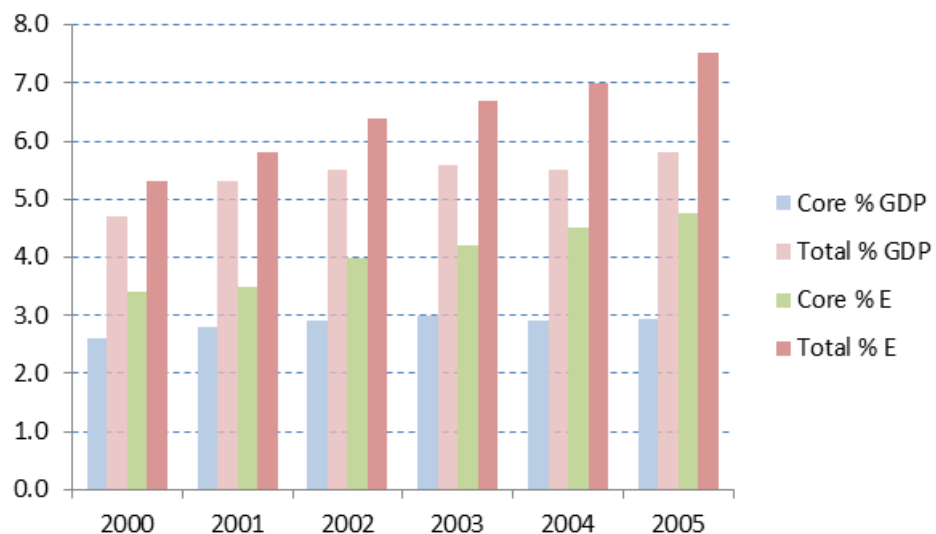
Chart 7.5: Share of Singapore Copyright in the Economy



Unlike Singapore, Malaysia's estimates cover a six-year period (2000 – 2005) with data for each year. Throughout the period, the core copyright GDP and employment shares are larger than the non-core copyright shares (Chart 7.6). And the employment shares (both core and total) are larger than the GDP shares. Except for the GDP shares of core and total copyright in 2004 (which dropped slightly), all other contributions to the economy have been rising each year. The shares of core and total copyright in GDP are 3% and 5.8% respectively in 2005, compared to 2.6% and 4.7% in 2000. The core and total copyright shares in employment are 4.8% and 7.5% respectively in 2005, upped from 3.4% and 5.3% in 2000.

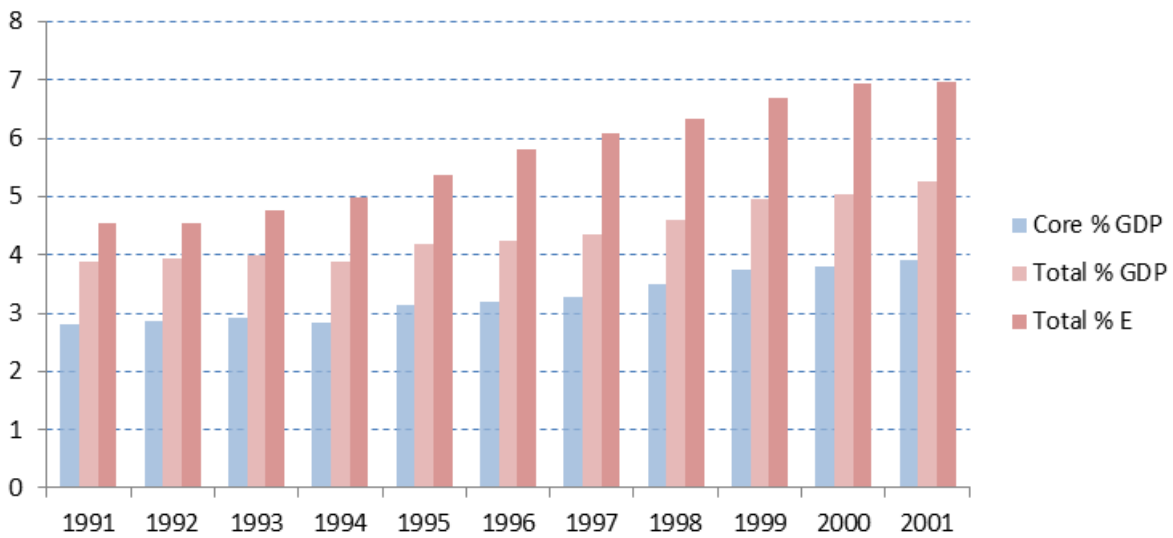
Canada's time series on copyright shares (core and total GDP and total employment) range from 1991 to 2001.¹³ Non-core copyright GDP shares are smaller than that of core copyright throughout the whole period (Chart 7.7). The shares of total copyright in employment are larger than that in GDP. Except for a break in 1994 for GDP shares, all the shares have been rising each year. The core and total copyright shares in GDP and total copyright share in employment have increased respectively to 3.9%, 5.3% and 7% in 2001 from 2.8%, 3.9% and 4.5% in 1991.

Chart 7.6: Share of Malaysia Copyright in the Economy



¹³ 2002 estimates are not included, as employment shares are missing.

Chart 7.7: Share of Canada Copyright in the Economy



From the three cases, it is seen that there is an upward trend in the relative size of the copyright-based industries as measured by their contribution to the country's GDP and employment. There is also a tendency for the core copyright industries to become larger than the non-core copyright industries. There is also a consistent pattern of the copyright-based industries having a greater impact on employment than on the country's GDP as reflected in the larger employment share over that of GDP.

8. Conclusions and Recommendations

Given the dominance of the mining sector in the Brunei economy, the relative size of the copyright industries as a share in GDP and employment is expected to be small. The copyright industries in 2005 were, however, comparable in size to the construction industry in value added and to the transport and communication industry in employment. Productivity (as measured by value added per worker) in copyright industries was thus higher than that in construction, but lower than that in transport and communication. Moreover, four copyright industries posted higher productivity than the national value added per worker of BND 97,927 in 2005. These four industries are:

- software and databases and radio and television in the core copyright group;
- architecture, engineering and surveying in the partial copyright group; and
- telephony and internet telecoms in the non-dedicated support group.

Employees in the copyright industries are well paid. In both years of 2005 and 2006, almost all (21 out of 23) copyright industries recorded per worker employee compensation above the national average. The average employee compensation per worker in copyright industries has been estimated at 1.8 and 2.1 times higher than the national values of BND 7,585 in 2005 and BND 7,172 in 2006 respectively.

In comparison with 12 other countries, the copyright industries in Brunei Darussalam are not particularly small in terms of contribution to GDP and employment. Brunei copyright share in GDP of 2% in 2005 is almost the same as Bulgaria's 2.1% in 2003, and its share in employment of 3.3% in 2005 is slightly higher than Jamaica's 3.0% in the same year. Furthermore, time series on copyright industries in several countries reveal increasing contributions of copyright industries to GDP and employment and a tendency for the core copyright industries to become larger than the non-core copyright industries. There is also a consistent pattern of the copyright industries generating a greater impact on employment than on GDP. The implication is that there is potential for the core copyright industries in Brunei Darussalam to grow over time, thus providing another channel for the diversification of the economy.

The survey on partial copyright industries also obtained some feedback from the respondents. Based on the comments and suggestions, the recommendations for promoting copyright industries are:

- (i) to explore avenues to help enterprises, especially those where only the owners are doing creative designs, to tap into other sources of design activities, to obtain exposure to new developments in design, and to market innovative designs;
- (ii) to promote creativity through competitions and exhibitions, and to encourage the use of local resources in creative activities;
- (iii) to protect architectural designs and drawings as copyright works belonging to the respective company or firm that produced them, and to educate the public on the granting of permission for use of copyright works;
- (iv) to liberalise the architecture industry in the employment of foreign professionals;
- (v) to enhance the demand for Brunei copyright works through marketing activities overseas and to tourists.

The study findings suggest that certain copyright-based industries could be developed further for a more balanced economic structure and a larger creative and knowledge-based sector. The study has identified copyright-based industries that are above the national average in productivity and worker earnings or have the potential for growth. However, in-depth research is needed to examine and determine copyright-based industries that best meet the country's development priorities. Given Brunei's small population, the development of selected copyright-based industries may need to consider overseas markets as well as niche areas. And one way to maximize resources is to endorse and support international collaborations in copyright-based industries and develop joint projects with interested countries in promoting copyright activities, such as the development of more talents and professional approaches.

This study is the first in Brunei Darussalam, similar to many of the WIPO studies in other countries. The findings could be considered as an initial attempt at measuring the size of the copyright industries and their economic contribution to the country. It would be useful to track the development of the copyright industries

as knowledge-based and creative activities are promoted in an increasingly competitive world. For the follow-up to this study, the following are proposed:

- (a) To disseminate the findings to top management of copyright industries and interested parties through, for instance, a seminar. The seminar can be used as a channel for feedback and policy inputs. It can also raise support for efforts to promote copyright activities in the country.
- (b) To update the estimates on the copyright industries' contribution to the economy when the Economic Census 2011 data become available.
- (c) To include estimates on the multiplying effects of copyright industries when the input-output table, which is being compiled presently, is completed. The multipliers of copyright industries will provide another dimension for policy formulation.

Appendix A

Table A.1: Brunei Darussalam: Copyright-Based Industries by WIPO Classification

	WIPO Category and Main Group	BDSIC2007	Industry
1	Core		
	Press and Literature	1811	Printing
		1812	Service activities related to printing
		4761	Retail sale of books, newspapers and stationery in specialised stores
		5812	Publishing of directories and mailing lists
		5813	Publishing of newspapers, journals and periodicals
		5819	Other publishing activities
		7490	Other professional, scientific and technical activities n.e.c.
2	Core		
	Music, Theatrical Productions, Operas	4762	Retail sale of music and video recordings in specialised stores
3	Core		
	Motion Picture and Video	5911	Motion picture, video and television programme production and distribution activities
		5912	Motion picture projection activities
		7722	Renting of video tapes and disks
4	Core		
	Radio and Television	6010	Radio broadcasting
		6022	Cable, satellite and other subscription programming
5	Core		
	Photography	7420	Photographic activities
6	Core		
	Software and Databases	6202	Computer consultancy and computer facilities management activities
		6209	Other information technology and computer service activities
		6312	Web portals
7	Core		
	Visual and Graphic Arts	7410	Specialised design activities
8	Core		
	Advertising	7310	Advertising
	WIPO Category and Main Group	BDSIC2007	Industry

Table A.1: Brunei Darussalam: Copyright-Based Industries by WIPO Classification (Continued)

9	Interdependent		
	TV Sets, Radios, VCRs, CD Players, etc.	4652	Wholesale of electronic and telecommunications equipment and parts
		9512	Repair of communication equipment
		9521	Repair of consumer electronics
10	Interdependent		
	Computers and Equipment	4651	Wholesale of computers, computer peripheral equipment and software
		4741	Retail sale of computers, peripheral units, software and telecommunication equipment in specialised stores
11	Interdependent		
	Paper	1709	Manufacture of other articles of paper and paperboard
12	Partial		
	Apparel, textiles and footwear	1322	Manufacture of made up textile articles, except apparel
		1411	Manufacturing of wearing apparel, except fur apparel
		1412	Custom tailoring and dressmaking
		1520	Manufacture of footwear
		4641	Wholesale of textiles, clothing and footwear
		4751	Retail sale of household textiles in specialised stores
		4771	Retail sale of clothing and clothing materials in specialised stores
		4772	Retail sale of footwear and leather articles in specialised stores
13	Partial		
	Jewellery and coins	3211	Manufacture of jewellery and related articles
		4774	Retail sale of jewellery, clocks and watches in specialised stores
14	Partial		
	Other crafts	2396	Cutting, shaping and finishing of stone
		4779	Retail sale of other goods in specialised stores n.e.c.
15	Partial		
	Furniture	3100	Manufacture of furniture
		4754	Retail sale of furniture
		4755	Retail sale of electrical household appliances and lighting equipment in specialised stores
16	Partial		
	Household goods, china and glass	2310	Manufacture of glass and glass products
	WIPO Category and Main Group	BDSIC2007	Industry
		2391	Manufacture of refractory products
		2599	Manufacture of other fabricated metal products n.e.c.
		4649	Wholesale of other household goods
		4752	Retail sale of hardware, paints and glass in specialised stores
		4759	Retail sale of other household articles in specialised stores

Table A.1: Brunei Darussalam: Copyright-Based Industries by WIPO Classification (Continued)

		9522	Repair of household appliances and home and garden equipment
		7729	Renting and leasing of other personal and household goods n.e.c.
17	Partial		
	Wall coverings and carpets	4753	Retail sale of carpets, rugs, wall and floor coverings in specialised stores
18	Partial		
	Toys and games	4764	Retail sale of games and toys in specialised stores
19	Partial		
	Architecture, engineering, surveying	7111	Architectural and land surveying activities
20	Non-Dedicated		
	General wholesale and retailing	4610	Wholesale on fee or contract basis
		4661	Wholesale of solid, liquid and gaseous fuels and related products
		4662	Wholesale of metals and metal ores
		4663	Wholesale of construction materials, builders hardware, plumbing and heating equipment and supplies
		4669	Wholesale of waste and scrap and other products n.e.c.
		4711	Retail sale in non-specialised stores with food, beverages or tobacco predominating
		4719	Other retail sale in non-specialised stores
		4789	Retail sale via stalls and markets of other goods
		4791	Retail sale via mail order houses or via Internet
		4799	Other retail sale not in stores, stalls or markets
21	Non-Dedicated		
	General transportation	4920	Transport via buses
		4931	Passenger land transport
		4932	Freight transport by road
		5010	Sea and coastal water transport
		5110	Passenger air transport
		5120	Freight air transport
		5221	Service activities incidental to land transportation
	WIPO Category and Main Group	BDSIC2007	Industry
		5222	Service activities incidental to water transportation
		5223	Service activities incidental to air transportation
		5224	Cargo handling
		5229	Other transportation support activities
		5320	Courier activities
22	Non-Dedicated		
	Telephony & Internet	6110	Wired telecommunication activities
		6120	Wireless telecommunication activities
		6191	Internet or cyber cafes
		6199	Other telecommunication activities

1 February 2010

KAJIAN SUMBANGAN INDUSTRI BERASASKAN HAKCIPTA KEPADA EKONOMI DI NEGARA BRUNEI DARUSSALAM

Survey on the Economic Contribution of Copyright-based Industries in Brunei Darussalam

Yang Mulia	<p>Tarikh tutup (Closing date) : 28 February 2010</p> <p>Pertanyaan (Enquiries) : Dyg. Nur Al-Ain binti Dr. Hj Abdullah (Jabatan Peguam Negara)</p> <p>Tel: 2231200 (AGC) 2230250 (JPKE)</p> <p>E-mail: nuralain.abdullah@gmail.com</p> <p>Fax : 2230236</p>
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4. Kerajaan Kebawah Duli Yang Maha Mulia Paduka Seri Baginda Sultan dan Yang DiPertuan Negara Brunei Darussalam melalui Jabatan Peguam Negara sedang melaksanakan projek **Sumbangan Industri Berasaskan Hakcipta kepada Ekonomi di Negara Brunei Darussalam** dengan bantuan *World Intellectual Property Organization* (WIPO). Sebagai sebahagian daripada aktiviti projek, Jabatan Perancangan dan Kemajuan Ekonomi (JPKE) bekerjasama dengan Jabatan Peguam Negara untuk mengendalikan kajian bagi projek tersebut.

The government of His Majesty The Sultan and Yang DiPertuan of Brunei Darussalam through the Attorney General's Chambers is currently implementing the project "Economic Contribution of Copyright-based Industries in Brunei Darussalam" with the assistance of World Intellectual Property Organization (WIPO). As part of the project activities, Department of Economic Planning and Development (JPKE) is collaborating with the Attorney General's Chambers in conducting a survey for the project.

5. **Kajian Sumbangan Industri Berasaskan Hakcipta kepada Ekonomi di Negara Brunei Darussalam** ini meliputi syarikat/perusahaan terpilih yang bergiat atau mempunyai kaitan dengan kerja-kerja hakcipta. Penerangan ringkas mengenai hakcipta adalah seperti dalam borangtanya.

The Survey on the Economic Contribution of Copyright-Based Industries in Brunei Darussalam covers selected companies/businesses that are involved or related to copyright works. A brief explanation of copyright is provided in the questionnaire.

6. Sehubungan dengan ini, syarikat/perusahaan Tuan/Puan adalah dipohonkan untuk membekalkan maklumat seperti dalam borangtanya kajian yang disertakan. Sukacita dipohonkan agar pihak Tuan/Puan akan dapat mengembalikan borangtanya yang telah lengkap diisi ke JPKE pada atau sebelum **28 Februari 2010**.

*In this context, you are kindly requested to provide the information as in the enclosed questionnaire. Please submit your completed questionnaire to JPKE on or before **28 February 2010**.*

7. Kajian ini dijalankan di bawah **AKTA PERANGKAAN**, Penggal 81 dari Undang-Undang Negara Brunei Darussalam. Segala keterangan yang diberikan akan dirahsiakan dan akan digunakan untuk keperluan perangkaan sahaja.

*This survey is conducted under the **STATISTICS ACT**, Chapter 81 from the Laws of Brunei Darussalam. All the information given will be treated as confidential and will be used for statistical purposes only.*

8. Sokongan dan kerjasama dari pihak Tuan/Puan dalam membekalkan maklumat yang diperlukan adalah amat dihargai.

Your support and cooperation in providing the required information is very much appreciated.

Dengan hormat,
Yours sincerely,

PG HJ OSMAN HASHIM

Pengarah Perangkaan
b.p. Ketua Pengarah

*Director of Statistics
for Director General*

s.k. Jabatan Peguam Negara

**KAJIAN SUMBANGAN INDUSTRI BERASASKAN HAKCIPTA KEPADA EKONOMI
DI NEGRA BRUNEI DARUSSALAM**

**Survey on the Economic Contribution of Copyright-based Industries
in Brunei Darussalam**

Segala maklumat yang diberikan akan dirahsiakan. Sila isikan di ruang yang disediakan atau tandakan (☐) di dalam petak yang disediakan, di mana bersesuaian.

Please be assured that all information provided will be kept confidential Please fill in the spaces provided or tick (☐) in the boxes provided, where applicable.

Bahagian A : Keterangan Syarikat

Part A : Company Particulars

A.1 Aktiviti utama perusahaan:

Primary business activity:

A.2 Pendapatan dalam tahun 2008

Turnover/Sales in 2008

- | | |
|--|---------------|
| 1. Kurang dari/Less than | BND 10,000 |
| 2. BND 10,000 <i>hingga/to</i> | BND 19,999 |
| 3. BND 20,000 <i>hingga/to</i> | BND 49,999 |
| 4. BND 50,000 <i>hingga/to</i> | BND 99,999 |
| 5. BND 100,000 <i>hingga/to</i> | BND 199,999 |
| 6. BND 200,000 <i>hingga/to</i> | BND 499,999 |
| 7. BND 500,000 <i>hingga/to</i> | BND 999,999 |
| 8. BND 1,000,000 <i>hingga/to</i> | BND 1,999,999 |
| 9. BND 2,000,000 <i>hingga/to</i> | BND 4,999,999 |
| 10. BND 5,000,000 dan ke atas/ <i>and over</i> | |

Table C.1: Partial Copyright Factors of Eight Countries

	Singapore	Latvia*	Hungary	Jamaica	Bulgaria	Lebanon	Malaysia	China	Average	Rank
1	0.4%	0.43%	0.5%	0.5%	0.6%	2.0%	15.0%	0.4%	2.48%	9
		0.42%								
		0.46%								
		0.42%								
2	25.2%	8.69%	25.0%	25.0%	20.0%	25.0%		8.0%	19.55%	4
	8.3%	9.13%	25.0%	25.0%		25.0%		8.0%		
	42.0%									
		8.25%								
3	42.0%		40.0%		40.0%		26.7%	40.0%	37.74%	3
4	5.0%	41.0%	5.0%	5.0%	5.0%	5.0%	35.0%	5.0%	13.25%	6
	8.3%									
	1.7%									
5	0.6%		0.5%	0.5%	0.5%	2.5%	0.38%	0.3%	0.75%	11
6	1.7%	1.65%	2.0%	0.5%	0.4%	2.5%	1.1%	2.0%	1.48%	10
7	42.0%	45.5%	50.0%	50.0%	40.0%	50.0%	26.7%	40.0%	43.03%	1
8	8.3%		10.0%	50.0%	10.0%	10.0%	5.28%	6.0%	14.23%	5
9	8.3%			2.0%			5.28%	5.0%	5.15%	8
10			50.0%	50.0%	50.0%	50.0%		0.5%	40.10%	2
11		45.5%								
12			5.0%	5.0%		6.0%			5.33%	7

Cells shaded in blue denote the highest value in each industry.

* Average of Singapore and USA factors.

Philippines adopted Singapore's factors.

Mexico used average of USA and Hungary factors.

Appendix D

Table D.1: Brunei Darussalam: Copyright-Based Industries Data

2006	Operating Revenues 2006	Gross Value Added 2006	Employee Compensation 2006	Number of Businesses 2006	Total Employment 2006
Core Copyright (8)					
a. Press & Literature	75,391,843	29,093,776	19,943,412	70	1,235
b. Music, Theatrical Production & Operas	13,216,029	3,804,282	1,892,165	19	257
c. Motion Picture & Video	2,929,975	812,590	562,759	3	53
d. Radio & Television	64,111,363	53,841,784	5,941,024	3	212
e. Photography	6,585,771	2,656,847	1,371,029	22	123
f. Software & Databases	21,681,337	9,410,654	3,722,873	16	148
g. Visual & Graphic Arts	13,592,921	4,121,865	2,682,057	17	244
h. Advertising Services	17,136,496	21,241,591	3,415,137	18	275
Subtotal	214,645,735	124,983,388	39,530,456	168	2,547
Interdependent Copyright (3)					
a. TV Sets, Radios, VCRs, CD Players, etc.	32,907,856	16,618,761	2,956,300	18	128
b. Computers & Equipment	107,613,083	7,361,797	9,315,603	58	623
c. Paper	3,213,566	536,369	358,671	1	19
Subtotal	143,734,505	24,516,927	12,630,574	77	770
Partial Copyright (10)					
a. Apparel, Textiles & Footwear	32,368,164	9,770,195	5,491,148	81	929
b. Jewellery & Coins	11,417,349	4,073,743	1,805,700	24	136
c. Other Crafts	19,328,658	6,136,446	2,556,834	34	281
d. Furniture	21,752,756	4,707,673	3,335,966	16	207
e. Household Goods, China & Glass	13,723,928	2,904,476	890,694	6	64
f. Wall Coverings & Carpets	59,883	40,970	13,112	0	2
g. Toys & Games	1,709,476	544,160	383,448	5	35
h. Architecture, Engineering, Surveying	129,940,000	95,484,000	2,173,714	11	85
i. Museums	5,216,250	2,012,955	1,379,855	1	85
Subtotal	235,516,464	125,674,619	18,030,472	176	1,824
Non-Dedicated Support (3)					
a. General Wholesale & Retailing	37,400,432	83,955	4,142,477	38	163
b. General Transportation	17,661,061	1,231,490	5,723,357	10	113
c. Telephony & Internet Telecomm	11,766,075	6,390,164	1,603,315	2	38
Subtotal	66,827,569	7,705,609	11,469,148	51	315
TOTAL	660,724,272	282,880,543	81,660,651	472	5,456

Table D.1: Brunei Darussalam: Copyright-Based Industries Data (Continued)

2005	Operating Revenues 2005	Gross Value Added 2005	Compensation of Employees 2005	Number of Businesses 2005	Total Employment 2005
Core Copyright (8)					
a. Press & Literature	68,596,730	24,595,381	17,003,215	70	1,146
b. Music, Theatrical Production & Operas	11,796,989	3,624,338	2,021,703	19	246
c. Motion Picture & Video	3,150,635	711,046	670,030	3	58
d. Radio & Television	62,550,611	52,951,151	5,723,141	3	380
e. Photography	7,201,557	2,337,562	1,514,960	22	127
f. Software & Databases	23,265,462	27,873,335	3,347,138	16	126
g. Visual & Graphic Arts	11,717,747	5,870,550	2,806,560	17	239
h. Advertising Services	16,002,094	16,503,133	3,224,897	18	220
Subtotal	204,281,825	134,466,496	36,311,644	168	2,542
Interdependent Copyright (3)					
a. TV Sets, Radios, VCRs, CD Players, etc.	21,834,889	11,797,986	2,583,642	18	123
b. Computers & Equipment	115,750,781	8,980,918	8,515,306	58	578
c. Paper	2,283,762	535,164	356,235	1	20
Subtotal	139,869,432	21,314,068	11,455,183	77	721
Partial Copyright (9)					
a. Apparel, Textiles & Footwear	41,461,133	11,301,889	6,206,337	81	960
b. Jewellery & Coins	10,865,629	3,070,675	1,692,087	24	131
c. Other Crafts	20,499,627	5,656,810	2,760,869	34	288
d. Furniture	20,080,086	4,276,152	2,581,807	16	196
e. Household Goods, China & Glass	11,427,810	2,365,680	918,688	6	59
f. Wall Coverings & Carpets	61,800	38,331	13,701	0	2
g. Toys & Games	1,791,466	596,964	391,621	5	33
h. Architecture, Engineering, Surveying	146,876,000	112,712,000	1,495,040	11	85
i. Museums	5,148,750	1,846,086	1,276,231	1	86
Subtotal	258,212,302	141,864,588	17,336,382	176	1,838
Non-Dedicated Support (3)					
a. General Wholesale & Retailing	39,018,897	78,629	2,607,013	38	158
b. General Transportation	19,245,062	1,345,279	3,577,382	10	114
c. Telephony & Internet Telecomm	10,112,381	6,052,918	639,669	2	14
Subtotal	68,376,341	7,476,826	6,824,064	51	287
TOTAL	670,739,899	305,121,978	71,927,272	472	5,388

Appendix E

Table E.1: Brunei Darussalam: Trade in Copyright Items

2005							BND
SITC	Description	Imports	Exports	Domestic Exports	Re-Exports	Retained Imports	Trade Balance
*8921200	Children's Picture, Drawing or Colouring Books	123,326	44		44	123,282	-123,282
*8921300	Maps, Hydrographical & Similar Charts	37,508				37,508	-37,508
*8921600	Printed Books	188,646	24,730		24,730	163,916	-163,916
*8921900	Brochures, Leaflets & Similar Printed Matter	5,010,664	121,384	7,728	113,656	4,897,008	-4,889,280
*8922100	Newspapers, Journals & Periodicals	5,475,115	255		255	5,474,860	-5,474,860
*8924100	Transfers (Decalcomanias)	92,755	35		35	92,720	-92,720
*8924200	Picture Postcards & Greeting Cards	211,960	162		162	211,798	-211,798
*8928100	Labels of Paper or Paperboard	3,836,776	9,206		9,206	3,827,570	-3,827,570
*8928200	Industrial Plans & Drawings	28,119	3,110		3,110	25,009	-25,009
*8928400	Calendars of Any Kind Incl. Calendar Blocks	241,813	9,341	7,855	1,486	240,327	-232,472
*8928500	Music, Printed or in Manuscript	4,587				4,587	-4,587
*8928600	Advertising Material, Commercial Catalogues etc.	796,240	58,490	4,281	54,209	742,031	-737,750
*8928900	Other Printed Matter Incl. Pictures & Photographs	1,478,568	33,634	193	33,441	1,445,127	-1,444,934
8986100	Magnetic Tapes Recorded of a Width not Exceeding 4mm	465,982	16,628		16,628	449,354	-449,354
883	Cinematographic Film	76,650	631		631	76,019	-76,019
896	Works of Art	450,541	45,882	6,278	39,604	410,937	-404,659
	Total	18,519,250	323,532	26,335	297,197	18,222,053	-18,195,718
	Total Trade	2,480,990,000	10,397,680,000	10,105,000,000	292,680,000	2,188,310,000	7,916,690,000
	Share of Copyright items	0.75%	0.003%	0.00026%	0.10%	0.83%	-0.23%

Table E.1: Brunei Darussalam: Trade in Copyright Items (Continued)

2006							BND
SITC	Description	Imports	Exports	Domestic Exports	Re-Exports	Retained Imports	Trade Balance
*8921200	Children's Picture, Drawing or Colouring Books	146,123	154		154	145,969	-145,969
*8921300	Maps, Hydrographical & Similar Charts	3,198	1,034		1,034	2,164	-2,164
*8921600	Printed Books	362,655	57,207		57,207	305,448	-305,448
*8921900	Brochures, Leaflets & Similar Printed Matter	3,670,822	89,518		89,518	3,581,304	-3,581,304
*8922100	Newspapers, Journals & Periodicals	4,442,422	10		10	4,442,412	-4,442,412
*8924100	Transfers (Decalcomanias)	94,541	176		176	94,365	-94,365
*8924200	Picture Postcards & Greeting Cards	398,401	383		383	398,018	-398,018
*8928100	Labels of Paper or Paperboard	3,662,895	34,515		34,515	3,628,380	-3,628,380
*8928200	Industrial Plans & Drawings	18,752	15		15	18,737	-18,737
*8928400	Calendars of Any Kind Incl. Calendar Blocks	265,275	6,591		6,591	258,684	-258,684
*8928500	Music. Printed or in Manuscript	5,059				5,059	-5,059
*8928600	Advertising Material, Commercial Catalogues etc.	1,560,661	85,389		85,389	1,475,272	-1,475,272
*8928900	Other Printed Matter Incl. Pictures & Photographs	1,588,683	50,562		50,562	1,538,121	-1,538,121
8986100	Magnetic Tapes Recorded of a Width not Exceeding 4mm	124,956	1,356		1,356	123,600	-123,600
883	Cinematographic Film	106,054	4,063		4,063	101,991	-101,991
896	Works of Art	504,061	224,232		224,232	279,829	-279,829
	Total	16,954,558	555,205	0	555,205	16,399,353	-16,399,353
	Total Trade	2,658,500,000	12,117,120,000	11,888,280,000	228,840,000	2,429,660,000	9,458,620,000
	Share of Copyright items	0.64%	0.005%	0%	0.24%	0.67%	-0.17%

Appendix F

Table F.1: Relative Size of Copyright-Based Industries from WIPO Studies

Country	Year	Share in GDP		Share in Employment		Core Share in Trade		Share in Census Value Added	
		Core %	Total %	Core %	Total %	Exports %	Imports %	Core %	Total %
Philippines (1999)	1999	3.54	4.826	8.81	11.01	0.06	0.31		
Mexico (1998)	1998	1.328	5.15	2.72	10.45			2.47	9.58
Mexico (2003)	2003	1.548	4.77	3.41	11.01			2.62	8.07
Jamaica	2005	1.7	4.8	1.8	3.03				
Bulgaria	2003	1.3	2.08	2.5	3.93				
Bulgaria	2005	1.57	2.81	2.29	4.31			1.91	3.42
Lebanon	2005	2.53	4.75	2.11	4.48				
Latvia	2000	2.9	4.0+	3.7	4.4+				
Latvia **	2000	2.9	5.1	3.7	5.6				
Hungary	2002	3.961	6.668	4.154	7.102				
Singapore	1986	2.1	4.74	2.26	4.56				
Singapore	1990	2.33	5.43	2.34	5.32				
Singapore	1995	2.62	6.07	3.03	6.2				
Singapore	2000	2.97	6.14	3.45	5.65	3.27*			
Singapore	2001	2.85	5.67	3.64	5.80	3.58*			
Singapore	2003	3.5		4.0					
Singapore	2004	3.04	5.75	3.9	5.94				
USA	2002	5.98	11.97	4.02	8.41				
USA	2005	6.56	11.12	4.03	8.49				
Canada	2004	3.33	4.50	4.11	5.55				

Table F.1: Relative Size of Copyright-Based Industries from WIPO Studies (Continued)

Country	Year	Share in GDP		Share in Employment		Core Share in Trade		Share in Census Value Added	
		Core %	Total %	Core %	Total %	Exports %	Imports%	Core %	Total %
Malaysia	2000	2.6	4.7	3.4	5.3	0.4	0.4		
Malaysia	2001	2.8	5.3	3.5	5.8				
Malaysia	2002	2.9	5.5	4.0	6.4				
Malaysia	2003	3.0	5.6	4.2	6.7				
Malaysia	2004	2.9	5.5	4.5	7.0	1.1	0.5		
Malaysia	2005	2.93	5.81	4.77	7.51				
China	2004	2.08	5.15	2.82	5.8	0.26			
China	2006	3.01	6.41	3.25	6.78	0.26			
Canada	1991	2.81	3.87		4.53				
Canada	1992	2.85	3.93		4.55				
Canada	1993	2.93	3.98		4.76				
Canada	1994	2.84	3.88		4.99				
Canada	1995	3.15	4.19		5.36				
Canada	1996	3.18	4.25		5.81				
Canada	1997	3.27	4.35		6.08				
Canada	1998	3.5	4.61		6.34				
Canada	1999	3.74	4.95		6.69				
Canada	2000	3.79	5.04		6.95				
Canada	2001	3.92	5.27		6.96				
Canada	2002	3.99	5.38		-				

* Share in non-oil domestic exports

** Total copyright figures estimated by consultant.

+ Covers core and intermediate copyright industries only.

References

Author	Title	Publisher/Year
Department of Statistics Department of Economic Planning and Development (JPKE) Prime Minister's Office	<i>Brunei Darussalam Standard Industrial Classification (BDSIC) 2007.</i>	2008
	<i>Report of the 2002 Economic Census.</i>	2005
	<i>External Trade Statistics 2008.</i>	2009
	<i>Brunei Darussalam Statistical Yearbook 2006.</i>	2007
	<i>Brunei Darussalam Statistical Yearbook 2008.</i>	2009
	<i>Brunei Darussalam Key Indicators 2009.</i>	2010
Hajah Fatimah binti Haji Aji Norwatiza binti Mohd Zaidi	<i>Directory of Handicraft Entrepreneurs in Brunei Darussalam.</i>	Brunei Arts and Handicraft Training Centre, 2004
World Intellectual Property Organization	<i>Guide on Surveying the Economic Contribution of the Copyright-Based Industries.</i>	WIPO Publication No. 893(E), Geneva 2003
	<i>National Studies on Assessing the Economic Contribution of the Copyright-Based Industries, Creative Industries Series No.1.</i>	WIPO Publication No. 624(E), Geneva 2006
	<i>National Studies on Assessing the Economic Contribution of the Copyright-Based Industries, Creative Industries Series No.2.</i>	WIPO Publication No.1009(E), Geneva 2008
	<i>Study on the Economic Contribution of the Copyright and Related Rights-Based Industries in Malaysia.</i>	2008
	<i>The Economic Contribution of Copyright-Related Industries in China.</i>	2010
US Department of State Bureau of East Asian and Pacific Affairs	<i>Brunei.</i>	31 December 2009
		10 December 2010
CIA, USA	<i>The World Factbook.</i>	16th March 2011