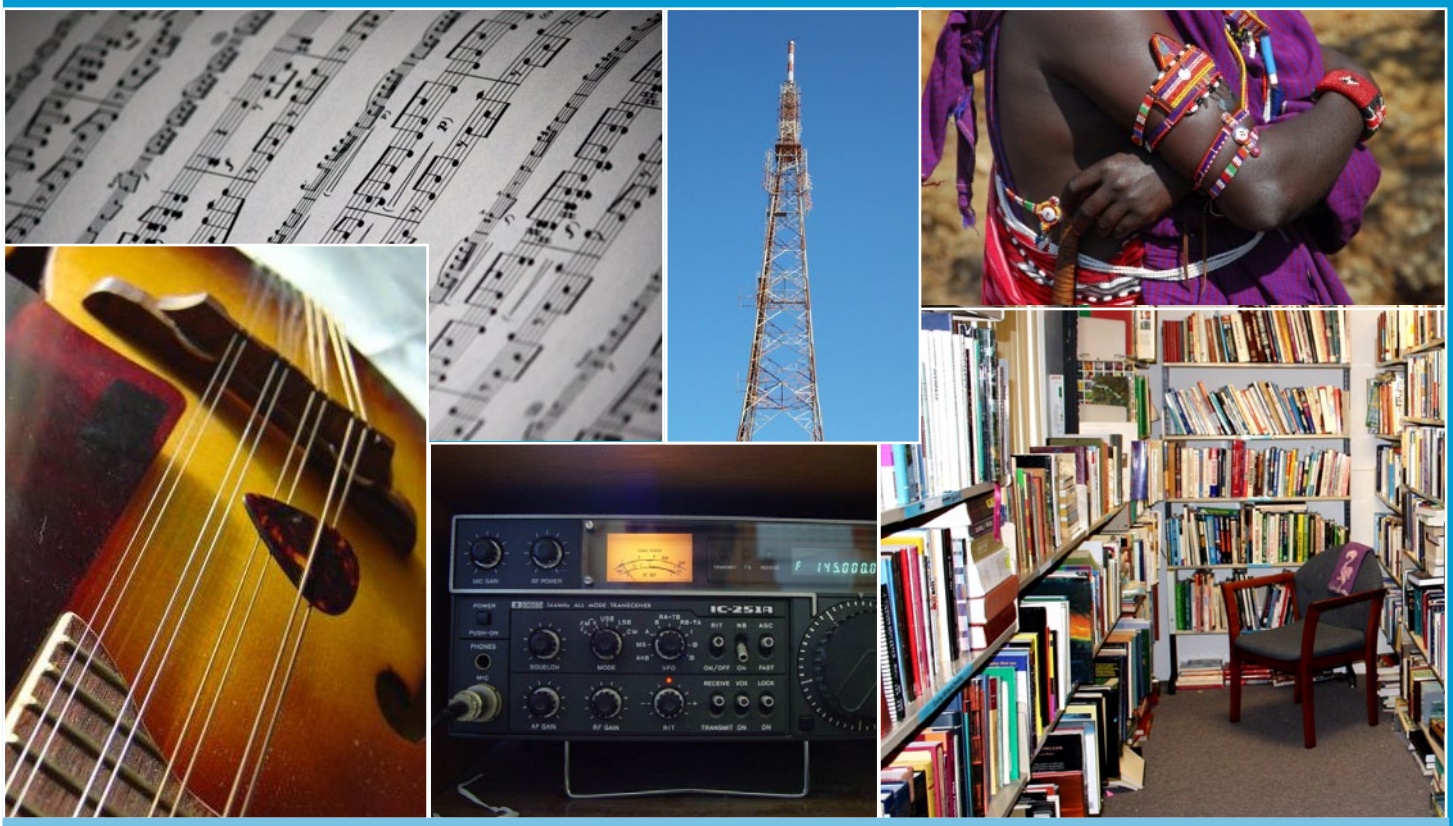
The Economic Contribution of Copyright-Based Industries in Lithuania



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The Economic Contribution of Copyright-Based Industries in Lithuania

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Abbreviations

AEPO-ARTIS	Association of European Performers' Organisations
AGICOA	Association on Rights Protection of Audiovisual Works Authors' and Related Rights Owners
AVAKA	Association of Copyright in Audiovisual Works
CIs	Copyright Industries
CISAC	International Confederation of Authors and Composers
CMOs	Collective Management Organisations
CPA	Classification of Products by Activity
EC	European Community
EU	European Union
ESTEP	Public Company *Europossocialiai, teisiniaiirekonominiaiprojektai*
FTU	Full Time Units (for Employment)
GDP	Gross Domestic Product
GVA	Gross Value Added
ICI	Intermediate Copyright Industries
LATGA-A	Lithuanian Copyright Protection Association
LDS	Lithuanian Department of Statistics
LTL	Litas (Lithuanian currency)
NACE	Classification of Economic Activities in the European Community
NATA	Music Copyright Association
NCB	Nordisk Copyright Bureau
NDCI	Non-dedicated Support Copyright Industry
NSO	National Statistical Office of Lithuania
OECD	Organisation for Economic Co-operation and Development
PCI	Partial Copyright Industries
SCAPR	The Societies' Council for the Collective Management of Performers' Rights
SU(T)	Supply and Use (Tables)
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
VAT	Value Added Tax
WIPO	World Intellectual Property Organization
WCT	WIPO Copyright Treaty
WPPT	WIPO Performances and Phonograms Treaty

Executive Summary

Copyright Law

The regulation of copyright and related rights activities in Lithuania is well-developed; major international standards have been implemented over the last two decades. The principal law is the Law of the Republic of Lithuania on Copyright and Related Rights which came into force in 1999. In 2003, it was reworded as it was important to harmonise the national Copyright Law with the legal requirements of the European Union (EU) during Lithuania's accession to the EU.

Since the restoration of national independence in 1990, Lithuania has ratified key international agreements. These include: the 1886 Berne Convention on the Protection of Literary and Artistic Works (ratified in 1996); the 1961 Rome Convention on the Protection of Performers, Producers of Phonograms and Broadcasting Organisations (ratified in 1998); the 1971 Geneva Convention on the Protection of Producers of Phonograms (ratified in 1999); the Agreement on Trade-Related Aspects of Intellectual Property Rights, or TRIPS, ratified in 2001); the 1996 WIPO Performances and Phonograms Treaty, or WPPT, and the WIPO Copyright Treaty, or WCT (ratified in 2000 and 2001).

The current Copyright Law is comprehensive and includes provisions for the regulation of copyright in literary, scientific and artistic works, the rights of authors, performers, producers of phonograms, broadcasting organisations, and producers of the first fixation of an audiovisual work, and the rights of makers of databases.

Collective management of copyright and related rights activities is regulated under the Copyright Law. In 2012, there were five Collective Management Organisations (CMOs) in Lithuania. Two CMOs date back to the 1990s and have many members; newer ones are still rather small. Authors, performers and other copyright owners are free to choose the appropriate CMO for the enforcement of their economic rights depending on their activities.

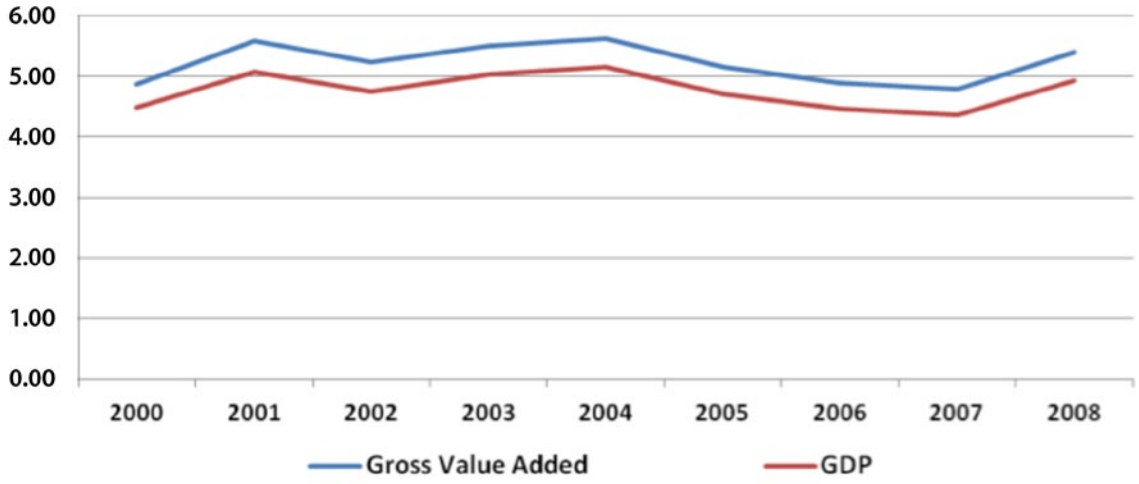
Economic Contribution

The Lithuanian copyright-based sector was analysed in terms of the value added, employment, and the foreign trade contributions of this industry to the Lithuanian economy in 2000–2008.[1] The analysis shows that the Lithuanian copyright and related rights industry made up between 4.79 and 5.62 percent of the country's economy annually over the period of 2000–2008, being 5.40 percent value in 2008. The copyright industry in Lithuania is more important in terms of gross value added (GVA) than in terms of employment as it is more productive than the economy in general. One employee in creative industries creates a larger gross value added compared to the rest of the national economy. The contribution of the copyright economy to the country's foreign exports falls close to its contribution to the national employment and to the gross value added as well. The copyright economy, as is the case in other copyright studies, is subdivided into four segments: core, interdependent, partial and non-dedicated support industries. The core copyright industry contributed 2.79 percent to the economy in 2008. The largest copyright industry in 2000–2008 was Press and Literature with a little less than 1 percent contribution to the economy at the end of the period. The rapidly growing Software and Databases industry, classified as a core copyright activity, has quickly been catching up.

A detailed statistical analysis of the value added of copyright-related economic activities shows that the Lithuanian copyright industry comprised 5.40 percent of the gross value added in 2008 while, compared to gross domestic product (GDP), it made up 4.93 percent. The difference between these two measures is explained by the fact that gross value added does not include net taxes on products or the value added tax (VAT). Both net taxes and VAT cannot largely be attributed to economic activities; thus, a share of the copyright industry is smaller in terms of GDP than in terms of GVA. This research is based on the GVA measure throughout the study, which, according to the emerging consensus among researchers, suits the current aim better; nevertheless, due to country comparability reasons, the aggregates are provided in GDP percentages as well. The following Figure shows that both measures are moving strictly in parallel and differences are of the same scale each year.

[1]The employment figures were analysed for the period of 2001–2008, the export figures, for the period of 2004–2008.

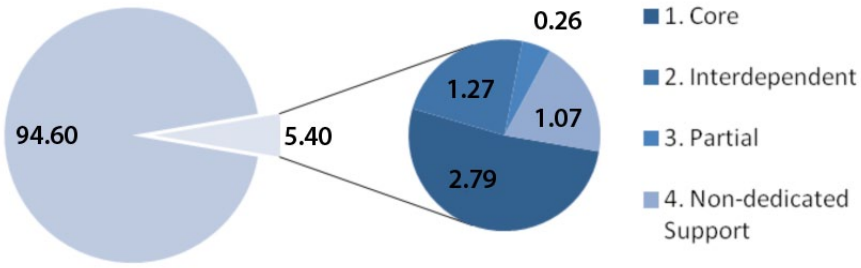
Copyright Industry Contribution to GVA and GDP, %



Source: calculated by the authors

The structure of the copyright economy is dominated by the core copyright industry. More than half of the value added created in the copyright industry in 2008 comprised the core copyright industry, creating 2.79 percent of GVA. The interdependent copyright industry, which is the one most closely related to the core copyright industry, made up 1.27 percent of the national economy. The partial copyright industry created 0.26 percent of the value added in the economy. Finally, the part of the economy which serves the copyright industry, and which is traditionally classified as the non-dedicated support copyright industry, comprised 1.07 percent of the value added. These numbers were derived from structural business statistics by reconciling the data with the national accounts aggregates. The structure of the economic contribution to the Lithuanian economy (GVA) is presented in the following Figure.

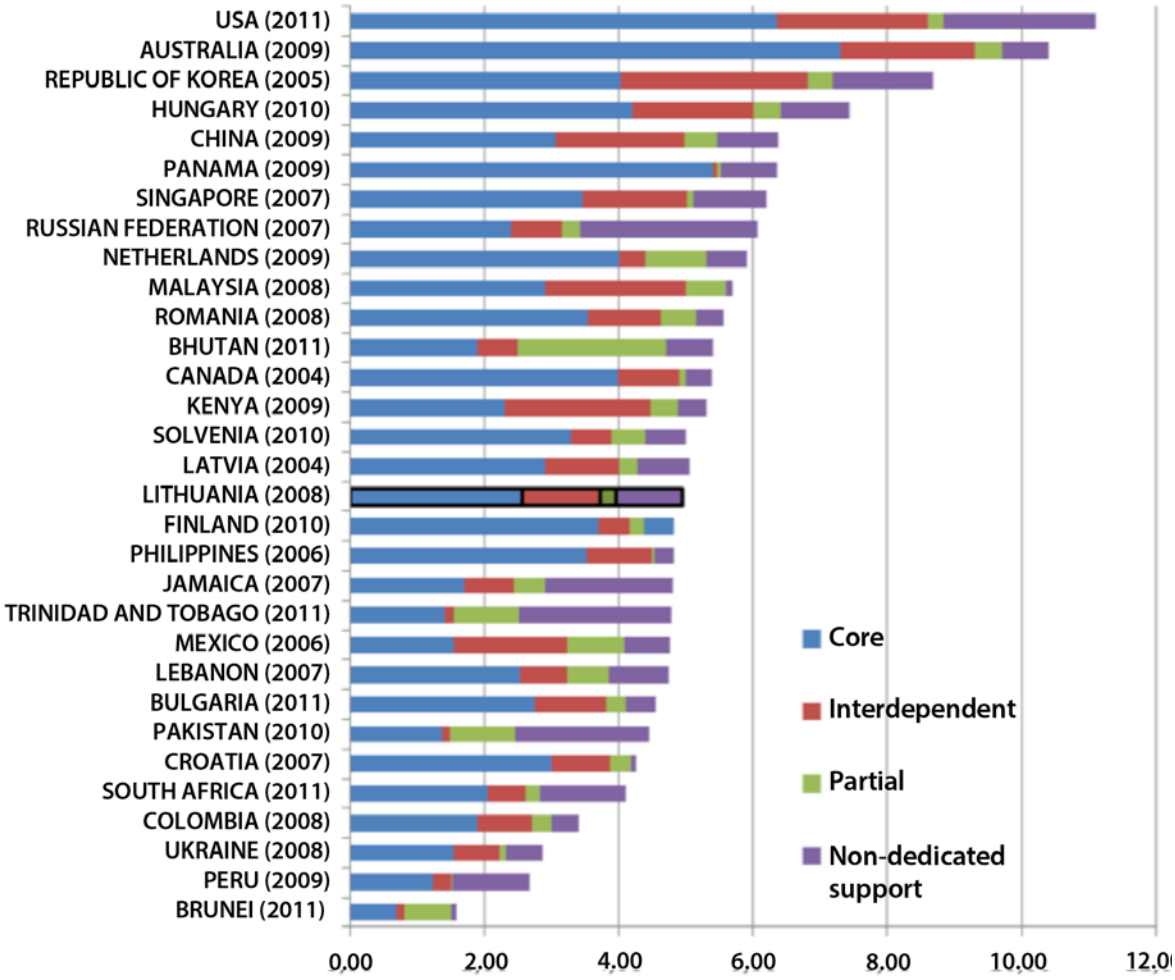
Copyright Industry Contribution to Gross Value Added in 2008, %



Source: calculated by the authors

The findings above allow mapping of the Lithuanian position to the global picture by comparing the importance of the copyright industry in other countries which have conducted similar statistical research. As presented below, the Lithuanian copyright industry is slightly smaller than the corresponding part of the economy in neighbouring Latvia and slightly larger than the copyright industry in Finland. International comparison demonstrates the relatively advanced stage of the Lithuanian copyright economy, which also corresponds to the highly-developed legal regulation of the copyright activities.

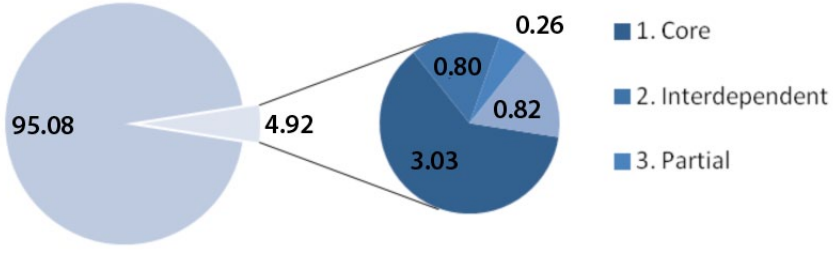
National Contributions of Copyright Industries to GDP, %



Source: calculated by WIPO and the authors

The analysis of the employment dynamics indicates that the copyright industry generated slightly less employment than value added. In 2008, employment in the Lithuanian copyright industry comprised 4.92 percent of the total employment (value added equalled 5.40 percent). Moreover, more than half of the employment, 3.03 percent, was generated by the core copyright industry. The interdependent copyright industry made up 0.80 percent, while the partial copyright industry created 0.26 percent of the overall employment. Finally, the non-dedicated support copyright industry comprised 0.82 percent of the total employment. The employment structure with regard to the Lithuanian copyright industry is shown in the Figure below.

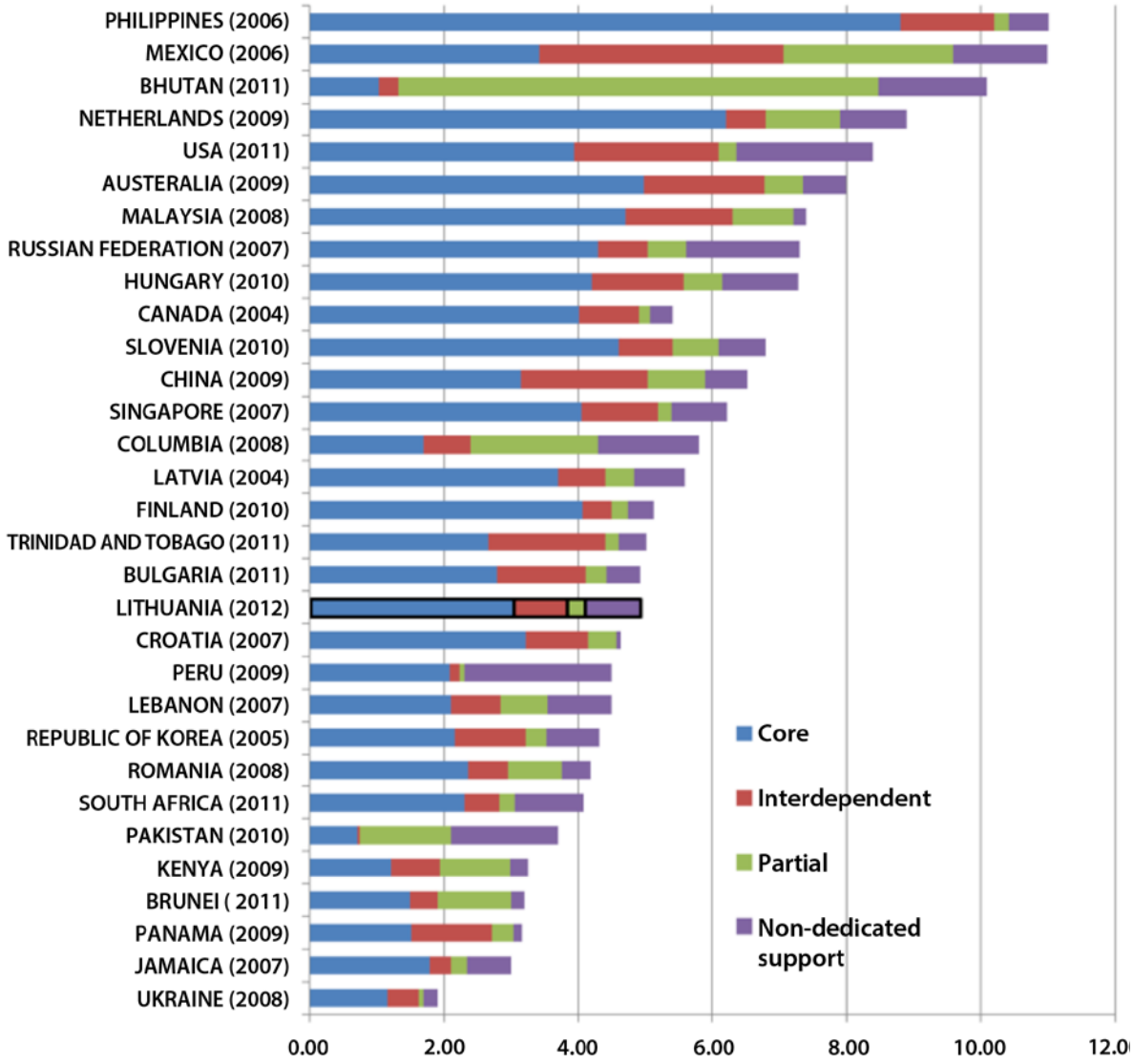
Employment by the Copyright Industry in Lithuania in 2008, %



Source: calculated by the authors

An international comparison shows that, due to differences in productivity across different countries, the Lithuanian copyright economy ranks lower in terms of the employment measure. It generates less employment than in Latvia and Finland, to which countries Lithuania ranked very close in terms of the value added contribution. Nonetheless, Lithuania falls between Bulgaria and Croatia. In fact, the lower ranking means that the copyright industry is relatively productive. Following this assumption, the productivity of the Lithuanian copyright sector employment could be defined as relatively advanced compared to the other countries examined.

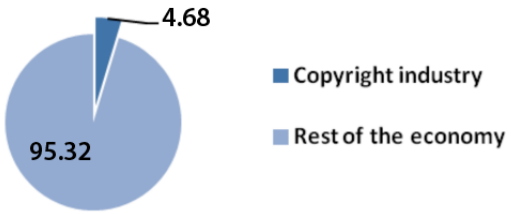
Contribution of Copyright Industries to Employment, %



Source: WIPO

The third analysed feature of the copyright industry in Lithuania was its contribution to export in goods and services. It was remarkably close to that of employment, and made up 4.89% in 2008. Since the copyright economy comprises 5.40% of value added, it shows that the domestic role of the copyright industry is higher than its ability to contribute revenues from abroad.

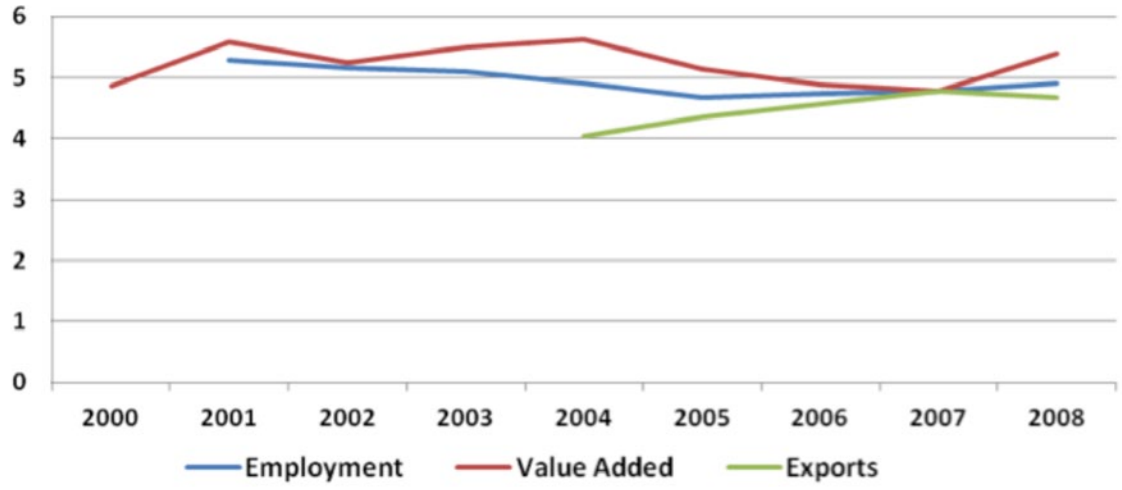
Exports Structure in 2008, %



Source: calculated by the authors

The statistical analysis shows that the value added and employment of the copyright industry are closely related, while copyright-based exports have a rather different dynamic. Development in the value added has shown more volatility when compared to a smoother employment trend. Nevertheless, both the value added and employment measures exhibited parallel movements in the medium term. The contribution of the copyright industry to foreign trade shows more similarities in its dynamics with employment than with the value added. As is the case in the overall economy, development in foreign trade of the copyright industry is much more pronounced if compared to contributions of the value added or employment. The table below summarises the economic history of Lithuanian copyright over the period 2000–2008.

Copyright Industry Contribution to the Lithuanian Economy, %



Source: calculated by the authors

This study provides a comprehensive analysis of the three most important core copyright industries in Lithuania. The analysis of these three, separately analysed, industries goes beyond their value added and employment components and includes an analysis of business demography. During the first decade of the millennium, the Press and Literature industry was experiencing the toughest ever period on record, reducing its share in the economy by a third. During the same period, the Software and Databases industry demonstrated an outstanding story of success, increasing its economic share twice over. Advertising Services, being third in terms of economic size, augmented its share in the economy by a half.

The last Part of the study provides technical details for those willing to conduct their own copyright studies. In order to make the text more user-friendly, the most technical parts of data collection, imputation, reconciliation with national accounting, and the underlying data are presented in 12 dedicated annexes.

The research of the Lithuanian copyright industry was conducted consistently, applying the World Intellectual Property Organization guidelines and recommendations. It was decided to cover several subsequent years (nine years in total), which is rather rare in the copyright industry studies commissioned by the WIPO. This decision helped to provide a clearer picture of how the Lithuanian copyright economy was evolving throughout a nearly complete business cycle.

1. Introduction to the Study

The Introduction discusses the reasons for measuring the contribution of copyright and related rights-based industries to the Lithuanian economy. It presents the purpose and the objectives of this study, as well as the structure of the study, and information regarding the applied methodology and indicators.

Industries based on copyright and related rights activities make a considerable contribution to national economies across the globe, and have deserved careful investigation over the past two decades. National studies in more than 30 countries have revealed that these industries are substantial contributors in terms of their country's gross domestic product (GDP) and/or gross value added (GVA),[2] as well as in their contribution to employment, and foreign trade in goods and services.[3]

Although copyright-based industries are politically important in Lithuania, they have not been widely discussed. Information about their contribution to the economy has not been analysed in detail to date. The only related study was conducted in 2005,[4] but it was rather general, used extremely simple qualitative methods of analysis which are by no means comparable to the analytical standard developed by the World Intellectual Property Organization (WIPO).

A natural question raised many times by policy makers and analysts was where does the Lithuanian copyright industry stand in terms of value added, employment and foreign trade when compared to other countries? What do the copyright industry's development trends in Lithuania say about the perspectives of this economic sector in the country? Which sectors of the copyright industry are the main contributors and which are minor contributors? Which copyright subsector has developed the most rapidly over the last decade? What policy lessons could be drawn from other countries? To answer all these questions there was a genuine need for a specific and comprehensive copyright study.

Prior to the study it was assumed that the copyright-based industries created approximately 5 percent of GDP. This was an assumption waiting for confirmation or rejection, not supported by reliable and comprehensive statistical techniques. Creating a solid basis for policy-makers would enable them to review the policy of allocating national budget to the cultural (and copyright-related) sector and better target the current budgetary spending. From budgetary figures, it was known that the national budget expenditure share on cultural activities was approximately two times smaller than their share in country's value added.[5]

All in all, the vital need for a detailed and extensive study of the contribution of the copyright-based industries to the national economy is built on three arguments.

Firstly, such a study would help to build a sounder understanding of the economic value of copyright-related activities. Guidelines for the Development of the Lithuanian Cultural Policy[6] declare the intention of calculating the real contribution of the copyright-based industries to the national economy, and possibly changing the existing attitude that copyright-related activities are only sustained by state revenues.

Secondly, the Guidelines for the Development of the Lithuanian Cultural Policy define the need for developing a national methodology for calculating the contribution of cultural industries to the national economy. In 2003, (WIPO) published the 'Guide on Surveying the Economic Contribution of the Copyright-Based Industries' (WIPO publication No 893, hereafter referred to as the 'WIPO Guide'), to provide a methodology for measuring the contribution of copyright-based industries in economic terms to a country's development. The WIPO Guide has been used as a methodological tool in over 30 country studies. It was evident that the application of an internationally comparable methodology in Lithuania could improve policy making.

Thirdly, the results of an extensive study of the copyright-based industries could be used by different interest groups. For the copyright-related private sector, it is necessary to have a clear understanding of how each

[2] Gross Domestic Product (GDP) and Gross Value Added (GVA) are closely related concepts. GDP is derived from GVA by adding net taxes on products. Net taxes on products is made up of taxes on products minus subsidies on products.

[3] The most complete set of copyright studies may be found on the WIPO website.

[4] TNS-Gallup, ESTEP, 'Pramonės, susijusios su autorių teisėmis ir gretutinėmis teisėmis, ekonominė svarba Lietuvoje.' 2005 ('Economic Importance of the Copyright and Related Rights-Based Industry in Lithuania').

[5] Spending on cultural and leisure sector is 2.6 percent of the national budget (2011).

[6] Approved by the Lithuanian Parliament in 2010.

industry develops, its future prospects, and to be able to optimally allocate investments. This study could be instrumental in reviewing fiscal and structural policies in relation to the copyright-related industries. In the long-term perspective, the results of the study will be conducive to evaluating the development of the copyright-based industries.

All things considered, detailed research into the economic value of the copyright-based industries provides a robust and consistent dataset regarding the actual economic contribution of the creative industries, which can serve as a basis for adjusting policies and strategies aimed at promoting growth and development in national copyright-based sectors.

1.1 purpose and objectives of the study

The **purpose** of this study was to produce a precise map of the copyright-based industries in Lithuania in terms of economic value. The **key objectives** of the study were to:

- **quantify the economic contribution** of copyright and related rights-based industries in the country by estimating their value added to GDP (and GVA), share of national employment, and revenue generated from foreign trade;
- **analyse and elaborate selected copyright and related rights-based industries of importance to Lithuania**, their national market structure, value chain, demand and supply patterns, labour market, and the role of collective management organisations and other copyright-related organisations;
- **identify the comparative advantages of the Lithuanian copyright-based industries** with regard to other countries; and
- **propose a strategy** for encouraging the growth and development of copyright-based industries in the country.

1.1 Background Information on the Study

The study aims at presenting the economic contribution of the copyright industry to Lithuania's economy. However, for a better understanding of economic processes in the sector, a brief legal analysis is presented as well (see Part 2). It discusses the legal background for copyright-related works and the rights of relevant subjects. Lithuania's participation in international conventions and agreements is explained in detail. In addition, this Part examines collective rights management and the collective management associations operating in Lithuania.

Part 3 presents the results of this study. It provides an overview of the Lithuanian copyright industry by presenting the economic contribution of copyright to GVA, employment, and foreign trade. Comparing the value added contribution with the employment contribution allows the examination of the productivity of the copyright industry and its constituents. Moreover, all these aspects are analysed in dynamic development over 2000–2008.

The reliability and consistency of economic analysis are essential aspects of the quality of the copyright studies. They are needed for better applicability of the results of the study to the future endeavours in copyright management; therefore, the team has paid great attention to the analytical approach applied in the study. The decision was taken to analyse the economic contribution to the GVA not for a single year, but to investigate the entire time series for 2000–2008. Specific datasets were derived and calculations were performed following the procedure of imputation of data received from the Statistics Department of the Republic of Lithuania and from the Bank of Lithuania. In one instance, where official statistics were unavailable for confidentiality reasons, some data from commercial data vendors were employed. Most calculations were completed at basic prices. However, at the final stage, the economic contribution results were recalculated at market prices in order to make them more comparable with GDP. The structure of the Lithuanian copyright-related industry and its features were measured. Based on these results, copyright factors were evaluated. The very technical character of the methodology is dealt with in Part 4. The most complex technical details are presented in Annex 1 of the study.

Finally, Part 5 presents the conclusions of the analysis and recommendations for the future. The recommendations address Lithuanian national authorities as to how to utilise the results of this study and how the copyright economy contribution could be measured in Lithuania in the most cost-conscious way.

It should be noted that the sources for external data in the tables and graphs are credited immediately below the relevant table or graph; sometimes, the source are the authors of this study who handled all the calculations of the data provided hereafter.

2. Copyright Law in Lithuania

This Part provides an overview of the national legal system and its enforcement in the copyright and related rights activities, as well as defines collective management practices in Lithuanian copyright-based industries.

The independence of Lithuania was restored in 1990, ending an annexation that had lasted for half a century. Not only the recognition of the Government, its inter-state relations and economic system had to be re-established, but also the entire legal system had to be reformed. It is important to note that Lithuania has never had its own legal copyright traditions. Throughout its history, legislation based on the copyright traditions of other countries were taken over or simply enforced in the territory of Lithuania. Therefore, after 1990, the system of Copyright Law was basically created from scratch rather than reformed.

At present, the enactment of the Constitution of the Republic of Lithuania is of high importance to the protection of intellectual property. Article 42.1 of the Constitution sets forth that culture, science, research and teaching shall be unrestricted. Moreover, Article 42.3 of the Constitution sets forth that the spiritual and material interests of authors which are related to scientific, technical, cultural and artistic work, shall be protected and defended. It should also be noted that Article 23.1 of the Constitution has extended the protection to property and, as the Constitutional Court of the Republic of Lithuania has noted, the constitutional protection of property covers not only the protection of tangible, but also of intellectual property.[7]

The main legislative source of copyright in Lithuania is the Law of the Republic of Lithuania on Copyright and Related Rights. The Law has been amended several times, the most significant amendments related to the implementation of the directives of the European Union (EU) into the national law. Lithuania is a party to the main multilateral conventions and bilateral agreements in the field of copyright and related rights. In general, regulation of copyright activities is legally consistent and reflects major international standards.

2.1 Current Law on Copyright and Related Rights

In the early 1990s, Chapter 6 of the Civil Code of the Soviet Republic of Lithuania covering the introduction of copyright law was still in force, but the process of amending and supplementing the legal acts was started as well. The Civil Code was amended in 1994. The principal amendments made to the regulation of some related rights activities was due to the fact that related rights activities had no protection in Lithuania before that time. In 1996, the first law specifically dealing with the legal protection of computer programs and databases was passed and remained effective until the new Law on Copyright and Related Rights was adopted and came into force on 1999.

The Law of the Republic of Lithuania on Copyright and Related Rights, *Autoriųteisiųirgretutiniųteisiųįstatymas* (hereafter referred to as the 'Copyright Law' or the 'Law') is the main legislative source of copyright protection. It was first enacted on 18 May 1999 and came into force on 9 June 1999. The initial wording of the Copyright Law reflected the key provisions of the contemporary EU directives, as well as preserving the well-established French traditions of copyright protection that rested on the concept of individual rights. The new wording of the Copyright Law was adopted on 5 March 2003 (enforced on 21 March 2003). Since then, it has since been amended several times with the most significant amendments relating to the transposition of European Community Directives in national law.8

The current Copyright Law consists of the following chapters: Chapter 1, General Provisions; Chapter 2, Copyright; Chapter 3, Related Rights; Chapter 4, *Sui Generis Right*; Chapter 5, Collective Management of Copyright and Related Rights, and Chapter 6, Enforcement of Copyright, Related Rights and *Sui Generis*

[7] See Judgments of the Constitutional Court of the Republic of Lithuania 5 July 2000, 27 March 2009 and 6 January 2011.

[8] The following amendments should be noted:
(1) Law No IX-1355 of 5 March 2003 (new wording of the Copyright Law, effective 21 March 2003), which implemented the Information Society Directive 2001/29/EC.
(2) Law No X-855 of 12 October 2006 (effective since 31 October 2006) which implemented the Enforcement Directive 2004/48/EC and the Resale Rights Directive 2004/84/EC;
(3) Law No X-1454 of 13 March 2008 (effective since 27 March 2008) which amended the regulation of the limitation of the author's exclusive right to publicly display the original or copies of a work.

Right. The Government of the Republic of Lithuania has issued the following resolutions to implement the Copyright Law:

1. Resolution No 1283 of 19 November 1999 on the Implementation of Copyright and Related Rights of the Republic of Lithuania (the Ministry of Culture was authorised to exercise the State's policy in the area of copyright and related rights and to coordinate the protection of the said rights).
2. Resolution No 181 of 6 February 2002 on the Approval of the Procedure for the Payment of Remuneration for the Reprographic Reproduction of Works.
3. Resolution No 182 of 6 February 2002 on the Approval of the Procedure for the Payment of Remuneration for the Lending of Books and other Publications through Libraries (amended by Resolution No 905 of 14 August 2007).
4. Resolution No 1018 of 12 August 2003 on the Approval of the Procedure for the Protection of Author and Performer's Moral Rights in Case of the Absence of Any Heirs, as well as After the Expiry of Economic Rights.
5. Resolution No 699 of 13 June 2012 on the Approval of the Procedure for the Collection, Distribution, Payment and Refunding of Compensatory Remuneration for the Reproduction of Audiovisual Works or Works Fixed in a Phonogram for Personal Use.

2.2 International copyright law

Currently, Lithuania is a party to the following multilateral conventions and bilateral agreements in the field of copyright and related rights:

Multilateral conventions

1. ***The 1886 Berne Convention for the Protection of Literary and Artistic Works (Paris Act 1971)***. Lithuania agreed to the Berne Convention on 14 September 1994 and has been a party to the Berne Convention since 14 December 1994 (the Convention was ratified by Law No I-1351 of 28 May 1996). Lithuania made a reservation to Article 33.2 of the Berne Convention regarding dispute settlement, stating that any member state of the Berne Convention may appeal to the International Court when not reaching consensus in the negotiations.
2. ***The 1961 Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations.*** On 22 December 1998 Lithuania ratified the Rome Convention (by Law No VIII-1001) and it entered into force for Lithuania on 22 July 1999. Lithuania made a reservation to Article 12 of the Rome Convention, ostensibly exempting it from paying remuneration for phonograms by producers who are not nationals of any Rome Convention signatory.
3. ***The 1971 Geneva Convention for the Protection of Producers of Phonograms***. On 13 April 1999 Lithuania ratified the Geneva Convention (by Law No VIII-1140) and it entered into force for Lithuania on 27 January 2000.
4. ***The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs)***. As a member of the World Trade Organisation since 31 May 2001, Lithuania is bound by the TRIPs Agreement. It was ratified by Lithuania on 24 April 2001 (by Law No IX-292).
5. ***The 1996 WIPO Treaties.*** Lithuania ratified ***the WIPO Copyright Treaty*** on 13 March 2001 (by Law No IX-212), ***the WIPO Performances and Phonograms Treaty*** on 26 September 2000 (by Law No VIII-1956). The latter entered into force for Lithuania on 20 May 2002, the WIPO Copyright Treaty on 6 March 2002.

Bilateral agreements

1. European Union. On 12 June 1995, Lithuania concluded the Association Agreement with the European Union and the EU Member States. Article 67.3 and Annex XIX of the Association Agreement obliged the Republic of Lithuania to harmonise its legislation and to improve the protection of intellectual property rights in such a way that, by the end of transitional period, a protection level similar to the level existing in the European Community (EC) could be reached.
2. At the level of the Government of the Republic of Lithuania, Lithuania has concluded agreements on co-operation in the fields of education, science and culture with Poland, Slovenia, Hungary, Greece, the

United Kingdom and Bulgaria.[9] Each of these agreements provides, *inter alia*, for the protection by each of the parties of the copyright and related rights of citizens, permanent residents, and legal entities of the other party.

The legal base from which Lithuania could start harmonising its national law with European Community (EC) legislation was the Europe Agreement, establishing an association between the European Communities and their Member States and the Republic of Lithuania, signed on 12 June 1995. Article 67 of the Agreement emphasised the importance of ensuring adequate and effective protection and enforcement of intellectual, industrial and commercial property rights, while Paragraphs 2 and 3 of this Article laid down the essential obligations to be accomplished by Lithuania by the end of the transitional period which, according to Paragraph 1 of Article 3 of the Agreement, was to expire on 31 December 1999. The Lithuanian commitment to continuously improve the protection of intellectual, industrial and commercial property rights in order to provide a similar level of protection to that which exists in the Community was an expressed prerequisite for the drafting of new laws in the field of copyright law, including related rights.

Currently the following Directives are implemented by the Lithuanian Copyright Law:

1. Council Directive 93/83/EC of 27 September 1993 on the Coordination of Certain Rules Concerning Copyright and Rights Related to Copyright Applicable to Satellite Broadcasting and Cable Retransmission.
2. Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases.
3. Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society.
4. Directive 2001/84/EC of the European Parliament and of the Council of 27 September 2001 on the Resale Right for the Benefit of the Author of an Original Work of Art.
5. Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the Enforcement of Intellectual Property Rights.
6. Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on Rental Right and Lending Right and on Certain Rights Related to Copyright in the Field of Intellectual Property.
7. Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the Term of Protection of Copyright and Certain Related Rights.
8. Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the Legal Protection on Computer Programs.

2.3 Subject Matter and Beneficiaries of the Copyright Law

National legislative provisions on subject matter and beneficiaries of the rights have been influenced by the related provisions as embodied in international treaties and in the relevant EC directives. A list of works is based on Article 2 of the Berne Convention. For copyright, Lithuanian Copyright Law does not impose any preconditions although, for audiovisual works, fixation is required.

2.3.1 *Subject Matter of Protection*

Author's rights

According to Article 4.1 of the Copyright Law, the subject matter of copyright includes original literary, scientific, and artistic works which are the result of the creative activities of an author. Article 2.19 of the Law establishes that 'work' means any original result of creative activities in the literary, scientific, or artistic domain, whatever its artistic value, mode, or form of expression. This substantially corresponds with the description of works provided in Article 2.1 of the Berne Convention.

[9] Poland – the agreement of 17 December 1998 entered into force on 5 January 2000, Slovenia – the agreement of 14 November 1997 entered into force on 2 January 2002, Hungary – the agreement of 7 October 1997 entered into force on 21 June 2000, Greece – the agreement of 24 February 1997 entered into force on 24 September 1998, the United Kingdom – the agreement of 8 November 1996 entered into force on 1 April 1998, Bulgaria – the agreement of 10 April 1997 entered into force on 27 November 1997.

The Copyright Law contains special provisions relating to the peculiarities of protection criteria for computer programs, databases and photographs, in accordance with the provisions of EC legislation in respect of protection granted for such a subject matter:

i. A computer program shall be protected if it is original in the sense that it is the author's own intellectual creation and no other criteria shall be applied to determine its eligibility for protection (Article 1.3 of the Council Directive 91/250/EEC, Article 10.1 of the Copyright Law).
ii. Databases which, by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation shall be protected as such by copyright and no other criteria shall be applied to determine their eligibility for that protection (Article 3.1 of the Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases).
iii. Photographs shall be protected by copyright if it is determined that they are the author's own intellectual creation and this alone is considered to be sufficient to determine their originality (Article 6 of the Council Directive 93/98/EEC of 29 October 1993 harmonising the term of protection of copyright and certain related rights).

For any original result of creative activities to be granted copyright protection, it is sufficient for it to be expressed in any objective form.

Lithuanian Copyright Law does not impose any formalities as preconditions of copyright. Fixation is required for audiovisual works. An audiovisual work means a cinematographic work or any other work created by means of cinematography, consisting of a series of related images which impart an impression of motion, whether or not accompanied by sound, and which are recorded (fixed) in an audiovisual recording medium (Article 2.4 of the Copyright Law).

A list of works laid down in Article 4.2 of the Copyright Law is based on Article 2 of the Berne Convention. The *numerus clausus* principle is not applied in respect of the list of works eligible for copyright protection but is quite detailed (12 groups). In accordance with the provisions of Article 10 of the TRIPS Agreement and Articles 4 and 5 of the WCT, computer programs and databases enjoy protection as works. The regulation of protection of computer programs and databases is identical to that set forth in the EC Computer Programs Directive and the EC Database Directive.

Under Article 2.7 of the Law, a database means a compilation of works, data or any other material arranged in a systematic or methodical way and individually accessible by electronic or other means, except for computer programs used in the making or operation of such databases.

Works of applied art are granted double protection, i.e., even if a work of applied art has been registered as an industrial design, rights to such a work can be protected cumulatively under the special Law on Industrial Design of 7 December 2002, and the Copyright Law. Article 17 of the EC Directive 98/71/EC[10] grants double protection for industrial designs in the EU Member States, both under industrial design and copyright legislation. In the light of this provision, Article 4.3 of the Lithuanian Design Law also provides that registered designs may be protected by the Copyright Law if they are expressed in any objective form.

Article 2.10 of the Law lays down that a photographic work is an image produced on surfaces sensitive to light by means of light, or any other radiation, if the composition, selection or way of capturing the chosen objects show originality, irrespective of the technology (chemical, electronic, etc.) of such fixation. A still picture extracted from an audiovisual work is not considered to be a photographic work, but only a part of the audiovisual work concerned.

Related rights

In Lithuania, the protection of related rights has been provided since 10 June 1994. The regulation of protection identically reflects provisions of the appropriate international treaties and the relevant EU legislation. The Copyright Law protects the related rights of performers, phonogram producers, broadcasting organisations, producers of the first fixation of audiovisual recordings, publishers of public domain works and the *sui generis* right in databases.

[10] Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the legal protection of designs (OJ 1998 L 289, p. 28).

a. Performance

According to Article 2.30 of the Copyright Law, performance means acting, singing, playing, reciting, reading, dancing or otherwise publicly performing a work, either directly (live performance) or by means of any device or equipment in a certain public place in which a group of members of the public of an indefinite number are, or may be, present at the same time. Article 2.8 of the Law provides that a phonogram means the fixation of the sounds of a performance, or of other sounds, or of the representation of sounds, by technical devices in any material sound-recording medium.

b. Broadcasting and transmission

According to Article 2.28 of the Law, broadcasting means the transmission by wireless means, including by satellite, for public reception of sounds, images and sounds, or representations thereof. The transmission of encoded signals is considered to be transmission if a broadcasting organisation provides society with special decoding devices, or grants permission to acquire them.

c. Audiovisual recording

The term 'audiovisual recording' is not very clearly defined in the Copyright Law. According to Article 2(4) of the Copyright Law, an audiovisual work means a cinematographic work or any other work created by means of cinematography, consisting of a series of related images, which imparts an impression of motion, whether or not accompanied by sound. The term 'producer of the first fixation of an audiovisual work' is used in Article 57.1 of the Copyright Law. According to the Directive 2006/116/EC, the term 'film' includes not only a cinematographic or audiovisual work but, in relation to the related rights, also moving images, whether or not accompanied by sound. There are no special provisions implementing these provisions of the Directive. However, the existing legislation will have to be interpreted in view of the objectives of the Directive.

d. Sui generis right in databases

The *sui generis* right to a database protects the substantial qualitative and/or quantitative (intellectual, financial, organisational) investment in obtaining, arranging, verification and presentation of the contents of that database (Article 61.1 of the Law).

e. First publication after expiry of protection

Article 36 of the Copyright Law grants protection to anyone who lawfully publishes, or communicates to the public, a previously unpublished work for the first time.

2.3.2 *Author of Work*

Author

Article 6.1 of the Copyright Law establishes that 'the author shall be *a natural person* who has created a work'. Natural persons may be owners of copyright, irrespective of their age and legal capacity. Any person who has created a piece of work of whatever value shall be the author and may enjoy all copyright with regard to their work.

Legal entities cannot be considered authors or initial right holders. Legal entities can, in cases provided for by the Law, by copyright agreements or by way of bequeath, enjoy derivative authorship rights. However, this includes economic rights only. In all cases, the owners of moral rights shall be authors who are natural persons.

Article 7.1 of the Copyright Law defines a 'joint work' to which several natural persons have commonly contributed. Each co-author shall be entitled to use, at their own discretion, the part of the joint work created by them and having an autonomous meaning, unless otherwise provided for in the agreement concluded among the co-authors. However, a person who has provided material, technical or organisational assistance in the process of the creation of a work shall not be considered to be its co-author.

According to Article 11.1 of the Copyright Law, co-authors of an audiovisual work are persons who contribute creatively to its completion. This provision presumptively specifies that co-authors may be the director, author of the screenplay, author of the dialogue, art director, cameraman and composer of music (with or without

lyrics) specifically created for use in the audiovisual work. Authors of the pre-existing works included in, or adapted for, the audiovisual work, shall enjoy copyright to their works.

The economic rights of an author to collective works (such as encyclopaedias, encyclopaedic dictionaries, periodical scientific collections, newspapers, journals, and other collective works) shall vest in the natural person or legal entities on the initiative, and under the direction of whom, the work has been created (Article 8 of the Copyright Law). Authors of works incorporated in collective works shall retain exclusive rights to exploit their works independently of the use of the collective work, unless otherwise provided for by an agreement.

Owners of related rights

As mentioned above, the Copyright Law protects the related rights of performers, phonogram producers, broadcasting organisations, producers of the first fixation of audiovisual recording, publishers of public domain works and the *sui generis* right to databases.

A *performer* means an actor, singer, musician, dancer or another person who plays in, sings, reads, recites, or otherwise performs literary and artistic works, folklore, or circus acts, including a leader and conductor of an orchestra, ensemble or choir (Article 2.2 of the Copyright Law).

According to Article 2.9 of the Law, a *producer of a phonogram* means a natural person or a legal entity on the initiative, and under the responsibility of whom or which, the first fixation of the sounds of a performance or other sounds, or the representation of sounds is made. A *producer of an audiovisual recording* means a natural person or a legal entity on the initiative, and under the responsibility of whom or which, an audiovisual recording is being made (Article 2.3 of the Law).

Article 2.29 of the Copyright Law defines a *broadcasting organisation* as a legal entity, the main activity of which is the preparation and transmission of radio and (or) television programmes, as well as a cable transmission operator preparing and transmitting its own broadcasts and programmes.

Article 36.1 of the Copyright Law defines a *publisher* as a natural person or a legal entity on the initiative, and under the responsibility of whom or which, the first lawful publication or lawful communication to the public is made.

Article 61.1 of the Law describes a *maker of a database* as a natural person or a legal entity who or which takes the initiative and the risk of substantially investing in order to obtain, verify or present its contents.

2.4 Rights granted to Right Holders

2.4.1 *Economic Rights*

National legislative provisions on the economic rights of authors have been influenced by the related provisions as embodied in international treaties and in the relevant EC directives. Article 15.2 of the Copyright Law notes that any mode of exploitation of the original of a work or of its copies without the permission of the right holder shall be considered illegal, with the exception of cases provided for in the Law. The author shall have the right to receive remuneration for each mode of the exploitation of the work related to the author's economic rights. Moreover, it is particularly emphasised that, in the case of a public performance of a work, the author shall be entitled to remuneration for any live performance, fixation on a phonogram or an audiovisual fixation, radio and television broadcasting, or retransmission.

Article 15.1 of the Copyright Law lays down the following economic rights of authors: (1) reproduction, including publication; (2) translation, adaptation, arrangement, dramatisation or other transformation; (3) distribution, including rental, lending, offering for use, import and export; (4) public display; (5) public performance, and (6) communication to the public (broadcasting by any means and the making available to the public over public computer networks such as on the Internet). It sets out an extensive, but not exhaustive, list of examples of fields in which rights may be exploited.

Reproduction

Article 2.1 of the Copyright Law defines reproduction of a work as the production of a single or of several copies of a work or its part in any material form, including electronic. The exclusive right of the author in the reproduction of works shall include all means of reproducing a work, irrespective of their form. Any embodiment in which a work is fixed is treated as a copy, irrespective of the technique used. Such a technique may be the production of copies of a work enabled by the use of printing, sound or visual recording or other techniques of reproduction and copying, such as any printing means: typewriting, computer text, photocopying, mechanical and magnetic recordings (discs, cassettes, compact discs, films, microfilms, etc.).

Publication is defined as the production of copies of a work in quantities sufficient to satisfy the reasonable requirements of the public, regardless of the method of production, provided that such work is made available to the public with the consent of the owner of such a right (Article 2.14 of the Law). Works may be published in the form of mechanical and magnetic recordings (cassettes, compact discs, etc.) or in a digital form (such as in a form of so-called electronic books in compact discs and computer discs).

Translation and adaptation

Article 15.1(3–4) of the Copyright Law defines the author's right of adapting the work by themselves or authorising the adaptation thereof, and lists the following means of transformation: adaptation, arrangement, dramatisation, translation, etc. The list of forms for transformation of works is not exhaustive. Adaptation is a means of application of a work for use in another manner or for a special purpose.

Distribution

Article 15.1(5) of the Copyright Law defines distribution of a work as sale, rental, lending, or other transfer of ownership or possession of the original or copies of a work. The distribution right means the author's right to offer the original or copies of a work or distribute copies to the public. As well as the Copyright Law, the EU-wide exhaustion of distribution rights is applied in accordance with Article 4.2 of the Information Society Directive 2001/29/EC. It applies not only to the area of the EU, but also to the entire EEA (Article 16.1 of the Law). The provisions on the exhaustion of the distribution right upon sale or other transfer of ownership shall not apply to the exclusive rights of rental or lending of the work or its copies (Article 16.2 of the Law). Article 2.24 of the Law defines rental as making the original or copy of a work available for use for a certain period of time, and for direct or indirect commercial advantage. Lending is defined as making the original or copy of a work available for use for a certain period of time and not for direct or indirect economic or commercial advantage in libraries or other establishments accessible to the public (Article 2.25 of the Law).

Public display

Article 2.32 of the Law defines public display as any showing of a work (its original or a copy) directly (exposition) or on a screen by means of slides, television images or other similar means, as well as the showing of individual still images of an audiovisual work non-sequentially in a place where a group of members of the public of an indefinite number are or may be present, irrespective of whether they are present in the same place and at the same time, or in separate places and at different times. The author's exclusive right to public display of the original or copies of a work may be applied in practice only with regard to works of fine art and works of architecture (public display of works of painting, graphic art, sculpture in exhibitions, galleries, displays of a project, sketches or models of a building or any other construction, etc.), photographic works and other works created by a process analogous to photography.

Public performance

Public performance means acting, singing, playing, reciting, reading, dancing or otherwise publicly performing a work, either directly (live performance) or by means of any device or equipment in a certain public place in which a group of members of the public of an indefinite number are or may be present at the same time (Article 2.30 of the Copyright Law). The right to perform a work to the public in any form or by any means shall apply to dramatic, dramatic-musical, musical or literary works intended to be performed on the stage.

The right shall apply to both a live performance (when a work is performed by a singer, musician, choir, orchestra, etc.) and the use of recordings of a live performance (when recordings of works in compact discs, cassettes, etc., are used in public).

Communication to the public

The Copyright Law recognises the right to make a work available to the public by way of, *inter alia*, broadcasting, cable transmission, retransmission, or internet transmission. Communication to the public is defined as the transmission or retransmission of a work to the public by wire or wireless means, including making the work available to the public in such a way that members of the public may access it from a place and at a time individually chosen by them (Article 2.31 of the Law).

Article 2.28 of the Law defines broadcasting as the transmission of sounds, or images and sounds, or of representations thereof by wireless means, including by satellite, for public reception. The transmission of encoded signals is considered to be transmission, if a broadcasting organisation provides the society with special decoding devices, or grants permission to acquire them. Retransmission means simultaneous, unaltered and unabridged retransmission by a cable or a microwave system for reception by the public of an initial transmission, by wire or over the air, including that by satellite, of radio and/or television programmes intended for reception by the public (Article 2.15 of the Law).

2.4.2 *Moral Rights*

Following the concept of *droit d'auteur*, the Lithuanian Copyright Law treats the moral rights of the author as individual primary initial rights. Moral rights cannot be transferred to other persons, inherited or waived. Moral rights shall be protected for an unlimited period of time. Upon the death of the author, the protection of his/her moral rights can be exercised in several ways: the author is entitled to designate a person to whom he/she entrusts the protection of his/her moral rights and the latter will get such powers; in the absence of such instructions, the author's moral rights shall be protected by his/her heirs; in the absence of any heirs, as well as after the expiry of the author's property rights, the protection of the author's moral rights shall be executed by the national Ministry of Culture.

The Law provides for a so-called 'minimum' of moral rights as set out in Article 6bis of the Berne Convention. Article 14.1(1)(2)(3) of the Copyright Law provides for three moral rights: (1) the right to claim authorship of the work; (2) the right to claim the author's name, and (3) the right to the inviolability of a work.

Article 14.1(3) of the Copyright Law protects the integrity of a work by recognising the inviolability of the content and form of the work. The right to the inviolability of a work means the right to object to any distortion or other modification of a work or the title thereof, as well as to any derogatory action in relation thereto which would be prejudicial to the author's honour or reputation. In one case, the Supreme Court of Lithuania held that the right to the inviolability of the work cannot be treated in isolation because a creative work is a process of spiritual experience that pertains to very sensitive feelings and experiences of the author, his or her thoughts, and that certain alterations, distortions, although minor by their extent if considered from a formal perspective, might be painful to the author and perceived by him or her as disrespectful to his or her work, and, consequently, also to the author's personality.[11]

Although the Copyright Law does not contain any direct reference to the right of access as a specific individual moral right, it contains some provisions that enable authors to do so in case of specific works. Articles 18.1 and 18.2 lay down that the owner of an original work of fine art must permit the author of the work to reproduce or display the work at his/her exhibition if the author's right to reproduce the work or to publicly display it has not been transferred to the owner of the original work, provided that the owner's legitimate interests are not thereby prejudiced and the safety of the work is ensured (one may not destroy the work before offering it back to the author). Where the return of the original work is not possible, conditions must be created for the author to make a copy of the work in an appropriate manner. Articles 18.3 and 18.5 of the Copyright Law provide that the person commissioning a work of architecture must permit the author of the work, without additional remuneration, to participate in the realisation of the construction plan of a

[11] See Decision of the Supreme Court of Lithuania of 19 February 2003, civil case No. 3k-3-273/2003, J. Jakstas v. UAB „Musugaires", category 78.

building or other construction works (monitoring the drafting of the construction documentation and the execution of the construction of a building or other construction works with regard to copyright protection), unless otherwise provided for in the copyright agreement. The author of the work of architecture shall have the right to take photographs of the building or construction works before its demolition, and to get a copy of the design thereof.

2.4.3 *Limitation of Rights*

The regulation of authors' economic rights and related rights rests on two core principles: the 'Three-Step-Test'[12] and *numerus clausus* rules. A list of limitations of economic rights is in line with the conditions of the Berne Convention and the EC Information Society Directive, namely its Article 5. Thus, the limitations could be classified as limitations for the purpose of: (1) reproduction for a private use; (2) providing information and making reports; (3) teaching or scientific research, or (4) for any other purpose (e.g., quoting, temporary reproduction related to a technological process).

2.5 Collective Rights Management

Collective rights management in Lithuania is regulated in great detail. Bearing in mind the Lithuanian market and territory size, the current number of collective management associations is considered to be optimal. The state thoroughly oversees the activity of collective management organisations after their establishment. In addition, a right holder has a choice to opt for either collective or individual rights management.

Pursuant to Article 66 of the Copyright Law, Collective Management Organisations (hereafter referred to as CMOs) are non-profit organisations, established on the basis of a voluntary membership of owners of copyright and related rights, or their unions. They are not entitled to engage in commercial activities with profit purposes. They must adopt the legal form of an association and be registered with the Lithuanian Register of Legal Entities (the procedure of their establishment is governed by the Law on Associations of the Republic of Lithuania).

Regulation does not indicate any special authorisation for establishing a CMO, nor do they limit the number of CMOs entitled to engage in the collective management of copyright and related rights. However, at present there are several CMOs that only differ among themselves by the rights they defend. For example, there is one CMO for the collective management of the economic rights of authors, one for the collective management of related rights of performers and phonograms producers, and one for the collective management of authors of audiovisual works. In total currently there are four established and operating CMOs in Lithuania:[13]

1. The Lithuanian Copyright Protection Association (*Lietuvosautoriųteisiųgynimoasociacijosagentūra*, LATGA-A) administers copyright; www.latga.lt
2. The Lithuanian Related Rights Association (*Lietuvosgretutiniųteisiųagentūra*, AGATA) administers related rights of performers and phonogram producers; www.agata.lt
3. The Association of Copyright in Audiovisual Works (*Lietuvosaudiovizualiniųkūriniųautoriųasociacija*, AVAKA) administers copyright of authors' of audiovisual works. This Association was established in 2008 but is not fully operational yet; www.avaka.lt
4. The Association on Rights Protection of Audiovisual Works Authors' and Related Rights Owners (AGICOA Europe (Baltic)). The Association was established in April 2011.
5. The Music Copyright Association (Muzikosautorių teisių asociacija, NATA) administers music copyright. This Association was established in March 2012.

The Lithuanian Copyright Protection Association (LATGA-A), which administers copyright in Lithuania, has become an important organisation in Lithuania, forming international partnerships. Already in 1992 LATGA-A had become a member of CISAC (the International Confederation of Authors and Composers). That same year, the first bilateral representation agreements were signed with foreign CMOs. In 1994, LATGA-A entered into an agreement with the NCB (Nordisk Copyright Bureau) concerning recording rights administration.[14]

[12] See Article 9.2 of the Berne Convention, Article 13 of the TRIPS, Article 10 of the WIPO Copyright Treaty, Article 16 of the WIPO Performances and Phonograms Treaty, and Article 5.5 of the Directive 2001/29/EC of the European Parliament and of the Council of May 22 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

[13] Processes are taking place for the establishment of the division of the Nordisk Copyright Bureau and a new agency 'NATA'.

[14] However, the NCB is establishing its own office (see previous footnote).

The Lithuanian Related Rights Association (AGATA) administers the related rights of performers and phonogram producers. The association was founded in 1999 and currently has about 3,000 members. Since the establishment of the Association, one of main goals of the association has been the international protection of Lithuanian performers and phonogram producers' rights, as well as protection of international performers and producers' rights in Lithuania. Therefore, in 2002, AGATA became a member of the Association of European Performers' Organisations (AEPO-ARTIS) and a member of The Societies' Council for the Collective Management of Performers' Rights (SCAPR). Additionally, AGATA has signed co-operation agreements with most of the collective management associations of the 1961 Rome Convention members (22 countries in total, including Germany, France, Spain, Sweden, etc.).

The general legal framework for collective administration of rights is established in Articles 65–72 of the Copyright Law. It covers, in particular, rules on supervision, the relationship among CMOs and right owners, as well as between CMOs and users. Articles 65.2 and 65.3 of the Copyright Law establish mandatory collective management in the case of the following rights:

- Cable retransmission of works and objects of related rights, except own programmes of cable retransmission operators
- Broadcasting, retransmission or other communication to the public of phonograms published for commercial advantage (including background music), in favour of performers and phonogram producers
- Remuneration of authors and performers for rental of audiovisual works and phonograms
- Reproduction on paper of works by means of reprography (effected by the use of any kind of photographic technique or by some other process having similar effects)
- Reproduction for a private use of audiovisual works or works fixed in phonograms.

The CMOs are entitled to defend the rights they administer without any special authorisation from courts or other institutions. Their activities in Lithuania are also subject to provisions of other legal acts, in particular, the prohibition of abuse of a dominant position, as provided for by the Law on Competition of the Republic of Lithuania. A more detail case study of AGATA shows the results of these activities.

Case Study

AGATA – Lietuvosgretutinių teisių agentūra (Lithuanian Related Rights Association)

Year of establishment – 1999

Number of members – 3,225 (as at 8/8/2011):

- Performers – 3127
- Producers of phonograms – 106
- Producers of audiovisual work – 39
- Similar organisations from other countries – 28

Main activities that are represented include reproduction, and broadcasting and public performance of sound recordings

Number of licence agreements (presently enforced) – 4,577 (as at 8/8/2011)

Average annual number of licence agreements – 700

Average annual collection of remuneration – 3.96 million Litas (Lithuanian currency – LTL)

Collection of remuneration (LTL million)

	2005	2006	2007	2008	2009	2010
Public Performance	1,029	1,482	1,801	2,075	2,165	2,46
Broadcasting:	1,292	1,520	1,891	2,214	1,552	1,546
Radio	0,403	0,460	0,562	0,653	0,473	0,046
TV	0,867	1,045	1,315	1,543	1,065	1,063
Cable TV	0,005	0,005	0,007	0,007	0,004	0,003
Internet	0,017	0,009	0,008	0,011	0,011	0,015
Retransmission	0,094	0,201	0,333	0,486	0,711	0,896
Total	**2,415**	**3,203**	**4,024**	**4,776**	**4,428**	**4,902**

Source: AGATA

Other associations are more industry-oriented, such as the Lithuanian Cable Television Association, the Lithuanian Publishers Association, the Cinema Industry Association, etc.

Supervision of Collective Management Organisations

Activities of CMOs are supervised by the Lithuanian Ministry of Culture which is responsible for state policy in the field of copyright and related rights (Article 71.3 of the Copyright Law). All CMOs are obliged to submit, having started their activities, the following documents to the Ministry of Culture (Article 71.3(1) of the Copyright Law):

- Copies of their statutes and rules on the collection and distribution of the remuneration, as well as any amendments thereof
- Copies of all bilateral and multilateral agreements concerning the administration of rights of foreign owners of copyright and related rights (upon request)
- Copies of the resolutions of a general meeting (conference) of members of a CMO
- Data concerning the governing bodies of CMOs and their members.

In addition, the Ministry of Culture is entitled to obtain from a CMO other information necessary to determine whether the activities of the respective CMO conform to the provisions of the law and to the statutes of the CMO (the Ministry of Culture is authorised to obtain certain information by Article 71.2(1) of the Copyright Law). The Ministry may demand information on financial documents of the previous year that were approved in a general meeting of the CMO members, and obtain further explanations of the data within the documents; information concerning court proceedings where the CMO is a party; information on authors' remuneration actually collected by CMOs, and information on the distribution of such remunerations. Representatives of the Ministry of Culture may also take part (without voting rights) in general meetings (conferences) of CMO members as well as in meetings of the governing body. If it is revealed that the activities of a CMO do not conform to the legal requirements or statutes, the Ministry of Culture may request the participants of the collective administration association to resolve the issue concerning the suitability of the governing bodies to carry out the duties assigned to them and, if necessary, the said institution may take other measures provided for in law to ensure adequate activities of the collective administration associations.

The Council of Copyright and Related Rights of Lithuania is a public institution which, as an expert and a consultant, investigates issues related to the implementation of the provisions of this Law and international obligations of the Republic of Lithuania in the field of copyright and related rights and delivers conclusions and proposals to the institution authorised by the Government. Members of the Council are appointed by an institution authorised by the Government, in compliance with the principles of equal representation of holders, users of copyright and related rights and independent members. Members of the Council may be academics and other specialists in copyright and related rights. The Council acts as a mediator in disputes between CMOs and users of copyright and related rights.

3. Economic Contribution of the Copyright Industry

This Part analyses the economic contribution of copyright and related rights-based industries in Lithuania. Value added generated by copyright and related rights-based industries, their contribution to employment generation and foreign trade in Lithuania are discussed in detail. Comparing value added and employment shares enables an investigation into the productivity development patterns of the Lithuanian creative industry. At the end of this Part, the three most economically significant core copyright industries are analysed: Press and Literature, Software and Databases, and Advertising Services.

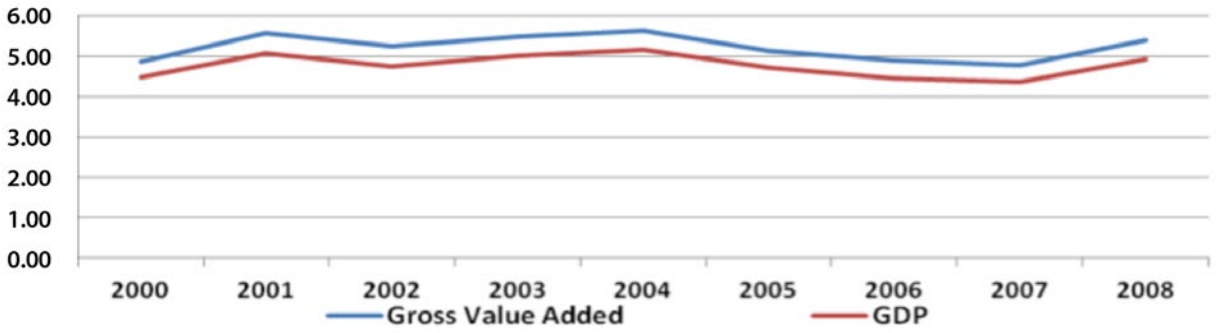
3.1 Value Added of the Copyright Industry

Consistently applying WIPO guidelines for the first time, this study of the Lithuanian copyright industry presents value added, employment and the foreign trade contributions of the copyright industry to the national economy over the period 2000–2008. Covering all the years over a business cycle is still a relatively unique feature of copyright industry studies in the context of other country studies commissioned by WIPO in the last decade. To achieve this, the US has invested significant efforts into conducting separate studies every year, which has proved to be rather costly. By offering consistent time series for nine years, this study provides a clear picture of how the Lithuanian copyright economy has evolved over a nearly complete business cycle, where 1999 and 2009 were the deepest economic recession points. The importance of these results is heightened by the fact that the Lithuanian copyright industry has never been closely studied on any earlier occasion. This section presents the economic results without touching upon statistical matters of the analysis.

3.1.1 *Overview of Copyright Industry Development*

A detailed statistical analysis of the value added of copyright-related economic activities shows that the Lithuanian copyright industry comprised 5.40 percent of the gross value added (GVA) in 2008, while compared to the gross domestic product (GDP) it made up 4.93 percent. The difference between these two measures is explained by the fact that gross value added does not include net taxes on products and value added tax (VAT). Both net taxes and VAT largely cannot be attributed to economic activities; thus, a share of the copyright industry is smaller in terms of GDP than in terms of GVA.[15] This research is based on the GVA measure that is used throughout the study. In fact, according to the emerging consensus among researchers in economic copyright matters, GVA is a far better measure. Nevertheless, due to country comparability reasons, the aggregates are provided in GDP percentages as well. Figure 1 below shows that both measures are moving largely in parallel and differences are of the same scale each year.

Figure 1: Copyright Industry Contribution to GVA and GDP, %



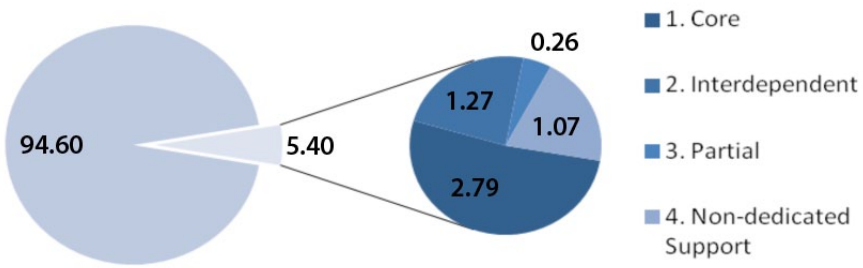
Source: calculated by the authors[16]

On the basis of the detailed analysis of the value added of economic activities, it was established that, in 2008, the Lithuanian copyright industry comprised 5.40 percent of the gross value added. The most

[15] For more detail on the differences between GVA and GDP contribution see Annex 1.
[16] From this point on, if calculations for figures and tables are made by authors, the reference is omitted.

significant copyright contribution to the economy is made by core copyright activities.[17] More than half of it, 2.79 percent, comprised the core copyright industry. The interdependent copyright industry, which is the most closely related to the core copyright industry, made up 1.27 percent of the national economy. The partial copyright industry created 0.26 percent of the value added in the economy. Finally, the part of the economy which serves the copyright industry and which is traditionally classified as non-dedicated support industry comprised 1.07 percent of the value added. The structure of the economic contribution to the Lithuanian economy is presented in Figure 2 below.

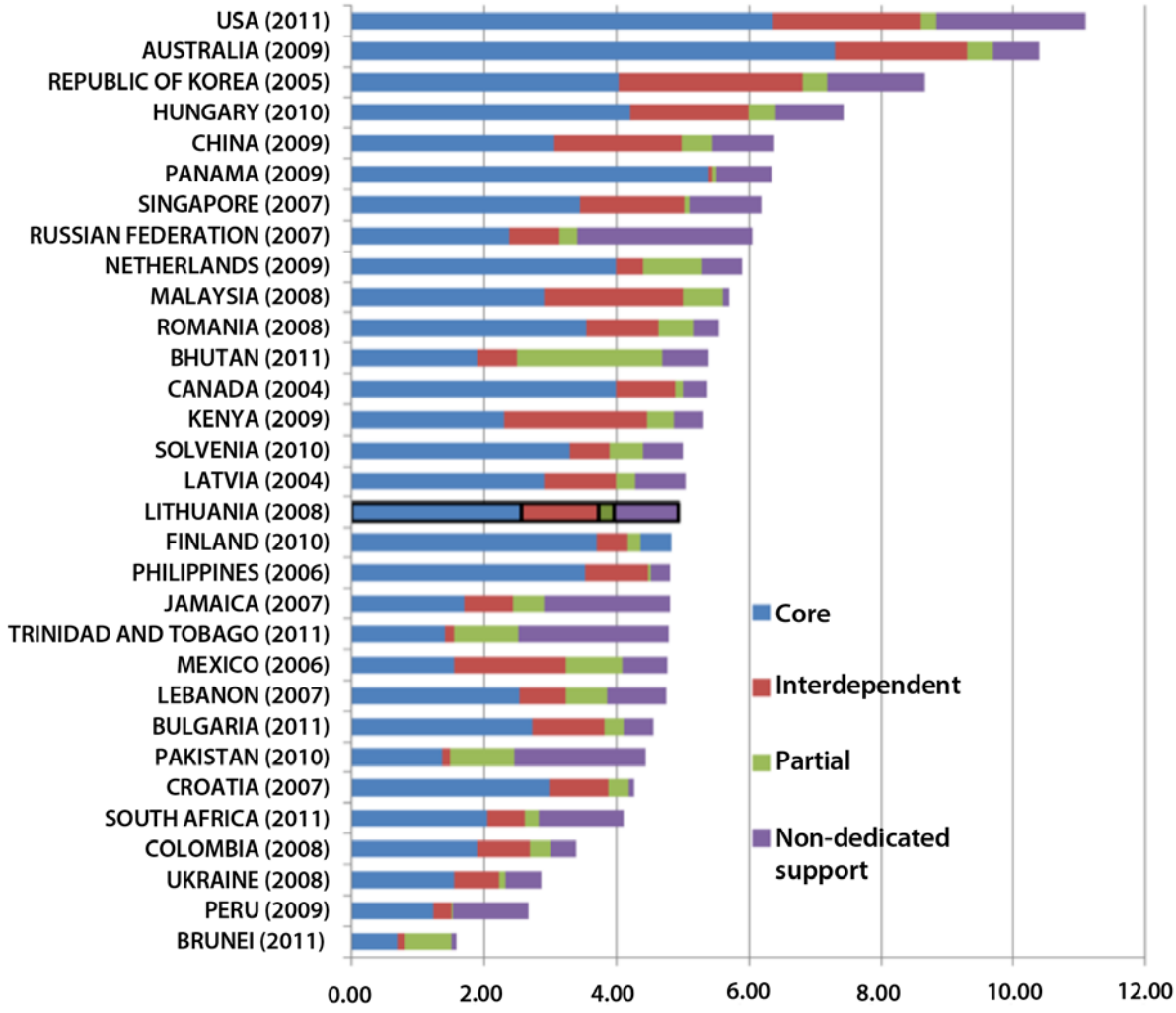
Figure 2: Contribution of the Copyright Industry to GVA in 2008, %



The findings allow mapping of the Lithuanian position of copyright industry against the international picture by comparing the economic size of the copyright industry with other countries for which a similar statistical research has been conducted. As presented in Figure 3 below, the Lithuanian copyright industry is slightly smaller than a corresponding part of the economy in neighbouring Latvia and slightly larger than the copyright industry in Finland. An international comparison demonstrates a relatively advanced stage of the Lithuanian copyright economy, which also corresponds to the well-developed legal regulation of the copyright activities.

[17] All four subcategories of the copyright industry are defined and explained in the next section.

Figure 3: Contribution of Copyright Industries to GDP, %

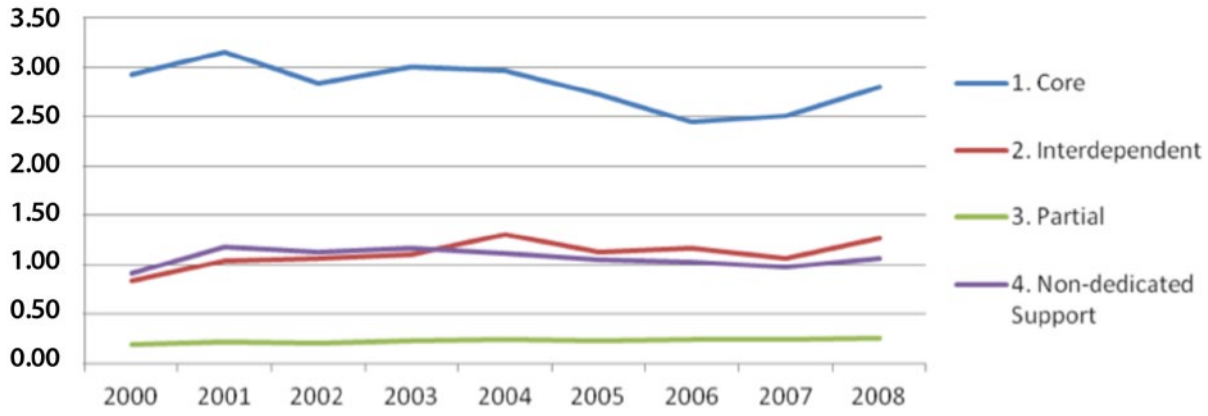


Source: WIPO

All in all, Figure 3 demonstrates the relatively advanced stage of the Lithuanian copyright economy. It is important to observe that countries throughout the world are very diverse in the size and structure of the copyright industry, and the above ranking was carried out according to the overall numbers of value added at market prices. With more than 30 completed copyright studies, it is possible to compare the Lithuanian copyright industry with other countries, according to other features of interest.

The development of the four types of copyright industry shows quite a smooth development over the decade. Although the core copyright activities dominated in terms of economic contribution, its overall contribution to the economy was slowly contracting. It seems that the major reason for this development was the overheating of the economy during 2005–2007 when the economy was rapidly growing in the range of 7.8 to 9.8 percent each year. The unsustainable and disproportionate growth of the real estate sector and related industries caused the share of the copyright industry to shrink in the economy. The partial copyright activities slightly contracted over the decade as well, while interdependent and non-dedicated support industries gained slightly in economic share. This is evident from Figure 4 and Table 1 below.

Figure 4: Copyright Industry Value Added by Industry Type, %



Different sections of the copyright industry were peaking at different stages of the economic cycle. The joint contribution of the core, interdependent, partial and non-dedicated support copyright industries was the largest in 2004, providing 5.62 percent contribution to GVA. It is worth mentioning that 2001 was the second year in which the economic recovery was gathering pace after a very severe recession in 1999. In 2001, the core copyright industry created the largest share of GVA, 3.15 percent. In contrast, the interdependent activities peaked three years later, when it provided 1.30 percent contribution to GVA in 2004. Furthermore, in 2004, it overtook non-dedicated support activities and has created more value added ever since. The detailed data on these developments are presented in Table 1.

Table 1: Copyright Industry Value Added by Industry Type, %

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	2.92	3.15	2.84	3.00	2.96	2.73	2.45	2.51	2.79
2. Interdependent	0.84	1.04	1.06	1.10	1.30	1.13	1.17	1.06	1.27
3. Partial	0.19	0.21	0.21	0.23	0.24	0.23	0.25	0.24	0.26
4. Non-dedicated Support	0.92	1.18	1.13	1.17	1.12	1.06	1.03	0.97	1.07
Total	**4.87**	**5.58**	**5.24**	**5.50**	**5.62**	**5.15**	**4.89**	**4.79**	**5.40**

Although a comparison of the contribution shares might indicate that the copyright industry was often contracting, it was always growing in nominal terms, with only one exception, in 2002. Table 2 proves that 2002 was the only year of nominal contraction.

Table 2: Copyright Industry Value Added by Industry Type, LTL million

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1,144	1,334	1,227	1,467	1,596	1,726	1,802	2,219	2,792
2. Interdependent	328	442	459	539	701	714	860	941	1,267
3. Partial	75	91	89	112	128	149	182	214	260
4. Non-dedicated Support	360	498	488	570	604	670	755	859	1,071
Total	**1,907**	**2,364**	**2,264**	**2,688**	**3,029**	**3,259**	**3,598**	**4,235**	**5,390**

Even though this study relies on the concept of gross value added stemming from national accounts, the other closely related concept of GDP has often been used in many previous copyright studies. For the purpose of comparability, it is important to look at how other copyright industries compare to the Lithuanian sector in terms of GDP. The shares in GDP are somewhat lower, primarily because GDP includes net taxes on products and VAT, which largely cannot be attributed to specific economic activities. As the nominator increases less than denominator, the resulting shares for GDP decrease. Figure 1, comparing the GDP and GVA shares of

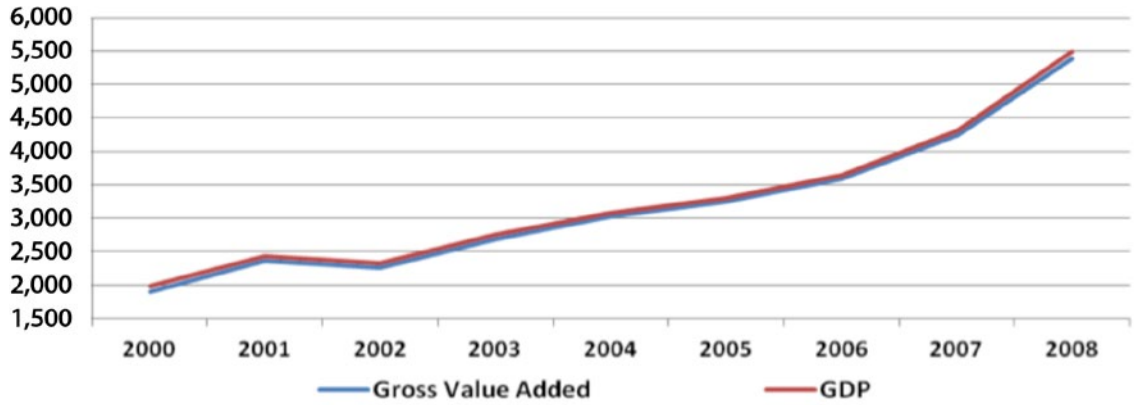
the copyright industry, was presented at the beginning of this section. In other terms, the GVA shares have to deal with basic prices, while GDP shares have to work with market prices. Table 3 provides the exact shares of the copyright industry with regard to GDP throughout the reporting period.

Table 3: Copyright Industry's GDP share by Industry Type, %

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	2.70	2.85	2.55	2.73	2.70	2.49	2.23	2.29	2.55
2. Interdependent	0.77	0.95	0.97	1.02	1.20	1.04	1.08	0.98	1.16
3. Partial	0.17	0.19	0.18	0.21	0.22	0.21	0.22	0.22	0.24
4. Non-dedicated Support	0.84	1.08	1.03	1.07	1.04	0.98	0.94	0.89	0.98
Total	**4.49**	**5.08**	**4.74**	**5.03**	**5.16**	**4.71**	**4.47**	**4.37**	**4.93**

Looking at absolute values in LTL, it is even more evident that both GDP and GVA shares are very closely related. The following chart illustrates this parallel movement. In a way, this confirms that it is sufficient to deal with one concept which, in our study, is GVA.

Figure 5: Copyright Industry Contribution to GVA and GDP, LTL million



For completeness of future comparisons on GDP basis, Table 4 below presents the value added of the copyright industry at market prices compared with GDP.

Table 4: Copyright Industry Contribution to GDP by Industry Type, LTL million

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1,194.8	1,361.5	1,251.3	1,499.4	1,616.8	1,745.7	1,820.9	2,254.7	2,846.1
2. Interdependent	339.5	455.1	475.8	558.2	720.7	729.7	878.3	962.5	1,294.7
3. Partial	76.2	92.0	90.5	112.9	129.4	149.6	182.8	215.6	262.0
4. Non-dedicated Support	372.4	514.4	505.0	589.0	621.2	685.1	768.9	877.0	1,093.8
Total	**1,982.9**	**2,422.9**	**2,322.6**	**2,759.5**	**3,087.9**	**3,310.2**	**3,650.9**	**4,309.7**	**5,496.6**

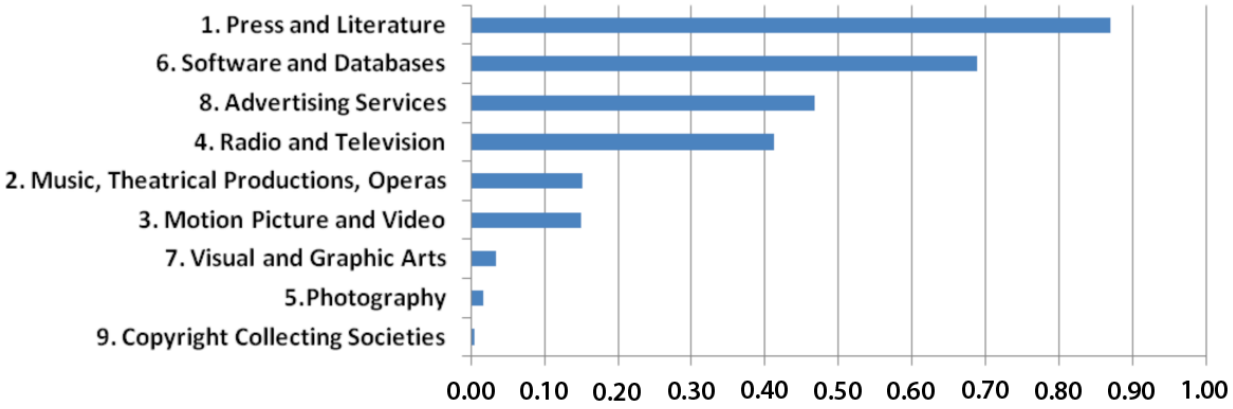
3.1.2 *Value Added Structure in Each Copyright Industry Type*

Core Copyright Industry

Core copyright industries are industries that are fully engaged in creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and any other protected subject matter. The core copyright industry is subdivided into nine separate activities.

The examination of the core copyright industry in 2008, shown in Figure 6, reveals that the dominant industry was Press and Literature, with Software and Databases being fairly closely in second place. The third industry by importance was Advertising Services, while Radio and Television ended in the fourth place. Each of the other five subcategories created 0.15 percent or less of gross value added.

Figure 6: Core Copyright Industry Contribution to Gross Value Added in 2008, %



The dynamics over the decade of the specific core copyright economic activities was vastly different. Press and Literature lost more than a third of its economic contribution, while Software and Databases' economic importance grew more than twofold. If the current trend persists, it is very likely that Software and Databases will overtake Press and Literature in a few years. Although, at the beginning of the decade, Advertising Services was approximately the same size as Software and Databases, the 50 percent increase in the economic share of Advertising Services was still too low to keep pace with Software and Databases; the advertising industry was left far behind the software industry in 2008. The economic share of Visual and Graphic Arts was fairly stable over the decade, while the share of Photography contracted twofold.

Table 5: Core Copyright Industry Contribution to Gross Value Added, %

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Press and Literature	1.48	1.46	1.06	1.27	1.28	1.09	1.03	0.90	0.87
2. Music, Theatrical Productions, Operas	0.07	0.09	0.06	0.07	0.09	0.11	0.08	0.09	0.15
3. Motion Picture and Video	0.24	0.21	0.19	0.18	0.14	0.11	0.09	0.10	0.15
4. Radio and Television	0.43	0.47	0.60	0.42	0.38	0.37	0.20	0.25	0.41
5. Photography	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
6. Software and Databases	0.32	0.58	0.48	0.52	0.56	0.58	0.54	0.64	0.69
7. Visual and Graphic Arts	0.03	0.03	0.04	0.03	0.03	0.03	0.02	0.02	0.03
8. Advertising Services	0.31	0.27	0.35	0.45	0.43	0.41	0.45	0.47	0.47
9. Copyright Collecting Societies	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Core Copyright Industry	**2.92**	**3.15**	**2.84**	**3.00**	**2.96**	**2.73**	**2.45**	**2.51**	**2.79**

Looking at the nominal values of the core copyright industry, it is evident that there were not many contractions in subcategories measured at basic prices, while the growth looks far more impressive. In nominal terms, even Photography, which contracted the most, was virtually flat, if 2000 and 2008 are compared. Accounting in LTL, the growth of Software and Databases looks even more impressive. In addition, tables with data in LTL million allow looking beyond rounded economic contribution shares. The data collected on Copyright Collecting Societies is a good example of usefulness of the data in LTL million. In this study, as a rule, measurements are provided both in percentages and in LTL million.

Table 6: Value Added of Core Copyright Industry, LTL million

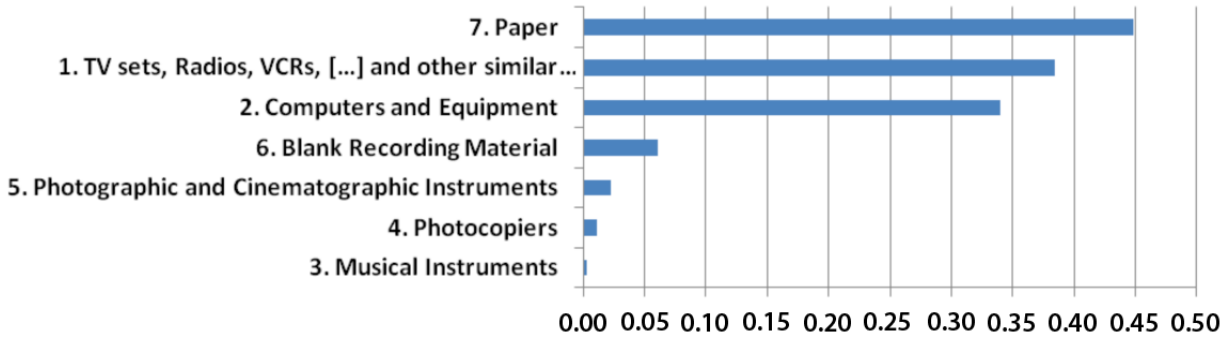
Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Press and Literature	578.9	619.5	460.1	622.6	689.6	687.4	760.7	800.0	869.5
2. Music, Theatrical Productions, Operas	29.0	36.0	25.7	34.0	46.3	67.1	62.0	82.2	150.8
3. Motion Picture and Video	92.7	88.1	83.9	89.0	78.1	67.7	68.9	87.2	149.8
4. Radio and Television	167.4	197.0	257.5	207.0	202.2	236.2	143.8	224.3	411.7
5. Photography	17.6	16.7	16.7	21.4	21.6	19.5	16.8	17.1	17.5
6. Software and Databases	125.4	245.9	208.3	253.3	304.1	365.6	399.9	565.2	687.4
7. Visual and Graphic Arts	11.0	13.3	17.6	16.6	17.5	20.2	17.4	21.8	33.4
8. Advertising Services	120.0	113.7	151.7	219.9	232.9	258.3	328.2	417.3	466.7
9. Copyright Collecting Societies	2.2	3.4	5.3	3.2	3.5	4.1	4.0	4.3	4.8
Core Copyright Industry	**1,144**	**1,334**	**1,227**	**1,467**	**1,596**	**1,726**	**1,802**	**2,219**	**2,792**

Interdependent Copyright Industry

Interdependent copyright industries are industries that are engaged in the production, manufacturing and sales of equipment, the only or primary function of which is to facilitate the creation, production or use of works and any other protected subject matter. The interdependent copyright industry is subdivided into seven activities.

There are three interdependent copyright industries, relatively large in size. Paper, TV Sets *et al*, and Computers and Equipment contribute between 0.3 and 0.45 percent each. While the economic contribution of Blank Recording Material, and Photographic and Cinematographic Instruments was still economically significant, the contribution numbers for Musical Instruments were not significant.

Figure 7: Interdependent Copyright Industry Contribution to Gross Value Added in 2008, %



The growth trend of Paper confirms that the more computers there are on the market, the more paper the economy needs to serve them. The paper industry has grown more than twice in terms of economic contribution and took over first place from TV Sets et al. Interestingly. Paper grew faster than Computers and Equipment. Photographic and Cinematographic Instruments kept its share over the decade. Table 7 below depicts the evolution of shares to the gross value added of all interdependent copyright industry subgroups.

Table 7: Interdependent Copyright Industry Contribution to Gross Value Added, %

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. TV Sets, Radios, VCRs, [...] and other similar equipment	0.45	0.50	0.57	0.51	0.54	0.47	0.50	0.44	0.38
2. Computers and Equipment	0.17	0.21	0.22	0.21	0.32	0.25	0.30	0.29	0.34
3. Musical Instruments	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00
4. Photocopiers	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01
5. Photographic and Cinematographic Instruments	0.02	0.10	0.02	0.02	0.02	0.02	0.02	0.02	0.02
6. Blank Recording Material	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06
7. Paper	0.19	0.22	0.24	0.35	0.41	0.37	0.35	0.29	0.45
Interdependent Copyright Industry	**0.84**	**1.04**	**1.06**	**1.10**	**1.30**	**1.13**	**1.17**	**1.06**	**1.27**

As in many other rapidly growing economies with some inflation, the numbers in nominal terms appear more optimistic than those which reflect a structural composition. For the sake of completeness, the nominal numbers for the interdependent copyright industry are presented in Table 8 below.

Table 8: Value Added of Interdependent Copyright Industry, LTL million

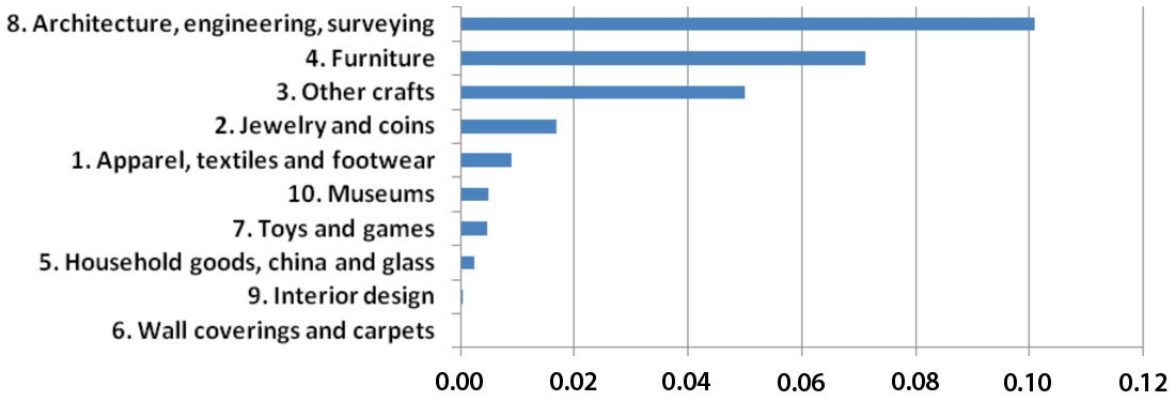
Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. TV Sets, Radios, VCRs, [...] and other similar equipment	174.8	213.8	244.6	248.3	289.8	300.3	364.9	387.0	384.1
2. Computers and Equipment	67.3	89.6	93.1	104.8	169.8	160.0	217.2	255.2	339.8
3. Musical Instruments	2.0	2.7	3.2	2.2	2.2	4.6	2.8	3.9	2.4
4. Photocopiers	1.7	2.2	2.1	2.7	3.1	2.5	2.8	5.3	10.8
5. Photographic and Cinematographic Instruments	8.8	41.5	10.7	10.8	13.2	13.8	15.9	20.0	22.2
6. Blank Recording Material	0.0	0.0	0.0	0.0	0.0	0.1	0.4	12.2	60.2
7. Paper	73.3	91.8	105.5	170.5	223.4	232.5	256.4	257.9	447.8
Interdependent Copyright Industry	**328.0**	**441.7**	**459.2**	**539.3**	**701.5**	**713.8**	**860.5**	**941.5**	**1,267.4**

Partial Copyright Industry

Partial copyright industries are industries where a portion of the activities is related to works and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales. They are divided into ten separate activities.

Partial copyright activities created 0.26 percent of the country's gross value added in 2008. Lithuanian partial copyright activities were largely dominated by three groups: Architecture, Engineering, Surveying, Furniture and Other Crafts. The first group created 0.10 percent of GVA, the second 0.07 percent and the third 0.05 percent respectively. Jewellery and Coins, which ranked in fourth place, reached 0.02 percent share by 2008. All other minor activities had shares equal or less than 0.01 percent of GVA.

Figure 8: **Figure 8. Partial Copyright Industry Contribution to Gross Value Added in 2008, %**



The partial copyright industry increased its share from 0.19 percent in 2000 to 0.26 percent in 2008 relatively smoothly in the country's gross value added over the interval analysed. The sector experienced only two minor contractions in its share, during 2005 and 2007. Architecture, Engineering, Surveying, even though it was the largest group, developed at a rather flat rate (the sector grew at the same rate as the rest of the economy) by starting and ending developments with 0.10 percent share. Furniture throughout the period was rapidly catching up with the first group and managed to close half of the gap by moving from 0.04 to 0.07 percent share of GVA. Other Crafts exhibited an even larger jump, augmenting its share. Jewellery and Coins grew several times during the same period, although from a very low base.

Table 9: **Partial Copyright Industry Contribution to Gross Value Added, %**

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Apparel, Textiles and Footwear	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
2. Jewellery and Coins	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
3. Other Crafts	0.02	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.05
4. Furniture	0.04	0.05	0.06	0.06	0.08	0.07	0.08	0.07	0.07
5. Household Goods, China and Glass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Wall Coverings and Carpets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7. Toys and Games	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8. Architecture, Engineering, Surveying	0.10	0.11	0.09	0.10	0.09	0.09	0.09	0.10	0.10
9. Interior Design	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10. Museums	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Partial Copyright Industry	**0.19**	**0.21**	**0.21**	**0.23**	**0.24**	**0.23**	**0.25**	**0.24**	**0.26**

Table 10 provides data measured in LTL million for the sake of completeness, as well as aiming to show what really hides behind the zero percentages of some contributions. The table reveals that Toys and Games grew 12 times over during the decade in nominal terms. Among many other rapid developments, the value added of museums grew more than three times over the period. Although these trends are significant and important, when aggregated, they pale behind the LTL 100.9 million of Architecture, Engineering, Surveying in 2008.

Table 10: Value Added of Partial Copyright Industry, LTL million

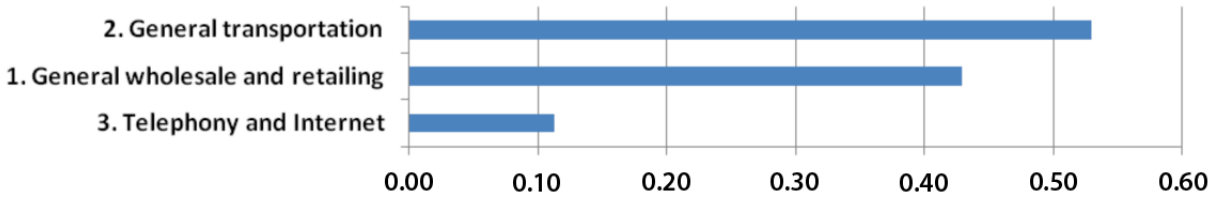
Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Apparel, Textiles and Footwear	8.3	8.9	6.8	7.6	8.9	8.6	9.2	9.9	8.9
2. Jewellery and Coins	1.6	2.1	2.7	3.4	5.2	7.2	9.8	8.9	16.8
3. Other Crafts	6.4	8.1	9.6	14.1	19.2	25.3	30.3	33.1	49.9
4. Furniture	17.5	21.4	25.3	31.5	42.6	45.2	57.4	64.8	71.1
5. Household Goods, China and Glass	1.3	1.3	1.0	1.3	1.5	2.4	2.3	2.7	2.5
6. Wall Coverings and Carpets	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
7. Toys and Games	0.5	1.5	1.1	2.0	1.9	1.8	2.8	2.5	4.7
8. Architecture, Engineering, Surveying	37.5	44.9	40.8	49.3	46.0	54.5	66.5	88.7	100.9
9. Interior Design	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.4	0.5
10. Museums	1.6	2.1	1.5	2.1	2.4	3.1	3.0	3.1	5.0
Partial Copyright Industry	**75.2**	**90.8**	**89.4**	**111.7**	**128.2**	**148.6**	**181.7**	**214.3**	**260.3**

Non-dedicated Support Copyright Industry

Non-dedicated support copyright industries are industries where a portion of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matters, and the activities of which do not fall into the category of core copyright industries. Although it is an economically large group, it is subdivided into just three subgroups.

This copyright industry group, which captures induced economic impact of the copyright, created 1.07 percent of the national annual value added in 2008. The General Transportation contribution to the national gross value added was 0.53 percent, while General Wholesale and Retailing contributed 0.43 percent. Telephony and Internet produced a much smaller contribution of 0.11 percent.

Figure 9: Non-Dedicated Support Copyright Industry Contribution to Gross Value Added in 2008, %



Looking closer at the development patterns, a clear, if not peculiar, phenomenon of the contraction of Telephony and Internet may be easily observed. The share of Telephony and Internet was contracting by a third over the decade. In contrast, both General Wholesale and Retailing, and General Transportation were expanding over the same period.

Table 11: Non-dedicated Support Copyright Industry Contribution to Gross Value Added, %

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. General Wholesale and Retailing	0.39	0.48	0.47	0.45	0.44	0.38	0.39	0.37	0.43
2. General Transportation	0.37	0.48	0.43	0.51	0.52	0.54	0.52	0.49	0.53
3. Telephony and Internet	0.16	0.22	0.23	0.21	0.16	0.13	0.12	0.11	0.11
Non-dedicated Support Copyright Industry	**0.92**	**1.18**	**1.13**	**1.17**	**1.12**	**1.06**	**1.03**	**0.97**	**1.07**

If the contribution is analysed in LTL million, then the growth rates, as in previous cases, are much higher. Even Telephony and Internet nearly doubled in a decade, counting in nominal terms. Technically speaking, different factors were applied for non-dedicated support copyright industries for each year. Table 12 presents estimates of the economic contribution in nominal terms.

Table 12: Value Added of Non-dedicated Support Copyright Industry, LTL million

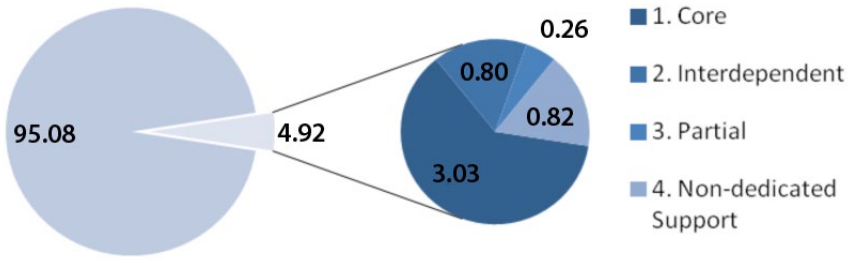
Category	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. General Wholesale and Retailing	154.0	201.4	204.2	221.7	235.9	243.0	283.7	323.7	428.8
2. General Transportation	143.1	203.7	186.0	247.1	281.0	343.3	380.8	437.4	529.1
3. Telephony and Internet	62.6	93.0	98.2	101.0	86.9	83.9	90.1	98.4	112.9
Non-dedicated Support Copyright Industry	**359.7**	**498.1**	**488.4**	**569.8**	**603.7**	**670.2**	**754.5**	**859.5**	**1,070.8**

3.2 Employment in the Copyright Industry

3.2.3 *General Employment Trends*

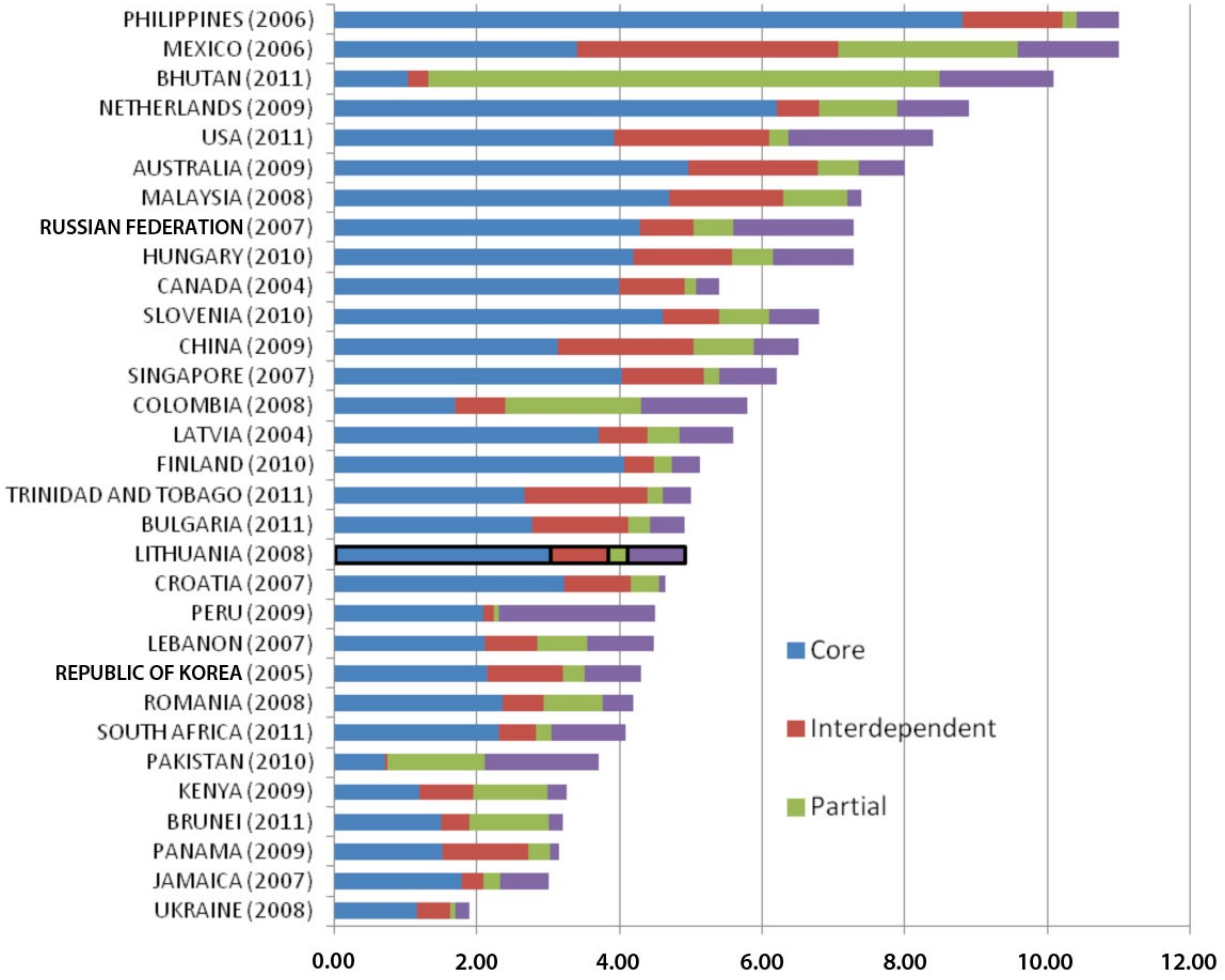
The copyright industry generated less employment than value added for the Lithuanian economy. In 2008, employment in the Lithuanian copyright industry comprised 4.92 percent of the total employment. Moreover, more than half of it, 3.03 percent, was generated by the core copyright industry. The interdependent copyright industry made up 0.80 percent, while the partial copyright industry created 0.26 percent of overall employment. Finally, the non-dedicated support copyright industry comprised 0.82 percent of the overall employment. The employment structure with regard to the Lithuanian copyright industry is shown in Figure 10.

Figure 10: Employment by Copyright Industry in Lithuania in 2008, %



The international comparison shows that, due to differences in productivity across different countries, the Lithuanian copyright economy ranks lower in terms of the employment measure. It generates less employment than in Latvia and Finland, to which Lithuania is ranked very closely in terms of the value added contribution. Nonetheless, Lithuania falls between Bulgaria and Croatia. In fact, the lower ranking means that the copyright industry is relatively productive. Figure 11 below compares employment in the Lithuanian copyright industry with other countries.

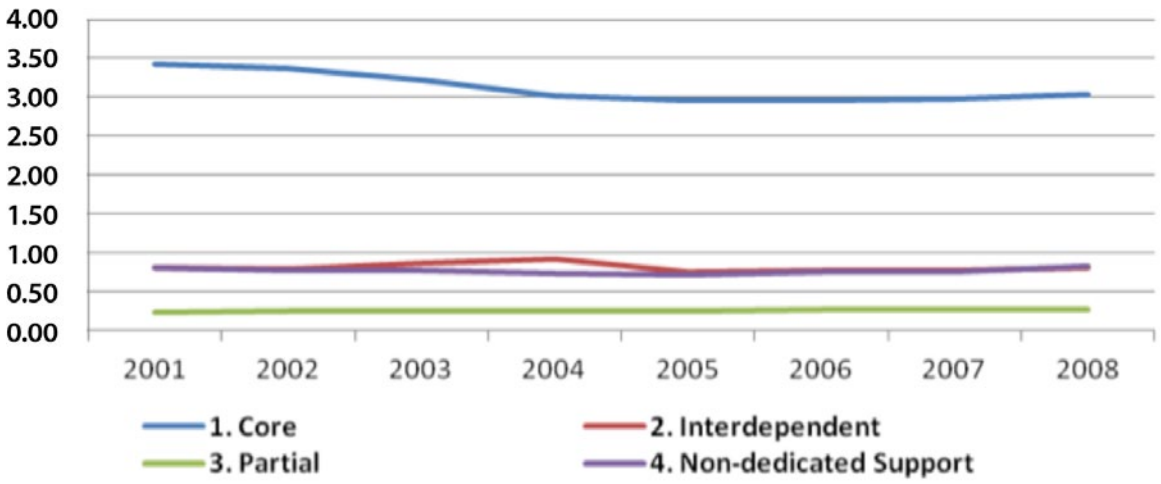
Figure 11: Contribution of Copyright Industries to Employment, %



Source: WIPO

In general, the dynamics of employment over the years is far smoother than corresponding developments of gross value added for the copyright industry. Figure 12 shows that employment in the core copyright industry steadily declined until 2005, but was extremely stable afterwards, as if some medium-term equilibrium was achieved, with some small rebound at the end of the decade. Similarly, the other parts of the copyright industry were far flatter in terms of employment than in terms of value added.

Figure 12: Copyright Industry Employment by Industry Type, %



Similarly to the core copyright industry, the interdependent copyright industry also hit bottom in 2005. That year, the contribution of employment in the interdependent copyright industry made up 0.75 percent, but it recovered afterwards. Similarly, the partial copyright industry had a local minimum in 2005. Not surprisingly, the same pattern is observed for employment in non-dedicated support copyright industries.

Table 13: Copyright Industry Employment by Industry Type, %

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	3.43	3.36	3.21	3.01	2.96	2.97	2.97	3.03
2. Interdependent	0.81	0.78	0.86	0.92	0.75	0.77	0.78	0.80
3. Partial	0.23	0.24	0.26	0.25	0.25	0.26	0.27	0.26
4. Non-dedicated Support	0.81	0.78	0.77	0.73	0.72	0.75	0.76	0.82
Total	**5.29**	**5.17**	**5.10**	**4.92**	**4.68**	**4.75**	**4.78**	**4.92**

Table 14 below provides employment figures of the copyright industry in full time equivalent terms for the Lithuanian economy. It is important to observe that employment in the copyright industry grew from 53.2 thousand to 57.4 thousand. Bearing in mind that the workforce in Lithuania was contracting during the reporting period, it shows that its importance to employment was growing.

Table 14: Copyright Industry Employment by Industry Type, full time units

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	34,502	34,455	33,468	31,533	31,976	33,257	34,594	35,402
2. Interdependent	8,183	8,007	8,963	9,671	8,045	8,675	9,057	9,334
3. Partial	2,354	2,507	2,677	2,597	2,701	2,940	3,087	3,067
4. Non-dedicated Support	8,145	7,971	8,008	7,661	7,739	8,370	8,843	9,552
Total copyright industry	**53,185**	**52,941**	**53,116**	**51,461**	**50,461**	**53,243**	**55,581**	**57,354**
Total national employment*	**1,005,716**	**1,024,217**	**1,042,231**	**1,046,756**	**1,078,898**	**1,121,463**	**1,163,678**	**1,166,651**

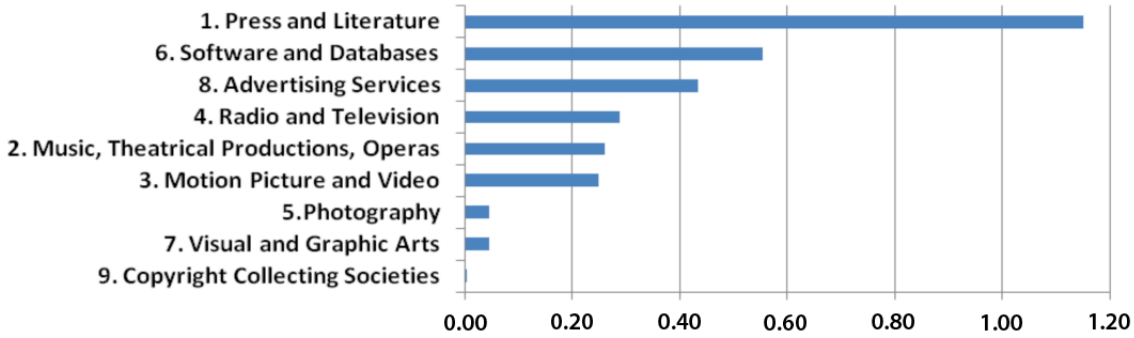
* The statistics of national accounts show that total national employment grew 16 percent from 2001 to 2008. By contrast, it should be noted that the population in Lithuania has shrunk several percentage points over the same period.

3.2.4 *Employment of Separate Copyright Industries*

Core Copyright Industry

Starting with the core copyright industry, it is obvious that, if Press and Literature was not far ahead of Software and Databases in terms of its economic contribution, it was still two times more important in terms of employment at the end of the reporting period. This is explained by much higher productivity in the Software and Databases industry. Because of productivity reasons, Photography and Visual and Graphic Arts have different national employment rankings when compared to their value added rankings, while other economic activities have the same ranking in employment as in their contribution to GVA.

Figure 13: Core Copyright Industry Contribution to Employment in 2008, %



The tables below provide complete data for the core copyright industry for every constituent. Measuring the contribution of employment, four groups of the core copyright industry showed a clear contraction trend, three were growing, while Visual and Graphic Arts and Copyright Collecting Societies were rather flat.

Table 15: Core Copyright Industry Contribution to Employment, %

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. Press and Literature	1.34	1.29	1.25	1.22	1.16	1.14	1.14	1.15
2. Music, Theatrical Productions, Operas	0.23	0.23	0.23	0.23	0.26	0.27	0.28	0.26
3. Motion Picture and Video	0.59	0.53	0.41	0.25	0.26	0.24	0.23	0.25
4. Radio and Television	0.59	0.53	0.43	0.35	0.33	0.31	0.29	0.29
5. Photography	0.09	0.09	0.09	0.07	0.07	0.06	0.05	0.05
6. Software and Databases	0.27	0.31	0.36	0.43	0.42	0.48	0.49	0.56
7. Visual and Graphic Arts	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.05
8. Advertising Services	0.27	0.33	0.38	0.43	0.43	0.43	0.44	0.43
9. Copyright Collecting Societies	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00
Core Copyright Industry	**3.43**	**3.36**	**3.21**	**3.01**	**2.96**	**2.97**	**2.97**	**3.03**

Table 16: Employment in Core Copyright Industry, full time units

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. Press and Literature	13,494	13,200	13,058	12,721	12,561	12,743	13,241	13,417
2. Music, Theatrical Productions, Operas	2,286	2,311	2,447	2,391	2,799	3,043	3,309	3,046
3. Motion Picture and Video	5,942	5,451	4,303	2,637	2,808	2,661	2,704	2,899
4. Radio and Television	5,897	5,426	4,511	3,617	3,538	3,502	3,345	3,363
5. Photography	923	949	896	700	749	628	597	543
6. Software and Databases	2,708	3,209	3,728	4,517	4,484	5,412	5,754	6,477
7. Visual and Graphic Arts	454	494	495	431	393	444	498	526
8. Advertising Services	2,744	3,337	3,981	4,467	4,590	4,770	5,091	5,073
9. Copyright Collecting Societies	55	78	48	52	55	56	54	58
Core Copyright Industry	**34,502**	**34,455**	**33,468**	**31,533**	**31,976**	**33,257**	**34,594**	**35,402**

Interdependent Copyright Industry

The employment contribution picture of the interdependent copyright industries is essentially different, if compared with its contribution to GVA. Paper and Blank Recording Material generates essentially less employment than value added in percentage terms.

Figure 14: Interdependent Copyright Industry Contribution to Employment in 2008, %

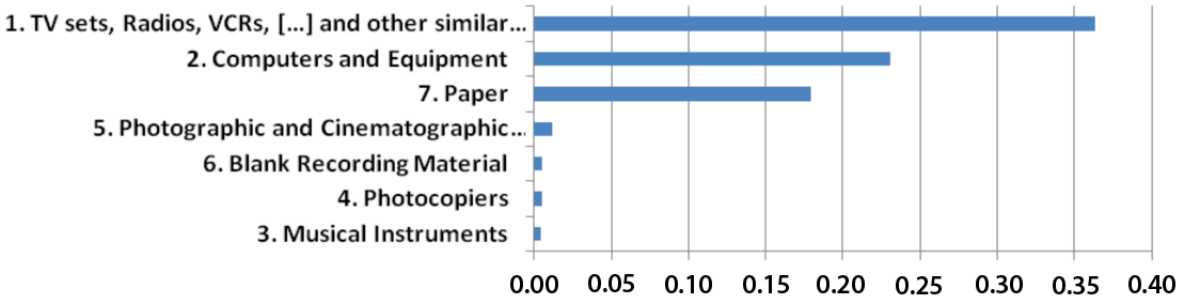


Table 17 depicts detailed employment developments in the interdependent copyright industry by providing employment figures in terms of its contribution to national employment.

Table 17: Interdependent Copyright Industry Contribution to Employment, %

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. TV Sets, Radios, VCRs, [...] and other similar equipment	0.44	0.46	0.49	0.55	0.37	0.37	0.36	0.36
2. Computers and Equipment	0.14	0.15	0.15	0.17	0.17	0.20	0.22	0.23
3. Musical Instruments	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
4. Photocopiers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Photographic and Cinematographic Instruments	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01
6. Blank Recording Material	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
7. Paper	0.21	0.15	0.19	0.18	0.18	0.19	0.18	0.18
Interdependent Copyright Industry	**0.81**	**0.78**	**0.86**	**0.92**	**0.75**	**0.77**	**0.78**	**0.80**

Table 18 measures the employment in the interdependent copyright industry in full time units. As in earlier cases, it allows looking behind the zero shares; for example, for Photocopiers or Blank Recording Material.

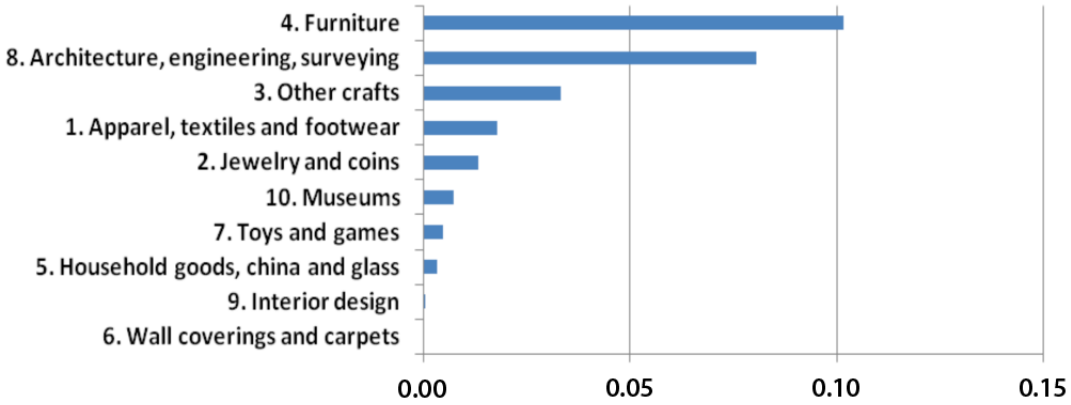
Table 18: Employment in Interdependent Copyright Industry, full time units

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. TV Sets, Radios, VCRs, [...] and other similar equipment	4,458	4,680	5,131	5,717	4,018	4,166	4,180	4,241
2. Computers and Equipment	1,440	1,498	1,604	1,805	1,854	2,197	2,526	2,692
3. Musical Instruments	38	39	47	46	51	58	58	52
4. Photocopiers	36	40	43	50	37	37	55	58
5. Photographic and Cinematographic Instruments	143	185	181	118	134	130	136	135
6. Blank Recording Material	0	0	2	4	2	4	33	64
7. Paper	2,068	1,565	1,955	1,932	1,949	2,083	2,070	2,091
Interdependent Copyright Industry	**8,183**	**8,007**	**8,963**	**9,671**	**8,045**	**8,675**	**9,057**	9,334

Partial Copyright Industry

The analysis of employment in the partial copyright industry reveals its clearly expressed heterogeneous character. The largest contributor to national employment is Furniture which ranked second in terms of GVA. Architecture, Engineering, Surveying is the second contributor to employment in this group, even though it was the first-ranked contributor to GVA. Jewellery and Coins, the fourth item on the value added list, is the fifth according to the employment ranking within the group, due to high productivity in the activity of striking coins. In contrast, Apparel, Textiles and Footwear shifted in the opposite direction, employing more than Jewellery and Coins. Although other sectors differed in productivity, they still managed to hold the same value added and employment rankings.

Figure 15: Partial Copyright Industry Contribution to Employment in 2008, %



The time series of individual partial copyright activities demonstrate a clear upward trend for Furniture, which increased its employment share from 0.06 to 010. In the meantime, Architecture, Engineering, Surveying decreased its employment contribution. Apparel, Textiles and Footwear, as well as Wall Coverings and Carpets, slowly and monotonically lost its importance in terms of employment.

Table 19: Partial Copyright Industry Contribution to Employment, %

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. Apparel, Textiles and Footwear	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02
2. Jewellery and Coins	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
3. Other Crafts	0.02	0.03	0.04	0.03	0.03	0.04	0.03	0.03
4. Furniture	0.06	0.08	0.08	0.09	0.10	0.10	0.10	0.10
5. Household Goods, China and Glass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6. Wall Coverings and Carpets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7. Toys and Games	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
8. Architecture, Engineering, Surveying	0.09	0.08	0.08	0.07	0.07	0.07	0.08	0.08
9. Interior Design	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10. Museums	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Partial Copyright Industry	**0.23**	**0.24**	**0.26**	**0.25**	**0.25**	**0.26**	**0.27**	**0.26**

If measured in full time units (FTU), the partial copyright industry managed to expand job creation over the eight years surveyed. Its employment grew from 2,354 FTU to 3,067 FTU. The data show that Architecture, Engineering, Surveying, being a dominating contributor, went from 884 employees to 941 employees.

Table 20: Employment in Partial Copyright Industry, full time units

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. Apparel, Textiles and Footwear	271	282	277	259	238	241	226	209
2. Jewellery and Coins	110	137	141	117	142	154	177	154
3. Other Crafts	245	329	371	357	358	401	402	390
4. Furniture	645	769	871	962	1,066	1,177	1,182	1,186
5. Household Goods, China and Glass	43	41	41	42	48	48	47	40
6. Wall Coverings and Carpets	4	4	5	5	2	2	2	2
7. Toys and Games	72	62	76	76	57	66	67	55
8. Architecture, Engineering, Surveying	884	803	809	704	714	768	887	941
9. Interior Design	4	6	4	4	4	4	5	5
10. Museums	76	74	82	72	71	79	92	86
Partial Copyright Industry	**2,354**	**2,507**	**2,677**	**2,597**	**2,701**	**2,940**	**3,087**	**3,067**

Non-Dedicated Support Copyright Industry

Rather remarkably, non-dedicated support activities started with a 0.81 percent employment share made a U-turn and then rebounded to 0.82 percent. Obviously, job creation in non-dedicated support copyright industries was concentrated in General Wholesale and Retailing, as well as in General Transportation.

Figure 16: Non-Dedicated Support Copyright Industry Contribution to Employment in 2008, %

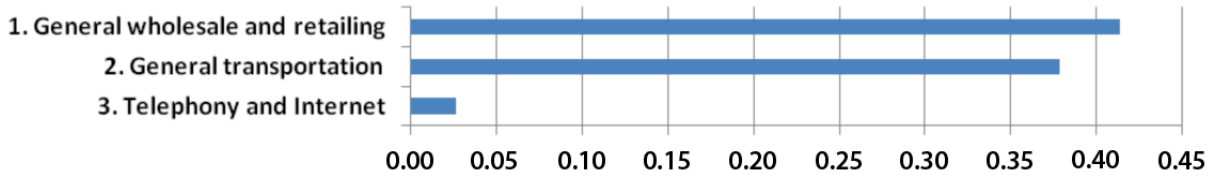


Table 21: Non-dedicated Support Copyright Industry Contribution to Employment, %

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. General wholesale and retailing	0.41	0.39	0.39	0.38	0.37	0.38	0.38	0.41
2. General transportation	0.35	0.35	0.35	0.33	0.32	0.34	0.35	0.38
3. Telephony and Internet	0.04	0.04	0.03	0.02	0.03	0.03	0.03	0.03
Non-dedicated support copyright industry	**0.81**	**0.78**	**0.77**	**0.73**	**0.72**	**0.75**	**0.76**	**0.82**

Table 22: Employment in Non-dedicated Support Copyright Industry, full time units

Category	2001	2002	2003	2004	2005	2006	2007	2008
1. General wholesale and retailing	4,164	4,018	4,049	3,962	4,011	4,308	4,478	4,827
2. General transportation	3,541	3,585	3,639	3,441	3,453	3,764	4,046	4,411
3. Telephony and Internet	441	368	320	258	275	298	319	314
Non-dedicated support copyright industry	**8,145**	**7,971**	**8,008**	**7,661**	**7,739**	**8,370**	**8,843**	**9,552**

Although this study applied the common approach as to how to measure non-dedicated support industries, which makes the results comparable with other studies, it seems that the evaluation method (practically applied by all copyright studies) is positive for some activities in open economies. The method seems to work well in Lithuania for General Wholesale and Retailing, as well as for Telephony and Internet which, by and

large, serve domestic customers. For General Transportation, more refined methods might be desirable in the future, if the country's economy provides many transport services to other countries.

3.3 Productivity in Major Copyright Activities

In this section, the comparison of value added and employment shares of major copyright economic activities provides important insights into the evolution of their trends. The Figures below eloquently speak for themselves by giving answers as to how the growth or contraction of value added and employment are interrelated. A positive difference between them shows the productivity advantage of the particular copyright sector against the overall economy. If value added is higher than employment, then productivity in the copyright activity under investigation is higher than in the economy in general. If the gap between the two lines is increasing, then the productivity gap is growing. Obviously, the opposite statements hold if the employment line lies above the value added curve.

This section reviews the three economically most significant groups from each of the copyright group (core, interdependent, partial and non-dedicated support), explaining their productivity advantages or disadvantages against the rest of the economy.

Figure 17: Press and Literature Contribution to Economy, %

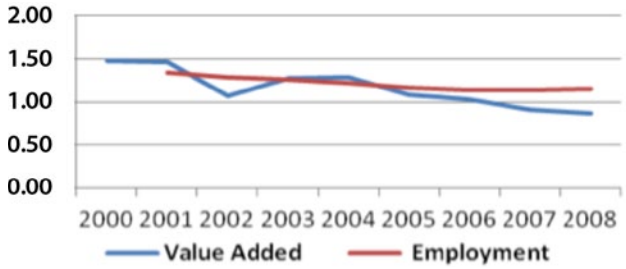


Figure 18: Software and Databases Contribution to Economy, %

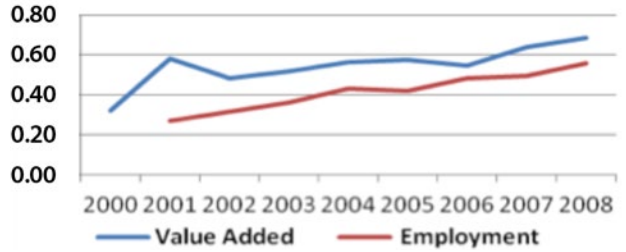
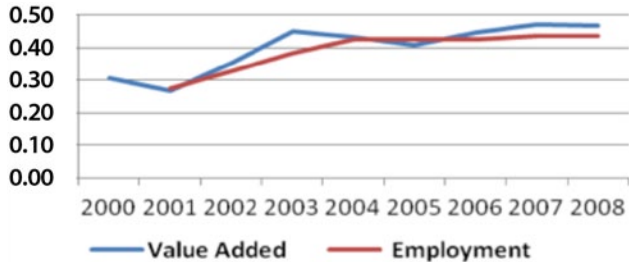


Figure 19: Advertising Services Contribution to Economy, %



Press and Literature, which is the largest activity among core copyright activities, has been less productive than the economy in general since 2005. Moreover, the productivity gap was constantly increasing at the end of the period. By contrast, Press and Literature was more productive compared to the overall economy in 2001 and 2004.

Contrary to the common perception, a positive productivity advantage of Software and Databases was very slowly reducing over the reporting period. The contribution of this group to gross value added was always

above its employment contribution, but instead of growing this gap has been slowly shrinking over the last six years at least.

Advertising Services, which is the third group by size in the Lithuanian core copyright industry, contributed more to gross value added than to employment over most of the reporting period with the only exception for 2005. The data prove that any clear direction in the productivity advantage of Advertising Services compared to the overall economy did not exist.

The three largest Lithuanian interdependent copyright industries are highly productive and clearly contribute a lot to the overall productivity of the copyright industry.

Figure 20: Paper Contribution to Economy, %

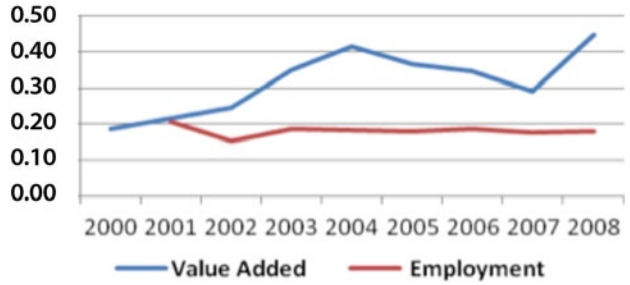


Figure 21: TV Sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Gaming Equipment, Other Similar Equipment Contribution to Economy, %

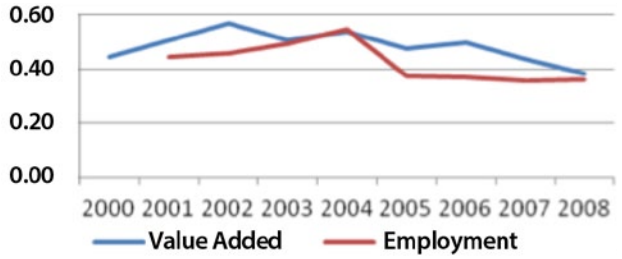


Figure 22: Computers and Equipment Contribution to Economy, %

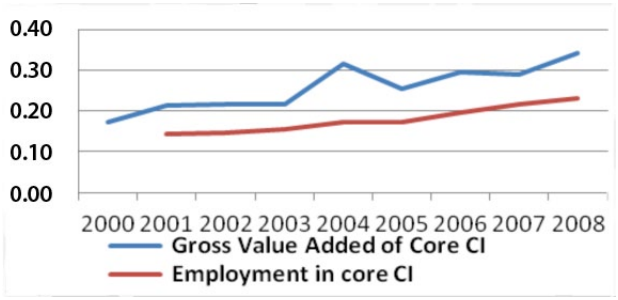
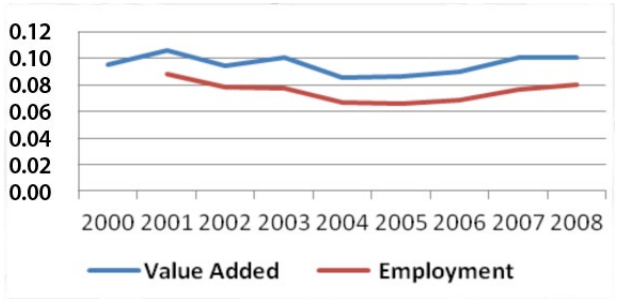


Figure 23: Architecture, Engineering, Surveying Contribution to Economy, %



The productivity gap is largest in the Paper subgroup. The statistical data show that, for some years, the value added share of this group was twice as large as its contribution to employment.

The second largest group, TV Sets *et al*, was relatively productive. However, from 2002, it gradually lost its economic significance, ending up in the second place in the interdependent group. Although this extremely heterogeneous group contributed much more to employment than the Paper activities, its value added was smaller at the end of the period.

Although the Computers and Equipment sub-category was only third in the interdependent group in 2008 by its size, it exhibited the steepest trend upwards over the decade. It is evidently more efficient than the Lithuanian economy in general and it showed no signs of giving up this comparative advantage.

The largest activities in the partial copyright activities group have completely different productivity patterns, which can be explained by the heterogeneity of this group. The largest group, Architecture, Engineering, Surveying, created a larger value added share than the employment share. Moreover, its productivity advantage showed no sign of decline as both red and blue lines have moved closely in parallel over the years. Rather remarkably, this group bottomed in 2004–2005 without any loss in its productivity.

Figure 24: Furniture Contribution to Economy, %

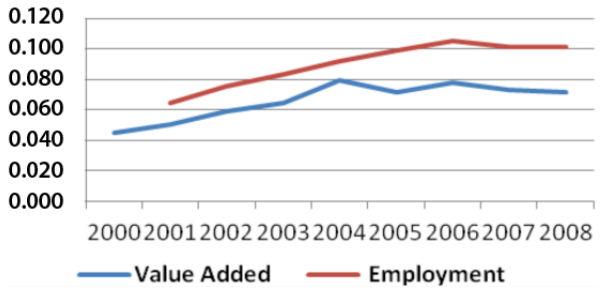


Figure 25: Other Crafts Contribution to Economy, %

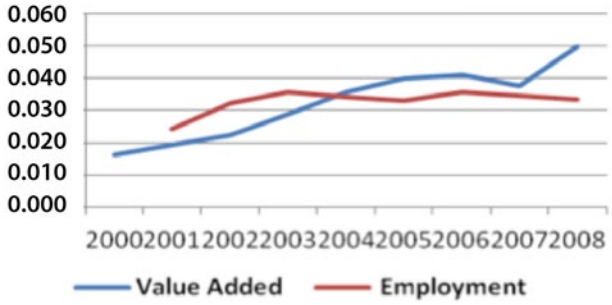


Figure 26: General Wholesale and Retailing Contribution to Economy, %

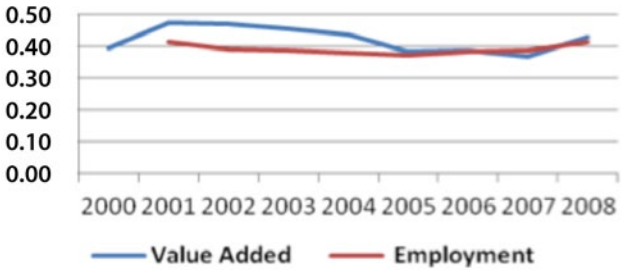


Figure 27: General Transportation Contribution to Economy, %

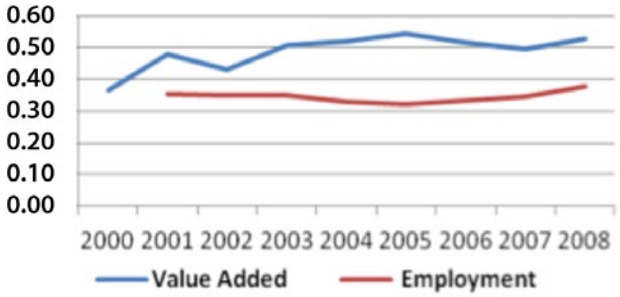


Figure 28: Telephony and Internet Contribution to Economy, %

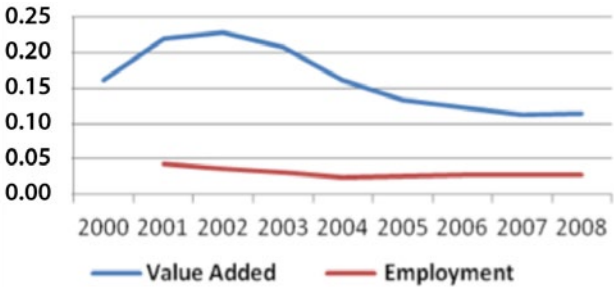


Figure 24 shows developments in the growing sector of Furniture which at the same time managed to increase the productivity disadvantage during the period of robust growth. Its productivity disadvantage managed to widen while growing steadily.

Other Crafts, being the third largest partial copyright group, managed to turn productivity disadvantage to advantage. The change took place in 2004. Also, some additional productivity jump was observed at the end of the period.

The fourth copyright group of non-dedicated support industries is far more productive than the overall Lithuanian economy. Non-dedicated support copyright industries consist only of three subgroups. Their productivity developments over time are reflected in the Figures 26-28. General Wholesale and Retailing has lost the efficiency advantage it previously had at the beginning of the decade.

General Transportation increased its productivity with a clear peak in 2005, both in value added and in productivity. Partial loss of the earlier gained efficiency advantage occurred together with a rapid growth in employment in 2006–2008, which were the end of the economic bubble years.

Telephony and Internet preserved its productivity advantage. However, it was substantially reduced compared to the telecoms bubble years of 2001–2003. Even after these sudden shifts were largely over during 2007–2008, this sector seems to be outstanding in its ability to create three times more value added per person employed than the Lithuanian economy in general.

This section showed how different and even incomparable developments in specific copyright industries are. Some copyright industries were gaining economic advantage, while others were losing it.

3.4 Comparison of foreign trade, value added and employment

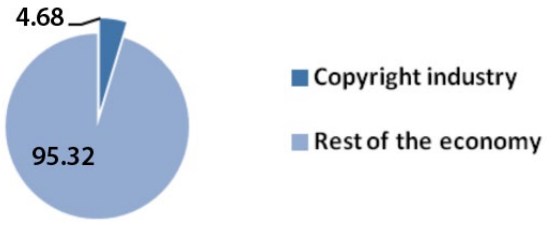
The third investigated feature of the copyright industry in Lithuania is its contribution to exports of goods and services. The international trade analysis relied directly on the available data in publicly available statistical data sources. Fortunately and uniquely in this context, there was no need to impute trade data or make it consistent with overall aggregates, as was previously the case with value added and employment, when the structural statistics data were reconciled with national accounting statistics.

The share of foreign trade was assessed by analysing separately trade in goods and trade in services. The statistics of trade in goods were available according to the Classification of Products by Activity (CPA) which

is perfectly consistent with the Classification of Economic Activities in the European Community (NACE); therefore, the shares of exports and imports were calculated directly using the same copyright factors and the same calculation structure in general as for the value added calculations. Unfortunately, the statistics of services are not collected in accordance with the corresponding classification of economic activities. Fortunately, the balance of payment statistics could be applied for the copyright industry analysis.

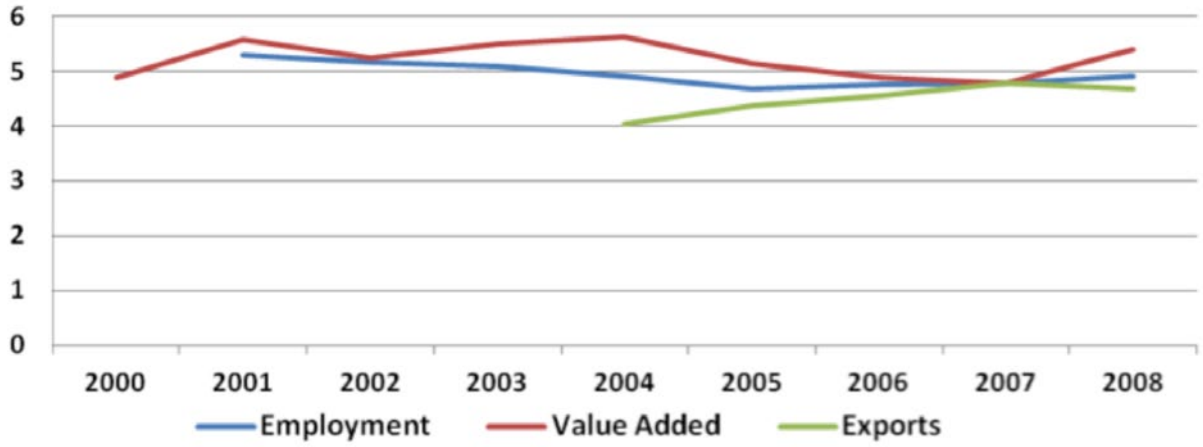
The contribution to exports in goods was remarkably close to that of employment and made up 4.68 percent in 2008. Since the copyright economy comprised 5.40 percent of the value added, it shows that the domestic role of the copyright industry was somewhat higher than its ability to contribute revenues from abroad. The proximity of the export share to the employment contribution value of 4.92 percent shows that the copyright industry export and employment shares managed to converge substantially over the reporting period.

Figure 29: Exports Shares in 2008, %



The value added and employment of the Lithuanian copyright industry were rather closely correlated, while the copyright industry exports had a rather different and more pronounced dynamic. Developments in value added have more volatility compared to a much smoother employment trend. Nevertheless, they both demonstrated movements in the same direction, with a single exception in 2003–2004. In contrast, the contribution of the copyright industry to foreign trade is evolving along somewhat smoother lines than value added but, remarkably, it moves in the opposite direction. In addition, annual shifts in the foreign trade of the copyright industry are much more pronounced if compared to changes in value added or employment contributions. Table 23 clearly summarises the Lithuanian economic copyright history over 2000–2008 by putting the copyright industry foreign exports contributions to the overall exports in the context of gross value added and employment.

Figure 30: Copyright Industry Contribution to Lithuanian Economy, %



All in all, the copyright industry seems to be less cyclical than the overall economy. Lithuanian data support the hypothesis that the best years for the copyright industry are the early stages of an economic recovery. When the economy overheats, the construction sector and other sectors related to it are also prone to overheating. As a consequence, during bubble years, the economic contribution of the copyright economy is smaller in percentage terms. It could be said that people do not start to write and read more books when they are building more, but people do not give up writing and reading if they start building less. Accordingly, during a recession or in hardship years, the copyright sector makes a greater contribution to the economy.

To some extent, the copyright economy contributes to a less pronounced business cycle. This is evident from Figure 30 as 2005–2007 were bubble years in the Lithuanian economy.

Table 23: Copyright Industry Contribution to the Economy, %

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employment		5.29	5.17	5.10	4.92	4.68	4.75	4.78	4.92
Value Added	4.87	5.58	5.24	5.50	5.62	5.15	4.89	4.79	5.40
Exports of Goods and Services					4.03	4.37	4.56	4.78	4.68

From 2004 to 2008, the Lithuanian copyright industry managed to increase its share in exports of goods and services, taken together, quite substantially, while the exports of services on their own exhibited a 'V' shape movement by hitting the bottom in 2006. Although exports of copyright goods were rapidly gaining momentum, they decreased somewhat in 2008, when international trade was negatively affected both globally and regionally. The shares of the copyright goods exports were on a par with the value added contribution, while the copyright exports of services had a much smaller share than the copyright industry contribution to value added. Contribution of copyright services exports was just 1.28 percent in 2008. In Table 24, exports of copyright goods are compared to the total exports of goods, while exports of services are compared to exports of services. That is why the figures should not, and do not, add up.

Table 24: Copyright Industry Contribution to Exports, %

	2004	2005	2006	2007	2008
Exports of Goods	4.66	5.18	5.49	5.67	5.37
Exports of Services	1.66	1.27	0.95	1.00	1.28
Exports of Goods and Services	4.03	4.37	4.56	4.78	4.68

The overall decline of the contribution of the copyright exports of services is primarily explained by a drop in the share of Computer and Information Services. These services fell as low as 0.51 percent of the exports in services and recovered to 1.07 percent in 2009. Quite remarkably, the least volatile contribution to the export of services was generated by Personal, Cultural and Recreational Services, which fluctuated around 0.4 percent of the overall exports of services. The contribution of Royalties and Licence Fees contracted twofold over the 2004–2010 period. It is important to mention that, for Computer and Information Services, as well as for Personal, Cultural and Recreational Services, the copyright factor was 1, while Royalties and Licence Fees was attributed the value of 0.5. More details can be found in Annexes 8 and 10. Table 25 provides the contribution shares to the exports of services up to 2010.

Table 25: Copyright Industry Contribution to the Export of Services, %

	2004	2005	2006	2007	2008	2009	2010
Computer and Information Services	1.26	0.91	0.51	0.59	0.88	1.07	0.94
Royalties and Licence Fees	0.02	0.03	0.01	0.00	0.01	0.00	0.01
Personal, Cultural and Recreational Services	0.39	0.33	0.43	0.41	0.39	0.43	0.40
Export of Copyright Services	1.66	1.27	0.95	1.00	1.28	1.50	1.34

The Lithuanian economy is much more dependent on the imports of copyright goods than on their exports. This statement is valid for both foreign trade in goods and foreign trade in services. If the copyright exports of goods made up 5.62 percent in 2008, the corresponding imports share was 6.28 percent. Similarly, with copyright services, the copyright exports of services made up 1.28 percent and the corresponding imports share was 1.56 percent in 2008. More details on the copyright imports of services can be found in Annexes 9 and 11.

Table 26: Copyright Industry Contribution to Imports, %

	2004	2005	2006	2007	2008
Imports of Goods	6.92	6.90	6.69	6.70	5.90
Imports of Services	1.87	1.73	1.47	1.17	1.56
Imports of Goods and Services	6.33	6.29	6.08	6.03	5.38

Although copyright-related imports in the Lithuanian economy are dominated by Computer and Information Services, other items also make up a substantial share. All three items on the services imports list were rising, if compared to GVA. This reflects the rapidly growing openness of the Lithuanian economy. Imports of Computer and Information Services grew from 1.23 percent share in 2004 to 1.33 percent in 2010. Royalties and Licence Fees grew from 0.55 percent to 0.61 percent accordingly. Even though Personal, Cultural and Recreational Services increased its percentage share four times over the reporting period, its annual exports share was always higher than the corresponding imports share.

Table 27: Copyright Industry Contribution to the Imports of Services, %

	2004	2005	2006	2007	2008	2009	2010
Computer and Information Services	1.23	1.11	0.90	0.79	0.94	1.26	1.33
Royalties and Licence Fees	0.55	0.50	0.48	0.32	0.41	0.49	0.61
Personal, Cultural and Recreational Services	0.09	0.12	0.09	0.06	0.21	0.33	0.36
Import of Copyright Services	1.87	1.73	1.47	1.17	1.56	2.08	2.30

Looking at actual amounts in LTL million, it turns out that the balance between exports and imports of copyright-related services was positive until 2005, but it turned out substantially negative in 2008–2010. The largest negative contribution was generated by Royalties and Licence Fees which earned 1.1 LTL million in 2010, while imports were LTL 45.4 million. The balance between imports and exports of Computer and Information Services is nearly neutral in 2010, after this category lost its positive significant contribution. Analysing in nominal terms is especially valuable for foreign trade which is far more volatile than employment or gross value added. The tables below present exports and imports of the copyright industry.

Table 28: Copyright Industry Export of Services, LTL million

	2004	2005	2006	2007	2008	2009	2010
Computer and Information Services	85.6	78.3	50.4	59.8	97.9	98.4	100.8
Royalties and Licence Fees	1.1	2.7	1.0	0.2	1.1	0.5	1.2
Personal, Cultural and Recreational Services	26.4	28.9	42.8	41.2	43.8	39.1	42.5
Exports of Copyright Services	113.1	109.9	94.2	101.1	142.8	138.0	144.5

Table 29: Copyright Industry Imports of Services, LTL million

	2004	2005	2006	2007	2008	2009	2010
Computer and Information Services	55.8	63.7	62.5	67.4	92.2	92.9	98.1
Royalties and Licence Fees	25.0	28.8	33.4	27.2	40.4	36.3	45.4
Personal, Cultural and Recreational Services	4.0	6.7	6.6	5.4	20.3	24.3	26.3
Imports of Copyright Services	84.8	99.1	102.5	100.0	152.9	153.4	169.8

3.5 The Most Important Core Copyright Industries

This section deals with three most important core copyright industries, keeping a close eye on the lowest level of aggregation. As explained above, in terms of the contribution to value added and employment the most important industries are Press and Literature, Software and Databases, and Advertising Services. Hereafter, the structure of these industries is described by drilling down to the NACE four digit level, both for value added and for employment. Moreover, business demography is provided for these most important industries. As in previous sections, a dynamic picture over the business cycle is presented, completing the picture. It is important to note that information provided in this section takes into account sharing factors for those economic activities that are shared, i.e., values assigned to a specific code reflect only that part of a four digit economic activity which is assigned to a particular copyright group under investigation.[18] This equally applies to their value added, employment and the number of enterprises.

3.5.1 *Press and Literature*

This subsection looks at the structural composition of value added, employment and business demography of Press and Literature, which is the largest, but shrinking, part of the core copyright industry. The analysis of Press and Literature starts with its business demography. The number of enterprises in Press and Literature has gradually fallen with some very small rebounds. Nevertheless, this decline in number of enterprises was still much less pronounced than the contraction of employment. The value added share of Press and Literature was falling even more abruptly than employment.

The number of enterprises in Press and Literature reduced from 1,266 in 2000 to 1,163 in 2008, while different activities exhibited opposite movements. The number of enterprises increased substantially only in two activities: 22.13 and 22.22. All other activities were either showing no significant growth, were falling or had just a few enterprises.

Table 30: Number of Enterprises in Press and Literature

Code	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
22.11	Publishing of books	229	308	237	209	199	218	218	215	197
22.12	Publishing of newspapers	162	128	170	121	107	110	111	112	96
22.13	Publishing of journals and periodicals	114	92	94	146	149	146	148	150	170
22.15	Other publishing	74	69	75	74	79	89	89	95	81
22.21	Printing of newspapers	63	53	56	33	25	22	17	18	13
22.22	Printing n.e.c.	148	160	179	184	189	185	209	208	229
22.23	Bookbinding	17	20	12	16	12	9	12	10	12
22.24	Pre-press activities	11	10	9	19	17	19	19	17	18
22.25	Ancillary activities related to printing	36	31	35	43	41	43	37	36	39
52.47	Retail sale of books, newspapers and stationery	336	291	302	294	272	269	233	223	213
52.50	Retail sale of second-hand goods in stores	31	28	28	26	25	24	24	23	22
74.87	Other business activities n.e.c.	24	23	25	14	13	14	17	21	24
92.31	Artistic and literary creation and interpretation	16	16	14	16	12	17	21	25	34
92.40	News agency activities	4	5	4	5	4	4	6	5	5
92.51	Library and archives activities	2	5	6	10	8	6	6	10	10
Press and Literature		**1,266**	**1,238**	**1,246**	**1,210**	**1,152**	**1,175**	**1,167**	**1,168**	**1,163**

[18] This is dealt with in the last Part of the study and in Annex 12.

For reasons of comparability, it is important to look at the value added shares of economic activities because the Lithuanian economy was rapidly developing during the reporting period. As has already been explained, this copyright group contracted substantially in terms of value added: from 1.48 percent in 2000 to 0.87 percent in 2008. This quite dramatic decline measured at the aggregated level covers both happier and unhappier cases if aggregated at the lower level. Interestingly, Publishing of Books (22.11) in eight years shed 32 enterprises out of 229 in 2000, but its value added share in the economy contracted by more than a factor of three over the same period from 0.40 percent to 0.13 percent. Publishing of Newspapers (22.12) followed the unfortunate fate of book publishing by contracting from 0.25 percent in 2000 to 0.13 percent in 2008. Publishing of Journals and Periodicals (22.13) did exceptionally well by expanding from 0.07 percent share of the economy to 0.10 percent. Table 31 makes it easy to see which activities were gaining or losing in economic importance.

Table 31: Value Added in Press and Literature, %

Code	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
22.11	Publishing of books	0.40	0.41	0.26	0.14	0.16	0.14	0.13	0.13	0.13
22.12	Publishing of newspapers	0.25	0.21	0.13	0.30	0.33	0.26	0.19	0.14	0.13
22.13	Publishing of journals and periodicals	0.07	0.07	0.06	0.15	0.14	0.10	0.10	0.09	0.10
22.15	Other publishing	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.02	0.01
22.21	Printing of newspapers	0.17	0.15	0.07	0.08	0.07	0.06	0.05	0.04	0.01
22.22	Printing n.e.c.	0.17	0.17	0.19	0.25	0.26	0.22	0.33	0.31	0.30
22.23	Bookbinding	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.24	Pre-press activities	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01
22.25	Ancillary activities related to printing	0.02	0.02	0.01	0.03	0.04	0.03	0.03	0.03	0.04
52.47	Retail sale of books, newspapers and stationery	0.29	0.30	0.23	0.19	0.19	0.19	0.13	0.10	0.10
52.50	Retail sale of second-hand goods in stores	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74.87	Other business activities n.e.c.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
92.31	Artistic and literary creation and interpretation	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00
92.40	News agency activities	0.05	0.05	0.04	0.04	0.03	0.02	0.01	0.01	0.02
92.51	Library and archives activities	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Press and Literature		**1.48**	**1.46**	**1.06**	**1.27**	**1.28**	**1.09**	**1.03**	**0.90**	**0.87**

Evaluating in terms of LTL million allows the study to see in which activities contraction was even nominal. For example, Publishing of Books (22.11) contracted nominally over the period from LTL 172.9 million in 2001 to LTL 126.2 million in 2008. Although Publishing of Newspapers (22.12) grew in nominal terms only modestly, Publishing of Journals and Periodicals grew by nearly a factor of four. Printing of Newspapers (22.21) contracted by more than ten times over the period because the activity, most likely, had shifted to Printing n.e.c. (22.22) which has grown approximately by four and a half times over the period. Consistently with the developments in publishing, activity 52.47 of Retail Sale was not growing either. Table 32 presents information on the value added (at four digit NACE level) in Press and Literature, accounting in LTL million.

Table 32: Value Added in Press and Literature, LTL million

Code	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
22.11	Publishing of books	156.4	172.9	113.1	69.8	86.6	91.6	96.7	110.7	126.2
22.12	Publishing of newspapers	97.2	89.8	57.6	148.0	177.6	163.5	140.7	125.3	126.7
22.13	Publishing of journals and periodicals	26.7	30.4	26.0	71.5	74.6	66.4	70.6	81.9	95.2
22.15	Other publishing	13.2	12.6	9.2	13.9	18.0	13.9	16.4	16.0	12.7

Table 32: Value Added in Press and Literature, LTL million (continued)

Code	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
22.21	Printing of newspapers	68.1	64.0	31.4	41.2	37.7	34.9	38.4	38.0	6.6
22.22	Printing n.e.c.	65.1	73.3	83.2	124.5	137.4	141.2	243.9	269.9	296.0
22.23	Bookbinding	2.8	2.4	0.5	1.0	0.7	0.2	0.6	0.6	1.0
22.24	Pre-press activities	4.7	6.3	6.0	11.0	10.0	9.0	10.6	10.8	12.1
22.25	Ancillary activities related to printing	6.8	8.3	2.8	16.7	18.9	21.9	24.7	27.6	35.1
52.47	Retail sale of books, newspapers and stationery	112.2	127.8	99.6	91.7	102.2	117.4	94.3	91.5	104.6
52.50	Retail sale of second-hand goods in stores	1.2	1.7	1.1	1.4	1.6	2.3	2.5	2.2	3.3
74.87	Other business activities n.e.c.	2.8	3.4	5.7	3.7	3.8	4.3	4.1	5.1	6.2
92.31	Artistic and literary creation and interpretation	2.7	3.7	2.8	6.1	2.6	3.8	2.5	1.2	3.1
92.40	News agency activities	18.9	22.8	18.5	19.3	13.8	11.2	8.1	8.0	16.1
92.51	Library and archives activities	0.1	0.2	2.7	2.7	4.1	6.0	6.4	11.2	24.7
Press and Literature		**578.9**	**619.5**	**460.1**	**622.6**	**689.6**	**687.4**	**760.7**	**800.0**	**869.5**

Employment in Press and Literature did not change significantly over the seven years. It started with 13.5 thousand FTU in 2001 and ended with 13.4 thousand in 2008. In between, it exhibited a 'U' pattern with the lowest dip in 2005. If Publishing of Books contracted from 2,866 employees to 1,078, a factor of nearly three, Publishing of Journals and Periodicals expanded by a factor of three from 642 to 1,828 employees. At the end of the period, the biggest employment was created by Printing n.e.c. (22.22) with 3,651 employees in 2008.

Table 33: Employment in Press and Literature, full time units

Code	Description	2001	2002	2003	2004	2005	2006	2007	2008
22.11	Publishing of books	2,866	2,527	1,175	977	1,208	1,179	1,288	1,078
22.12	Publishing of newspapers	1,951	1,887	2,532	2,583	2,295	1,875	1,932	2,345
22.13	Publishing of journals and periodicals	642	866	1,708	1,637	1,597	1,509	1,609	1,828
22.15	Other publishing	273	293	262	248	282	276	340	271
22.21	Printing of newspapers	1,371	966	685	666	411	371	397	105
22.22	Printing n.e.c.	1,351	2,066	2,193	2,143	2,560	3,147	3,360	3,651
22.23	Bookbinding	64	27	39	24	14	15	17	31
22.24	Pre-press activities	113	119	201	188	202	173	174	107
22.25	Ancillary activities related to printing	140	93	233	217	262	256	263	250
52.47	Retail sale of books, newspapers and stationery	2,938	2,774	2,607	2,856	2,614	2,640	2,506	2,339
52.50	Retail sale of second-hand goods in stores	55	55	55	47	53	56	67	59
74.87	Other business activities n.e.c.	138	210	139	142	143	143	162	187
92.31	Artistic and literary creation and interpretation	469	377	396	173	185	189	248	264
92.40	News agency activities	1,113	845	675	574	379	387	346	337
92.51	Library and archives activities	9	95	159	245	357	527	532	565
Press and Literature		**13,494**	**13,200**	**13,058**	**12,721**	**12,561**	**12,743**	**13,241**	**13,417**

The employment share of Press and Literature contracted less dramatically than its value added. It fell from 1.34 in 2001 to 1.15 in 2008. Table 34 presents employment shares of separate four digit activities compared to the total employment of the economy. Interestingly, in 2008, Printing n.e.c. was the biggest contributor, delivering 0.31 percent share of the total employment in the economy, even though it started from a very low base with 0.13 percent share in 2001.

Table 34: Employment in Press and Literature, %

Code	Description	2001	2002	2003	2004	2005	2006	2007	2008
22.11	Publishing of books	0.28	0.25	0.11	0.09	0.11	0.11	0.11	0.09
22.12	Publishing of newspapers	0.19	0.18	0.24	0.25	0.21	0.17	0.17	0.20
22.13	Publishing of journals and periodicals	0.06	0.08	0.16	0.16	0.15	0.13	0.14	0.16
22.15	Other publishing	0.03	0.03	0.03	0.02	0.03	0.02	0.03	0.02
22.21	Printing of newspapers	0.14	0.09	0.07	0.06	0.04	0.03	0.03	0.01
22.22	Printing n.e.c.	0.13	0.20	0.21	0.20	0.24	0.28	0.29	0.31
22.23	Bookbinding	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.24	Pre-press activities	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01
22.25	Ancillary activities related to printing	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
52.47	Retail sale of books, newspapers and stationery	0.29	0.27	0.25	0.27	0.24	0.24	0.22	0.20
52.50	Retail sale of second-hand goods in stores	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01
74.87	Other business activities n.e.c.	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.02
92.31	Artistic and literary creation and interpretation	0.05	0.04	0.04	0.02	0.02	0.02	0.02	0.02
92.40	News agency activities	0.11	0.08	0.06	0.05	0.04	0.03	0.03	0.03
92.51	Library and archives activities	0.00	0.01	0.02	0.02	0.03	0.05	0.05	0.05
Press and Literature		**1.34**	**1.29**	**1.25**	**1.22**	**1.16**	**1.14**	**1.14**	**1.15**

3.5.2 *Software and Databases*

Software and Databases was the real growth champion in the Lithuanian copyright industry, growing its share in the national economy approximately twice over. To be more precise, the number of enterprises nearly doubled, while value added and employment grew more than twice over during 2000–2008.

The number of enterprises in Software and Databases grew from 560 in 2000 to 1,040 in 2008. Other Software Consultancy and Supply (72.22) reached 605 enterprises in 2008, accounting for more than half of the enterprises in the sector. Database Activities was a growth champion in its own class by increasing the number of enterprises from 39 in 2000 to 128 in 2008. Data Processing Activities and Other Computer Related Activities were growing less steeply than the entire sector of Software and Databases. Remarkably, Publishing of Software was significantly contracting in business establishments from 101 in 2000 to 73 in 2008. For more details on the growth pattern in business demography see Table 35.

Table 35: Number of Enterprises in Software and Databases

Code	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
22.33	Reproduction of computer media	7	6	9	13	11	9	8	7	5
72.21	Publishing of software	101	124	138	140	93	77	65	71	73
72.22	Other software consultancy and supply	227	277	309	314	349	422	492	551	605
72.30	Data processing	48	46	47	44	46	39	39	52	67
72.40	Database activities	39	43	58	59	51	49	59	95	128
72.60	Other computer related activities	138	145	156	192	174	169	177	162	162
Software and Databases		**560**	**641**	**717**	**762**	**724**	**765**	**840**	**938**	**1,040**

The contribution of Software and Databases to the economy measured in basic prices increased from 0.32 percent in 2000 to 0.69 percent in 2008. The only year when its economic share was not rising was 2002, which was the year when the economic recovery was about to start. If Other Software Consultancy and Supply (72.22) made up a quarter of the sector with 0.08 percent value, after a decade of impressive growth, it was making up nearly two thirds of the sector with a 0.45 percent contribution in 2008. Other Computer Related Activities (72.60), which also started low with 0.01 percent in 2000, was the second by economic size in 2008. Database Activities (72.40), the third largest group in 2005, increased its contribution from 0.04 percent in 2000 to 0.05 percent in 2008. Publishing of Software (72.21) lost its leading position in 2000, when it contributed 0.13 percent, and fell to the fourth place with a 0.04 percent contribution.

Table 36: Value Added in Software and Databases, %

Code	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
22.33	Reproduction of computer media	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72.21	Publishing of software	0.13	0.24	0.19	0.24	0.14	0.10	0.08	0.08	0.04
72.22	Other software consultancy and supply	0.08	0.15	0.12	0.15	0.32	0.35	0.35	0.41	0.45
72.30	Data processing	0.06	0.09	0.05	0.04	0.03	0.05	0.04	0.06	0.07
72.40	Database activities	0.04	0.05	0.03	0.05	0.05	0.05	0.04	0.06	0.05
72.60	Other computer related activities	0.01	0.05	0.08	0.04	0.02	0.02	0.03	0.03	0.09
Software and Databases		**0.32**	**0.58**	**0.48**	**0.52**	**0.56**	**0.58**	**0.54**	**0.64**	**0.69**

Evaluating in terms of LTL million shows that, in nominal terms, Software and Databases grew by five and a half times from 2000 to 2008. It is not surprising that activity 72.22 with its large share contributed the most. It is easy to figure out that the software industry had only two nominally contracting sectors: Reproduction of Computer Media (22.33) and Publishing of Software (72.21). Table 37 below presents information on value added (at the four digit NACE level) in Software and Databases, accounted in LTL million.

Table 37: Value Added in Software and Databases, LTL million

Code	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008
22.33	Reproduction of computer media	0.6	0.5	0.2	0.3	0.9	1.6	1.6	0.4	0.4
72.21	Publishing of software	49.3	100.5	81.6	116.2	74.3	62.1	57.0	74.1	35.1
72.22	Other software consultancy and supply	31.3	63.9	51.9	73.9	172.8	222.6	258.7	358.8	448.2
72.30	Data processing	25.0	39.4	23.5	20.9	17.6	33.1	32.9	51.2	65.6
72.40	Database activities	14.3	20.5	15.1	24.8	25.5	30.7	31.0	54.8	47.3
72.60	Other computer related activities	5.0	21.2	36.0	17.3	13.1	15.5	18.7	25.9	90.8
Software and Databases		**125.4**	**245.9**	**208.3**	**253.3**	**304.1**	**365.6**	**399.9**	**565.2**	**687.4**

Employment in Software and Databases grew nearly as fast as its value added. The total contribution of this sector to employment increased more than twice from 2001 to 2008. It made up 0.27 percent of the total employment in 2001 and, after growing without any deviations, reached 0.56 percent of the country's employment in 2008. The employment contribution of Other Software Consultancy and Supply grew nearly three and a half times from 0.08 percent to 0.35 percent of the total employment over the period. Table 38 provides more information on employment in every single activity of Software and Databases.

Table 38: Employment in Software and Databases, %

Code	Description	2001	2002	2003	2004	2005	2006	2007	2008
22.33	Reproduction of computer media	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72.21	Publishing of software	0.08	0.09	0.11	0.08	0.07	0.07	0.06	0.04
72.22	Other software consultancy and supply	0.08	0.09	0.11	0.22	0.22	0.30	0.30	0.35
72.30	Data processing	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.05
72.40	Database activities	0.03	0.04	0.06	0.06	0.05	0.05	0.06	0.05
72.60	Other computer related activities	0.05	0.06	0.05	0.04	0.04	0.04	0.05	0.07
Software and Databases		**0.27**	**0.31**	**0.36**	**0.43**	**0.42**	**0.48**	**0.49**	**0.56**

Data presented in FTU reiterate the story of success of Software and Databases. It grew from 2,708 FTU in 2000 to 6,477 FTU in 2008. More than 4,000 FTUs were created in Other Software Consultancy and Supply (72.22). Looking at FTU, it is easy to see that employment developments in Data Processing (72.30) and Database Activities (72.40) were remarkably parallel. The first started with 336 FTUs, the other one with 334 FTUs. In 2008, Data Processing employed 563 workers, while Database Activities created 585 jobs.

Table 39: Employment in Software and Databases, full time units

Code	Description	2001	2002	2003	2004	2005	2006	2007	2008
22.33	Reproduction of computer media	8	17	27	16	36	13	6	4
72.21	Publishing of software	781	920	1,197	785	729	742	668	476
72.22	Other software consultancy and supply	764	900	1,172	2,298	2,426	3,328	3,463	4,026
72.30	Data processing	336	330	254	314	283	343	358	563
72.40	Database activities	334	408	602	639	574	520	726	585
72.60	Other computer related activities	485	634	476	464	436	466	534	822
Software and Databases		**2,708**	**3,209**	**3,728**	**4,517**	**4,484**	**5,412**	**5,754**	**6,477**

3.5.3 *Advertising Services*

Advertising Services has a significant share of the copyright economy which, by and large, was rapidly growing with some ups and downs. The first decade of the millennium was a real story of success for Advertising Services, while the number of enterprises, value added and employment were growing in this activity. It is worth noting that the NACE 1.1 classification does not give Advertising Services proper attention, putting everything into one basket in the four digit code; 74.40. This rough classification does not allow in depth analysis of its structure as it was possible for Press and Literature, and Software and Databases.

The growth rates of value added, employment and the number of enterprises grew at different rates. The most moderate growth rate was in the number of enterprises. The number of enterprises grew from 946 in 2000 to 1,103 in 2008. Employment in advertising was boosted from 0.27 percent to 0.47 percent in 2008, if measured in terms of the total employment. The value added growth of Advertising Services was a little above that of employment. It went from 0.27 percent in 2001 to 0.47 percent in 2008. Nonetheless, Advertising Services performed less successfully than the rest of the economy during 2004–2005, as its economic contribution share fell to 0.41 percent in 2005. However, employment was not contracting accordingly at the same time. Table 40 below provides information on value added and employment in comparative terms.

Table 40: Information on Advertising Services (74.40), %

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of Enterprises	946	747	870	883	849	936	999	1,025	1,103
Value Added of Advertising, %	0.31	0.27	0.35	0.45	0.43	0.41	0.45	0.47	0.47
Employment of Advertising, %		0.27	0.33	0.38	0.43	0.43	0.43	0.44	0.43

As in previously analysed cases, the information in nominal terms is useful to look at to evaluate whether there was any nominal contraction in a sector. Table 41 shows that 2001 was the lowest year for Advertising Services, when even this sector could not withstand the contracting forces in the recession economy. In 2001 the value added contracted to LTL 113.7 million.

Table 41: Information on Advertising Services (74.40), in nominal terms

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of Enterprises	946	747	870	883	849	936	999	1,025	1,103
Value Added of Advertising, LTL million	120.0	113.7	151.7	219.9	232.9	258.3	328.2	417.3	466.7
Employment of Advertising, full time unit		2,744	3,337	3,981	4,467	4,590	4,770	5,091	5,073

4. Analytical Approach

This Part explains in detail the statistical data sources of the copyright industry, including the structural business statistics and national accounts. The second half of this Part explains the selection of copyright factors, and provides a comprehensive description of all copyright activities at a detailed four digit NACE level. Naturally, some economic activities may be included into several clusters; therefore the reasons for their attribution in the Lithuanian case and the sharing patterns are discussed as well. Finally, due to reasons of complexity, the imputation procedures of filling in missing values, and the statistical techniques of reconciling the structural business statistics with the national accounts data are explained in Annex 1.

The methodology used in this study is based on the WIPO methodology, i.e., the WIPO Guide. The process of research was divided into three steps:

The first step included the identification of the copyright and related rights-based industries to be studied, using as a reference point, Annex I and Annex III of the WIPO Guide, as well as country studies which used NACE 1.1 classification of economic activities. This was done in consultation with the Ministry of Culture and WIPO experts. The categorisation of the copyright and related rights-based industries followed the advice presented in the WIPO Guide: core, interdependent, partial and non-dedicated support copyright industries. Nevertheless, there were nine NACE codes that had to be attributed to several copyright industries. These codes, which are referred to as *shared* in this study, are shared among corresponding industries.

↓

Based on the established classification according to NACE 1.1 of economic activities, the data collection stage was carried out. This involved compiling available statistical data by industry classes, imputing data where needed and possible, and collecting additional statistics by direct methods where imputation was impossible. The data were disaggregated to the required level of detail. In addressing specific areas, direct surveys were conducted, providing the data needed.

↓

The third step was to measure and calculate the contribution of the copyright and related rights-based industries studied to gross value added, national output, employment, and foreign trade, using a selective approach based on the WIPO Guide. The study followed the gross value added approach (GVA) by measuring value added at basic prices. The gross domestic product (GDP) approach of measuring value added at market prices was deduced from GVA analysis and available national accounts data. Thus, as a first step, value added was measured at basic prices or, similarly, at market prices, excluding net taxes on products (taxes minus subsidies). The chosen approach better reflects the value added aspect important to copyright industry, because some copyright sectors are heavily subsidised by the government. If subsidies are high, then they reduce a market price accordingly. This would distort the measurement of the value added that is created. Moreover, information about net taxes on products is available only at the level of the two digit NACE code which is too aggregated for copyright industry analysis. In order to have comparability with other country studies, the value added at market prices was established at the NACE four digit level and, consequently, for copyright industry groups. Since neither national accounting nor business statistics provide value added at market prices at the four digit level,[19] information from national accounting for the two digit level is used. It is assumed that net taxes on products and non-deductable VAT are homogenously distributed among four digit codes sharing the same first two digits.

The overall methodological approach consisted of two principal statistical data components:

(1) **Derivation of specific statistical data** for various copyright and related rights-based industries from the National Statistical Office of Lithuania (NSO), the Bank of Lithuania (BoL) and some specific surveys. Firstly, the statistical datasets had many missing values which had to be imputed. Secondly, for selected copyright and related rights-based activities, their contribution was shared between copyright industries (core, interdependent, partial, and non-dedicated support) following the Bulgarian copyright study. In the partial and non-dedicated support copyright industries, only some part of the output is copyright-related. The economic classification of economic activities in the study was based on the NACE Rev. 1.1. Thirdly, this stage included deriving a dataset for the copyright industry which is compatible with the national accounts definitions. The annual supply and use tables were publicly available for the years 2000–2007 from the Eurostat database. The supply and use tables for 2008 were released by the Lithuanian Department of Statistics (LDS) during the conduct of the study, and consequently employed.

(2) **The establishment and application of copyright factors** which estimate how much a specific economic activity on the lower level of NACE is related to the copyright industry. This stage relied heavily on copyright studies from countries of similar economic structure, namely Bulgaria and Malaysia (in one case). The total impact comprises the direct, indirect and induced impacts. Direct impact is generated in core and interdependent industries, indirect in partial industries and induced in non-dedicated support industries. These impacts were established for value-added, employment, and foreign trade.[20]

In general, as in other similar studies, the copyright industry was split into four categories by industry type: core, interdependent, partial, and non-dedicated support. Moreover, the core copyright industry was further split into nine subcategories, interdependent into seven, partial into ten, and finally, non-dedicated support into three subcategories. This followed strictly the classification guidelines of the WIPO Guide.

In total, if divided into **three levels of impact** these industry classes are as follows:

(1) **The direct impact** consists of core and interdependent copyright sector

(2) **The indirect impact** consists of partial copyright sector

(3) **The induced impact** is limited to the group of non-dedicated support copyright industries.

An employment vector was compiled following the same pattern as for value added at basic prices in all details.

In contrast, the trade data were calculated for all copyright economy without further breakdowns by industry type. The balance of payments statistics had the necessary breakdowns from 2004; thus foreign trade in services could be analysed starting from that year. Hence, the study of foreign trade covers the annual data for 2004–2010.

This section is rather technical in its use of relatively complicated statistical notation originating from structural business statistics, national accounts, and balance of payments areas. Not all technical concepts could be sufficiently covered in what is a relatively short explanation. To gain a better understanding of underlying statistical concepts of the analytical approach, it is advised to consult the Organisation for Economic Co-operation and Development (OECD) Glossary of Statistical Terms. If more knowledge of statistical terms is required, then the United Nations System of National Accounts 1993 and the International Monetary Fund's Fifth Balance of Payments Manual 1993 should be consulted.

4.1 Targeted Data

Specific data for the analysis of copyright activities were provided by two primary institutions of official statistics: the Lithuanian Department of Statistics (LDS) and the Bank of Lithuania (BoL). Statistics on the domestic sector is compiled by LDS, while statistics on the external sector is a shared responsibility of both

[19] No country in the EU is able to produce this.

[20] The WIPO Guide recommends using income approach for the calculation of GDP if the value added calculation cannot be employed directly. Alternative methods were not needed as the value added statistics were available for this research.

institutions. Trade data are available at LDS, whereas data on services and cross-border income transactions (royalties) are available at BoL.

LDS provided the requested information, which was not confidential. Since part of the required data was neither confidential nor publicly available, LDS was directly addressed to provide the dataset in as complete a fashion as possible. The request was completed, although some values were missing for confidentiality reasons.

The statistical dataset upon which this research is based consists of two sorts of data. The first comes from structural business statistics and provides detailed information on each single activity from the Complete Copyright Activity List (CCAL). CCAL is presented in Annex 12, with corresponding attributes and factors. It is important to notice that CCAL includes not only four digit codes taken directly from the WIPO Guide, but also higher (as in more general) positions of these codes (the first two digit and three digit codes from the CCAL) which are essential for consistency and plausibility checks during the estimation phase. Moreover, the data for the upper NACE levels were crucial when detailed information at the four digit level was confidential. As is the case in many countries, the structural business statistics dataset is inconsistent with the national accounts data, due to a narrower coverage than that found in national accounts.

The second part of the data comprises Lithuanian supply and use tables (SU) for 2000–2008. As SU tables are presented at a two digit level; the data for the CCAL had to be estimated at the lower four digit NACE levels.

4.1.1 *Datasets Time Series*

LDS and BoL were asked for specific annual indicator values for the period 2000–2008 and for each economic activity from CCAL. In general, it meant that LDS had to provide a table for each statistical indicator from item one to seven. In the dataset, a specific NACE code was attributed to each row, and years from 2000 to 2008 are assigned to columns. Moreover, items eight and nine were publicly available on the Eurostat or LDS web sites. All in all, LDS was a direct or indirect source for the following detailed datasets:

(1) Number of enterprises in operation (structural business statistics) for 2000–2008.
(2) Value added at factor costs (structural business statistics) for 2000–2008.
(3) Value added at basic prices (structural business statistics) for 2000–2007.
(4) Output at factor costs (structural business statistics) for 2000–2008.
(5) Number of employees in full time units (structural business statistics) for 2001–2008.
(6) Exports (Classification of Products by Activity at two and four digit level).
(7) Imports (Classification of Products by Activity at two and four digit level).
(8) Supply and use tables for 2000–2008.
(9) Average number of employees by sector in full time units, economic activity
(10) (NACE 1.1) for 2000–2008.

The received datasets were incomplete in many aspects; thus, not readily appropriate for aggregation. Whereas some items lacked specific values, other items lacked all the data for some years. Although five datasets out of seven were relatively complete in covering 2000–2008, two datasets were fundamentally incomplete. The average number of employees in full time units (item five) was not yet calculated in Lithuania in 2000; the data compilation started in 2001. The calculation of value added at basic prices (item three) was discontinued after 2007, although the value added at factor costs was still available for 2008. These two incomplete aspects were dealt with differently. Value added was imputed, while employment was analysed starting from 2001. Imputation techniques are explained in the corresponding section dealing with imputations.

Item one was needed to support the establishment of some very specific imputations, where official statistics regarding economic activity were insufficient. Regrettably, LDS refused to provide a list of the largest enterprises for each code from CCAL. This information could be valuable as it would allow the establishment of more accurate copyright factors for specific NACE codes from CCAL. Although the confidentiality rules do not apply to an economic activity of an enterprise, LDS explained that it applies to the lists of enterprises of a certain economic activity.

Items three to seven were directly employed in calculations, while item two was used to impute the dataset for item three.

BoL, in its annual External Statistics Bulletin, publishes annual trade in services data broken down by type of services. BoL was asked to provide a dataset where columns are attributed to the period of 2000–2008 and rows to the specific services of interest. BoL provided the data for 2000–2010, more information than requested. BoL could not provide a breakdown by NACE activity; the information on services is not aggregated on the basis of the main economic activity of an institutional unit which provides or consumes services with regard to non-residents. Thus, the data on trade in services were calculated for the national economy as a whole.

The following indicators for services (rows) were covered in the dataset:

1. Exports of services.
    1.1. Total services in kind.
        1.1.1. Computer and information services.
            1.1.1.1. Computer services.
            1.1.1.2. Information services.
                1.1.1.2.1. News agency services.
                1.1.1.2.2. Other information provision services.
        1.1.2. Royalties and licence fees.
            1.1.2.1. Franchises and similar rights.
            1.1.2.2. Other royalties and licence fees.[21]
        1.1.3. Personal cultural and recreational services.
            1.1.3.1. Audio-visual and related services.
            1.1.3.2. Other personal, cultural and recreational services.
2. Imports of services.
    2.1. Total services in kind.
        2.1.1. Computer and information services.
            2.1.1.1. Computer services.
            2.1.1.2. Information services.
                2.1.1.2.1. News agency services.
                2.1.1.2.2. Other information provision services.
        2.1.2. Royalties and licence fees.
            2.1.2.1. Franchises and similar rights.
            2.1.2.2. Other royalties and licence fees.
        2.1.3. Personal cultural and recreational services.
            2.1.3.1. Audio-visual and related services.
            2.1.3.2. Other personal, cultural and recreational services.

[21] The Lithuanian version of this category is formulated as 'Payments for copyrights and licences' and the data are collected from enterprises. In the text above, the official translation from the annual BoL bulletin is provided.

4.1.2 *Supply and Use Tables*

The Lithuanian supply and use tables (2000–2008) were downloaded from the Eurostat website. These datasets on the Eurostat website are supplied by the LDS. The level of detail in these publicly available datasets is restricted to the two digit code of the NACE. Alternatively, although not covering all the years, the same datasets are available at the website of LDS http://www.stat.gov.lt/en/pages/view/?id=1585. At the beginning of the research, SU annual tables were available up to 2007. However, according to the LDS advance release calendar, the 2008 SU tables were released on November 30, 2011. Thus, it was possible to integrate this dataset into the analysis at a final stage. Finally, to derive GDP contribution shares from GVA contribution shares the breakdown of net taxes by economic activities was needed. This was available only in the supply and use tables for 2005 which are publicly available only in paper format. Fortunately, LDS kindly provided the electronic version of these specific tables.

In order to derive estimations for the copyright industries, firstly, the missing variables in the statistics datasets had to be imputed. Secondly, on the basis of the complete structural business statistics dataset of value added at basic prices for economic activities, the value added estimations, consistent with national accounts, were derived.

The collected statistical datasets had three sorts of incompleteness. Firstly, some data for an entire year were missing. Secondly, in some time series, some values were present and others were missing. Thirdly, some time series did not have any single value at all. The first issue originated from peculiarities of the Lithuanian Programme of Official Statistics, while the second and the third were due to confidentiality reasons. Estimating value added at market prices on the basis of gross value added contributions and net taxes on products could be attributed to the third category.

The authors managed to impute data values with appropriate statistical methods, which are explained in a dedicated annex below, due to the highly technical statistical character of the techniques applied. As most of the previous national studies have lacked transparent presentations of these techniques, it is evident that missing values is a recurrent problem, especially for smaller economies, so the authors anticipate that this annex will be of special interest for those willing to conduct studies themselves. An effective imputation is never a trivial thing to construct; nevertheless, its simplicity is a greatly desirable feature at the same time, allowing users to understand the reliability of derived estimates.

4.2 Copyright Factors

The copyright factors for economic activities are set out in this study by relying on the methodological recommendations in the WIPO Guide and the findings of the Bulgarian copyright study commissioned by WIPO. The choice of Bulgaria was based on its geographical proximity and economic similarity. Due to limited funding, this study could not conduct specifically targeted surveys in order to establish copyright factors. All the copyright factors used in this study are provided in Annex 12.

The copyright factors for core, interdependent and partial industries were taken to be the same as in the Bulgarian study for 2005. The copyright factors for core and interdependent copyright groups were also taken and are equal to 1. The copyright factors for partial copyright group were smaller than 1, as it should be, according to the definition of the partial copyright group, strictly following the Bulgarian shares as well.

The copyright factors for non-dedicated support activities were estimated for each year separately and the same factor was applied, calculating GVA contribution, GDP contribution, employment, and trade. According to the recommendation of the WIPO Guide, the value added of the first three groups was divided by the gross value added, minus the value added of non-dedicated support copyright industry. The derived copyright factor of the non-dedicated support copyright industry was applied for employment and foreign trade of non-dedicated support activities. Moreover, the same copyright factors were applied for value added aggregates at market prices, which were needed to derived estimates comparable to GDP.

Table 42 presents a comparison of selected factors adopted in different country studies. It is easy to see that differences between countries are relatively small; using the Bulgarian estimates for purposes of this study seems justified.

Table 42: Copyright Factors of Selected Countries

Industry	Singapore	Latvia*	Hungary	Jamaica	Bulgaria	Lebanon	Malaysia	China	Average Factor
Apparel, Textiles & Footwear	0.4%	0.4%	0.5%	0.5%	0.6%	2.0%	15.0%	0.40%	2.48%
Jewellery & Coins	25.2%	8.69%	25.0%	25.0%	20.0%	25.0%		8.00%	19.55%
Other Crafts	42.0%		40.0%		40.0%		26.7%	40.00%	37.74%
Furniture	5.0%	41.00%	5.0%	5.0%	5.0%	5.0%	35.0%	5.0%	13.25%
Household Goods, China & Glass	0.6%		0.5%	0.5%	0.5%	2.5%	0.4%	0.3%	0.75%
Wall Coverings & Carpets	1.7%	1.65%	2.0%	0.5%	0.4%	2.5%	1.08%	2.0%	1.48%
Toys & Games	42.0%	45.50%	50.0%	50.0%	40.0%	50.0%	26.7%	40.0%	43.03%
Architecture	8.3%		10.0%	50.0%	10.0%	10.0%	5.3%	6.0%	14.23%
Interior Design	8.3%			2.0%			5.28%	5.0%	5.15%
Museums			50.0%	50.0%	50.0%	50.0%		0.5%	40.10%
Miscellaneous Manufacturing		45.50%							
Wholesale & Retail of partial copyright industries			5.0%	5.0%		6.0%			5.33%

* Average of Singapore and USA factors. The Philippine study adopted Singapore's factors. Mexico used the average of USA and Hungary factors.

Source: Brunei Darussalam Copyright Study commissioned by WIPO, 2011.

For Lithuania, all the copyright factors are exactly the same as for Bulgaria in Table 2 with some additions, as the Bulgarian study missed some copyright industry classes. The copyright factor for Interior Design in Lithuania was taken as 5.28 percent, as in Malaysia, which is a country of comparable economic development.

Copyright factors for foreign trade in goods and services

The factors applied to CPA activities were the same as those applied to the corresponding NACE code while measuring economic contribution to gross value added. The application of copyright factors to trade in goods was rather straightforward, since, as was explained in the section dealing with statistical issues, the foreign trade data were available with the breakdown according to the CPA. This matches perfectly with the NACE classification.

The copyright factors for trade in services were set equal to 1 or 0.5 depending on the type of services. To measure foreign trade in services of the copyright industry, three categories of services from the balance of payments services account were singled out which were relevant for copyright activities:

(1) computer and information services;
(2) royalties and licence fees; and
(3) personal, cultural, and recreational services.

The computer and information services category was estimated to have a copyright factor equal to 1. This category covers resident/non-resident transactions related to hardware consultancy, software implementation, information services (data processing, databases, news agency), and maintenance and repair of computers and related equipment.

For the copyright factor of the royalties and licence fees category the value 0.5 was assigned. Royalties and licence fees cover receipts (exports) and payments (imports) of residents and non-residents for (i) the authorised use of intangible non-produced, non-financial assets and proprietary rights, such as trademarks, copyrights, patents, processes, techniques, designs, manufacturing rights, franchises, etc., and (ii) the use, through licensing agreements, of produced originals or prototypes, such as manuscripts, films, etc.

The copyright factor of the personal, cultural, and recreational services category was set equal to 1. Personal, cultural, and recreational services cover (i) audiovisual and related services, and (ii) other cultural services provided by residents to non-residents, and vice versa. Included under (i) are services associated with the production of motion pictures on films or videotape, radio and television programmes, and musical recordings. Examples of these services are rentals and fees received by actors, producers, etc., for productions and for distribution rights sold to the media. Included under (ii) are other personal, cultural, and recreational services, such as those associated with libraries, museums, and other cultural and sporting activities.

The copyright factors for international trade in services are provided in Annexes 8–11.

4.3 List of Copyright Activities

Copyright and related rights activities are characterised as activities that are identifiably related to the copyright issue, even bearing in mind the fact that explicit definitions might vary between countries. Grouping of these activities is well-developed in the WIPO Guide and it is therefore used in this study. The WIPO Guide provides a list in its Annex II (ISIC version) and Annex III (NACE version). The Annex III list, with corresponding extensions, we call the Complete Copyright Activities List (CCAL). The list contains four categories that cluster economic activities according to the extent to which they are based on, and related to, copyright and related rights. Being more specific, the groups are:

(1) **Core CIs.** Core Copyright Industries (CCI) are industries that are fully engaged in the creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and any other protected subject matter.

(2) **Interdependent CIs.** Interdependent Copyright Industries (ICI) are industries that are engaged in production, manufacturing and sales of equipment, the only or primary function of which is to facilitate the creation, production or use of works and any other protected subject matter.

(3) **Partial CIs.** Partial Copyright Industries (PCI) are industries where a portion of the activities is related to works and other protected subject matter, and may involve the creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales.

(4) **Non-dedicated support CIs.** Non-Dedicated Support Copyright Industries (NDCI) are industries where a portion of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matters, and the activities of which do not fall into the category of CCI.

The current classification of economic activities in Lithuania is based on NACE Rev. 2. However, it has been used only from 2008 and is not comparable with longer statistical time series or any available Lithuanian supply and use tables. Since there is a clear need to make international comparisons of the Lithuanian copyright economy and its development over time, the NACE 1.1 classification will be used in the Lithuanian study. Moreover, this methodological choice allows the examination of the development of the copyright industries' contribution to the Lithuanian economy throughout most of the last business cycle. A follow up study of the Lithuanian copyright industries (which could be conducted in a few years time) will be evidently based on NACE Rev. 2. Moreover, this study covers all the data produced according to the NACE 1.1 framework.

A complete structure of the economic activities related to copyright investigated in this study is presented in Table 43. The table provides a coding for copyright industry categories and their groups which is used throughout the study. Since NACE was created without any regard for copyright studies, there are some economic activities which fall into several categories; thus they had to be split up applying certain sharing patterns. The last column shows whether a particular economic activity is attributed to a single group or is shared with other groups in the classification. The categories and groups in the list are in line with the WIPO Guide.

Table 43: Complete Copyright Activities List Used in the Study

Category	Groups	NACE 1.1	Description	Attribution
I. Core CIs	1. Press and Literature	22.11	Publishing of books	Single
		22.12	Publishing of newspapers	Single
		22.13	Publishing of journals and periodicals	Single
		22.15	Other publishing	Single
		22.21	Printing of newspapers	Single
		22.22	Printing n.e.c.	Single
		22.23	Bookbinding	Single
		22.24	Pre-press activities	Single
		22.25	Ancillary activities related to printing	Single
		52.47	Retail sale of books, newspapers and stationery	Single
		52.50	Retail sale of second-hand goods in stores	Shared
		74.87	Other business activities n.e.c.	Shared
		92.31	Artistic and literary creation and interpretation	Shared
		92.40	News agency activities	Single
		92.51	Library and archives activities	Single
	2. Music, Theatrical Productions, Operas	22.14	Publishing of sound recordings	Single
		22.31	Reproduction of sound recording	Single
		51.43	Wholesale of electrical household appliances and radio and television goods	Shared
		52.45	Retail sale of electrical household appliances and radio and television goods	Shared
		74.87	Other business activities n.e.c.	Shared
		92.31	Artistic and literary creation and interpretation	Shared
		92.32	Operation of arts facilities	Single
		92.34	Other entertainment activities n.e.c.	Single
	3. Motion Picture and Video	22.32	Reproduction of video recording	Single
		51.43	Wholesale of electrical household appliances and radio and television goods	Shared
		74.87	Other business activities n.e.c.	Shared
		92.11	Motion picture and video production	Single
		92.12	Motion picture and video distribution	Single
		92.13	Motion picture projection	Single
		92.31	Artistic and literary creation and interpretation	Shared
	4. Radio and Television	92.20	Radio and television activities	Single
	5. Photography	74.81	Photographic activities	Single
	6. Software and Databases	22.33	Reproduction of computer media	Single
		72.21	Publishing of software	Single
		72.22	Other software consultancy and supply	Single
		72.30	Data processing	Single
		72.40	Database activities	Single
		72.60	Other computer related activities	Single
	7. Visual and Graphic Arts	74.87	Other business activities n.e.c.	Shared
		92.31	Artistic and literary creation and interpretation	Shared
		92.52	Museums activities and preservation of historical sites and buildings	Shared
	8. Advertising Services	74.40	Advertising	Single
	9. Copyright Collecting Societies	74.87	Other business activities n.e.c.	Shared

Table 43: Complete Copyright Activities List Used in the Study (continued)

Category	Groups	NACE 1.1	Description	Attribution
II. Interdependent CIs	1. TV Sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Gaming Equipment and other similar equipment	32.30	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods	Single
		51.43	Wholesale of electrical household appliances and radio and television goods	Shared
		52.45	Retail sale of electrical household appliances and radio and television goods	Shared
	2. Computers and Equipment	30.02	Manufacture of computers and other information processing equipment	Single
		51.84	Wholesale of computers, computer peripheral equipment and software	Single
		51.85	Wholesale of other office machinery and equipment	Shared
		71.33	Renting of office machinery and equipment, including computers	Single
	3. Musical Instruments	36.30	Manufacture of musical instruments	Single
		52.45	Retail sale of electrical household appliances and radio and television goods	Shared
	4. Photocopiers	30.01	Manufacture of office machinery	Shared
		51.85	Wholesale of other office machinery and equipment	Shared
	5. Photographic and Cinematographic Instruments	33.40	Manufacture of optical instruments and photographic equipment	Single
	6. Blank Recording Material	24.64	Manufacture of photographic chemical material	Single
		24.65	Manufacture of prepared unrecorded media	Single
	7. Paper	21.11	Manufacture of pulp	Single
		21.12	Manufacture of paper and paperboard	Single
		24.30	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	Single
		29.55	Manufacture of machinery for paper and paperboard production	Single
		51.56	Wholesale of other intermediate products	Single
III. Partial CIs	1. Apparel, Textiles and Footwear	17.60	Manufacture of knitted and crocheted fabrics	Single
		17.71	Manufacture of knitted and crocheted hosiery	Single
		17.72	Manufacture of knitted and crocheted pullovers, cardigans and similar articles	Single
		18.10	Manufacture of leather clothes	Single
		18.21	Manufacture of workwear	Single
		18.22	Manufacture of other outerwear	Single
		18.23	Manufacture of underwear	Single
		18.24	Manufacture of other wearing apparel and accessories n.e.c.	Single
		19.30	Manufacture of footwear	Single
		29.54	Manufacture of machinery for textile, apparel and leather production	Single
		51.42	Wholesale of clothing and footwear	Single
		52.41	Retail sale of textiles	Single
		52.42	Retail sale of clothing	Single
		52.43	Retail sale of footwear and leather goods	Single

Table 43: Complete Copyright Activities List Used in the Study (continued)

Category	Groups	NACE 1.1	Description	Attribution
III. Partial CIs (continued)	2. Jewellery and Coins	36.21	Striking of coins	Single
		36.22	Manufacture of jewellery and related articles n.e.c.	Single
		36.61	Manufacture of imitation jewellery	Single
	3. Other Crafts	36.63	Other manufacturing n.e.c.	Single
	4. Furniture	36.11	Manufacture of chairs and seats	Single
		36.12	Manufacture of other office and shop furniture	Single
		36.13	Manufacture of other kitchen furniture	Single
		36.14	Manufacture of other furniture	Single
		36.15	Manufacture of mattresses	Single
		51.85	Wholesale of other office machinery and equipment	Shared
		52.44	Retail sale of furniture, lighting equipment and household articles n.e.c.	Shared
	5. Household Goods, China and Glass	20.51	Manufacture of other products of wood	Single
		20.52	Manufacture of articles of cork, straw and plaiting materials	Single
		26.12	Shaping and processing of flat glass	Single
		26.13	Manufacture of hollow glass	Single
		26.14	Manufacture of glass fibres	Single
		26.15	Manufacture and processing of other glass, including technical glassware	Single
		26.21	Manufacture of ceramic household and ornamental articles	Single
		26.22	Manufacture of ceramic sanitary fixtures	Single
		26.23	Manufacture of ceramic insulators and insulating fittings	Single
		26.24	Manufacture of other technical ceramic products	Single
		26.25	Manufacture of other ceramic products	Single
		26.26	Manufacture of refractory ceramic products	Single
		28.75	Manufacture of other fabricated metal products n.e.c.	Single
		31.50	Manufacture of lighting equipment and electric lamps	Single
		52.44	Retail sale of furniture, lighting equipment and household articles n.e.c.	Shared
	6. Wall Coverings and Carpets	17.51	Manufacture of carpets and rugs	Single
		21.24	Manufacture of wallpaper	Single
		21.25	Manufacture of other articles of paper and paperboard n.e.c.	Single
	7. Toys and Games	36.50	Manufacture of games and toys	Single
	8. Architecture, Engineering, Surveying	74.20	Architectural and engineering activities and related technical consultancy	Single
	9. Interior Design	74.87	Other business activities n.e.c.	Shared
	10. Museums	52.50	Retail sale of second-hand goods in stores	Shared
		92.52	Museums activities and preservation of historical sites and buildings	Shared

Table 43: Complete Copyright Activities List Used in the Study (continued)

Category	Groups	NACE 1.1	Description	Attribution
IV. Non-dedicated support CIs	1. General Wholesale and Retailing	51.11	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	Single
		51.12	Agents involved in the sale of fuels, ores, metals and industrial chemicals	Single
		51.13	Agents involved in the sale of timber and building materials	Single
		51.14	Agents involved in the sale of machinery, industrial equipment, ships and aircraft	Single
		51.15	Agents involved in the sale of furniture, household goods, hardware and ironmongery	Single
		51.16	Agents involved in the sale of textiles, clothing, footwear and leather goods	Single
		51.17	Agents involved in the sale of food, beverages and tobacco	Single
		51.18	Agents specialising in the sale of particular products or ranges of products n.e.c.	Single
		51.19	Agents involved in the sale of a variety of goods	Single
		51.41	Wholesale of textiles	Single
		51.43	Wholesale of electrical household appliances and radio and television goods	Shared
		51.44	Wholesale of china and glassware, wallpaper and cleaning materials	Single
		51.45	Wholesale of perfume and cosmetics	Single
		51.46	Wholesale of pharmaceutical goods	Single
		51.47	Wholesale of other household goods	Single
		51.81	Wholesale of machine tools	Single
		51.82	Wholesale of mining, construction and civil engineering machinery	Single
		51.83	Wholesale of machinery for the textile industry and of sewing and knitting machines	Single
		51.85	Wholesale of other office machinery and equipment	Shared
		51.86	Wholesale of other electronic parts and equipment	Single
		51.87	Wholesale of other machinery for use in industry, trade and navigation	Single
		51.88	Wholesale of agricultural machinery and accessories and implements, including tractors	Single
		51.90	Other wholesale	Single
		52.11	Retail sale in non-specialised stores with food, beverages or tobacco predominating	Single
		52.12	Other retail sale in non-specialised stores	Single
		52.45	Retail sale of electrical household appliances and radio and television goods	Shared
		52.48	Other retail sale in specialised stores	Single
		52.50	Retail sale of second-hand goods in stores	Shared
		52.61	Retail sale via mail order houses	Single
		52.62	Retail sale via stalls and markets	Single
		52.63	Other non-store retail sale	Single
		71.40	Renting of personal and household goods n.e.c.	Single

Table 43: Complete Copyright Activities List Used in the Study (continued)

Category	Groups	NACE 1.1	Description	Attribution
IV. Non-dedicated support CIs (continued)	2. General Transportation	60.10	Transport via railways	Single
		60.21	Other scheduled passenger land transport	Single
		60.22	Taxi operation	Single
		60.23	Other land passenger transport	Single
		60.24	Freight transport by road	Single
		61.10	Sea and coastal water transport	Single
		61.20	Inland water transport	Single
		62.10	Scheduled air transport	Single
		62.20	Non-scheduled air transport	Single
		63.11	Cargo handling	Single
		63.12	Storage and warehousing	Single
		63.21	Other supporting land transport activities	Single
		63.22	Other supporting water transport activities	Single
		63.23	Other supporting air transport activities	Single
		63.30	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.	Single
		63.40	Activities of other transport agencies	Single
		64.11	National post activities	Single
		64.12	Courier activities other than national post activities	Single
	3. Telephony and Internet	64.20	Telecommunications	Single

4.4 Shared Copyright Activities

This section details how shared activities are distributed to different copyright industries. There are nine shared codes that are repeatedly used in the above list. This is consistent with the WIPO Guide Annex I, even although it is not explicit in Annex III of the WIPO Guide. In fact, much of the work extending the code list of NACE Rev.1.1 has been carried out in the Bulgarian study22 of the copyright industry conducted in 2007.

Table 44 portrays these nine shared economic activities attributed to the copyright activities groups. Groups are referred to in compliance with the codes introduced in Table 43.

[22] 'The Economic Contribution of Copyright-Based Industries in Bulgaria.' May 2007. <http://www.wipo.int/ip-development/en/creative_industry/pdf/1009E-4.pdf>

Table 44: Shared Copyright Activities List

Activity		Group					
Code	Description	First	Second	Third	Fourth	Fifth	Sixth
30.01	Manufacture of office machinery	II.4					
51.43	Wholesale of electrical household appliances and radio and television goods	I.2	I.3	II.1	IV.1		
51.85	Wholesale of other office machinery and equipment	II.2	II.4	III.4	IV.1		
52.44	Retail sale of furniture, lighting equipment and household articles n.e.c.	III.4	III.5				
52.45	Retail sale of electrical household appliances and radio and television goods	I.2	II.1	II.3	IV.1		
52.50	Retail sale of second-hand goods in stores	I.1	III.10	IV.1			
74.87	Other business activities n.e.c.	I.1	I.2	I.3	I.7	I.9	III.9
92.31	Artistic and literary creation and interpretation	I.1	I.2	I.3	I.7		
92.52	Museums activities and preservation of historical sites and buildings	I.7	III.10				

In the next step, the attribution factors, which give the exact percentage contribution to each group, have to be derived. Depending on the derived estimation, the shares may or may not add up to 1. The nine economic activities described in Table 44 have to be distributed to corresponding copyright industry categories and subcategories. It was necessary to estimate two parameters (the share for value added and another share for employment) because the current study focuses on the value added and employment measures. For the foreign trade measure, the value added sharing pattern was applied. The major source for analysing the shares was the Bulgarian study referred to above, where calculations were carried out for 2003 and 2005. In this analysis, the Bulgarian calculations of 2005 were taken as a basis for Lithuanian estimations.

Table 44 also gives a useful summary of the NACE 1.1 incompatibility with the needs of copyright economic analysis. The most 'awkward' code is 74.87 with the rank of six. Slightly less awkward but still incompatible with copyright analysis needs are four codes: 51.43, 51.85, 52.45, and 92.31. The other codes could be considered as being less incompatible with the needs of copyright economic analysis.

It might seem peculiar to find code 30.01 in Table 44 as it is attributed to one group (II.4). There is a very practical reason for this. There are two codes in Table 44 that are attributed to group II.4 with different sharing percentages. As copyright factors are established for groups, but not for codes, in order to capture the attribution of different percentages the code should be treated as shared. In fact, it is shared between the copyright industry and the rest of the economy. It might also be appropriate to observe that some of Photocopiers category content might be classified under code 22.22, but we attribute this code to group I.1 in full. Assigning some part of 52.44 to the Photocopiers category is possible only theoretically, but practically highly unlikely. Accordingly, this code is not assigned to group II.4.

There was no need or justification to estimate a parameter which would allow the distribution of the number of enterprises within a specific copyright industry activity, as was attempted in the Bulgarian study. This study does not attempt to address the structural business statistics of the copyright industry. The specific enterprise might not be attributable to any copyright industry subgroup at all, if it conducts these activities only as secondary activities. Nevertheless, we calculated the number of enterprises in I.1, I.6 and I.8 group applying copyright factors, but fortunately these codes do not appear in Table 44.

The Bulgarian study managed to establish the distribution of shared copyright economic activities. The summary of these estimates is provided in Table 45.[23]

[23] More information on the derivation of these estimates may be found in the Bulgarian study.

Table 45: Distribution of Shared Copyright Economic Activities in Bulgaria, 2005

Industries, economic activities	Value added		Employment	
	thousand BGN	%	number employed	%
I.2	7,558	0.6		0.6
I.3	6,753	0.6		0.6
II.1	415,132	33.8		33.8
IV.1		65.0		65.0
51.43	**429,443**	**100.0**		**100.0**
II.2	2,766	37.0	139	16.0
III.4	4,700	63.0	730	84.0
IV.1	0	0.0	0	0.0
51.85	**7,466**	**100.0**	**869**	**100.0**
III.4	18,673	42.6	4,782	57.2
III.5	25,194	57.4	3,575	42.8
52.44	**43,867**	**100.0**	**8,357**	**100.0**
I.2	16,425	2.4		2.4
II.1	216,126	30.9		30.9
II.3	12,009	1.7		1.7
IV.1		65.0		65.0
52.45	**244,560**	**100.0**		**100.0**
I.1		10.0		10.0
III.9		10.0		10.0
IV.1		80.0		80.0
52.50		**100.0**		**100.0**
I.1		5.1		12.8
I.2		5.6		3.5
I.3		13.5		5.9
I.7		10.8		12.8
74.87		**35.0**		**35.0**
I.1	1,628	20.5	311	51.2
I.2	1,781	22.4	85	14.0
I.3	4,285	54.0	144	23.7
I.7	248	3.1	67	11.0
92.31	**7,942**	**100.0**	**607**	**100.0**
I.7		80.0		80.0
III.9		20.0		20.0
92.52		**100.0**		**100.0**

The Lithuanian and Bulgarian economies share a great similarity in their recent economic history and their economic structure; therefore, the Bulgarian shares of the copyright activities would seem to be a very good proxy for defining the Lithuanian distribution. It was decided that Bulgarian shares are appropriate in six out of nine cases when defining Lithuanian sharing patterns. Two other distributions, for activities 74.87 and 52.50, were modified, and distribution for 30.01 was introduced, if compared to Bulgarian estimates.

Activity 74.87 is broken down into six subcategories while the Bulgarian study broke it down into four subcategories. The four components of the 74.87 were transferred from the Bulgarian study. In order to estimate I.9, all copyright collecting societies were surveyed. The societies have been surveyed for their full time employment figures during 2000-2008. Consequently, the employment share of I.9 in 74.87 was calculated for each year. Moreover, the same shares were used to single out the I.9 component for value added as well. The collected data for group I.9 and estimates are presented in Table 46.

Table 46: Employment of Copyright Collecting Societies in Lithuania

Activity, industry, society*	2000	2001	2002	2003	2004	2005	2006	2007	2008
LATGA-A	26	30	35	34	35	36	38	35	38.5
AGATA	3	7	10	14	17	19	18	19	19
Copyright collecting societies	**29**	**37**	**45**	**48**	**52**	**55**	**56**	**54**	**57.5**
74.87	716	731	945	1082	1111	1118	1121	1265	1460
Share of I.9 in 74.87, %	4.1	5.1	4.8	4.4	4.7	4.9	5.0	4.3	3.9

* Only two out of four currently operating collecting societies were operating in the period of 2000-2008.

The Interior Design (III. 9) component in code 74.87 was estimated as being 7 percent for Lithuania. This was derived from expenditure approach considering firms and households expenditures.

The estimates of the copyright content of activity 52.50 in the Lithuanian economy were significantly reduced when compared to the Bulgarian estimates. The Bulgarian study assumed that copyright economic activities made up 20 percent (10 percent + 10 percent) of 52.50. This is too high for the Lithuanian economy. The shares of sales of second-hand books and antiques were also reduced from the Bulgarian estimate of 10 percent to 3 and 5 percent respectively in the Lithuanian case. The major part of a retail sale of second-hand goods in stores consists of the resale of second-hand automobile parts and second-hand clothes.

The remaining sharing differences with the Bulgarian study are due to the Photocopiers group on the Lithuanian list according to the Guide. The Bulgarian shares of value added and employment are applied for code 51.85 only after 5 percent are assigned to group II.4. Moreover, we treat the code 30.01 as a shared activity by assigning 5 percent to group II.4. We consistently apply the same sharing factor to the production and wholesale categories.

Altogether, Table 47 presents the Lithuanian estimates of shared economic activities applied to the nine shared economic activities.

Table 47: Distribution of Shared Copyright Economic Activities in Lithuania, 2000–2008

Industries, economic activities	Distribution	
	Value added, %	Employment, %
II.4	5.0	5.0
30.01	**5.0**	**5.0**
I.2	0.6	0.6
I.3	0.6	0.6
II.1	33.8	33.8
IV.1	65.0	65.0
51.43	**100.0**	**100.0**
II.2	35.1	15.2
II.4	5.0	5.0
III.4	59.9	79.8
IV.1	0.0	0.0
51.85	**100.0**	**100.0**

Table 47: Distribution of Shared Copyright Economic Activities in Lithuania, 2000–2008 (continued)

Industries, economic activities	Distribution	
	Value added, %	Employment, %
III.4	42.6	57.2
III.5	57.4	42.8
52.44	**100.0**	**100.0**
I.2	2.4	2.4
II.1	30.9	30.9
II.3	1.7	1.7
IV.1	65.0	65.0
52.45	**100.0**	**100.0**
I.1	3.0	3.0
III.9	5.0	5.0
IV.1	92.0	92.0
52.50	**100.0**	**100.0**
I.1	5.1	12.8
I.2	5.6	3.5
I.3	13.5	5.9
I.7	10.8	12.8
I.9	3.9-5.1	3.9-5.1
III.10	7.0	7.0
74.87	**45.9-47.1**	**45.9-47.1**
I.1	20.5	51.2
I.2	22.4	14.0
I.3	54.0	23.7
I.7	3.1	11.0
92.31	**100.0**	**100.0**
I.7	80.0	80.0
III.9	20.0	20.0
92.52	**100.0**	**100.0**

Although this study derives annual time series for all copyright industries, the shared activities constitute only a small fraction of overall copyright activities. Therefore, there was no particular analytical need to derive individual copyright estimates for each year. In the case of the copyright collecting societies, there was an apparent necessity to conduct a specific survey. Taking this opportunity, the annual data for the copyright collecting societies better captures the dynamics over the decade than the other seven shared economic activities.

5. Conclusion and Recommendations

This part sums up the major conclusions of the analysis of the Lithuanian copyright industries. Based on these conclusions, the recommendations aim to reinforce the growth of the copyright and related rights industries in Lithuania and lay foundations for the development of the national monitoring system of the copyright industries.

The Lithuanian copyright and related rights industry made up around 5 percent of the country's economy over the last decade, hovering around this number depending on the measure (value added, employment, trade) and the specific year. The copyright industry in Lithuania is more important in terms of gross value added than in terms of employment, as it is more productive than the economy in general. The contribution of creative industries to the country's foreign exports falls close to its contribution to the national employment. The core copyright industry contributes around 3 percent to the national employment. The largest copyright industry in 2000–2008 was Press and Literature with a little less than 1 percent contribution at the end of the period, while Software and Databases has rapidly been catching up.

On the basis of the detailed statistical analysis of the value added of economic activities, it was established that, in 2008, the Lithuanian copyright industry comprised 5.40 percent of gross value added. Moreover, more than half of it, 2.79 percent, comprised the core copyright industry. The interdependent copyright industry, which is the section most closely related to the core copyright section, made up 1.27 percent of the national economy. The partial copyright industry created 0.26 percent of the value added in the economy. Finally, the part of the economy which serves the copyright industry, which is traditionally classified as the non-dedicated support industry, comprised 1.07 percent of the gross value added. The numbers for 2008 were derived from the structural business statistics by reconciling them with the national accounts data.

The copyright industry generated less employment than value added – in 2008, employment in the Lithuanian copyright industry comprised 4.92 percent of total employment (compared to 5.40 percent of the gross value added). Moreover, the largest part of employment, namely 3.03 percent, was generated by the core copyright industry. The interdependent copyright industry made up 0.80 percent, while the partial copyright industry created 0.26 percent of overall employment. Finally, the non-dedicated support copyright industry comprised 0.82 percent of employment.

The third investigated feature of the copyright industry in Lithuania was its contribution to exports of goods and services. The contribution to exports was the lowest measure compared to employment and value added. It made up 4.68 percent in 2008. Since the copyright economy comprises 5.40 percent of value added, it shows that the domestic role of the copyright industry is higher than its ability to contribute revenues from abroad.

All in all, the copyright industry was less cyclical than the overall national economy during the last business cycle. When the economy is overheating, the construction sector and sectors related to it are prone to excessive expansion. As a consequence, during the so-called bubble years, the copyright economy makes less of an economic contribution in percentage terms. By contrast, during recession or hardship years, the copyright sector makes a greater contribution to the economy. To some extent, the copyright economy contributes to a less pronounced business cycle in Lithuania.

Legal regulation of the copyright and related rights activities is well-advanced and is in conformity with the provisions of EU directives and international agreements. Therefore, it does not pose any major legal obstacles to the development of any economic activities related to copyright. At this stage of development, efforts in legal regulation have to be concentrated on issues of legal enforcement and legal implementation.

The study of the Lithuanian copyright and related rights industry reveals several areas where both national and international practices might be improved. The recommendations below address how to conduct follow-up studies in the most efficient way.

Recommendations to **the Ministry of Culture of the Republic of Lithuania** and other national institutions:

(i) The implementation of a follow-up copyright economy study, taking the funding needed into account. The next study should cover years starting with 2009.

(ii) The implementation of the next national study should be timed after methodological work is completed which relates the European classification of economic activities NACE Rev.2 with the relevant classification of the copyright industry. On the other hand, the next study should be conducted no later than when the NACE Rev.2 is updated again. As the updates in the classification are made approximately once in a decade, the periodicity of studies should be less than a decade. If the funding is available, it would be more appropriate to conduct it every five years. Taking costs and merits into account, an annual conduct of studies seems excessive.

(iii) A national statistical compilation of the Copyright and Related Rights Economic Statistics every five or ten years. The Lithuanian Statistics Department or the Ministry of Culture could execute this task. It would be extremely beneficial to incorporate such a study into the Lithuanian Programme of Official Statistics, whereby resolving confidentiality constraints, which have significantly burdened the conduct of this current study. It would be even more useful to produce annual data for the past five years rather than to compile statistics only for a current year.

(iv) The production of a report regarding economic and legal developments of the copyright industry (e.g., annual or every five years) based on statistical data collected on the copyright sector. If deemed necessary, light touch annual studies could be carried out which could focus on some narrow subclasses of the copyright and related rights industry, which gain specific national attention.

(v) Bearing in mind that this study revealed the sub-industries of the copyright economy to be extremely dynamic, it seems appropriate that the Ministry of Culture conducts specific surveys of the most dynamic sectors (both expanding and contracting) addressing the issues of legal regulation, legal implementation and enforcement of copyright law.

(vi) To pay close attention to methodological developments coordinated by WIPO with the aim of ensuring that future national research is compatible with new developments.

Bibliography

Legal documents, reports, guidelines

[1] *AGATA 2010-aisiais*, AGATA 2010 m. veiklos ataskaita (AGATA Performance Report, 2010).

[2] *Balance of Payments Manual*, 5th edition, IMF, 1993.

[3] *Creative Industries in Estonia, Latvia and Lithuania*, 2010.

[4] *System of National Accounts*, 1993, Brussels/Luxembourg, New York, Paris, Washington, D.C., 1993.

[5] *The Economic Contribution of Copyright-Based Industries in Brunei*, Report, 2011.

[6] *The Economic Contribution of Copyright-Based Industries in Bulgaria*, Report, May 2007.

[7] *The Economic Contribution of Copyright-Based Industries in Latvia*, Report, 2000.

[8] *The Economic Contribution of Copyright-Based Industries in Russia*, Report, 2007.

[9] „Integruotosmeno, mokslo, studijūir verslonacionalinėskompleksinėsprogramos“ Lietuvoskūrybinėsirkultūrinėsindustrijos ‘galimybiųstudija’, 2008 (Feasibility Study, National Complex Programme Lithuanian Cultural and Creative Industries, 2008).

[10] Lietuvoskultūrospolitikosgairės, patvirtintos LR Seimo 2010 m. birželio 30 d. nutarimu Nr. XI-977 (Guidelines for the Development of the Lithuanian Cultural Policy, 2010).

[11] Lietuvos Respublikos 1999 m. gegužės 18 d. Autorių teisių ir gretutinių teisių įstatymas Nr. VIII-1185 (suvėlesniaispapildymaisirpakeitimais) (Law of the Republic of Lithuania on Copyright and Related Rights No VIII-1185 of 18 May 1999, including later supplements and amendments).

[12] Lithuanian Department of Statistics, ‘Lietuvossąnaudųirprodukcijoslentelės 2005 m.’ (Input–Output Tables for Lithuania, 2005), Vilnius, 2009.

[13] *Glossary of statistical terms*, OECD, 2007. http://stats.oecd.org/glossary/download.asp.

[14] ‘Pramonės, susijusiossuautorių teisėmisirgretutinėmisteisėmis, ekonominėsvarbaLietuvoje’, TNS-Gallup, ESTEP, 2005 (Economic Importance of the Copyright and Related Rights-Based Industry in Lithuania).

[15] *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*, WIPO, Publication No 893.

[16] ‘National Studies on Assessing the Economic Contribution of the Copyright-Based Industries’, WIPO, *Creative Industries Series* No. 5, 2011 (China, Finland, Pakistan, Panama, Slovenia).

[17] ‘National Studies on Assessing the Economic Contribution of the Copyright-Based Industries’, WIPO, *Creative Industries Series* No. 4, 2011 (Australia, Kenya, Malaysia, the Netherlands, Peru).

Statistical data sources

[18] Bank of Lithuania, http://www.lb.lt/statistical_data_tree

[19] Eurostat Public Database, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes

[20] Lithuanian Department of Statistics, http://www.stat.gov.lt/en/

[21] World Intellectual Property Organisation, http://www.wipo.int/ip-development/en/creative_industry/economic_contribution.html

Annexes

Annex 1. Data Imputation and Estimation

The collected statistical datasets for the copyright study had three areas of incompleteness. Firstly, some data for an entire year was missing. Secondly, in some time series, some values were present and others were missing. Thirdly, some time series did not have any single value at all. The first issue originated from peculiarities of the Lithuanian Programme of Official Statistics, while the second and the third were due to confidentiality reasons.

The authors managed to impute data values with appropriate statistical methods, which are explained in this annex, but not in the main text, due to the extremely technical character of the statistical methods applied. As most previous national studies have lacked transparent presentations of these techniques or sometimes even omitted any reference to them, it is evident that missing values is a recurrent problem, especially for smaller economies, so the authors anticipate that this annex will be of special interest for those willing to conduct studies themselves.

As this study attempted to cover the copyright industry over the period 2000–2008, both value added and employment data were desirable for these years. The values for value added were imputed for 2000–2008, for employment, however, for 2001–2008.

Fortunately, datasets for foreign trade in goods and for foreign trade in services did not have any missing values. The BoL data from 2004 were collected according to a more detailed breakdown than in previous years, but the datasets did not contain confidential values. Thus trade in goods and services was analysed for 2004–2008, because starting from 2004 the dataset on trade in services was complete. It did not require any imputations of the trade data altogether.

An effective imputation is never trivial to construct; nevertheless, its simplicity is a greatly desirable feature at the same time, allowing users to understand reliability of estimates.

1. Imputation of Basic Prices for Entire Year

As explained previously, the LDS had not provided value added data at basic prices for 2008 at all; thus, it had to be imputed. Fortunately, in the structural business statistics, value added was available at factor cost. The difference between factor cost and basic price is relatively minor for current purposes. The basic price includes taxes on production minus subsidies on production. It is natural to assume that the government intervention level stayed approximately similar in 2008 compared with 2007. This was used for imputation.

Assuming that factor costs and basic prices were growing at the same rate, the value added at basic prices for 2008 was estimated in the following way:

$$VA_{BP,2008} = VA_{BP,2007} \cdot \frac{VA_{FC,2008}}{VA_{FC,2007}},$$

where $VA_{BP,}$ denotes value added at basic prices, and $VA_{BP,}$ denotes value added at factor costs. In other words, it is assumed that net taxes on production, i.e., taxes on products minus subsidies on production, were changing proportionally to the factor costs for copyright industries. It is appropriate to mention that there were no essential policy changes in 2008 in taxation or in policies related to subsidies.

2. Imputation of single missing values in the datasets

The LDS dataset originating from structural business statistics had a great number of missing values, especially at four digit level, due to confidentiality requirements. If in some copyright economic activities with four digit NACE codes less than three enterprises were operating, the values were not provided. Such values were imputed with appropriate linear methods which fit the purposes of the study. These linear methods were deployed for two indicators lying at the focal point of this study: value added at basic prices, and employment in full time units. In addition, imputations were calculated for output of economic activities.

The initially available incomplete structural statistics dataset was fortunately complete for two digits of NACE codes, partially complete for three digits of the NACE code, and incomplete for some four digit codes. The initial dataset had all the values for a code XY, for any code XYZW belonging to the CCAL. Moreover, each code XYZ had at least one value for some year. There were ten economic activities at the four digit level which had no values at all, for value added or employment.

To describe a method formally, some mathematical notation has to be employed. Let $XYZW$ be a four digit code, where X,Y,Z,W denote first, second, third and fourth digit accordingly. Let $I_{year}(XYZW)$ denote a value of an indicator for an activity $XYZW$ in a specific year measured in thousands of LTL or full time employment units depending on what is under imputation. Let $I_{year}^{Relative}(XYZW)$ denote a value of an indicator for activity $XYZW$ in a specific year measured as a share in percentage points, which it has compared to its higher position $I_{year}(XYZ)$.

In order to impute values for three digit NACE codes, first, the indicator was brought into a relative form, second, it was interpolated and third, it was transformed back into an absolute form. At the final step, the value for $I_{year}(XYZ)$ is imputed.

Thus, starting with the first step, it is transformed into a relative form:

$$I_{year}^{Relative}(XYZ) = \frac{I_{year}(XYZ)}{I_{year}(XY)}.$$

Second, it is interpolated or extrapolated, depending upon which values are missing. For interpolation, if between two values $I_{year}^{Relative}(XYZ)$ and $I_{year+n}^{Relative}(XYZ)$ all $n-1$ values are missing, an interpolation is linear:

$$I_{year+i}^{Relative}(XYZ) = I_{year}^{Relative}(XYZ) + \frac{i}{n} \cdot (I_{year+n}^{Relative}(XYZ) - I_{year}^{Relative}(XYZ)).$$

For extrapolation, a constant function $I_{year\pm i}^{Relative}(XYZ) = I_{year}^{Relative}(XYZ)$ is employed, using a plus or minus sign depending on a direction of an extrapolation.

After interpolation and extrapolation of values in a relative form are completed, the absolute values are calculated in an obvious way:

$$I_{year+i}(XYZ) = I_{year+i}^{Relative}(XYZ) \cdot I_{year+i}(XY).$$

The imputed values have a substantial deficiency in that they are inconsistent with a value $I_{year+i}(XY)$. This obstacle is resolved by a reconciliation procedure, which adjusts these values in the following way. All the imputed three digit values out of $I_{year+i}(XY)$ are added up to get $Estimates(I_{year+i}(XY))$. Separately, by subtracting from $I_{year+i}(XY)$ all the estimated three digit values a sum of these estimates is calculated, which is denoted as a $Sum\_of\_imputations(I_{year+i}(XY))$. To receive a consistent set of imputations, the values have to be adjusted with regard to adding up in the following way:

$$I_{year+i}^{consistent}(XYZ) = I_{year+i}(XYZ) \cdot \frac{Estimates(I_{year+i}(XY))}{Sum\_of\_imputations(I_{year+i}(XY))}.$$

By this method, all the values for three digits were successfully imputed. Moreover, the same linear method allowed imputing all the values for four digit codes with an exception for ten economic activities. The remaining ten economic activities had to be dealt with separately by a completely different method, which is explained in the next section.

3. Imputation of Entire Time Series

As the LDS structural business statistics dataset did not entail any of the ten time series at four digit level at all, they had to be imputed relying on publicly available data. In fact, this imputation was the last step in designing a complete structural statistics dataset. In the dataset provided by the LDS, the empty time series for which all data values were missing included the following NACE codes: 2111, 2124, 2464, 2465, 2614, 2622, 2623, 2624, 2955, and 3621. For purposes of this study it was sufficient to impute values for 2111,

2124, 2464+2465, 2614+2622+2623+2624, 2955, and 3621 because the third and fourth group fall into the same category of the CCAL. For purposes of this study, there was no need to decompose this group any further as it fell into the same copyright category. Thus, only six values needed to be imputed instead of ten.

Firstly, the LDS agreed to provide data separately for both aggregated groups: G1=2614+2622+2623+2624 and G2=2111+2124+2464+2465+2955+3621. The data for group G1 were incomplete, but still could be imputed by the method described in the previous section. The group G2 was heterogeneous and had to be decomposed further.

Secondly, a private data vendor engaged in the collection of publicly available business data was approached. The Lithuanian establishment 'Credit Reform' kindly agreed to provide data which the company sells on the market. As annual financial statements of firms are publicly available, the data vendor collects, stores and sells on the market this information. It was fortunate that the data vendor not only tracked output and employment but also the four digit NACE code as well. Although it was a cumbersome procedure to find out what was really needed (the database had to be searched through looking for enterprises within a special code), the data were received for companies falling into all six activities: 2111, 2124, 2464, 2465, 2955, and 3621. Moreover, since only one enterprise was involved in economic activity for the category 3621 (striking of coins), this enterprise was asked to provide its data. The publicly available data for separate activities, when added up, were relatively close in matching the LDS data provided for the entire group G2. The discrepancies between the totals of G2 data collected by the research team and the LDS totals for G2 were around 10 percent. Consequently, the disaggregated data for economic activities were adjusted in order to comply with the LDS aggregated data. The derived employment estimations are presented below.

Table A: Imputed employment values (full time equivalents)

Economic activity	2000	2001	2002	2003	2004	2005	2006	2007	2008
2111	0	0	0	0	0	0	1	0	1
2124	0	0	0	0	0	0	0	0	0
2464+2465	0	0	0	2	4	3	4	38	69
2955	55	85	114	163	188	210	174	156	149
3621	47	45	45	46	50	53	63	65	76

Source: Survey and estimations by the Authors

Although the imputation was rather straightforward for employment, it was much more complex for value added. It was possible to impute only output for these economic activities. On the basis of output values, the value added at basic prices was estimated, applying linear methods.

4. Imputing National Accounts Data

This section describes a step of deriving value added and employment data that is consistent with national accounts methodology. In fact, this is an essential request of the WIPO Guide as it seeks to achieve comparability of national copyright studies. Practically speaking, this might be achieved only by reconciling all the data with national accounts definitions. The national accounts are harmonised between countries to a large extent. The structural business statistics, a primary source for this study, is inconsistent with national accounts data and, still worse, rather different, non-harmonised in every country. This section describes the method which provides value added and employment estimates for the copyright activities which are consistent with national accounts data.

However peculiar it might appear, this last step started with an imputation of the national accounts data itself for 2008. The reason for this was the fact that the supply and use tables for 2008 were released according to the more recent NACE Rev.2 which is not comparable for the purposes of this study. The two digit values of 2008 for NACE Rev.1.1 had to be imputed. Fortunately, the LDS still disseminates value added data for two digit codes, according to NACE Rev.1.1, at market prices in the framework of national accounts.

The imputation method applied relies on the assumption that, in 2008, the value added at basic prices grew at the same rate as market prices for two digit economic activities. Every single value at basic prices for two

digit code in 2008 was computed by multiplying a corresponding value added at basic prices in 2007 by a corresponding growth rate for market values.

$$Estimate\_(VA_{2008}^{Basic\_prices}) = VA_{2007}^{Basic\_prices} * \frac{VA_{2008}^{Market\_prices}}{VA_{2007}^{Market\_prices}}.$$

After this step, it should be ensured that estimations are consistent with regard to adding up to gross value added. The following reconciliation of derived estimates produces consistent values for two digit codes:

$$(VA_{2008}^{Basic\_prices}) = Estimate\_(VA_{2008}^{Basic\_prices}) * \frac{\sum VA_{2008}^{Basic\_prices}}{\sum Estimate\_(VA_{2008}^{Basic\_prices})}.$$

Although national accounts data are subject to constant revisions, the supply and use tables are never revised in Lithuania, or in other countries. For this reason, the analysis in this study of the copyright economy entirely relies upon the value added data from supply and use tables. As to not analysing 2009 data, it should be mentioned that supply and use tables for 2009 were not available during the research and are planned to be released only at the end of 2013.

5. Data Reconciliation with National Accounts

In this section, the final estimates of value added and employment are presented which are consistent with national accounts framework. Hitherto the methodology has explained how to calculate a complete dataset for structural business statistics. By contrast, the value added in the framework of national accounts was derived only for two digit codes. Moreover, if all the four digit sub-values from the structural business statistics for a particular two digit value are added up, then this estimate stemming from the structural business statistics differs from the corresponding value derived from the national accounts framework. To produce the copyright industry contribution to the economy, value added at basic prices in the national accounts framework has to be calculated for each four digit NACE code, ensuring consistency of aggregation.

The natural way to follow is to reconcile structural business statistics data $VA^{Basic\_prices}(XYZW)$ at hand with two digit totals $VA_{NA\_Basic\_prices}(XY)$ from national accounts. The procedure is run for each two digit code XY and its sub-activity $XYZW$ deriving national accounts consistent estimates of value added for each four digit NACE code $VA_{NA\_Basic\_prices}(XYZW)$:

$$VA_{NA\_Basic\_prices}(XYZW) = VA^{Basic\_prices}(XYZW) \cdot \frac{VA_{NA\_Basic\_prices}(XY)}{VA^{Basic\_prices}(XY)}.$$

After this step, all the required value added data, consistent with national accounts, are estimated.

A similar adjustment is needed for the structural business statistics employment data. In order to properly reflect copyright economy employment with regard to total employment in the economy, the employment at four digit NACE codes level had to be estimated. It has to be kept in mind that the structural business statistics do not reflect all the employment in the economy. The imputation procedure for employment data follows entirely the same procedure as the one for value added, which is captured in the formula above.

$$Employment_{NA}(XYZW) = Employment^{SBS}(XYZW) \cdot \frac{Employment_{NA}(XY)}{Employment^{SBS}(XY)}.$$

Instead of the value added, the employment figure is substituted. The place of the value added from structural business statistics takes the employment in full time units from structural business statistics $Employment^{SBS}(...)$ (item five according to the list in the section on data). $Employment_{NA}(...)$ for two digit codes denotes the indicator 'Average number of employees by sector in full time units, economic activity (NACE 1.1)' for 2000-2008 (item nine according to the same list).

6. Value Added at Market Prices

In this section, it is explained how estimates of the value added at market prices are derived from the value added at basic prices, net taxes on products and value added tax. This step is needed to compare value added aggregates with GDP, hence there is a need to estimate value added at market prices at four digit NACE level. Needless to say, this information is unavailable both in the structural business statistics and in the national accounts. Firstly, the net taxes on products (which does not include VAT) is examined; secondly, the VAT itself.

Net taxes on products broken down to two digit level by economic activity are made available in Lithuania every five years, for this study, the 2005 data. Specifically, this information for the Lithuanian economy is available in the supply and use table at basic prices for 2005. Moreover, in national accounting as a rule, net taxes on products are calculated annually for an economy as a whole without any breakdown. Only once in five years, two and a half years after the accounting period, is a two digit level distribution of net taxes on products disseminated in supply and use tables. This table is compiled every five years, together with an input-output table compilation.

Given this information, the net taxes on products are estimated for every year in the following way:

$$NetTaxes\_on\_products_{Year}(XY) = NetTaxes\_on\_products_{Year} \cdot \frac{NetTaxes\_on\_products_{2005}(XY)}{NetTaxes\_on\_products_{2005}}.$$

Supply and use tables are designed in a way that only a minor part of the value added tax amount is shared between economic activities. This is the case in all EU countries' national statistics. In these tables, the total VAT amount is disaggregated into three major parts: (i) non-deductible VAT; (ii) VAT paid by households (also non-deductible), and (iii) VAT of gross capital formation. The fourth residually minor part relates to revaluations and is not relevant to the current analysis. The first part on non-deductible VAT may be shared among economic activities while (ii) and (iii) cannot.

The information on non-deductible VAT is available for every year in a corresponding annual use table from SUT in the national accounts. A corresponding cell we denote as $Non\_deductible\_VAT_{Year}(XY)$.

Having assigned to economic activities net taxes on products and non-deductible VAT, it is a trivial operation to add up both taxes for each economic activity. It is denoted as $NetTaxes(XY)$, where argument XY is an economic activity two digit code:

$$NetTaxes_{Year}(XY) = NetTaxes\_on\_products_{Year}(XY) + Non\_deductible\_VAT_{Year}(XY).$$

Since it is always obvious which year is referred to, a sub-index referring to a particular year is omitted below.

Assuming that net taxes spread out homogenously across the different constituents of four digit economic activity, the value added estimates at market prices are obtained at the four digit level:

$$NetTaxes(XYZW) = NetTaxes(XY) \cdot \frac{VA_{NA\_Basic\_prices}(XYZW)}{VA_{NA\_Basic\_prices}(XY)},$$

where the value added variables were defined in the previous section and the net taxes on products $NetTaxes(XY)$ were defined above. By having net taxes on products at the four digit level, value added at market prices can be finally calculated:

$$VA_{NA\_market\_prices}(XYZW) = VA_{NA\_Basic\_prices}(XYZW) + NetTaxes(XYZW).$$

It is a rather straightforward corollary that the estimated value added at market prices at the four digit level is consistent with the aggregation value added at the two digit level.

For employment numbers nothing is required as it is measured it in full time equivalents. This completes exposition of imputation and estimation methods.

Annex 2. Value Added of Copyright Industry, LTL million

Category	Subcategory	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1. Press and Literature	579	620	460	623	690	687	761	800	870
	2. Music, Theatrical Productions, Operas	29	36	26	34	46	67	62	82	151
	3. Motion Picture and Video	93	88	84	89	78	68	69	87	150
	4. Radio and Television	167	197	257	207	202	236	144	224	412
	5. Photography	18	17	17	21	22	20	17	17	17
	6. Software and Databases	125	246	208	253	304	366	400	565	687
	7. Visual and Graphic Arts	11	13	18	17	17	20	17	22	33
	8. Advertising Services	120	114	152	220	233	258	328	417	467
	9. Copyright Collecting Societies	2	3	5	3	3	4	4	4	5
1. Core Total		**1,144**	**1,334**	**1,227**	**1,467**	**1,596**	**1,726**	**1,802**	**2,219**	**2,792**
2. Interdependent	1. TV Sets, Radios, VCRs, [...] and other similar equipment	175	214	245	248	290	300	365	387	384
	2. Computers and Equipment	67	90	93	105	170	160	217	255	340
	3. Musical Instruments	2	3	3	2	2	5	3	4	2
	4. Photocopiers	2	2	2	3	3	3	3	5	11
	5. Photographic and Cinematographic Instruments	9	42	11	11	13	14	16	20	22
	6. Blank Recording Material	0	0	0	0	0	0	0	12	60
	7. Paper	73	92	106	171	223	233	256	258	448
2. Interdependent Total		**328**	**442**	**459**	**539**	**701**	**714**	**860**	**941**	**1,267**
3. Partial	1. Apparel, Textiles and Footwear	8	9	7	8	9	9	9	10	9
	2. Jewellery and Coins	2	2	3	3	5	7	10	9	17
	3. Other Crafts	6	8	10	14	19	25	30	33	50
	4. Furniture	18	21	25	31	43	45	57	65	71
	5. Household Goods, China and Glass	1	1	1	1	2	2	2	3	3
	6. Wall Coverings and Carpets	0	0	0	0	0	0	0	0	0
	7. Toys and games	0	2	1	2	2	2	3	3	5
	8. Architecture, Engineering, Surveying	37	45	41	49	46	55	66	89	101
	9. Interior Design	0	0	0	0	0	0	0	0	0
	10. Museums	2	2	2	2	2	3	3	3	5
3. Partial Total		**75**	**91**	**89**	**112**	**128**	**149**	**182**	**214**	**260**
4. Non-dedicated Support	1. General Wholesale and Retailing	154	201	204	222	236	243	284	324	429
	2. General Transportation	143	204	186	247	281	343	381	437	529
	3. Telephony and Internet	63	93	98	101	87	84	90	98	113
4. Non-dedicated Support Total		**360**	**498**	**488**	**570**	**604**	**670**	**755**	**859**	**1,071**
Grand Total		**1,907**	**2,364**	**2,264**	**2,688**	**3,029**	**3,259**	**3,598**	**4,235**	**5,390**

Annex 3. Copyright Industry Contribution to Gross Value Added, %

Category	Subcategory	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1. Press and Literature	1.48	1.46	1.06	1.27	1.28	1.09	1.03	0.90	0.87
	2. Music, Theatrical Productions, Operas	0.07	0.09	0.06	0.07	0.09	0.11	0.08	0.09	0.15
	3. Motion Picture and Video	0.24	0.21	0.19	0.18	0.14	0.11	0.09	0.10	0.15
	4. Radio and Television	0.43	0.47	0.60	0.42	0.38	0.37	0.20	0.25	0.41
	5. 5.Photography	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
	6. Software and Databases	0.32	0.58	0.48	0.52	0.56	0.58	0.54	0.64	0.69
	7. Visual and Graphic Arts	0.03	0.03	0.04	0.03	0.03	0.03	0.02	0.02	0.03
	8. Advertising Services	0.31	0.27	0.35	0.45	0.43	0.41	0.45	0.47	0.47
	9. Copyright Collecting Societies	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
1. Core Total		**2.92**	**3.15**	**2.84**	**3.00**	**2.96**	**2.73**	**2.45**	**2.51**	**2.79**
2. Interdependent	1. TV Sets, Radios, VCRs, [...] and other similar equipment	0.45	0.50	0.57	0.51	0.54	0.47	0.50	0.44	0.38
	2. Computers and Equipment	0.17	0.21	0.22	0.21	0.32	0.25	0.30	0.29	0.34
	3. Musical Instruments	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00
	4. Photocopiers	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01
	5. Photographic and Cinematographic Instruments	0.02	0.10	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	6. Blank Recording Material	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06
	7. Paper	0.19	0.22	0.24	0.35	0.41	0.37	0.35	0.29	0.45
2. Interdependent Total		**0.84**	**1.04**	**1.06**	**1.10**	**1.30**	**1.13**	**1.17**	**1.06**	**1.27**
3. Partial	1. Apparel, Textiles and Footwear	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
	2. Jewellery and Coins	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
	3. Other Crafts	0.02	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.05
	4. Furniture	0.04	0.05	0.06	0.06	0.08	0.07	0.08	0.07	0.07
	5. Household Goods, China and Glass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6. Wall Coverings and Carpets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7. Toys and Games	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8. Architecture, Engineering, Surveying	0.10	0.11	0.09	0.10	0.09	0.09	0.09	0.10	0.10
	9. Interior Design	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10. 1Museums	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Partial Total		**0.19**	**0.21**	**0.21**	**0.23**	**0.24**	**0.23**	**0.25**	**0.24**	**0.26**
4. Non-dedicated Support	1. General Wholesale and Retailing	0.39	0.48	0.47	0.45	0.44	0.38	0.39	0.37	0.43
	2. General Transportation	0.37	0.48	0.43	0.51	0.52	0.54	0.52	0.49	0.53
	3. Telephony and Internet	0.16	0.22	0.23	0.21	0.16	0.13	0.12	0.11	0.11
4. Non-dedicated Support Total		**0.92**	**1.18**	**1.13**	**1.17**	**1.12**	**1.06**	**1.03**	**0.97**	**1.07**
Grand Total		**4.87**	**5.58**	**5.24**	**5.50**	**5.62**	**5.15**	**4.89**	**4.79**	**5.40**

Annex 4. Output of Copyright Industry, LTL million

Category	Subcategory	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1. Press and Literature	1,034	1,076	938	1,183	1,294	1,319	1,477	1,672	1,817
	2. Music, Theatrical Productions, Operas	53	71	55	95	85	107	144	235	217
	3. Motion Picture and Video	148	133	137	138	117	144	145	260	292
	4. Radio and Television	380	311	338	287	284	315	333	471	536
	5. 5.Photography	31	32	28	29	33	32	28	29	33
	6. Software and Databases	268	371	365	447	501	632	700	947	1,114
	7. Visual and Graphic Arts	26	56	57	43	58	71	78	105	134
	8. Advertising Services	397	392	522	640	746	856	1,018	1,280	1,376
	9. Copyright Collecting Societies	4	7	8	5	8	9	9	9	11
1. Core Total		**2,341**	**2,449**	**2,447**	**2,866**	**3,126**	**3,484**	**3,932**	**5,007**	**5,529**
2. Interdependent	1. TV Sets, Radios, VCRs, […] and other similar equipment	390	442	534	639	779	764	810	789	845
	2. Computers and Equipment	125	152	166	182	236	285	282	377	499
	3. Musical Instruments	3	5	5	4	4	5	4	6	4
	4. Photocopiers	3	3	3	4	4	3	4	8	18
	5. Photographic and Cinematographic Instruments	23	22	27	24	24	24	28	35	38
	6. Blank Recording Material	0	0	0	0	0	0	0	13	36
	7. Paper	173	165	193	306	351	369	387	419	459
2. Interdependent Total		**717**	**789**	**928**	**1,159**	**1,398**	**1,450**	**1,516**	**1,648**	**1,899**
3. Partial	1. Apparel, Textiles and Footwear	17	19	17	17	17	17	18	19	20
	2. Jewellery and Coins	4	5	6	7	11	14	20	23	34
	3. Other Crafts	12	16	21	24	33	39	44	55	58
	4. Furniture	47	52	64	76	100	108	133	159	184
	5. Household Goods, China and Glass	3	3	3	3	4	6	6	7	6
	6. Wall Coverings and Carpets	1	1	1	1	1	0	0	0	0
	7. Toys and Games	3	4	3	4	5	4	4	4	4
	8. Architecture, Engineering, Surveying	54	60	63	97	79	94	103	128	160
	9. Interior design	0	1	1	0	1	1	1	1	1
	10. 1Museums	3	6	6	5	7	8	9	12	15
3. Partial Total		**146**	**165**	**184**	**233**	**256**	**289**	**339**	**410**	**482**
4. Non-dedicated Support	1. General Wholesale and Retailing	225	249	289	311	323	327	356	441	484
	2. General Transportation	293	327	355	424	467	540	660	859	907
	3. Telephony and Internet	92	117	137	151	136	132	131	155	157
4. Non-dedicated Support Total		**610**	**692**	**781**	**885**	**927**	**999**	**1,148**	**1,455**	**1,548**
Grand Total		**3,813**	**4,096**	**4,340**	**5,143**	**5,706**	**6,222**	**6,935**	**8,519**	**9,459**

Annex 5. Copyright Industry Contribution to Output, %

Category	Subcategory	2000	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1. Press and Literature	1.34	1.30	1.06	1.23	1.20	1.04	1.00	0.96	0.89
	2. Music, Theatrical Productions, Operas	0.07	0.09	0.06	0.10	0.08	0.08	0.10	0.14	0.11
	3. Motion Picture and Video	0.19	0.16	0.15	0.14	0.11	0.11	0.10	0.15	0.14
	4. Radio and Television	0.49	0.38	0.38	0.30	0.26	0.25	0.23	0.27	0.26
	5. 5.Photography	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02
	6. Software and Databases	0.35	0.45	0.41	0.46	0.46	0.50	0.48	0.55	0.54
	7. Visual and Graphic Arts	0.03	0.07	0.06	0.04	0.05	0.06	0.05	0.06	0.07
	8. Advertising Services	0.52	0.47	0.59	0.66	0.69	0.68	0.69	0.74	0.67
	9. Copyright Collecting Societies	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
1. Core Total		**3.04**	**2.95**	**2.76**	**2.97**	**2.90**	**2.75**	**2.67**	**2.89**	**2.70**
2. Interdependent	1. TV Sets, Radios, VCRs, [...] and other similar equipment	0.51	0.53	0.60	0.66	0.72	0.60	0.55	0.45	0.41
	2. Computers and Equipment	0.16	0.18	0.19	0.19	0.22	0.22	0.19	0.22	0.24
	3. Musical Instruments	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	4. Photocopiers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	5. Photographic and Cinematographic Instruments	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02
	6. Blank Recording Material	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
	7. Paper	0.23	0.20	0.22	0.32	0.33	0.29	0.26	0.24	0.22
2. Interdependent Total		**0.93**	**0.95**	**1.05**	**1.20**	**1.30**	**1.14**	**1.03**	**0.95**	**0.93**
3. Partial	1. Apparel, Textiles and Footwear	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
	2. Jewellery and Coins	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
	3. Other Crafts	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
	4. Furniture	0.06	0.06	0.07	0.08	0.09	0.09	0.09	0.09	0.09
	5. Household Goods, China and Glass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6. Wall Coverings and Carpets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7. Toys and Games	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8. Architecture, Engineering, Surveying	0.07	0.07	0.07	0.10	0.07	0.07	0.07	0.07	0.08
	9. Interior Design	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10. 1Museums	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
3. Partial Total		**0.19**	**0.20**	**0.21**	**0.24**	**0.24**	**0.23**	**0.23**	**0.24**	**0.24**
4. Non-dedicated Support	1. General Wholesale and Retailing	0.29	0.30	0.33	0.32	0.30	0.26	0.24	0.25	0.24
	2. General Transportation	0.38	0.39	0.40	0.44	0.43	0.43	0.45	0.50	0.44
	3. Telephony and Internet	0.12	0.14	0.15	0.16	0.13	0.10	0.09	0.09	0.08
4. Non-dedicated Support Total		**0.79**	**0.83**	**0.88**	**0.92**	**0.86**	**0.79**	**0.78**	**0.84**	**0.76**
Grand Total		**4.95**	**4.94**	**4.89**	**5.34**	**5.29**	**4.91**	**4.71**	**4.91**	**4.61**

Annex 6. Employment of Copyright Industry, full time units

Category	Subcategory	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1. Press and Literature	13,494	13,200	13,058	12,721	12,561	12,743	13,241	13,417
	2. Music, Theatrical Productions, Operas	2,286	2,311	2,447	2,391	2,799	3,043	3,309	3,046
	3. Motion Picture and Video	5,942	5,451	4,303	2,637	2,808	2,661	2,704	2,899
	4. Radio and Television	5,897	5,426	4,511	3,617	3,538	3,502	3,345	3,363
	5. 5.Photography	923	949	896	700	749	628	597	543
	6. Software and Databases	2,708	3,209	3,728	4,517	4,484	5,412	5,754	6,477
	7. Visual and Graphic Arts	454	494	495	431	393	444	498	526
	8. Advertising Services	2,744	3,337	3,981	4,467	4,590	4,770	5,091	5,073
	9. Copyright Collecting Societies	55	78	48	52	55	56	54	58
1. Core Total		**34,502**	**34,455**	**33,468**	**31,533**	**31,976**	**33,257**	**34,594**	**35,402**
2. Interdependent	1. TV Sets, Radios, VCRs, [...] and other similar equipment	4,458	4,680	5,131	5,717	4,018	4,166	4,180	4,241
	2. Computers and Equipment	1,440	1,498	1,604	1,805	1,854	2,197	2,526	2,692
	3. Musical Instruments	38	39	47	46	51	58	58	52
	4. Photocopiers	36	40	43	50	37	37	55	58
	5. Photographic and Cinematographic Instruments	143	185	181	118	134	130	136	135
	6. Blank Recording Material	0	0	2	4	2	4	33	64
	7. Paper	2,068	1,565	1,955	1,932	1,949	2,083	2,070	2,091
2. Interdependent Total		**8,183**	**8,007**	**8,963**	**9,671**	**8,045**	**8,675**	**9,057**	**9,334**
3. Partial	1. Apparel, Textiles and Footwear	271	282	277	259	238	241	226	209
	2. Jewellery and Coins	110	137	141	117	142	154	177	154
	3. Other Crafts	245	329	371	357	358	401	402	390
	4. Furniture	645	769	871	962	1,066	1,177	1,182	1,186
	5. Household Goods, China and Glass	43	41	41	42	48	48	47	40
	6. Wall Coverings and Carpets	4	4	5	5	2	2	2	2
	7. Toys and Games	72	62	76	76	57	66	67	55
	8. Architecture, Engineering, Surveying	884	803	809	704	714	768	887	941
	9. Interior Design	4	6	4	4	4	4	5	5
	10. 1Museums	76	74	82	72	71	79	92	86
3. Partial Total		**2,354**	**2,507**	**2,677**	**2,597**	**2,701**	**2,940**	**3,087**	**3,067**
4. Non-dedicated Support	1. General Wholesale and Retailing	4,164	4,018	4,049	3,962	4,011	4,308	4,478	4,827
	2. General Transportation	3,541	3,585	3,639	3,441	3,453	3,764	4,046	4,411
	3. Telephony and Internet	441	368	320	258	275	298	319	314
4. Non-dedicated Support Total		**8,145**	**7,971**	**8,008**	**7,661**	**7,739**	**8,370**	**8,843**	**9,552**
Grand Total		**53,185**	**52,941**	**53,116**	**51,461**	**50,461**	**53,243**	**55,581**	**57,354**

Annex 7. Copyright Industry Contribution to Employment, %

Category	Subcategory	2001	2002	2003	2004	2005	2006	2007	2008
1. Core	1. Press and Literature	1.34	1.29	1.25	1.22	1.16	1.14	1.14	1.15
	2. Music, Theatrical Productions, Operas	0.23	0.23	0.23	0.23	0.26	0.27	0.28	0.26
	3. Motion Picture and Video	0.59	0.53	0.41	0.25	0.26	0.24	0.23	0.25
	4. Radio and Television	0.59	0.53	0.43	0.35	0.33	0.31	0.29	0.29
	5. 5.Photography	0.09	0.09	0.09	0.07	0.07	0.06	0.05	0.05
	6. Software and Databases	0.27	0.31	0.36	0.43	0.42	0.48	0.49	0.56
	7. Visual and Graphic Arts	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.05
	8. Advertising Services	0.27	0.33	0.38	0.43	0.43	0.43	0.44	0.43
	9. Copyright Collecting Societies	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00
1. Core Total		**3.43**	**3.36**	**3.21**	**3.01**	**2.96**	**2.97**	**2.97**	**3.03**
2. Interdependent	1. TV Sets, Radios, VCRs, [...] and other similar equipment	0.44	0.46	0.49	0.55	0.37	0.37	0.36	0.36
	2. Computers and Equipment	0.14	0.15	0.15	0.17	0.17	0.20	0.22	0.23
	3. Musical Instruments	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
	4. Photocopiers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5. Photographic and Cinematographic Instruments	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01
	6. Blank Recording Material	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	7. Paper	0.21	0.15	0.19	0.18	0.18	0.19	0.18	0.18
2. Interdependent Total		**0.81**	**0.78**	**0.86**	**0.92**	**0.75**	**0.77**	**0.78**	**0.80**
3. Partial	1. Apparel, Textiles and Footwear	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02
	2. Jewellery and Coins	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
	3. Other Crafts	0.02	0.03	0.04	0.03	0.03	0.04	0.03	0.03
	4. Furniture	0.06	0.08	0.08	0.09	0.10	0.10	0.10	0.10
	5. Household Goods, China and Glass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6. Wall Coverings and Carpets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7. Toys and Games	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
	8. Architecture, Engineering, Surveying	0.09	0.08	0.08	0.07	0.07	0.07	0.08	0.08
	9. Interior Design	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10. 1Museums	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
3. Partial Total		**0.23**	**0.24**	**0.26**	**0.25**	**0.25**	**0.26**	**0.27**	**0.26**
4. Non-dedicated Support	1. General Wholesale and Retailing	0.41	0.39	0.39	0.38	0.37	0.38	0.38	0.41
	2. General Transportation	0.35	0.35	0.35	0.33	0.32	0.34	0.35	0.38
	3. Telephony and Internet	0.04	0.04	0.03	0.02	0.03	0.03	0.03	0.03
4. Non-dedicated Support Total		**0.81**	**0.78**	**0.77**	**0.73**	**0.72**	**0.75**	**0.76**	**0.82**
Grand Total		**5.29**	**5.17**	**5.10**	**4.92**	**4.68**	**4.75**	**4.78**	**4.92**

Annex 8. Exports of Services of Core Copyright Industry, LTL million

Code	Description	Factor	2004	2005	2006	2007	2008	2009	2010
B	Services		113.1	109.9	94.2	101.1	142.8	138.0	144.5
b.7	Computer and information services		85.6	78.3	50.4	59.8	97.9	98.4	100.8
b.7.1	Computer services	1	83.3	75.0	46.8	58.2	95.3	96.6	96.3
b.7.2	Information services		2.2	3.3	3.6	1.6	2.7	1.8	4.5
b.7.2.1	News agencies services	1	1.7	1.7	1.3	1.0	0.8	0.3	0.6
b.7.2.2	Other information services	1	0.5	1.6	2.3	0.6	1.9	1.5	3.9
b.8	Royalties and licence fees		1.1	2.7	1.0	0.2	1.1	0.5	1.2
b.8.1	Franchises and similar services	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.0
b.8.2	Other payments for copyrights and licences	0.5	0.6	2.1	1.0	0.2	1.1	0.5	1.2
b.10	Personal, cultural and recreational services		26.4	28.9	42.8	41.2	43.8	39.1	42.5
b.10.1	Audiovisual and related services	1	15.1	8.1	20.3	12.2	8.5	4.6	1.4
b.10.2	Other personal, cultural and recreational services	1	11.3	20.8	22.6	29.0	35.3	34.5	41.1

Annex 9. Imports of Services of Core Copyright Industry, LTL million

Code	Description	Factor	2004	2005	2006	2007	2008	2009	2010
B	Services		84.77	99.135	102.545	100.025	152.885	153.39	169.765
b.7	Computer and information services		55.76	63.68	62.54	67.41	92.16	92.86	98.12
b.7.1	Computer services	1	43.43	38.16	51.18	52.67	66.59	83.25	71.69
b.7.2	Information services		12.33	25.52	11.36	14.74	25.57	9.61	26.43
b.7.2.1	News agencies services	1	1.82	1.69	2.01	0.94	0.82	0.99	1.83
b.7.2.2	Other information services	1	10.51	23.83	9.35	13.8	24.75	8.62	24.6
b.8	Royalties and licence fees		24.99	28.775	33.445	27.175	40.395	36.26	45.355
b.8.1	Franchises and similar services	0.5	3.31	3.305	5.85	6.07	6.63	7.76	5.13
b.8.2	Other payments for copyrights and licences	0.5	21.68	25.47	27.595	21.105	33.765	28.5	40.225
b.10	Personal, cultural and recreational services		4.02	6.68	6.56	5.44	20.33	24.27	26.29
b.10.1	Audiovisual and related services	1	1.12	2.08	0.79	0.21	5.89	9.91	12.46
b.10.2	Other personal, cultural and recreational services	1	2.9	4.6	5.77	5.23	14.44	14.36	13.83

Annex 10. Copyright Industry Contribution to Exports of Services, %

Code	Description	Factor	2004	2005	2006	2007	2008	2009	2010
B	Services		1.66	1.27	0.95	1.00	1.28	1.50	1.34
b.7	Computer and information services		1.26	0.91	0.51	0.59	0.88	1.07	0.94
b.7.1	Computer services	1	1.23	0.87	0.47	0.57	0.85	1.05	0.90
b.7.2	Information services		0.03	0.04	0.04	0.02	0.02	0.02	0.04
b.7.2.1	News agencies services	1	0.02	0.02	0.01	0.01	0.01	0.00	0.01
b.7.2.2	Other information services	1	0.01	0.02	0.02	0.01	0.02	0.02	0.04
b.8	Royalties and licence fees		0.02	0.03	0.01	0.00	0.01	0.00	0.01
b.8.1	Franchises and similar services	0.5	0.01	0.01	0.00	0.00	0.00	0.00	0.00
b.8.2	Other payments for copyrights and licences	0.5	0.01	0.02	0.01	0.00	0.01	0.00	0.01
b.10	Personal, cultural and recreational services		0.39	0.33	0.43	0.41	0.39	0.43	0.40
b.10.1	Audiovisual and related services	1	0.22	0.09	0.20	0.12	0.08	0.05	0.01
b.10.2	Other personal, cultural and recreational services	1	0.17	0.24	0.23	0.29	0.32	0.38	0.38

Annex 11. Copyright Industry Contribution to Imports of Services, %

Code	Description	Factor	2004	2005	2006	2007	2008	2009	2010
B	Services		1.87	1.73	1.47	1.17	1.56	2.08	2.30
b.7	Computer and information services		1.23	1.11	0.90	0.79	0.94	1.26	1.33
b.7.1	Computer services	1	0.96	0.67	0.73	0.62	0.68	1.13	0.97
b.7.2	Information services		0.27	0.45	0.16	0.17	0.26	0.13	0.36
b.7.2.1	News agencies services	1	0.04	0.03	0.03	0.01	0.01	0.01	0.02
b.7.2.2	Other information services	1	0.23	0.42	0.13	0.16	0.25	0.12	0.33
b.8	Royalties and licence fees		0.55	0.50	0.48	0.32	0.41	0.49	0.61
b.8.1	Franchises and similar services	0.5	0.07	0.06	0.08	0.07	0.07	0.11	0.07
b.8.2	Other payments for copyrights and licences	0.5	0.48	0.45	0.40	0.25	0.34	0.39	0.54
b.10	Personal, cultural and recreational services		0.09	0.12	0.09	0.06	0.21	0.33	0.36
b.10.1	Audiovisual and related services	1	0.02	0.04	0.01	0.00	0.06	0.13	0.17
b.10.2	Other personal, cultural and recreational services	1	0.06	0.08	0.08	0.06	0.15	0.19	0.19

Annex 12. Complete Copyright Activity List with Corresponding Attributes and Factors, NACE 1.1

Category	Subcategory	Code	Contribution Type	Attribution	Split coef.	Factor
1. Core	1. Press and Literature	22.11	Direct	Single	1	1
		22.12	Direct	Single	1	1
		22.13	Direct	Single	1	1
		22.15	Direct	Single	1	1
		22.21	Direct	Single	1	1
		22.22	Direct	Single	1	1
		22.23	Direct	Single	1	1
		22.24	Direct	Single	1	1
		22.25	Direct	Single	1	1
		52.47	Direct	Single	1	1
		52.50	Direct	Shared	0.03-0.038	1
		74.87	Direct	Shared	0.051	1
		92.31	Direct	Shared	0.205	1
		92.40	Direct	Single	1	1
		92.51	Direct	Single	1	1
	2. Music, Theatrical Productions, Operas	22.14	Direct	Single	1	1
		22.31	Direct	Single	1	1
		51.43	Direct	Shared	0.006	1
		52.45	Direct	Shared	0.021-0.029	1
		74.87	Direct	Shared	0.056	1
		92.31	Direct	Shared	0.224	1
		92.32	Direct	Single	1	1
		92.34	Direct	Single	1	1
	3. Motion Picture and Video	22.32	Direct	Single	1	1
		51.43	Direct	Shared	0.006	1
		74.87	Direct	Shared	0.135	1
		92.11	Direct	Single	1	1
		92.12	Direct	Single	1	1
		92.13	Direct	Single	1	1
		92.31	Direct	Shared	0.54	1
	4. Radio and Television	92.20	Direct	Single	1	1
	5. Photography	74.81	Direct	Single	1	1
	6. Software and Databases	22.33	Direct	Single	1	1
		72.21	Direct	Single	1	1
		72.22	Direct	Single	1	1
		72.30	Direct	Single	1	1
		72.40	Direct	Single	1	1
		72.60	Direct	Single	1	1
	7. Visual and Graphic Arts	74.87	Direct	Shared	0.108	1
		92.31	Direct	Shared	0.031	1
		92.52	Direct	Shared	0.8	1
	8. Advertising Services	74.40	Direct	Single	1	1
	9. Copyright Collecting Societies	74.87	Direct	Shared	0.039-0.051	1

Category	Subcategory	Code	Contribution Type	Attribution	Split coef.	Factor
2. Interdependent	1. TV Sets, Radios, VCRs, [...] and other similar equipment	32.30	Direct	Single	1	1
		51.43	Direct	Shared	0.338	1
		52.45	Direct	Shared	0.301-0.309	1
	2. Computers and Equipment	30.02	Direct	Single	1	1
		51.84	Direct	Single	1	1
		51.85	Direct	Shared	0.351	1
		71.33	Direct	Single	1	1
	3. Musical Instruments	36.30	Direct	Single	1	1
		52.45	Direct	Shared	0.011-0.019	1
	4. Photocopiers	30.01	Direct	Shared	0.05	1
		51.85	Direct	Shared	0.05	1
	5. Photographic and Cinematographic Instruments	33.40	Direct	Single	1	1
	6. Blank Recording Material	24.64	Direct	Single	1	1
		24.65	Direct	Single	1	1
	7. Paper	21.11	Direct	Single	1	1
		21.12	Direct	Single	1	1
		24.30	Direct	Single	1	1
		29.55	Direct	Single	1	1
		51.56	Direct	Single	1	1
3. Partial	1. Apparel, Textiles and Footwear	17.60	Indirect	Single	1	0.006
		17.71	Indirect	Single	1	0.006
		17.72	Indirect	Single	1	0.006
		18.10	Indirect	Single	1	0.006
		18.21	Indirect	Single	1	0.006
		18.22	Indirect	Single	1	0.006
		18.23	Indirect	Single	1	0.006
		18.24	Indirect	Single	1	0.006
		19.30	Indirect	Single	1	0.006
		29.54	Indirect	Single	1	0.006
		51.42	Indirect	Single	1	0.006
		52.41	Indirect	Single	1	0.006
		52.42	Indirect	Single	1	0.006
		52.43	Indirect	Single	1	0.006
	2. Jewellery and Coins	36.21	Indirect	Single	1	0.2
		36.22	Indirect	Single	1	0.2
		36.61	Indirect	Single	1	0.2
	3. Other Crafts	36.63	Indirect	Single	1	0.4
	4. Furniture	36.11	Indirect	Single	1	0.05
		36.12	Indirect	Single	1	0.05
		36.13	Indirect	Single	1	0.05
		36.14	Indirect	Single	1	0.05
		36.15	Indirect	Single	1	0.05
		51.85	Indirect	Shared	0.599	0.05
		52.44	Indirect	Shared	0.426	0.05
	5. Household Goods, China and Glass	20.51	Indirect	Single	1	0.005
		20.52	Indirect	Single	1	0.005
		26.12	Indirect	Single	1	0.005

Category	Subcategory	Code	Contribution Type	Attribution	Split coef.	Factor
		26.13	Indirect	Single	1	0.005
		26.14	Indirect	Single	1	0.005
		26.15	Indirect	Single	1	0.005
		26.21	Indirect	Single	1	0.005
		26.22	Indirect	Single	1	0.005
		26.23	Indirect	Single	1	0.005
		26.24	Indirect	Single	1	0.005
		26.25	Indirect	Single	1	0.005
		26.26	Indirect	Single	1	0.005
		28.75	Indirect	Single	1	0.005
		31.50	Indirect	Single	1	0.005
		52.44	Indirect	Shared	0.574	0.005
	6. Wall Coverings and Carpets	17.51	Indirect	Single	1	0.004
		21.24	Indirect	Single	1	0.004
		21.25	Indirect	Single	1	0.004
	7. Toys and Games	36.50	Indirect	Single	1	0.4
	8. Architecture, Engineering, Surveying	74.20	Indirect	Single	1	0.1
	9. Interior Design	74.87	Indirect	Shared	0.07	0.053
	10. Museums	52.50	Indirect	Shared	0.05-0.058	0.5
		92.52	Indirect	Shared	0.2	0.5
4. Non-dedicated Support	1. General Wholesale and Retailing	51.11	Induced	Single	1	0.043-0.051
		51.12	Induced	Single	1	0.043-0.052
		51.13	Induced	Single	1	0.043-0.053
		51.14	Induced	Single	1	0.043-0.054
		51.15	Induced	Single	1	0.043-0.055
		51.16	Induced	Single	1	0.043-0.056
		51.17	Induced	Single	1	0.043-0.057
		51.18	Induced	Single	1	0.043-0.058
		51.19	Induced	Single	1	0.043-0.059
		51.41	Induced	Single	1	0.043-0.060
		51.43	Induced	Shared	0.65	0.043-0.061
		51.44	Induced	Single	1	0.043-0.062
		51.45	Induced	Single	1	0.043-0.063
		51.46	Induced	Single	1	0.043-0.064
		51.47	Induced	Single	1	0.043-0.065
		51.81	Induced	Single	1	0.043-0.066
		51.82	Induced	Single	1	0.043-0.067
		51.83	Induced	Single	1	0.043-0.068
		51.85	Induced	Shared	0	0.043-0.069
		51.86	Induced	Single	1	0.043-0.070
		51.87	Induced	Single	1	0.043-0.071
		51.88	Induced	Single	1	0.043-0.072
		51.90	Induced	Single	1	0.043-0.073
		52.11	Induced	Single	1	0.043-0.074
		52.12	Induced	Single	1	0.043-0.075
		52.45	Induced	Shared	0.65-0.658	0.043-0.076
		52.48	Induced	Single	1	0.043-0.077
		52.50	Induced	Shared	0.92-0.928	0.043-0.078
		52.61	Induced	Single	1	0.043-0.079
		52.62	Induced	Single	1	0.043-0.080

Category	Subcategory	Code	Contribution Type	Attribution	Split coef.	Factor
		52.63	Induced	Single	1	0.043-0.081
		71.40	Induced	Single	1	0.043-0.082
	2. General Transportation	60.10	Induced	Single	1	0.043-0.083
		60.21	Induced	Single	1	0.043-0.084
		60.22	Induced	Single	1	0.043-0.085
		60.23	Induced	Single	1	0.043-0.086
		60.24	Induced	Single	1	0.043-0.087
		61.10	Induced	Single	1	0.043-0.088
		61.20	Induced	Single	1	0.043-0.089
		62.10	Induced	Single	1	0.043-0.090
		62.20	Induced	Single	1	0.043-0.091
		63.11	Induced	Single	1	0.043-0.092
		63.12	Induced	Single	1	0.043-0.093
		63.21	Induced	Single	1	0.043-0.094
		63.22	Induced	Single	1	0.043-0.095
		63.23	Induced	Single	1	0.043-0.096
		63.30	Induced	Single	1	0.043-0.097
		63.40	Induced	Single	1	0.043-0.098
		64.11	Induced	Single	1	0.043-0.099
		64.12	Induced	Single	1	0.043-0.100
	3. Telephony and Internet	64.20	Induced	Single	1	0.043-0.101

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