

# Employment in Copyright Based Industries in Romania. Comparative Advantages and Performances

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## Abstract

*In the transition to the knowledge-based economy, the creative/cultural industries have emerged as the most rapidly growing sector. The opening of the Romanian economy and society has contributed to higher employment in the creative activities. The new jobs - “high-knowledge jobs” in creative activities or in “non-creative industries” – have a sum of particularities that could support higher performances. In this paper we underline the size and particularities of employment in the copyright based industry sector, mainly in CORE activities in Romania and some performances of labour force. The analysis of the CORE-CIs with respect to the size and evolution of the operational profit per employee, both at the overall sector and component industries’ level, led us to an interesting and useful classification of the core industries which could be helpful for better decision making and copyright industries policies.*

**Key words:** *copyright based industries, cultural-creative activities, employment, labour market*

## Main Particularities of Labour Market in Transition Period

The labour market reform and the changing of the human capital management model in Romania have known a sinuous development, highly delayed as compared with the demands of the economic and social environment. Labour market had a secondary rank, as it was considered that the regulations on the other markets will generate the necessary changes that would ensure labour market functionality. If, according to the legislative aspect, the necessary institutions and adjustment mechanisms were created, in order to achieve their efficient functionality there would still be necessary some fine tunings that are also firm and sustainable.

During the entire transition period, a diminishment of the labour market size is recorded associated with higher flexibility, but against the background of a stronger de-correlation under the quantitative and qualitative aspect between labour demand and supply, on main industries, especially those with a high potential of new technologies transfer, at national level, but mostly at regional level as well. The diminished territorial mobility of labour force and households, as well as the focus of investments on urban areas of high population density generates strong imbalances on local labour markets which stimulate temporary labour migration abroad. An important part of migrant labour force is represented by young skilled persons, with professions compatible with the new demand profile of high tech activities, brain drain and brain loss registering an increasing trend. In fact, the last years’ trend is represented by a decrease in the share of those with low-level education in total population employed in parallel with increased numbers of those with higher education. The economic restructuring also triggered a replacement process of low-qualification jobs especially in the urban area and in the most

dynamic activities of the economy, as well as an enrichment of the job content, of the requirements for skills and qualifications, mainly in the ICT field for an ever larger range of jobs, including here the ones requiring a relatively low level of training.

An important aspect that might define on medium term the development of the employment structure by professional status is represented by the *professional training level of the employed population*. In comparison with the year 1995, in the next ten years, the share of employed population with higher education increases by 4.4 pp, the one of employed population with secondary education by 4.6 pp, and the one of employed with vocational and apprenticeship training by 4.3 pp. At the same time, the share of employed persons with primary or no education decreases more than two times, mainly due to pensioners and to the increase trend of extending the period of attending education of the younger generations. It is noteworthy that the interest for education and professional training is more significant among the employed women, especially with respect to higher education, where they exceed with about 8 pp the participation of men. In the year 2005, about 17 per cent from employed population had post high school and higher education, and about two-thirds high school and vocational training, and about another quarter primary education. On age groups, a shift is found on the labour market from an employed population with preponderantly secondary and primary education, specific to the employment system in the period preceding the transition, to an employed population increasingly better trained. Against 1995, for instance, the increasing share of those with higher education in total employed population was of more than 3 pp per total, and for the mature age groups on the labour market, respectively the age group from 25 to 34 years of age, and from 35 to 44 years of age the recorded increases were of almost 6 pp and, accordingly of about 2 pp. At the beginning of the last year, the trends recorded in the preceding years are maintained. The highest level of the employment rate for working age population was recorded among the graduates of tertiary education – over 4/5 compared with approximately half of the persons with secondary education and less than 2/5 from those with a low education level.

## **Copyright Based Industries and Particularities of Labour Force Demand**

Employment in the knowledge economy is based on the new pattern of labour market demand. Human resources development is one of the five drivers for the development of the cultural creative sector together with the social organization and values, cultural asset management, technological and infrastructure development and policy environment<sup>1</sup>. Complementary, the national systems of education even under the conditions of the Bologna process implementation have faced major problems in adjusting the curricula and change the teaching system into a modern one<sup>2</sup>. The gap between the education market supply and labour market demand is still

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<sup>1</sup> Background Documents of the Senior Expert Symposium *Asia-Pacific Creative Communities: A Strategy for the 21st Century*, [http://www.unescobkk.org/culture/cultural\\_industries](http://www.unescobkk.org/culture/cultural_industries) (Jodhpur Symposium on Cultural Industries - Symposium Documents).

<sup>2</sup> „The major challenge for the initial education system is and shall continue to be the anticipatory capacity to ensure labour force supply in a socio-professional structure compatible with the demand on labour market, in the context of extensive and even speedier promotion of the RDI activities' results. Complementary, the segment dedicated to adult education for a successful active life is taken into account. As result, lifelong learning constitutes a sine qua non condition for attaining the Lisbon objectives considering the interest of achieving high quality at all levels.” The reform of education system in Romania continues with qualitative changes. A detailed analyses on national educational system, in the conditions of faster changes on labour market is made in the national study “Restructuring Romania's education system considering the evolutions from the domestic market perspective and impact on RDI progress”, Study no 2, Valentina VASILE (coordinator), Gheorghe Zaman, Steliana Perț, Felicia Zarojanu, European Institute from Romania, 2007.

very important. As yet unsolved problems we could mention: weak coordination of the university specializations profile in accordance with the national economy sustainable development strategy, especially for new fields of activities of ICT and knowledge economy; the educational system focuses more on knowledge accumulation and less on gaining skills and competences for lifelong learning; there are some fields of education that are less oriented on the national labour market demand and, as result, the graduates will look for a job abroad.

The national labour market is not so attractive for many university specializations. Relative lower level of wages and salaries, lack of successful career building perspective and poor working conditions for research and innovation (in some research fields below average European and international standards), generate lack of labour force, the graduates choosing to work abroad or looking for a better remunerated job, but not always related to the professional qualification. In this less favorable context for creative activities, the development at national level, *characteristic for the knowledge economy and cultural creative industries registered higher dynamics than the average national level in employment, output and profitability*<sup>3</sup>.

The importance of this sector for economic growth and employment in the future is underlined by the Council of the European Union by considering the following aspects<sup>4</sup>: a) cultural creativity and the economic sectors built around it already make a direct and significant contribution to economic growth and employment which the cultural sector is experiencing; b) growth higher than that of the economy in general, and having witnessed a rise in employment higher than employment in the wider economy; c) cultural activities and creative industries, such as visual and performing arts, heritage, film and video, television and radio, new and emerging media, music, books and press, design, architecture and advertising are also playing a critical role in boosting innovation and technology, and are key engines of sustainable growth in the future, in particular, the availability of high quality creative content is a key driver in the take-up of new technologies, especially broadband internet, digital television and mobile communication; d) the self-employed, micro-enterprises, and small and medium-sized enterprises within the cultural sector play an even more pivotal role in driving forward its development than those in other sectors; e) given its close links with specific cultural and linguistic environment and strong regional roots, the production of goods and services in the culture sector is not easily transferable and thus forms a stable and sustainable base for local and regional strategies of economic growth and social cohesion.

## Copyright Based Industries and Employment Performances

In the transition to the knowledge-based economy, the creative/cultural industries have emerged as the most rapidly growing sector. The opening of the Romanian economy and society has contributed to a higher employment in the creative activities. The copyright industries are one of the fastest-growing sectors of the economy<sup>5</sup>. In the transition to the knowledge-based

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<sup>3</sup> Valentina Vasile (2008) - Employment and labour force performances in copyright based industries in Romania, in the context of knowledge society, International NOBEL FORUM in economics "World Economy of the 21-st century: Cycles and Crises", 11-13 September 2008, Dnipropetrovsk, Ukraine

<sup>4</sup> Council Conclusions on the contribution of the cultural and creative sectors to the achievement of the Lisbon objectives, 8635/2/07 CULT 25 REV 2, Council of the European Union, Brussels, 8 May 2007

<sup>5</sup> The economic dimension of copyright industries in Romania is becoming of higher interest for policy-makers taking into consideration its increasing contribution to GDP, employment, foreign trade and investment. The assessment of CIs economy in Romania has been done for the first time in the national report on economic contribution of copyright based industries. For details see: Gh. Zaman, V. Vasile, R. Pârvu, C. Dărășteanu - Contribuția industriilor bazate pe copyright la economia națională a României, Oficiul român pentru drepturi de autor Centrul de studii și cercetări în domeniul culturii, Institutul de economie națională, national report 2007, with the financial support of WIPO

economies, the creative or cultural industries<sup>6</sup> have emerged as the most rapidly growing sector. ICT and creative industries development determine new job creation. What these industries have in common is that they all use creativity, cultural knowledge and intellectual property to generate products and services with social and cultural meaning<sup>7</sup>. As a result, a general increase in the importance of skills, knowledge and human capital among many types of firms has occurred

The new jobs - “high-knowledge jobs” in creative activities or in “non-creative industries” – have a sum of particularities that could support higher performances. On one hand, press freedom, the increase in the role of civil society, the elimination of censorship represented positive influence factors for new jobs’ creation in the cultural industries. In this way, the copyright based industries have become a factor of tension reduction and increased flexibility on labour market

The copyright-based industries (CIs) contributed to the increase of Romanian employment of labour force due to the raise of this sector’s share in national average number of employees, i.e. from 2.73% in 2002 to 4.19% in 2005. This increase represented 76.833 new jobs (in full-time equivalent) with a very large variety of skills gravitating around the cultural and artistic creativity development and diffusion.

From the international comparisons between Romania and developed countries it results that CIs in Romania are still modest but in a dynamic process of expansion. Regarding the competitiveness of the cultural and creative sector, measured as value added per employment cost, Romania has better results and higher dynamics than the European median value of the mentioned indicator. In 1999 the productivity level was of 1.46 as compared with 1.43 for EU 25 and in 2003 of, respectively, 3.06 and 1.57. In 2003 the productivity was twice as high in Romania than EU 25, but we have to mention that labour cost is still lower and this is not an incentive factor for attracting and keeping employed young persons, especially high skilled ones but only for a short period of time, and newly entered persons on labour market and just in a few cultural creative activities. An adequate policy for employment of the labour force in new jobs generated by cultural creative activities development represents on short term a real and necessary decision, as minimum support for increasing market competitiveness.

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<sup>6</sup> The generally accepted definition of cultural industries : industries that produce tangible or intangible artistic and creative outputs, and which have a potential for wealth creation and income generation through the exploitation of cultural assets and the production of knowledge-based goods and services (both traditional and contemporary). Also known as “creative” or sometimes as “copyright-based” industries, cultural industries include a wide array of economic activities including: advertising; architecture; crafts and designer furniture; fashion clothing; film, video and other audiovisual production; graphic design; educational and leisure software; live and recorded music; performing arts and entertainments; television, radio and internet broadcasting; visual arts and antiques; and writing and publishing. (Source: Statistics on cultural industries: Framework for the Elaboration of National Data Capacity Building Projects. Bangkok: UNESCO Bangkok, 2007. Published by the UNESCO Asia and Pacific Regional Bureau for Education, Prakanong, Bangkok, Thailand.

<sup>7</sup> The uniquely distinguishing characteristic common to all cultural industries is the involvement of human skills and knowledge in the production process. However, there is no international standardized classification system based on the degree of the involvement of human skills in the production process, and the existing statistical systems cannot distinguish sufficiently between different activities that produce the same kind of output. The tendency observed in different mapping studies to increasingly base the definition of creative/cultural industries on an analysis of the processes involved in the production and consumption of cultural goods rather than on a distinction between different categories of goods, represents an effort to recognize this aspect of the cultural industries. (Source: Statistics on cultural industries: Framework for the Elaboration of National Data Capacity Building Projects. Bangkok: UNESCO Bangkok, 2007. Published by the UNESCO Asia and Pacific Regional Bureau for Education, Prakanong, Bangkok , Thailand).

Assuring qualified labour force for specific activities and jobs of the cultural-creative industries depends on factors that restrict to a high degree the balance on labour market. The most important ones, also specific for the Romanian economy, could be considered: a) inertia to change/lack (or weak) adaptability of the national educational system; b) economic environment inefficiency in creating attractive jobs for young graduates; c) labour force circulation, especially high qualified and brain drain.

As a general tendency, the “knowledge employment” is increasing in business services and the new job creation is more significant in activities related to creative industries. The new jobs “high-knowledge jobs” in creative activities or in “non-creative industries” have a sum of *particularities*:

- Generate new professions and specialisations specific for ICT services in new industries but also in social and cultural activities;
- ICT abilities and competencies enrich the labour content of more and more jobs;
- Technical occupations require a higher share of people with postsecondary education or higher;
- Professional occupations are characterised by an educational profile based on university degree and post-university specialization and an interdisciplinary approach;
- Management occupations development – flexibility, distribution of responsibilities at different decision levels; promoting performance etc;
- Jobs in such innovative activities and creative jobs in non-creative industries are characterized by high relative wages and an increasing share of people with university-level education;
- Employment is characterized by an inherent “flexibility” requirement and “mobility” constraint;
- Part time employment, temporary employment and multiple jobs have a higher proportion than at national level;
- The sector is overwhelmingly made up of small/micro businesses and self-employed.

At present, due to the cultural creative industries different classifications and of the increasing number of creative jobs in more non-creative activities, there are some mismatches between the databases provided by different sources or institutions, but without influencing to a high extent the magnitude and size as against national or regional level. According to a report on the economy of culture in Europe<sup>8</sup>, in the year 2004, a total of 5.8 million people worked in the cultural & creative sector, equivalent to 3.1% of total employed population in the EU25, with a higher dynamics in the period 2002-2004 de +1.85%, under the conditions of a general trend of the -0.04%. According to Eurostat data<sup>9</sup> cultural employment, which covers both employment in cultural occupations in the whole economy and all employment in cultural economic activities represented in 2002, for example, between around 1.5% (1.4% in Portugal and Slovakia, 1.8% in Czech Republic, Latvia and Luxembourg), and 3.5% (3.2% in the United Kingdom, 3.3% in the Netherlands and Sweden, 3.5% in Finland, 3.7% in Estonia) of total employment. Some specific characteristics had been observed when comparing educational attainment and security of employment of cultural employment and total employment:

1. Labour force is more educated, 40% of cultural workers are university graduates compared to 24% for total employment;
2. Employment is more precarious: 18% of cultural workers had temporary jobs compared to 12% for the total labour force; 25% of cultural workers had a part time job, against 17% of

<sup>8</sup> The economy of culture in Europe, Study prepared for the European Commission (Directorate General for Education and Culture), October 2006, KEA European Affairs.

<sup>9</sup> Eurostat Press Office, eurostat-pressoffice@ec.europa.eu

the EU work force, and 9% of cultural workers had more than one job, three times more than for total employment (3%);

3. Regarding employment status, 29% of cultural workers were either employers or self employed in 2002, compared with 14% of the total working population.

This sector is crucial for the take off of ICTs and also for local development. Also culture employment is atypical in nature and represents the “frontrunner of tomorrow’s job market”, as an important source for new job creation, for local tourism growth and regional regeneration, development of “creative cities”, territorial and social cohesion. Taking into account the main development objective at European level – cultural diversity, inclusiveness, territorial cohesion and community identity-, creative industries development and also employment in creative jobs of non-creative activities stimulate knowledge based economy development in emergent countries like Romania. There still remain unsolved issues regarding comparative disadvantages and less attractive employment in lower paid jobs or with weak perspectives in careers development. The young generations of labour force will migrate for better and more attractive jobs and higher incomes. (Table 1).

**Table 1.** The European cultural and creative sector - Strengths and weaknesses

Plenty of individual talent	but with limited business skills and attracted to the USA (creativity drain)
Some of the largest competitive players at global level	but they lack same power and leverage than the US-based creative industries on governments
A myriad of creative SMEs with strong local presence	market access and undercapitalization problems
Importance of the public sector	but a resistance in taking stock of international challenges
Sustained consumer demand (growth in demand for content)	but poor understanding of consumers’ demand in relation to the digital economy
Strong intellectual property laws in the EU	but poor enforcement in some countries (piracy levels) and subsidizing broadband rollout.

Sources: The economy of culture in Europe, Study prepared for the European Commission (Directorate General for Education and Culture), October 2006, KEA European Affairs

If at the European level we discuss about the comparative advantages offered by USA, Canada or Japan, among the Member States we face important differences between Old and New Member States, between west and east. A report of the Budapest Observatory underlines that employed persons in cultural-creative activities in East European countries are fewer but more qualified: 45% of cultural workers in east-central Europe have a diploma, against 40% in the west. The greatest difference was found in the proportion of part time workers in culture: 8.1% in the east, 26.9% in the west<sup>10</sup>.

### **Employment in Copyright Based Industry in Romania**

After the year 2000 copyright based industries have been developed in the context of a relatively advanced transition of the Romanian economy towards market mechanisms, characterized by the following outstanding features: a) the shift of economic evolution since the year 2000, from negative growth rates of GDP to positive ones and showing a relatively high and sound recovery power of the national economy; b) a substantial increase of the private sector with the highest share in the economy, including a good part of copyright industries, although the public sector in this domain still exists; c) in the general context of population decrease to around 21.6 million inhabitants in Romania, the service sector become dominant in

<sup>10</sup> Source: Cultural Employment in Europe, The Budapest Observatory, <http://www.budobs.org>

relative and absolute terms; d) the convergence process is sustained by labour productivity increases which improve Romania's level of this indicator from 32.10 per cent in 2002 to 40.90 per cent in 2005 compared with the average level of productivity of EU – 25 in the respective years<sup>11</sup>; e) harmonization of legislation between Romania and EU including Intellectual Property Rights and other international agreements and commitments have contributed to a better understanding and enforcement of the law in the field of copyright based industries (Gh. Zaman, V. Vasile and others, 2007).

The Copyright based industries (CIs) is an important activity field with respect to the employment level and the creation of full-time and part-time jobs. The average qualification level of employees is higher than that at national level. The part-time system has met an increasing trend in the copyright-based industries, which will generate in the future significant changes in the employment structure, associated also with a powerful dynamic of new jobs' creation or jobs' replacement. Also, some significant changes have taken place in the work content from CIs, due to both specific technical progress and IT services incorporation. The average qualification level, higher than that at national level, will know an increasing trend based on incorporation of new knowledge, needed skills to operate with new technologies, as well as of modern management methods for creative activities, and of developing the entrepreneurial culture as backbone of career advancement.

CIs employed 180.5 thousand people in 2005 or 4.19% of Romania's total employees exceeding the employed people in mining and quarrying (117 thou persons), gas and water (135 thou. persons), hotels and restaurants (133 thou persons), public administration and defense (159 thou. persons). The highest share of CIs employees belongs to core industries while the smallest number of employees is held by non-dedicated support industries. In annual evolution, there is an important increase in the average number of employees in total CIs (of 1.74) compared to the national economy (of 1.13), especially in the core industries (of 2.31) (Figure 1).

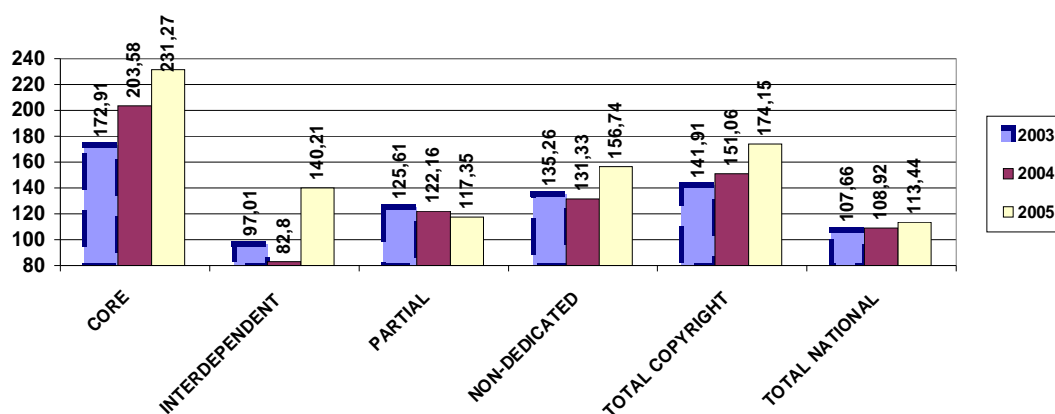


Fig. 1. Dynamics of the average number of employees, 2002-2005 (2002=100)

Source: Ministry of Finance data

This important development is explained by the fact that new domains of CIs have appeared during the transition period due to economic and social changes, liberalization and the new democratic regime. The privatization of State-owned enterprises and the inflow of foreign direct investments have also contributed to the development of CIs and strengthening in spite of the “stop-and-go” evolution of these processes especially at the beginning of the transition to market economy.

<sup>11</sup> See: “Sectoral Operational Programme”, Increase of Economic Competitiveness Government of Romania, Ministry of Finance, June 2007.

The opening of the Romanian economy and society has also contributed to a higher employment in the CIs. Press freedom, increased role of civil society, elimination of censorship represented positive influence factors for new jobs creation in the cultural industries. In this way, the CIs have become a factor of tension reduction on labour market and employment pressure decrease. As result of the sustainable increase of the average number of employees, the share of CIs in total Romanian employment reached a level of 4.19% in 2005. Out of this level, the core industries represent 2.36%, while the non-core industries correspond to 1.83% (Table 2).

**Table 2.** The share of employees' number from the copyright-based industries in total employees' number at national level (%)

	2002	2003	2004	2005
CORE	1.16	1.86	2.17	2.36
INTERDEPENDENT	0.47	0.42	0.35	0.58
PARTIAL	0.79	0.92	0.89	0.82
NON-DEDICATED	0.31	0.39	0.38	0.43
<b>TOTAL CI</b>	2.73	3.59	3.78	4.19

Source: Ministry of Finance and on data from Statistical Yearbook of Romania, National Institute for Statistics

These shares are close to those of some important industries from Romania. For example, for the year 2005, the share of processing industries represented 31.26% out of the total national economy, constructions held 7.63%, transports, storage and communications – 7.0%, transactions with fixed assets and other services – 5.26%, and public administration and defense – 3.66%. *The number of employees grew in CIs 1.5 times faster than the average of the national economy. This indicator was 2.6 times faster for core industries; 1.24 for interdependent industries and 1.4 for non-dedicated ones.* The change in employment was varying compared to the national level, which proves an extensive and continuous process of adjustment of these companies to evolutions and tendencies at national and/or international level. Employment dynamics are also correlated with the legislative developments and with the functionality degree of the created legislative and institutional frame. In the year 2005, the core component industries<sup>12</sup> which attracted the highest level of labour were press and literature, software and databanks.

An important feature for employees in core CIs is the labour force's creativity meaning the ability to create something new, combining the scientific, technological, economic and artistic dimensions in their activities. Therefore, specialists<sup>13</sup> use the term of "creative class" and propose to measure a so-called "creativity index" for both global and local levels. As a paramount parameter of Core CIs, creativity plays an important role in global competition and is fostered by experience exchange, information, and skills within the national and international cooperation, large propagation and spill-over effects. Cultural creative industries have an important share of self-employed and free lancers (writers, visual artists, musicians, crafts people, designers etc.) who are working on a project – basis that offers more adjustment opportunities of the labour force to the market requirements of flexibility and fluctuation.

A large number of core component industries increased their number of employees substantially in 2002-2005, which is explained by the initial low level of the respective industry development, but also by the CORE-CIs' production diversification and the fact that the "immaterial"

<sup>12</sup> The core copyright industries include activities of creation, production, processing, representation, communication, distribution, and sale of copyrighted products, works and materials. An integral part of this sector is represented by the cultural fields in their traditional meaning and those related to the software industry as well- see WIPO classification.

<sup>13</sup> See: Florida Richard, *The Rise of the Creative Class*, 2003; "Means of Overall Assessment of Cultural Life and Measuring the Involvement of Cultural Sector in the Information Society", Report prepared by G.Picard, Mikko Grönlund, Timo Taivonen, for the Finnish Ministry of Education and Culture, 2003, Finland; Hong Kong: Culture and creativity, 2006.



economy has become more and more important. The highest rates of employment growth were in advertisement, theatre and opera, press and literature.

### Some Employment Performances

1. As developing country, Romania is interested in attenuating the gaps regarding the *labour productivity*<sup>14</sup> - an important indicator for the national economy's competition level. The CORE-CIs contributed to the strategic goal of reducing the gaps between Romania and developed economies. The labour productivity level for total CIs, core and interdependent was higher than the average of the national economy for the entire period, this difference in 2005 being respectively of. 1.33:1, 1.51:1 and 1.87:1. The superior values of labour productivity for CIs offer a significant competitiveness and efficiency growth potential with respect to both domestic and international markets, including the convergence process within the member states of the European Union.

**Table 3.** Labour productivity for total CIs and by main components (GVA, current prices /average number of employees- % compared to national level)

	2002	2003	2004	2005
<b>TOTAL CIs out of which:</b>	<b>138</b>	<b>149</b>	<b>121</b>	<b>133</b>
CORE	178	174	154	151
INTERDEPENDENT	206	260	105	187
PARTIAL	57	72	60	64
NON-DEDICATED	91	92	96	92

Source: Ministry of Finance data

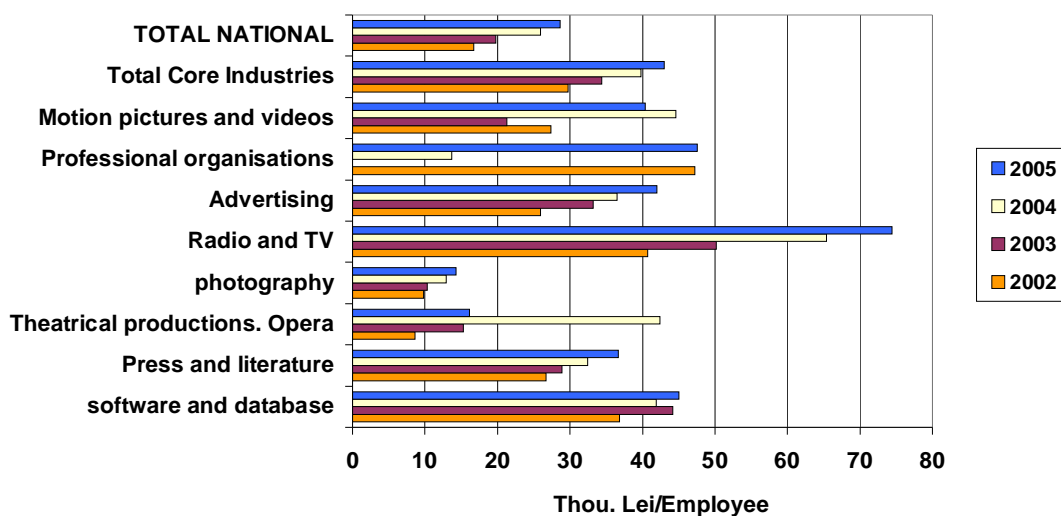
With respect to the dynamics of labour productivity, the highest growth is found for partial, non-dedicated support and interdependent industries. For the core copyright industries, the productivity increase was rather small, which is explained by the fact that the indicator's size has reached a relatively high level against the entire national economy, indicating that future incremental productivities will be relatively hard to obtain. The labour productivity has fluctuated throughout the CIs sector, especially in the interdependent, partial and non-dedicated support industries, while small yearly variations are recorded for the core copyright industries, fact which confirms our previous remark about reaching a given increase ceiling in this case.

Labour productivity in 2005 compared to 2002 in the CORE- CIs was superior to that of the national economy, and it recorded a higher growth rate. The evolution of labour productivity in CORE industries reveals the following outcomes:

- the productivity in the CORE – CIs sector was 1.5 times higher than the average on the national economy;
- the productivity gaps between CORE-CIs and the average per national economy was reduced from 71% to 51%, revealing a convergence trend of the productivity's level between the national economy's industries.

The higher levels of the gross value added per employee were recorded in the radio, television and software industries as well as in the database sector, proving the sometimes higher return on investment in creativity and copyright.

<sup>14</sup> In spite of some statistical difficulties faced, within the study we have calculated the labour productivity indicator in CORE industries as the annual amount of gross value added (GVA) to one employee in order to see in which activities labour force is more or less productive in comparison with CIs and national economy levels. This indicator has to be corroborated with the "return on investment" indicator in order to get a more comprehensive size of the efficiency of main production factors in these industries. Unfortunately, the data on investment are missing so that the only indicator used is labour productivity.



**Fig. 2.** Labour productivity (GVA/employee) for CORE –CIs activities, during 2002 – 2005

Source: www.ListaFirme.ro

The decline in labour productivity is obvious in the following industries for 2005 compared to 2002 (Figure 2): operation of arts facilities; reproduction of video recording; manufacture of television and radio receivers, sound or video recording or reproduction apparatus, and associated goods; printing of newspapers; database activities; publishing of books.

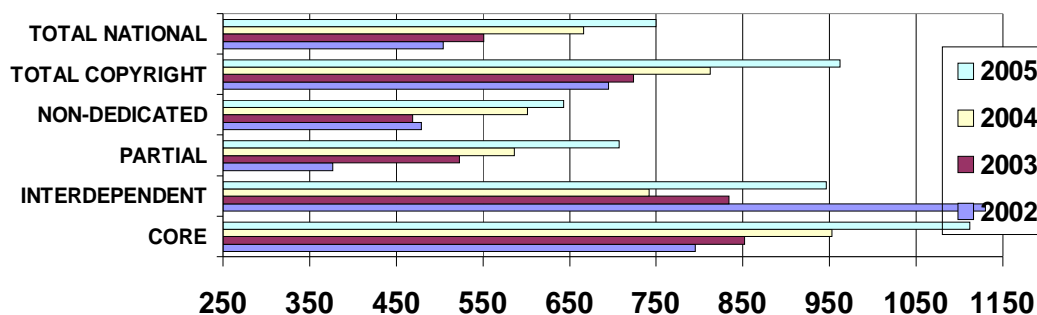
- The share of total CIs' wages bill in total *national wages cost* was 5.35% in 2005 compared to 3.74% in 2002, which is close to the share of CIs' gross value added in GDP. The highest share of total CIs' wage costs belong to core industries (i.e. about 50%), which confirms the importance of this component in the total CIs.

**Table 4.** The share of total CIs' wages cost in total national economy (%)

	2002	2003	2004	2005
<b>Total CIs</b> out of which:	<b>3,76</b>	<b>4,72</b>	<b>4,61</b>	<b>5,37</b>
CORE	1.83	2.88	3,10	3,50
INTERDEPENDENT	1.05	0.64	0,40	0,73
PARTIAL	0.59	0.88	0,78	0,77
NON-DEDICATED	0.30	0.33	0,34	0,37

Source: Ministry of Finance data

Compared to the average of the national economy, the *level of nominal incomes in the CIs* was *higher* for the entire period analyzed, with the exception of partial and non-dedicated support industries (Figure 3).



**Fig. 3.** The average monthly nominal incomes in CIs in 2002-2005 (LEI/month, current prices)

Source: Ministry of Finance data

For the core and interdependent industries, the incomes are over 50% higher than the national level in 2005. A diminishment of the incomes differences of over 30% among CIs components is worth mentioning.

**Table 5.** The ratio between the monthly gross nominal average incomes from CIs and the average at national level

	2002	2003	2004	2005
<b>TOTAL CIs:</b>	<b>138</b>	<b>131</b>	<b>122</b>	<b>128</b>
CORE	158	155	143	148
INTERDEPENDENT	224	151	111	126
PARTIAL	75	95	88	94
NON-DEDICATED	95	85	90	86

Source: Ministry of Finance data

The data regarding the incomes' dynamic reveal a fluctuating evolution, especially for the non-core industries. According to the opinion of the interviewed specialists, a differentiation of incomes can be noticed within the CIs and interdependent industries (to a lesser extent), i.e. a relatively low number of employees obtain very high levels of wages (incomes), while the majority of the other employees obtain relatively lower incomes. This fact could be partially explained on one hand by the relative importance of creativity, and on the other hand by the specificity of the competitive market in this field (positions of monopoly). In 2005, the total value of wages earned by the CORE-CIs' employees represented 3.5% out of the total value by national economy, compared to 1.8%, which was the respective share in 2002. The share had a constant increasing trend for the entire period analyzed as a result of both a more rapid increase in the number of employees and wages' increase especially for highly qualified people hired in creative industries. A number of 5 component core industries, i.e. software publishing, other software consultancy and supply, advertisement, radio and television activities, represent 77.0% out of the total incomes of CORE-CIs, which shows an unequal distribution of wages among the component industries. In these auxiliary activities, as a rule, employees have higher skills and are better paid. The share of educated people with at least an university degree, especially in the art branches, in core industries is significant and is increasing, according to the opinion of interviewed specialists. They represent a valuable intangible asset for firms which create and make a profitable use of new high tech in a competitive globalized context. Of course, only a small proportion of core employed persons will be successful to the extent of being able to make a living from their discovery, innovation and art.

CORE industries with the highest average monthly wages in 2005, were: radio and television activities (2 times as of national level); software publishing (1.7); other software consultancy and supply (1.5); publishing of newspapers and publishing of journals and periodicals (1.2). All these cultural/creative activities are performed by people with tertiary education who are demanded on the Romanian labour market, the demand exceeding the supply. The lowest monthly wages were recorded in 2005 for the following component industries: operations of art facilities; other entertainment activities; bookbinding; fair and amusement park activities; artistic and literary creation and interpretation; other recreational activities n.e.c. In these activities of core industries the wages per employee are relatively lower because they do not need a very high qualification or they are characterized by the so-called "small" creativity or innovation.

3. CIs industries' profitability was measured as *profit/employee ratio*, which, in our opinion is a relevant indicator for the development capacity of an industry. The gross operational profit per employee records high and increasing values in the case of core industries. The interdependent industries had considerable yearly fluctuations, yet their amplitude had a decreasing trend.

Compared to the national level, the operational profit per employee in 2005 was obviously higher for interdependent and core industries and smaller for partial and non-dedicated industries (Table 6).

**Table 6.** The ratio between profit per employee for CIs and profit per employee at national level

	2002	2003	2004	2005
<b>TOTAL CIs</b>	<b>139</b>	<b>185</b>	<b>145</b>	<b>153</b>
<b>CORE</b>	230	213	195	179
<b>INTERDEPENDENT</b>	79	378	108	227
<b>PARTIAL</b>	54	66	50	48
<b>NON-DEDICATED</b>	102	122	118	111

Source: Ministry of Finance data

The average operational profit per employee at the national level was 9.909 thousand Lei in 2005, while in CORE – CIs the indicator was 17,715 thousand Lei which confirms the opinion that core industries represent a dynamic and complex economic sector characterized by a relatively high profitability, being *one of the driving factors for an economic upward evolution*.

With respect to the dynamics of the operational profit per employee, the highest growth rates were recorded for interdependent industries. We can notice significant variations throughout the period for all component industries.

There are big differences regarding the value of the operational profit per employee and its evolution in time among the CORE component industries. The analysis of the CORE-CIs with respect to the size and evolution of the operational profit per employee, both at the overall sector and component industries' level, led us to an interesting and useful classification of the core industries which could be helpful for better decision making and copyright industries policies. This classification intends to establish *a typology of core industry components* (Gh Zaman , 2007<sup>15</sup>) and is based on two economic criteria: the size of profitability indicators for the whole core industry and its components; the dynamics (growth rate) of profitability for the whole core industry and its components over the period 2002-2005. By correlating the size indicators with the dynamic ones for the operational profit per employee, both for total CORE-CIs and its component industries, we can distinguish the followings CORE industries' categories:

1. Highly profitable, *with an increasing trend* - both the size and the rate of the profit per employee is outrunning the CORE-CIs average level. In our research, these industries' categories include: *publishing of books, artistic and literary creation and interpretation*. The strategies adopted for these core industries should aim at further increasing or maintaining the relative advantage investing in creativity and dissemination of knowledge and arts.
2. *Highly profitable industries though on decline* with higher levels of profitability than the core average but with decreasing dynamics. These are: *printing of newspapers; manufacture of television and radio receivers; other software consultancy and supply*. The policy strategies goals for these industries are to hinder the decline and restart growth.
3. Industries *with low efficiency, but on increase*, with the level of profitability below average core industries and higher positive dynamics. These industries are represented by the: *bookbinding; radio and television activities; other entertainment activities n.e.c.; other recreational activities n.e.c.* These industries have to focus their future efforts on increasing

<sup>15</sup> This analyses is detailed in the paper Gh. Zaman, V. Vasile, R. Pârvu, C. Dărășteanu, Contribuția industriilor bazate pe copyright la economia națională a României, Oficiul român pentru drepturi de autor Centrul de studii și cercetări în domeniul culturii, Institutul de economie națională, 2007

the growth rate in order to diminish the gap and overcome the average level profitability of core industry.

4. Industries with low profitability, on decline. The level of profitability is below CORE average – CIs industries and the decreasing dynamics of core industries components. Among these types of industries we mention: publishing of newspapers; other publishing; data processing; photographic activities. The increase in profitability of these activities depends on the one hand and to a greater extent on market demand, which has to be known beforehand, and on the other hand, on the technological change.
5. Industries with a fluctuating evolution which have a more or less variable efficiency in the average level proximity of the whole CORE – CIs sector and include: *publishing of sound recordings; pre-press activities; software publishing; data base activities; motion picture and video distribution; artistic and literary creation and interpretation; operation of arts facilities*. These industries, in fact, are mainly contributing to the formation of the average level of the whole core industry size profitability.
6. Industries which during the analyzed period managed to shift from the area below the CORE average (as both level and rate) to the area above the CORE average. Such industries with a *sensitive profitability “leap”* were specific for: *printing n.e.c.; advertising; motion picture and video production*.
7. Industries which were above the average of CORE-CIs at the beginning of the period (both as level and rate), but ended up with a lower profitability than this average. Profitable industries on strong decline trend are referring to: reproduction of sound recordings; reproduction of video recordings. Their further development is highly related to technological improvements.

Each CORE industries' category from the proposed typology requests specific strategic approaches, policies and action programs in such a way as to keep or improve their economic, financial and socio-cultural performances.

The CIs have a significant potential for new jobs creation, especially for highly skilled and creative employees, that are willing to assimilate new cultural, artistic, scientific and technological knowledge.

Even though the level of performance indicators of employment for cultural-creative industries is higher than the national average, it should be noticed that we still have significant differences in comparison with developed countries such as Germany, USA or Canada, where this level is over ten times higher than that of Romania.

The analyses performed highlighted the increased capacity of putting to good use the work potential of labour force involved in specific activities of cultural-creative industries, but also the high volatility of the activity, with high yearly variations but on an increasing trend of the importance of these activities in the value of output and employment capacity.

It could be appreciated that this sector of activity is still in development, defining its quantitative and qualitative dimensions, establishing its position in the economic and social environment. The capacity of creating attractive and comfortable jobs under the financial and social status aspect represents factors of retaining and valuing the creative potential of young labour force at national level. In this context, the support policies of cultural-creative companies and the legislation for the protection of intellectual property rights shall allow for diminishing the volatility of this sector of activity and for increasing the economic and employment performances (profitability, wage earnings etc.).

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## Ocuparea în cadrul industriilor bazate pe copyright în România. Avantaje și performanțe comparative

### Rezumat

În cadrul tranziției către economia bazează pe cunoaștere, industriile creative/culturale s-au remarcat ca fiind sectorul cu cea mai rapidă creștere. Deschiderea economiei și societății românești au contribuit la creșterea gradului de ocupare în domeniul activităților creative. Noile meserii – job-uri de tip „high-knowledge” din cadrul activităților creative sau din industriile „non-creative” – prezintă o serie de particularități care permit obținerea unor performanțe superioare. În acest articol se subliniază dimensiunile și particularitățile ocupării în cadrul industriilor bazate pe copyright, în special în activitățile fundamentale în România, precum și performanțele forței de muncă. Analiza acestor activități în privința dimensiunilor și evoluției profitului operațional per angajat, atât în sectorul general, cât și la nivelul industriilor componente, conduce la o clasificare interesantă și utilă a acestor industrii, ce poate veni în sprijinul adoptării deciziilor optime și politicilor industriilor bazate pe copyright.