STUDY OF THE ECONOMIC CONTRIBUTION OF
THE COPYRIGHT INDUSTRIES IN BULGARIA

(Based on statistical data by 2005)

Sofia, May 2007
Може ли издателството да преведе на английски служебния текст по-долу?! 

Всички права са запазени! Не се разрешават копиране, възпроизвеждане и разпространение на книги или на части от тях по какъвто и да е начин без писменото разрешение на УИ „Стопанство”.

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© Authors – Ivan Tchalakov, Vladya Borisova, Rossitza Arkova, Donka Keskinova, Georgi Damyanov, Tsveta Andreeva, Jordan Kalchev, Todor Todorov

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УНИВЕРСИТЕТ ЗА НАЦИОНАЛНО И СВЕТОВНО СТОПАНСТВО
София, Студентски град „Христо Ботев”
Обобщение на резултатите
This survey is the first comprehensive study of the contribution of copyright and related rights-based industries (copyright-based industries) to the Bulgarian economy. It was conducted in the period August 2006 – February 2007 on the initiative of the Bulgarian government and with the financial support of the World Intellectual Property Organization (WIPO).1 The adoption of NACE international classification of economic activities by the National Statistical Institute (NSI) in 2003 (Bulgarian National Classification of Economic Activities NKID-2003) was important precondition for the study, allowing the application of WIPO methodology. The information about the years 2003 and 2005 was analyzed which allowed an evaluation of the real situation at the end of 2005 and the development of these industries for a three-year period.

Carrying out this study was an expression of Bulgarian government’s adherence to the principle that the knowledge, considered as intellectual property, is of key importance for the wealth of the nations. This principle, widely accepted among the developed countries, put the creative (or copyright) industries at the focus of public policy. Following this policy, the OECD countries developed relevant infrastructure and boosted the implementation of intellectual property legislation, which transformed copyright industries in one of the most rapidly developing economic sectors. After 1998 number of Bulgarian governments have made significant efforts to limit the piracy of protected goods and services and to impose intellectual property rights legislation. In 2006 the present government launched National campaign for protection of copyrights aiming at rising public awareness and further strengthening the implementation of copyrights law. The present research is part of these efforts, since it provides objective economic data for designing better policy in the filed and contributes to the general positive change in public attitudes towards copyright based industries.

The methodology is based on a secondary analysis of main economic indicators such as Value added, Gross output, share of imports and exports and employment, which have been analyzed for each of copyrights related economic activities. These activities are classified in four group – core, interdependent, and partial copyright industries, together with the group of non-dedicated support industries. The economic contribution of core and interdependent industries in taken in their full weight, while for the other two groups a specific copyright factor is applied, following the methodology of WIPO and experience of research in Hungary, USA, Singapore, Latvia, and others. In its analysis of the manner of collection and calculation of the macroeconomic data applied by Bulgarian NSI, the survey team has reached the conclusion that, for now, a more appropriate idea about the economic contribution of the copyright-based industries can be provided by their share compared to the gross value added (GVA) at basic prices rather than the gross domestic product (GDP) at market prices. In addition ot GVA as its basis, the later includes also indirect taxation, excise duties and customs duties (all having greater impact on the goods for massive consumption non-related to creative industries), which changes the basis for comparison artificially reducing the share of copyright industries. In addition to that the NSI methodology does not take into account the own income of such large cultural institutions as the National Television, National Radio, state and municipal theatres, operas, dance groups, museums and galleries, etc. (which, according to the experts, exceeds 20% of their subsidies).

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1 This Study has been accomplished by a research team lead by Ass. Prof. Ivan Tchalakov, PhD (Plovdiv University and Institute of Sociology, BAS). The members of the team were Dr. Vladya Borisova (Assist. Prof. at the Intellectual Property Department, University of National and World Economy - Sofia), Donka Keskinova (Assist. Prof. at Department of Sociology, the Plovdiv University), Assoc. Prof. Jordan Kalchev (National Statistical Institute) and experts of the Ministry of Culture – Georgi Damyanov (Director of the Copyrights Directorate), Dr. Rossitza Arkova (Chief expert at the Strategies and Programming Directorate) and Tsveta Andreeva (Chief expert at the EU Integration and International Cooperation Directorate). The work of the team was under the close supervision of the Deputy Minister of Culture, Mrs. Ina Kileva. Consultant on behalf of the WIPO was Prof. Robert Picard from the Jönköping International Business School, Sweden. Dr. Dimitar Ganchev, Acting Director, Creative Industries Division of WIPO, monitored the execution of the project at all stages. Of great importance was the close cooperation with the experts of the NSI, Mr. Todor Todorov, Director of the National Accounts Directorate, and Ms. Ljuba Yaneva, Head of Business Statistics Department.
The WIPO methodology has been applied to the lowest possible level in the Bulgarian survey – to the primary data by each of the studied codes of economic activities in the classification of Bulgarian version of NACE (NKID-2003). This has made it possible to process information about the intangible fixed assets of the companies (including rights on products of intellectual property, software, R&D products), net sales, profit on ordinary activities, intermediate consumption and others. The collected CI economic data for 2003 and 2005 allows for additional specialized analyses of different segments of the copyright-based industries, including in-depth analyses of the most successful and rapidly developing sectors of software, publishing and printing, and film industries. These data are also a good basis for future comparisons on a national and international scale.

**Contribution of the copyright-based industries to the GDP in 2005**

In 2005, gross output of BGN 4.155 billion and value added of BGN 1.204 billion were created in economic activities related to copyright and related rights in Bulgaria. The core copyright industries had the greatest economic contribution of the industries in the sector – they put out gross output of BGN 2.498 billion and value added of BGN 672 million.

<table>
<thead>
<tr>
<th>Core CI (Gross output)</th>
<th>Total BG Gross output</th>
<th>Core Share of BG Gross Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 498 559</td>
<td>92 132 091</td>
<td>2.71%</td>
</tr>
<tr>
<td>Total Copyright (Gross output)</td>
<td>Total BG Gross output</td>
<td>Total Share of BG Gross Output</td>
</tr>
<tr>
<td>4 155 101</td>
<td>92 132 091</td>
<td>4.51%</td>
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</table>

<table>
<thead>
<tr>
<th>Core CI (value added)</th>
<th>Total BG Gross Value Added</th>
<th>Core Share of BG Gross Value Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>672 270</td>
<td>35 220 410</td>
<td>1.91%</td>
</tr>
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<td>Total Copyright (value added)</td>
<td>Total BG Gross Value Added</td>
<td>Total Share of BG Gross Value Added</td>
</tr>
<tr>
<td>1 204 229</td>
<td>35 220 410</td>
<td>3.42%</td>
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</tbody>
</table>

When calculated in comparison to the gross domestic product, the total contribution of the copyright industries is 2.81% and that of the core industries only is 1.57%.

<table>
<thead>
<tr>
<th>Core Copyright (value added)</th>
<th>Total BG GDP</th>
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<td>672 270</td>
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<td>1.57%</td>
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<tr>
<td>1 204 229</td>
<td>42 797 407</td>
<td>2.81%</td>
</tr>
</tbody>
</table>

The economic contribution of the copyright industries in 2005 can be represented graphically in the following way:

**Share of GDP**

- Core Copyright: 2.81%

- Total Copyright: 3.42%

- Core CI: 4.51%
The ‘static’ outline of the share of CI industries economic contribution reveals a significant, if small, sector of Bulgarian economy. This outline, however, neglect CI industries growth rates, which put these industries among the most rapidly developing sectors of the economy. For the period 2003-2005 the survey identified that the gross value added derived from the current prices index grew by 50% over three years only, which exceeded the growth rates of the economy as a whole (11.5%). If favorable conditions continued and the sector received adequate public support, it might become one of the engines of the Bulgarian economic development in near future.

### Rates of change in value added for 2003-2005

<table>
<thead>
<tr>
<th></th>
<th>Growth Copyright (value added)</th>
<th>Growth Total Copyright (value added)</th>
<th>Growth BG Gross Value Added</th>
<th>Growth BG GDP</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>52,8%</td>
<td>49,9%</td>
<td>10,8%</td>
<td>11,5%</td>
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The information about the copyright-based industries is obtained as a ratio of the values for 2005 and 2003 adjusted with an inflation index; the data about the national economy are taken from Table 1.2.22 in 2005 Main Economic Indicators, National Accounts Section (www.nsi.bg).

### Growth of Copyright Industries for 2003-2005 period

![Graph showing growth of copyright industries for 2003-2005 period]

### Employment in the sector of copyright-based industries

In 2005, 104,814 people in Bulgaria were employed in economic activities related to copyright and related rights, almost one in every 20 people employed. 55,861 people worked in the core copyright-based industries only, i.e. more than half of the people employed in the sector.

<table>
<thead>
<tr>
<th>Core Copyright (number of employed)</th>
<th>Total BG employed</th>
<th>Core Share of BG employed</th>
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<tr>
<td>55 861</td>
<td>2 434 726</td>
<td>2,29%</td>
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<tr>
<th>Total Copyright (number of employed)</th>
<th>Total BG employed</th>
<th>Total Share of BG employed</th>
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<tr>
<td>104 814</td>
<td>2 434 726</td>
<td>4,31%</td>
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</table>

A fast increase in the number of people employed in copyright-based industries is registered for the period 2003-2005. The growth rate exceeds more than three times the growth of employment in the economy as a whole.
Comparison with other sectors of the economy

The copyright-based industries are not monitored separately in the national statistical information. That is why they are a little undervalued in the comparison we have made because the activities in them have already been included in the data about some of the monitored sectors. In view of their share in the gross value added in 2005, the copyright-based industries rank 11th – before “Health care,” “Hotels and restaurants,” and “Extraction industries”. The value added generated by the copyright-based industries (3.42%) is about ¾ of the value added in such an important sector as “Generation and distribution of electric power, gas and water” and has a significantly larger contribution than the “Hotels and restaurants” sector! As for the contribution to the gross domestic product (GDP), the share of the copyright-based industries is 2.81% – a value that exceeds twice the share of “Extraction industries” and is higher than the one of “Hotels and restaurants”. With respect to employment, the copyright-based industries occupy the 10th place, higher than “Hotels and restaurants” and “Agriculture, forestry, hunting and fishing.”

Copyright Industries Share in GDP compared with other sectors in BG Economy

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</thead>
<tbody>
<tr>
<td></td>
<td>3.42%</td>
<td>4.01%</td>
<td>3.88%</td>
<td>3.35%</td>
<td>3.35%</td>
<td>16.09%</td>
<td>13.27%</td>
<td>11.81%</td>
<td>7.93%</td>
<td>7.03%</td>
<td>5.86%</td>
<td>4.83%</td>
<td>4.01%</td>
<td>3.88%</td>
<td>3.35%</td>
<td>3.35%</td>
<td>2.81%</td>
<td>2.46%</td>
<td>2.14%</td>
<td>1.84%</td>
<td>1.35%</td>
</tr>
</tbody>
</table>
Leading sectors in the copyright-based industries

*Book publishing and print* and *Software and databases* are the two largest core copyright-based industries – they both contributed 0.51% each to the gross value added in the country in 2005. The value added per person employed was the highest in the *Radio and television industry* – BGN 25 287. It is followed by *Production and distribution of motion picture and video* with BGN 19 503 and *Software and databases* – BGN 18 522 per employed.

In 2005 the value added adjusted with the inflation index, which was generated by the core industries grew by 52.8% in comparison to 2003. The greatest growth is registered in *Production and distribution of motion picture and video* – + 166%, i.e. it almost tripled! The main activity in this industry exhibits the greatest growth among all copyright-based economic activities of + 225%!

In 2003, this sector pertained to the same economic level with sectors such as *Theatre and music, Visual and graphic arts, Photography*. It detached from the group in three years only and became an industry in the proper sense of the word.

#### Relative contributions of Core Copyright Industries to Bulgarian 2005 GVA

The second fastest developing sector is *Software and databases* – it registers growth by 93%; its key activity of development of original software for customer needs and design of websites grew by +108%. The interviews, carried out with experts in the field confirmed the positive effects of the current efforts to increase the share of legal software used by the enterprises – it improves their efficiency, the quality of end products and their competitiveness.

The third fast developing sector is *Architecture* which falls into the category of partial copyright-based industries. During the surveyed period, it showed a growth in value added by +81% taking into account the inflation, a growth in gross product by 23% and 16% of growth in employment. Using real numbers, the contribution of the sector to the GVA is BGN 15.3 million and this is the number calculated after a 90% reduction (10% copyright-based factor). The importance of the sector must not be underestimated because there is a hidden potential here, which is not accounted for by NSI due to the peculiarities of the construction sector as a whole.

The CI leading sectors should be subject of deeper studies in order to reveal the sources of their growth, the problems the artists and the entrepreneurs are facing with, and make them in the focus of public authorities and branch associations activities.

The core CI value added share is 2,12% of Bulgarian GDP for 2005, thus higher those of extraction industries and closer to the share of ‘hotels and restaurants’. The share of the seven ‘culture related’ core CI (without out *software and advertising*) in 2005 GDP equals to 1,27%, while to total
government subsidies to culture related activities for 2005 is 0.72% of GDP – about one third of core CI economic contribution and slightly more the half of the seven ‘cultural’ CI economic contribution. These results claim for revising of the public policy towards structure and management of subsidized cultural activities – these subsidies should be considered not just as ‘public good’ distributed according to society’s long-term social and cultural needs, but rather as partial compensation of he ‘cultural’ CI economic agents for their efforts in response of these needs, as correction of ‘market failures’ in private response of the cultural needs of society, and as ‘seed capital’ for developing new business in the cultural sphere. All this, however, presupposes enlarging the public-private partnership in the management of public subsidies for culture.

Imports and exports of products of copyright-based industries for the period 2003-2005

In view of the purchased and sold copyright and licenses on products of intellectual property, Bulgaria establishes itself as a net importer of products of intellectual property and rights for their use – for the past years, the compensation paid abroad for using products of intellectual property has increased from BGN 21.5 million to BGN 64 million while the income received from sale of domestic intellectual property abroad has reached a level of BGN 4-5 million a year.

The exported goods and services of the Publishing and printing industry amounted to between Euro 5.45 million and Euro 6.84 million a year for the period 2003-2005 while the imports grew steadily and the increase for 2005 only was 68%. The negative trade balance of trading in this group of goods increased respectively and it was Euro 21.27 million in 2005. The exports of the software industry was much better reaching close to Euro 10 million in 2005 which was an increase of 45% in comparison to the previous year; yet, in the experts’ opinion, a significant part of these exports is not accounted for in the national statistical information.

The information about the imports and exports of radio and television sets, tape recorders, CD, DVD and other equipment for reproduction and recording of audio and visual carriers shows that the main part of the value added in this interdependent copyright-based industry is realized in imports. During the entire surveyed period, the ratio between imports and exports here was 1:4 to the benefit of imports; the negative trade balance exceeded Euro 400 million in 2005.

The leader among the partial copyright-based industries is Apparel, textile and footwear with a positive balance of Euro 1.13 billion. The survey has shown that there has been a distinct trend in this sector for the enterprises to appoint professional designers or buy the services of such while the companies more and more often protect their original products and register trademarks.

The Furniture industry also exhibits growing volumes of imports and exports given a stable positive balance between BGN 70 million and 80 million. As a result of its higher copyright weight, this industry is ahead of Apparel, textile and footwear according to the gross value added. With respect to the Games and toys industry, imports and exports stayed at the level of
about BGN 20 million during the surveyed period with a slight rise in imports. There is a significant grey sector and serious infringements on copyright in this industry (computer games), which makes the Bulgarian game producers to turn their attention to the external market primarily and explains the relatively high levels of exports.

It is obvious that the first successes in the fight against intellectual piracy and the strengthening of the legislation in this field have resulted in a triple increase in payments made abroad while the income from rights and licenses in Bulgarian products of intellectual property remains at a constant level.

The export-import data on products and services provided by Bulgarian interdependent CI reveal a clear picture of de-industrialisation of the sector. Fifteen years ago most of these industries were among the country’s leading, export-oriented industries. Putting aside the paper production there are few items of CI related equipment and apparatuses that are produced and exported. Only limited number of authentic entrepreneurs has managed to preserve and develop small-scale production in specific niches such as blank recording material (CD, DVD), optical and electronic components, etc. Hence the public policies have to stimulate foreign direct investment here, to identify the country specific competitive advantages (research and manufacturing traditions, access to specific markets, attractive factors of production, etc.) and to support the local entrepreneurs with potential to grow.

**International comparisons**

With the share of value added of the core copyright-based industries in 2003 equal to 1.3% of the GDP, Bulgaria ranks last among the 19 states that have conducted surveys applying this methodology (after Greece and Portugal).
This comparison does not take into account the enormous growth in copyright-based industries in Bulgaria for the past three years because the lack of available comparative data for the past years required that the comparison be made for 2003. This low share has been additionally reduced by the inability of the national statistical information to register the exact contribution of all copyright-based activities.

In view of employment in the core copyright industries, Bulgaria is significantly higher in the ranking with a value higher than the average in the 15 old EU Member States (EU of the 15).

The information about 2005 in the USA and about 2004 in Canada allows one to use the Bulgarian data about 2005 in the comparison. It shows that the share of the core copyright-based industries in the GDP of Bulgaria is more than three times lower than that in the USA and more than two times lower than that in Canada.

Employment in the core copyright-based industries in Bulgaria is about two times lower than that in the USA and is comparable to that in Canada. For the period 2003-2005, the growth rate of the core copyright-based industries in Bulgaria calculated as a ratio between the shares of value added in the GDP was 38% – significantly higher than that in the USA and Canada.

Policy issues

Based on the project results the following conclusions and recommendations could be outlined:

1) The relative homogeneity of the main part of core and partial copyright industries in Bulgaria favors development of the common policy measures in their support, in addition to sector specific policies aiming at fast growing ‘champions’ (book publishing and printing, software, architecture, furniture). The positive trade balance in most of these industries is additional argument in this respect. Possible strategies include improving the general conditions for
protection of copyrights, whose importance is already widely recognized among the entrepreneurs in these sectors. In more specific term, it is necessary

- Strengthening the implementation of IP law, especially in distribution of protected items and services via Internet. This should include tightening the control on LANs and cable TV networks in the cities and towns.
- Improving competences and knowledge in copyrights among the representatives of the legal system in Bulgaria, especially among the judges and prosecutors. Special training programs are needed, which have to popularize the best practices and facilitate exchange of information and experience.
- Continuation of the public campaign against intellectual piracy and rising public awareness on the economic losses and moral damages related to it.

2) **Support of the export of locally produced CI products and services.** Measures to improve qualification level among the employees and entrepreneurs in CI. The expert interviews carried out reveal that the transition from small entrepreneurial firms towards larger, corporate businesses leads to a number of problems, the most acute being the lack of managerial skills for running larger enterprises.

3) **The rudimentary state of design profession emerged as critical point of development, bearing on the development of number of CI sectors.** This profession was not yet emancipated in Bulgaria as autonomous business field. At present it exists as number of different professional activities, attached to other CI businesses, each pointed with corresponding adjective – fashion design, media design, graphic design, interior design, etc. This spread of these activities among the sectors, lack of common profile, as well as of autonomous institutional and organizational status of design activities limit the possibilities to impose their copyrights on the market and to defend them against misuse. The present situation creates obstacles in building long-term strategies for development of the sector and improving the artistic level of the design profession. Public policy in the field is urgently needed to support the efforts of the practitioners and to create better legal, educational and organizational environment of the autonomous development of the sector.

4) **Improving the national system of classification of economic activities and statistical data collection is urgent necessity.** At present number of important CI related economic activities are classified under large mixed codes together with other, irrelevant activities. This requires a lot of additional efforts and recourses and same time make impossible the correct evaluation of CI economic contribution. We recommend the establishment of a special task force comprising representatives of National Statistical Institute, Ministry of Culture, UWE Intellectual Property Department and members of Bulgarian WIPO research team to revise the Bulgarian version of NACE and propose the necessary changes. Such changes will correspond to the rapid development of CI industries in the country and will relevant information for the practitioners and policy makers in the field. We especially recommend changes in the twelve codes, described in Annex 4 of the present report, as well as number of CI related codes in Bulgarian Custom Tariff. The changes in the existing rules for classifying export-import data are also needed. In general, the proposed improvements in Bulgarian economic statistics will help public policy in the filed of CI and will be valuable contribution to the current efforts against intellectual piracy allowing adequate measuring the effects of anti-piracy companies.

5) **The public policy toward CI industries – from ‘public good’ management to correcting market failure in the filed and seed capital for new CI businesses.** The much higher core CI value added share in Bulgarian GDP for 2005 compared with share of government subsidies to culture related activities for 2005 claims for revising of the public policy towards structure and management of subsidized cultural activities – these subsidies should be considered not just as ‘public good’ distributed according to society’s long-term social and cultural needs, but rather as partial compensation of he ‘cultural’ CI economic agents for their efforts in response of these needs, as correction of ‘market failures’ in private response of the cultural needs of society, and as ‘seed capital’ for developing new business in the cultural sphere. All this, however, presupposes enlarging the public-private partnership in the management of public subsidies for culture.