CULTURAL-CREATIVE INDUSTRIES (CCI) – ECONOMIC AND SOCIAL PERFORMANCES

Prof. PhD.Gheorghe ZAMAN
Corresponding member of Romanian Academy, Romania
gheorghezaman@ien.ro
Prof. PhD. Valentina VASILE
Institute of National Economy-Romanian Academy, Romania
valentinavasile2009@gmail.com

Abstract:

Evaluating the economic contribution of CCI represents a relatively new research field triggered especially by the following factors: a) segregation of the CCI group as a relatively autonomous sector of national economies based on copyright and its other correlative rights has an increasing economic-social impact; b) the increasingly higher economic importance of CCI was determined by a complex of economic, social and technological factors among which we mention globalization, knowledge-based society, ITC, the more stronger interspersing between cultural-artistic fields and the economy of intangibles; c) the economic contribution of CCI is aimed mainly at value added (GDP), employment, foreign trade and the role of the state in developing CCI taking into account also their feature of public good.

In the present paper we intend to make a contextual comparative analysis at international level about the macroeconomic contribution of CCI from Romania in the period 2002-2008 on the three aforementioned dimensions, making use of the WIPO methodology for classifying these industries (core, inter-dependent, partial and non-dedicated). Depending on the available data a series of analyses were extended over the year 2009 which marked the beginning of the economic-financial crisis in Romania.

Key words: cultural-creative industries, copyright based industries and other correlative rights, economic and social contribution of CCI.

JEL Classification: K11, O34, Z1, L82

1. INTRODUCTION

Cultural-creative industries (ICC) comprise the activities referring to output and consumption of creative-artistic and scientific products that enter into the economic circuit, create value, generate public incomes through paid taxes and duties, create new jobs and profit, help with regional and national development, and contribute to the foreign trade of the countries. The sizes, creativity and culture are found again, implicitly and explicitly both in the public sector (cultural and educational institutions partially or integrally subsidised by local or national authorities), and in the private sector (companies or non-profit association created as result of private investments). The unprecedented development of the cultural-creative sector is increasingly stronger related to the globalisation process, to the expansion of information and communications technology and, last but not least, to the cultural-artistic and scientific creativity.

Turning autonomous as a complex sector of national economies, CCI have raised a series of questions of theoretic-methodological and practical-applicative nature with respect to components and metrics of their inputs and outputs, the institutional-legal framework of copyright, the character of public goods (positive and negative externalities), the evaluation of the report between the economic and social-humane dimensions of CCI, etc.

The discussions and controversies about measuring creativity by an adequate system of indicators creates a fruitful field for rendering operational a policies' mix in the field of CCI that should contribute to increasing the economic-financial and social performances of CCI.

From the viewpoint of countries' hierarchy according to various indicators of creativity, Romania has unfavourable positions that should stimulate theory and practice from our country specifically towards improving the situation, increasing competitiveness and enrolling on the actual convergence trajectory having as important fact nominal convergence.

According to the computations of the European Creativity Index (ECI), Romania, with 0.16 average value in the period 2001-2007, is placed on the last position in Europe, even if recording an ascending trend which, unfortunately, was necessary but not enough.

Table no. 1. ECI for Romania and some European countries, average of the period 2001-2007

	Global composite index – talent -	**Global composite index – technology -**	**Global composite index - tolerance**	**Aggregated global index – creativity**	**Countries' hierarchy according to ECI (position held)**
Finland	0.46	0.94	0.51	**0.78**	**1**
The Netherlands	0.54	0.82	0.46	**0.67**	**3**
Germany	0.54	0. 90	0.29	**0.58**	**8**
England	0.90	0. 65	0.49	**0.57**	**9**
Hungary	0.13	0. 38	0.74	**0.54**	**10**
Slovakia	0.56	0.18	0.62	**0.44**	**17**
Portugal	0.55	0.29	0.49	**0.39**	**19**
Latvia	0.51	0.13	0.51	**0.36**	**20**
Lithuania	0.42	0.15	0.22	**0.29**	**24**
Romania	0.56	0.01	0.29	**0.16**	**26**
Ratio against the highest value added	62%	1,1%	39,2%	**20,5%**	**-**
Ratio against the lowest value added	4,3 ori	1	1,32 ori	**1**	**-**

Source: A. Bobircă, A. Drăghici, S. Dumitrescu, O. Mihuţ, Măsurarea Economiei Creative – Studiu de caz România, The Romanian Economic Journal, nr. 34, 2009, pag. 117-144

We notice Romania's ranking first from the viewpoint of the growth rate (dynamics) of the indexes Creative Class (where the country is on the first position) and Human Capital. This situation specific to the developing countries (low level and high dynamics for CCI indicators) practically highlights for a given period a favourable catching-up (rattrapage) position against developed countries which in order to become efficient must also be "sustainable" on long- and very long-terms.

Table no. 2. Composite annual indexes creativity for Romania

Year	**Talent index**	**Technological index**	**Tolerance index**	**Creative Class Indices**	**Human Capital Indices**
2001	8.66	0.93	9.55	10.27	10.15
2002	9.99	0.93	9.56	11.31	13.75
2003	10.48	1.00	11.17	11.33	14.90
2004	11.17	1.03	10.43	11.78	16.05
2005	11.23	1.15	8.70	11.86	15.57
2006	11.34	1.26	8.04	12.40	15.86

Source: *After*, A. Bobircă, A. Drăghici, S. Dumitrescu, O. Mihuţ, Măsurarea Economiei Creative – Studiu de caz România, The Romanian Economic Journal, nr. 34, 2009, pag. 117-144

In our study we shall dwell on the level of the dynamics and structure of the economic and social contribution of CCI in Romania, as compared with other countries using for the first time in specialised literature in our country the CCI classification methodology suggested by the World

Intellectual Property Organisation.

2. EVALUATIONS REGARDING THE ECONOMIC CONTRIBUTION OF THE CCI SECTOR IN ROMANIA, BASED ON THE WIPO

Creative industries (1) represent a key-element of the knowledge-based economy which stimulates to an increasing extent the use of cultural heritage, tourism growth, ideas and imagination of the nations as assets with an increasing role in economic growth (Towse R., 2002). Measuring creativity, respectively its impact on economic and social life becomes necessary, because: a) creativity represents a support factor for knowledge-based economy development; b) incorporating the outcomes of the creative act in economic and social life generates development; c) impact of intangible capital (assets) use becomes more and more decisive for ensuring performance and competitiveness in production/services processes.

2.1. Theoretical-methodological aspects

The notion of CCI, as shown in Guide WIPO 2003, represents groups of activities of certain dimension and structure "which can be statistically identified and measured" comprising the following categories: CI - **Core** (the basic "core" industry of CIs); **interdependent** CI; **partial** CI; **non-dedicated** CI. CCI are characterised by the fact that the copyrighted works immediately after being generated, imply much lower costs with their reproduction and dissemination, particularly for the digitalised ones. Delivering on the market a creation work at marginally relatively low costs of reproduction and dissemination cannot generate the required incomes for recovering total costs generated by their first time production.

The WIPO methodology is based on the "copyright factor", which reveals the attributed contribution of activities *i* to the realisation of products incorporating innovativeness under the protection of copyright. The copyright vector is defined as $w = (w_1, w_2, ... w_n)$ where the weight w_i is meant to represent the respective percentage of value added to the activity *i* which depends directly on copyright. In terms of weights, core activities have the weight 1, and non-related activities have a weight 0. The weight following to be attributed to each related activity is strictly between 0 and 1, and the exact values of these weights make the subject of experts' estimations. The increase of specific products' and services' value and the diversification of activities which incorporate elements of intellectual property heighten the importance of activities for determining the copyright factor and make necessary the periodical re-evaluation of activities included in non-core categories. The issues in attributing the weight begin, actually, when the precise point is analysed in which related activities cease and where non-related activities begin. In reality, if we take into account globalisation and the dynamics of technological progress absorption, as well as the creativity content of new niche fields which develop, it is extremely difficult (probably impossible) to ponder about an economic activity which is completely unrelated to copyright products. The analysis based on conditionality, although imposing debatable conceptual restrictions constitutes currently the WIPO agreed on way for developing studies on countries and build a "map" and typology of countries under the aspect of using applied "innovativeness" in economic and social progress, in maintaining/developing comparative advantages on specific goods and services market. The total value of copyright contribution to GDP is given by: $A = C + \sum_{h+1}^{k} w_i x_i$ In relative terms, copyright contribution to GDP is given by: $Y = \frac{C + \sum_{h+1}^{k} w_i x_i}{T}$ As result we assume that C is just a small percentage of T and as long as x_{h+1} is just one activity of the economy, it shall be almost insignificant in relation to T, hence the right side of this equation cannot be much higher than approximately 0.05. On the other hand w_{h+1} must be rather closer to 1 (as the activity classified on position $h+1$ is the most dependent on copyright from those outside the core). Thus, we might assume as certainty that such a division has indeed as outcome $Z > Y$. The majority of studies suggest that the total value added of the core varies between approximately 3% and 5% in total GDP (R.Watt, 2004 (2)). Based on the outcomes of national studies, Watt develops this correlation and assumes that $C = 0.04T$, and the related group of activities constitutes half of the unweighted total value added, respectively $R = 0.5T$. Recent developments and the orientation towards underscoring the absorption of RDI outcomes as support factor of market competitiveness and developing new economic-social activities/fields suggest an increase of the inter-branches/activities interdependencies and intensified links. The sphere of dependent activities shall expand due to the one with 0 impact factor, and the value of the impact factor shall record shift trends towards 1. In our opinion the methodology for estimating the CCI impact on macro-economic indicators must be developed by associating qualitative models that would “measure” the impact of externalities generated by the absorption of RDI outcomes and increased creativity in enhancing measurable economic and social performances (productivity, profitability, employment, “triggering”, competitive advantage, etc.).

2.2 CCI economic contribution for Romania. Estimates based on the WIPO methodology

The copyright factor was applied on the indicators on activities resulted from processing data from the Structural Survey on Enterprises realised on a yearly basis by the National Institute of Statistics for the period 2002-2008 (for which data could be determined at CANE rev. 1.4 digits level) (3). On the date of elaborating the present study, no survey data were available for the year 2009, and no recalculation of the indicators was retroactively operated in accordance with CANE rev. 2, which is currently applicable.

The economic contribution of CCI sector for Romania was determined for the first time on the occasion of developing the study “Economic contribution of copyright-based industry in Romania” under WIPO (4) coordination. In the period 2002-2008 (for which a comparable set of data was available) the copyright industries were developed in the broader context of a more or less coherent and consistent transition to market economy mechanisms, characterised by the following essential features: a) change of the development direction of the national economy as of 2000 from negative GDP growth rates to positive rates and emergence of consistent signs of improvement and recovery power of the national economy; b) substantial increase of the private sector, which currently has the highest weight within the economy, including with respect to the largest part of copyright-based industries; c) population decreased from 21,8 to 21,6 million inhabitants as consequence of the low birth rate, a negative natural birth rate and of labour force migration abroad, particularly of high-skilled labour force; d) the services sector became dominant in absolute and relative terms (53.4% of the labour force) as result of a relative decrease of the primary and secondary sectors, of the Romanian society’s digitalisation and swifter development of some public and financial services; e) labour productivity level increased from 32.10% to 40.90% against the average productivity level in EU-25 in the period 2000-2005; f) Romania’s joining NATO in 2004 and the EU accession in 2007 were active factors of development, stability and security, the estimated accession costs being lower than the benefits on the medium- and long-term time horizon; g) harmonising legislation between Romania and EU, including the field regarding Rights of Intellectual Property and of other international agreements and undertakings in complementary fields which have contributed to the better understanding and strengthening of the support legal framework for copyright industries.

The ascending dynamic of Romanian industry (with a GDP growth of 7.3% in 2008/2007, the highest at EU-27 level) was brutally halted by the propagation of the economic and financial crisis effects on the economy. The economic constriction was harsh and more accelerated than initially estimated (-7.1% in 2009/2008 and an official estimate of at least -2% in 2010/2009), associated with significant diminishments of the purchasing power of customers for CCI products and services (both natural and legal persons, i.e. economic agents) (5). The trend on medium- and long term is of expanding and intensifying the links between products and services incorporating copyright and of developing the other activity sectors, the absorption of technological progress generating an increasing trend of copyright activities' impact on the entire economy. On medium-term the activities that **do not** incorporate support goods and services based on copyright, either directly or indirectly, shall decrease significantly.

Due to these considerations, we regard as natural the development of the CCI sector's structure for the indicator enterprises and for the one of employed population on the 4 groups of activities.

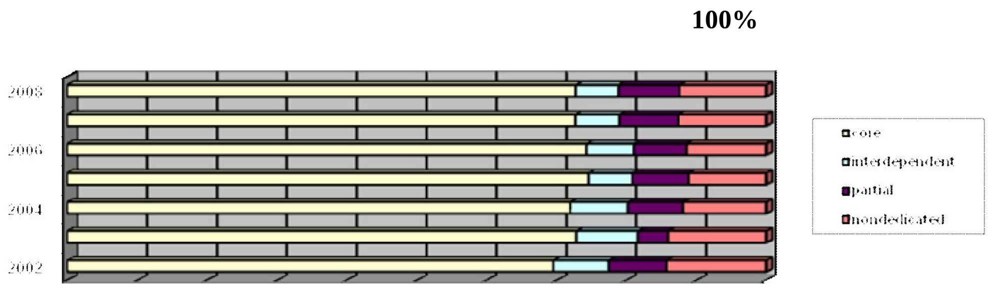

Figure no.1. Structure of the number of enterprises pertaining to the CCI sector, in Romania, for the period 2002-2008

Source: Own processing based on NIS data. Structural survey on enterprises

On the other hand, the slower growth of employed population from CCI in total national employment, as compared with the share of enterprises from the CCI sector in total enterprises, reveals that the CCI sector in its entirety, but especially "core" activities ensure the highest volume of human factor use in the business environment, putting to good use a better trained labour force segment, as a rule, also younger, against the average age of employed persons and with an educational and employment profile that can sustain competitiveness and the development of activities requested on medium- and long-term, strengthening the employment structures of the future.

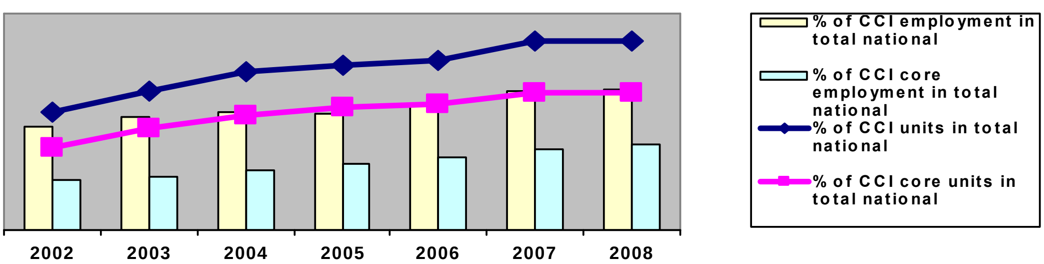

Figure no 2. CCI sector position within the national economy after the number of enterprises and employment (% in total national)

Source: Processing based on NIS data, Structural survey in enterprises

Paid employment rate in the CCI sector activities is high and on increase, representing almost 91% in 2002 and 94% in 2008. This reveals the rather high rigidity of the labour force employment models for CCI activities, the employment typology differing from the one in developed EU member countries.

For the analysed period, paid employment in the core copyright sector doubled, a fact which highlights the increased importance and growing demand for goods and services incorporating innovativeness, respectively the more extensive use of RDI outcomes.

On activities of the CCI sector, paid work increases significantly in the “core” sector reaching to about 2/3 of total number employees in 2008.

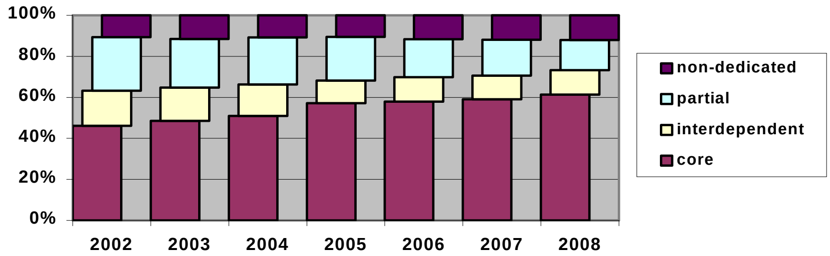

Figure no 3. Paid work structure on CCI categories of activities in the period 2002-2008 **-%-**
Source: Processing based on NIS data, Structural survey on enterprises

Real wage earnings for CCI activities increased for the analysed period to lower shares than the national average. Facilitating factors of wage increases in the CCI sector were: a) increase of the average skills level of newly employed within the sector; b) wage increases for employees as result of the policy for attracting and retaining on the national market expert personnel; c) increased taxation associated to labour incomes based on contributions to the social funds; d) labour productivity growth from 63 thousands lei/employed person in 2002 to 197 thousands lei. The activities from the interdependent and partial sub-groups have recorded a superior growth of the sector and of the national average which might be partially explained by the propagation effect in using some goods and services which incorporate innovative ideas, procedures and mechanisms, or in the case of artistic activities “unique products”. Additionally to activities based exclusively on copyright, support services are developed which allow for distribution, wide-scale dissemination of direct and indirect products generated by the “core” activities. The growth of the CCI sector was realised both extensively by creating companies, and intensively by developing the existing ones due mainly to investments which imposed also an increase in the professional exigency level for new employees and more performing jobs, fact contributing to the renewal of the employment structure.

The global analysis of CCI sector contribution to Romania’s economic development underpins the evolution of the CCI-core industries’ sector contribution from 2.52% (2004) to 3.94% (2007) in creating gross value added at national level, with annual oscillations and slight decrease trends in 2008, on the background of marked economic-financial crisis, which in the case of CCI was signalled far before the one in other sectors.

The contribution of gross value added of CCI was of 3.4 billion lei, in 2002, and it increased to about 14 billion lei in 2008 which represented about 6.3% from the macroeconomic level of the respective indicator. On components of the CCI sector the following percentage contribution is found:

- „core" copyright activities 60%;
- interdependent and partial industries 30%;
- non-dedicated industries 10%.

In the period 2002-2008, in the case of "core" industries was recorded a growth of 9 pp of their weight in total CCI value added, whereas for interdependent and partial industries a corresponding decrease took place, the weight of non-dedicated industries' group remaining constant.

This structural modification was due to the 2.85 times growth of the gross value added from core industries, of 1.85 times for partial and interdependent industries, and of 2.3 times in non-dedicated ones. Within the general growth trend of CCI weight in total GDP there are still recorded variations of its size from one year to the other, which illustrates the "volatile" character of the branch for which the incomes are very sensistive to the influence and conjecture of internal and external factors of supply and demand, including for those pertaining to the "business cycle". The CCI field proved to be relatively sensitive to "fiscality" and other conjectural influence factors – legislative, political, cultural, institutional, and environmental ones, etc. The largest share of the value added of CCI was held by Core-CCI, about 60% in the years 2005-2008, which confers to it the role of a factor with strong propagation effect for the other components (interdependent, partial and non-dedicated).

A significant contribution to creating total gross value added of the sector, and at national level as the second important category of the CCI industries was the one of interdependent industries, with respectively 1.17% in 2005 and 1.88% in 2003-2004. Partial and non-dedicated industries had a contribution of less than 1 percent to creating gross value added at national level, respectively partial CCI 0.48% (2008) and, respectively, 0.63% (2002), and the non-dedicated 0.59% (2007) and, respectively 0.76 % (2003).

Table no 3. CCI sector's contribution to creating gross value added at national level, on groups of component industries in the period 2002-2008 (%)

	2002	2003	2004	2005	2006	2007	2008
Total CCI from which:	6,36	6,76	5,70	6,25	6,36	6,61	6,31
Core	3,18	3,59	2,52	3,93	3,62	3,94	3,75
Interdependent	1,87	1,88	1,88	1,17	1,48	1,53	1,43
Partial	0,63	0,53	0,59	0,53	0,52	0,55	0,48
Non-dedicated	0,67	0,76	0,71	0,62	0,75	0,59	0,64

Source**:** Processing based on NIS data, Structural survey on enterprises.

As different from non-core components, where the weight in total value added of the branch had higher or lower variations from one year to the other, in the case of Core-CCI the trend is identified of increasing the weight on medium-term with certain annual oscillations which represents a confirmation of the increasing importance of copyright protected industries, or of creative-cultural industries, under the conditions of the knowledge-based society, and of the information and communication technologies, the growth potential of which in Romania is at still insufficiently valued levels. This weight of CCI in GDP is equal to or even higher than the weight of some branches of processing or extractive industries with tradition in the Romanian economy.

2.3. Analysis of the outcomes of CCI industries activities and economic performance Turnover.

Goods and services realised in the CCI sector in Romania have summed up 9873 mill. RON in 2002 and have increased up to 46391 mill. RON in 2008 (current prices) which represented 3.6%

and, respectively, 4.8% from total value of the turnover realised at national level. As annual evolution, an oscillating dynamic is found but on an increasing trend, with a growth in 2008, as compared with 2002, of almost 2.8 times on total CCI and even higher being the growth in "core" and non-dedicated industries. The CCI turnover exceeded the national average in each year of the analysed period, being of 1.35 in 2008.

Gross value added per employed person in the CCI sector represents in 2002 about 22 thousands lei/person, as compared with only 13 thousands lei/person at national level. This higher ICC capacity to realise plus-value is maintained for the entire analysed period, yet with the gradual diminishment of the dynamic gap of the value added of CCI and total value added, which highlights achieving a certain development threshold of some of the most dynamic activities of the CCI sector.

In the year 2008, a value added was obtained of about 60 thousands lei/employed person in the CCI sector, against the less than 50 thousands lei at national level. On CCI components, the highest capacity of creating value is recorded by the CCI-interdependent sector, and thereafter by the group of core-industries which, also, form the "hard" core of the cultural-creative branches with impact and the strongest propagation effects for contemporary economies.

CCI profitability. Even though the CCI goods and services have a strong dimension specific to public goods, with higher or lower time lags, depending on legal regulations and shares of counterfeit and "piracy", the aspects related to their profitability represent a sine qua non criterion of economy on the competition market. Therefore, we consider as useful the analysis of CCI profitability which, to different shares, leaves its mark on the future development of these industries, hence on increasing their economic contribution. Of course, one of the biggest issues for the process of economic growth remains the allocation of profit for future investments in the CCI field, in other fields or for consumption. Global gross profitability (as gross value added to 1000 lei turnover) in the case of CCI-"core" industries as absolute value of the indicator was of 1.3 – 1.8 times higher than the national average and recorded as dynamic annual variations over and under the average value at national level.

The gross outcome of the exercise (to total gross profit) of companies pertaining to the CCI sector recorded a quasi-constant absolute growth for the entire period, and the weight of its contribution to total value at national level being diminished from 12.1% in 2003 to little more over 7% in the year 2008.

In 2003 the profit rate within the ICC sector oscillated between 4.5% and 18.3%, and in 2007 between 5.4%-21.2%. In 2008 these differences decrease, same as the average profitability to turnover varying between 3.3% and 9.3%. The economic crisis affected earlier and stronger CCI industries which had not only to limit investments in business development but also their profitability margin. Less affected were interdependent and non-dedicated CCI-core industries, and most affected being partial industries. The propagation effect of CCI-core industries, from the viewpoint of profitability, is much more emphasised in partial industries than in the interdependent ones, the performance volatility being present also in this situation, fact which highlights that the CCI sector still remains a strongly emergent sector with probabilities of more efficiently valuing the resources and creativeness potential of the attracted labour force. Of course, not al CCI components were affected to equal extent by the crisis, just as their profitability was not uniform. What must be remembered is the fact that "core" industries based exclusively on copyright represent the engine of the other CCI components (interdependent, partial and non-dedicated) which could not expand without the background ensured by the "core" sector.

Foreign trade. Circumscribed to an ascending trend, the exports' dynamics of the "core" and "non-core" branches of CCI have recorded variations from one year to the other, which confirm not only annual oscillation of the CCI output due to internal factors but also to the external conjecture and to the incapacity of maintaining a relatively constant level of Romanian exports. These oscillations, to a good extent, are explained also by the strong influence of the factor "fashion" which presupposes a higher creation, adjustment and absorption capacity of the Romanian economy. The modest power of Romanian companies of imposing brands at domestic and external level represents another instability factor in the export of copyrighted products.

Leaving aside the group of non-dedicated activities, the annual average growth rate of direct exports of the CCI sector was constantly superior to the one at national level in the years 2006-2008, particularly due to the marked dynamic of CCI-core industries. On the other hand, the imports of products and services of CCI in Romania exceeded several times the volume of Romanian exports which leads to the conclusion that CCI represented a sector with unfavourable influences on the chronic negative balance of Romania's trade balance. In addition, the imports' prices were a lot higher than the ones of export which still has to improve the competitiveness and internal and external performance parameters.

3. ESTIMATIONS ABOUT THE LEVEL AND DYNAMIC OF THE CCI SECTOR FROM ROMANIA IN COMPARATIVE INTERNATIONAL CONTEXT

By international comparisons between Romania and developed countries it results that CCI in Romania are still at modest levels, but in a dynamic expansion process. The record contribution of these industries was registered in the US economy, where total copyright industries have employed 5.38 million employees in 2005 (8.49% from total US employees).

In developed countries is registered a more noticeable development of the CCI sector, the contribution to GDP and employment being superior to the world average of 5.68% from GDP and 6.03% from employment.

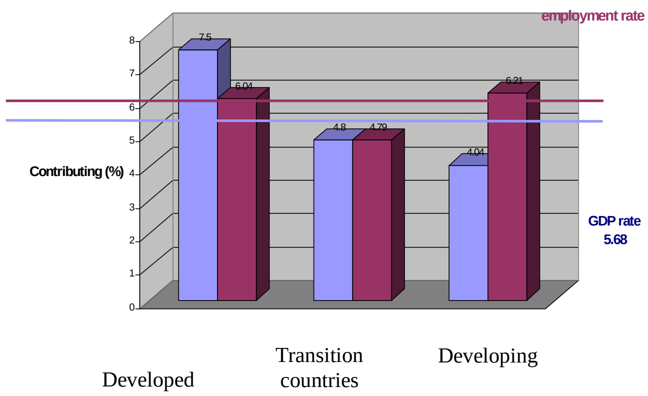

Figure no.4. Contribution of CCI industries on groups of countries in GDP and employment

A synthesis of the studies on countries highlights as leaders USA and Australia with respect to CCI share to GDP, and Mexico and the Philippines to employment (6).

Table no.4. Economic contribution of copyright-based industries determined in accordance with WIPO methodology

Country	Year of Reference	Copyright-based industries contribution to GDP - %					Copyright based industries contribution to employment- %				
		Total	Core	Interdependent	Partial	Non-dedicated	Total	Core	Interdependent	Partial	Non-dedicated
Bulgaria	2005	2,81	1,57	0,62	0,09	0,52	4,30	2,29	0,73	0,27	1,0
Jamaica	2005	4,81	1,7	0,74	0,47	1,9	3,03	1,79	0,31	0,23	0,68
Lebanon	2005	4,75	2,53	0,71	0,62	0,89	4,49	2,11	0,73	0,70	0,95
Mexico	2003	4,77	1,55	1,69	0,85	0,68	11,01	3,41	3,65	2,53	1,41
Philippines	1999	4,82	3,50	0,96	0,04	0,29	11,10	8,81	1,4	0,2	0,6
Canada	2004	4,7	3,5	0,81	0,08	0,31	5,4	4,0	0,91	0,16	0,33
Hungary	2002	6,66	3,96	1,24	0,45	1,0	7,1	4,15	1,25	0,61	1,07
Latvia	2000	5,05	2,9	1,1	0,28	0,77	5,59	3,7	0,7	0,44	0,75
Singapore	2001	5,67	2,85	1,76	0,09	0,97	5,80	3,64	1,24	0,18	0,74

USA	2004	11,09	6,48	2,13	0,40	2,08	8,53	4,07	2,17	0,26	2,03
Australia	2007	10,30	7,30	2,0	0,40	0,70	8,0	4,97	1,81	0,57	0,65
Croatia	2004	4,27	2,99	0,88	0,32	0,07	4,64	3,22	0,93	0,41	0,08
Romania	**2005**	**6,25**	**3,93**	**1,17**	**0,53**	**0,62**	**4,30**	**2,47**	**0,47**	**0,90**	**0,46**
	2008	**6,31**	**3,75**	**1,43**	**0,48**	**0,64**	**5,18**	**3,16**	**0,59**	**0,72**	**0,71**
Columbia	2005	3,30	1,90	0,80	0,30	0,40	5,80	1,70	0,70	1,90	1,50
Russia	2004	6,06	2,39	0,76	0,27	2,64	7,30	4,29	0,75	0,56	1,69
Ukraine	2005	2,85	1,54	0,68	0,10	0,54	1,90	1,16	0,46	0,08	0,20
The Netherlands	2005	5,9	4,0	0,4	0,9	0,6	8,8	6,2	0,6	1,1	1,0

Source: WIPO's Framework and Experience in Surveying the Economic Contribution of the Creative Industries, Dimiter Gantchev, Creative Industries Division, WIPO, Bucharest, Romania, February 18, 2009.

Romania takes a middle position for both indicators.

On types of activities, there are significant differences on countries, yet a structural typology can be extracted which places press and literature activities, in average, on the first place with about 40% contribution to GDP and 44% contribution to employment based on studies on countries, with an increasing trend of the share of software activities in GDP, which tends to become equal to the share of radio and TV activities.

With respect to labour force employment, software activities has a higher capacity of attracting personnel (16%) as compared with radio TV activities (11%) and those of musical, theatre and opera production (12%) or the advertising ones (9%).

Against a number of member- and candidate-EU countries, employment in CCI-core activities was more diminished in Romania. At the same time there are also EU member countries where the respective weight was lower than in Romania, which reveals the specific conditions of each country. We notice that in 2002, Romania was closer to France and Portugal as weight of employment in CCI in total number employment.

In event that the employment contributions of CCI-CORE and CCI-Interdependent are taken together, it can be seen that the gap between Romania and the other EU member countries is maintained, and this can be explained by a "spillover" effect of CCI-CORE which is higher in developed countries than in Romania.

At the level of cultural industries' sector level, in accordance with Eurostat data, employed population in culture for EU-27 was in 2005 of 2.4%, with a maximum of 3.8% in the Netherlands and Iceland, and with just 1.1% in Romania.

CCI represents a strategic sector for investment policies. Increasing the volume of expenditures with investments in intangible assets is an actual fact both for developed countries and developing ones, being a proof of CI economic contribution to knowledge-based economy and to information society, driven by scientific and cultural-artistic creativity.

Table no.5. Development of the ratio dimension intangible assets/turnover in 1999-2003 (%), for the creative sector. Components

Country	**Years**				
	1999	**2000**	**2001**	**2002**	**2003**
Austria	0,2	0,1	5,1	5,0	2,5
Belgium	1,4	3,5	3,0	2,6	2,3
Cyprus	…	…	…	…	…
Czech Republic	…	…	…	0,0	12,4
Denmark	3,0	8,9	9,7	10,7	7,9
Estonia	1,5	3,2	2,5	1,4	1,4
Finland	2,7	2,4	2,3	2,6	4,7
France	4,1	4,2	4,7	4,5	4,2
Germany	…	2,5	2,5	1,2	1,1

Greece	1,7	3,0	2,8	2,2	2,5
Hungary	0,6	1,9	1,8	1,3	1,9
Ireland	1,1	13,9	11,4	11,5	12,3
Italy	3,2	3,6	4,0	3,4	3,6
Latvia	0,8	0,7	0,7	0,7	0,8
Lithuania	11,3	11,2	11,0	11,2	11,9
Luxemburg	0,0	0,5	0,0	1,1	0,8
Malta	…	…	…	…	…
The Netherlands	15,2	7,6	12,7	11,4	6,0
Poland	0,7	…	…	0,8	1,2
Portugal	1,0	1,1	1,6	1,8	1,5
Slovakia	0,5	0,5	0,3	0,3	0,3
Slovenia	1,7	1,5	4,6	2,3	0,7
Spain	3,2	4,0	3,5	3,2	2,9
Sweden	5,6	5,3	6,0	4,9	4,4
United Kingdom	6,3	11,1	11,8	9,0	8,4
Bulgaria	1,3	3,9	1,6	1,5	1,3
Romania	0,6	0,6	0,7	0,9	1,2
Norway	5,6	4,4	5,1	5,0	4,9
Iceland	4,2	4,3	2,4	4,2	4,2
Total EU 25	3,6	4,3	4,9	4,0	4,2
Total 30 countries	3,5	4,2	4,5	3,9	4,0

Source: The Economy of Culture in Europe, Study prepared for the European Commission (DG for Education and Culture), Oct. 2006.

As compared with EU-25 countries, EU-12 countries (the New Member-States) have lower percentage weight of investments in creativity and knowledge. For instance, this weight was in 2003 of 1.2% in Romania, against 8.4% in Great Britain, 12.3% in Ireland, 6% in the Netherlands, etc. However, this discrepancy between groups of countries is less marked than in the case of productivity and profitability gaps. At the same time, a relative stability or lower variation of the respective share can be seen for almost all countries in the analysed period.

4. CONCLUSIONS

CCI are characterised by the fact that copyrighted works and services as soon as they were produced, their reproduction and distribution, particularly for the digitalised form requires much lower costs. Supplying the market with creation works at relatively low marginal costs of reproduction and distribution, cannot generate the necessary incomes for recovering total costs originated by their first-time production. Identifying copyright-based industries allows for developing indicators and models for measuring the economic and social impact. The activities based on copyright cover a large sphere of the economic and social environment, less and less activities being completely independent. Understanding the development potential provided by the cultural-creative industries' sector allows for promoting intervention/support policies for valuing intangible assets, generated and protected by intellectual property rights.

Currently, the contribution of the copyright sector reached a significant relevance threshold according to output indicators at macroeconomic level. By its dynamics which is about 2.5 times higher than the average of economic development, by positive externalities which are generated and the attributes associated with the knowledge society, CCI represents a significant factor of structural change at economy's level, and in an employment multiplier, of generating new, performance jobs on a sensible interface segment with the international trade of goods and services. The main activities which generate products subject to copyright law are: editing activities, radio/TV activities, software development, music, film, and advertisement.

By and large, employed population in the cultural sector is comparatively younger against the national average, creativity and performance in some fields being specific to young ages (artists, ICT experts, etc.). If at EU-27 level over 2/3 from the employed in culture were between 25-49 years of age and another 10.2% between15-24 years of age, there are countries where young up to 24 years of age represent over 20% (Latvia) or 18% (Malta, the Netherlands, Iceland).

In Romania, only 7% from employed population is of up to 24 years of age and over 2/3 are between 25-49 years of age. Very talented young are not retained on the culture market from Romania, as they leave abroad where the labour market is substantially wider and the young can develop exceptional professional careers.

We mention that employment flexibility is diminished within the cultural sector in Romania, as compared with other EU-27 countries, which reflects: a) the inertial of the old employment system and the lack of in-depth reforms of the sector under the aspect of employment opportunities; b) low innovativeness, weak-performances management and rigid institutional structures, unadjusted to the dynamics of the European model of CCI sector's development.

Rendering modular working time and flexibility under the aspect of at-home job opportunities are particularities of CCI activities to which the necessary importance is still not given.

Some of the main conclusions and remarks resulting from the analysis of the CCI sector, based on the WIPO methodology, target the following aspects:

- The copyright-based industries' sector (CCI) underwent significant quantitative and qualitative development in the period 2002-2008, as result of the in-depth changes occurred within the Romanian economy and society in the transition process to democracy and regulated competitive market mechanisms, due to the fact that the preparation for European Union accession took place, the functionality degree of the market increased, the volume of foreign investments recorded unprecedented growth, and the private sector became predominant.
- CCI represents ***<u>a dynamic sector of the Romanian economy</u>*** which comprises a large diversity of fields, sectors and sub-branches and is characterised by high volatility, depending on the intensity of internal and external influence factors which affect copyright as source of incomes and national wealth.
- The weight of CCI in GDP exceeded the ones of manufacturing industry such as chemical fibres, rubber and plastics, real estates' activities, computers and of related activities which ascertains the potential and importance of the CCI branch, currently and in perspective.
- According to the CCI weight in GDP, Romania is placed among the countries with an average size of this indicator, as in US this weight was of 11.12% in 2005, and 11.09% in 2004 (Copyright Industries in the U.S. Economy: The 2006 Report).
- Both in Romania and in other countries which analysed the CCI contribution to GDP, a medium-long-term growth is found with respect to CCI weight in GDP which means the increasing contribution of this sector to economic-social development in countries with various development levels.
- The CCI sector has an important potential of job creation, particularly for highly-skilled, creative individuals which are inclined towards assimilating new cultural-artistic, scientific and technological knowledge.
- The most important component of CCI was the one called "CCI-CORE" from the viewpoint of the labour force employment weight which comprises: programs' editing; consulting and supplying software products; printing papers and other printing activities; editing books,

papers and magazines; advertisement; radio and TV activities. Advertising, theatre and opera, press and literature were the most dynamic sectors with respect to labour force employment.

- **Labour productivity** in CCI-CORE, computed as value added per employed person in Romania was in 2002 of 19.980 Euro and of 46575 Euro in 2008, that is, almost 10 times lower against the value achieved in developed countries (Germany, USA, Canada etc.).
- CCI-CORE **industries' profitability**, computed as share of gross profit in turnover for the period 2002-2008, reveals a diminishment of the indicator from 5.40% to 5.08%. During the entire period, CCI-core profitability was placed on higher levels against the national average, even if a decreasing trend was recorded from 11.4% in 2002, 12.5% in 2005, to 9.3% in 2007 and to 4.7% in 2008. The diminishment of the profitability indicator is explained both by increased competition, but also by its high level in the initial functioning periods as result of a much higher demand than supply and the modest level of the CCI-CORE output.
- The most profitable components of CCI-CORE were in 2005: artistic and literary creation and interpretation; activities related to data banks; digitalised data processing; consulting and other software products; reproduction of audio recordings.
- The nominal gross average wage level in copyright industries against the average on national economy was 1.27 times higher for total CCI, 1.4 times for CCI-CORE and 1.8 times for interdependent ones.

*

* *

The sustainable CCI sector development, within the national economy imposes a *strategic vision on long term* and policy instruments corresponding to each stage of the process, taking into account the interference between the economic, social, and environmental pillars of Romania's sustainable development, as well as the *educational, behavioural and relational impact* that may be induced by copyright at individual, and social group level, and for the society in entirety.

A **strategic approach** of the CCI sector requires also implementing and developing adequate *statistical instruments* and indicators at national, regional and local level.

ENDNOTES:

(1) In the specialised literature, parallel to the notion of CI (copyright-based industries) also other categories are used, more or less related or with an overlap/delimitation degree such as "cultural industries" and "creative industries". (Caves R.E. 2000). Cultural industries are considered as an auxiliary sector of creative industries and comprise tourism, and cultural heritage, museums, libraries, sport, as well as a wide range of other cultural events at local, national and international level. At the same time, cultural industries are centred on supplying social, cultural values and not necessarily some values measurable in monetary terms.

(2) Richard Watt, A Comment: The "Copyright factors", Review of Economic Research on Copyright Issues, 2004, vol.1(1), p.71-78.

(3) The major objectives of the study for evaluating the CCI sector based on the WIPO methodology took into account measuring the total economic contribution, and on components of CI determined, mainly, based on the following indicators: **output and value added; labour force and employment; foreign trade**. Starting from these basic indicators we attempted to determine also other derived performance and structural indicators of output and costs for the entire CI sector as compared with the average level on national economy. The analysis was extended also with respect to the CI influence on the Romanian economy also from the viewpoint of indicators regarding wages, the gross exploitation surplus, profit, investments. At the same time we performed comparisons inter- and intra-branches on categories of "core" and "non-core" industries (interdependent, partial and non-dedicated). Our analysis refers to the period 2002-2008 when Romania's economy after a strong decline generated by transition costs to market economy succeeded at macroeconomic level to gain an ascending trend, recording growth developments of GDP, improving the parameters of macro-stability and of

market mechanisms functionality. The research pursued, at the same time to catch the influence of several quantitative and qualitative factors on size and structure of CI economic contribution among which we mention the availability of production factors (labour and capital), volume and dynamics of demand, interference with upstream and downstream industries, the evolution of the business climate and state intervention.

(4) The Economic Contribution of Copyright-Based Industries in Romania, no.3, Study Case Romania, (co-author) January 2010, p.163-249. http://www.wipo.int/ip-development/en/creative_industry/pdf/ecostudy_romania.pdf

(5) The lack of statistical data does not allow for the time being to determine the GDP loss as result of economic activity shrinking, but according to preliminary estimates, due to the specific particularities of the sector, of the increased dynamics and flexibility of the activity and economic and social use of specific products and services, the activity constriction was relatively lower but with high differentiations on types of activities. In average, it was lower for ICT applications' sub-sector, mass-media products and relatively more considerable for entertainment and recreational activities industry.

(6) Performing an international comparative analysis between Romania and other countries with respect to the economic contribution of CI components took into account the similarity of methodological approaches with other countries; final report elaborated by Robert G.Picard, Timo E.Toivonen, Miko Grondlund entitled: „The Contribution of Copyright Related Rights to the European Economy", Final Report 2003 which comprises data regarding CI of EU-15 in the year 2000; the paper „National Studies on Assessing the Economic Contribution of the Copyright - Based Industries, Creative Industries", Serie No.1,2 and 3 World Intellectual Property Organization, which comprises national reports for a series of countries such as Singapore, Canada, USA, Latvia and Hungary (vol.1.); Philippines, Mexico, Jamaica, Bulgaria, Lebanon (vol.2), Columbia, Croatia, Romania, Russia, Ukraine (vol.3); the paper „The Economy of Culture in Europe", UNESCO Culture Sector, The Global Alliance for Cultural Diversity, Brussels, 2006.

LITERATURE

1. Arundel A., Hollanders H. (2008), Innovation Scoreboards: Indicators and Policy Use. In C. Nauwelaers and R. Wintjes (eds.), "Innovation Policy in Europe".
2. Banacu, C. S. (2006), Evaluarea dreptului de autor (Authorship Evaluation), Tribuna Economică, 2006.
3. Bobircă A., Drăghici A., Dumitrescu S., Mihuţ O. (2009) Măsurarea Economiei Creative – Studiu de caz România, The Romanian Economic Journal, nr. 34, 2009.
4. Bowen H.P, Sleuwaegen L., (Vlerick Leuven Gent Management School), Moesen W. (Catholic University of Leuven) (2006), A Composite Index of the Creative Economy, http://ideas.repec.org/p/vlg/vlgwps/2006-31.html
5. Cardona, Jeannine (2002), Cultural Statistics in Europe: Updates and Trends, a paper presented at The International Symposium on Culture Statistics: "Statistics in the Wake of Challenges Posed by Cultural Diversity in a Globalization Context", Québec.
6. Caves, R. E. (2000), Creative Industries: Contracts between Art and Commerce. Cambridge, Massachusetts, Harvard University Press.
7. Constantin I. (1996), Proprietatea intelectuală şi succesul în afaceri (Intellectual Property and Success in Business), Editura Rentrop & Straton, Bucureşti, 1996.
8. Moldoveanu M (2005) Industrii culturale I şi II - Colecţia Biblioteca Economică, Seria Probleme Economice vol. 171 - 172, 186 - 187, CIDE.
9. Moldoveanu M. (coord.), Mucica D., Ciutacu C., Ioan-Franc V. (2003), Fundamentarea strategiei de dezvoltare a culturii. Abordare sectorială pentru programul naţional de dezvoltare a României 2004-2006, institutul de Economie Naţională, contract cu Ministerul Culturii din România.
10. Moldoveanu M., Ioan-Franc V. (1997), Marketingul şi cultura, Editura Expert, Bucureşti; (2000) Managementul culturii: universul rural, Editura Expert, Bucureşti.
11. Moldoveanu M., Mucica D., Vasile V., Ioan-Franc V. (2005), Cultură, culte, industrii culturale-principii, obiective strategice, direcţii de acţiune 2007-2013, Colecţia Biblioteca Economică, seria Probleme economice, vol. 168-169-170, CIDE.

12. Piedras E., (2004), The Value of Culture: Economic contribution of Industries, Protected by Copyrights in Mexico, Sept.30.2004.
13. Ţiţan E., Todose M. (2010), Abordări teoretico-metodologice de măsurare a contribuţiei industriilor cultural-creative la dezvoltarea economică sustenabilă, The fifth International Conference on Economic Cybernetic Analysis: Efficiency of social and economic anti-crisis policies, 14-15 mai 2010.
14. Todose D., Ţiţan E., Todose M. (2008), Cultural Industries Indicators in Romania: Possibilities And Determinaton Limits", The 48th Congress of the European Regional Science Association", University of Liverpool, Anglia, 27-31 august 2008**;**
15. Zaman G., Vasile V., Pârvu R., Dărăşteanu C. (2008), Industriile bazate pe drepturi de autor şi conexe, http://culturadata.ro/PDF-uri/contributia%20industriilor.pdf.
16. Zaman Gh., Vasile V., Economic contribution of copyright-based industries and impact on employment and performance indicators in knowledge-based society developing in Romania, Romanian Journal of Economics, Anul XIX, vol. 28 Nr. 1(37)/2009, Ed.Expert, ISSN 1220-5567, p.27-53.
17. INS, Anchetă structurală în întreprinderi pentru perioada 2002-2008.
18. *** World Intellectual Property Organization, Introducere în proprietatea intelectuală, Editura Rosetti, Bucureşti, 2001.
19. *** World Development Report 1997, The State in a Changing World, Septembrie 1997
20. *** World Intellectual Property Organisation, Guide on Surveying the Economic Contribution of the Copyright-Based Industries WIPO Publication, Geneva, 2003.