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Hristina Mikić
Institute for Creative Entrepreneurship and Innovation
Paraćin

Branko Radulović
University of Belgrade
Faculty of Law
Department of Economics

Miljan Savić
Balkan Center for Regulatory Reform
Belgrade

CREATIVE INDUSTRIES IN SERBIA: METHODOLOGICAL APPROACHES AND ECONOMIC CONTRIBUTION*

Kreativne industrije u Srbiji – metodološki pristupi i ekonomski doprinos

Abstract

This paper examines the relative importance of creative industries (CI) in Serbia and provides a critical review of the existing methodological approaches that may be used in order to determine the economic contribution of these industries. We also present the results for the period from 2014 to 2017. To show the relative contribution of creative industries, we used the narrow DCMS approach that focuses only on core creative industries. We also provide additional results for what we refer to as the "broad approach". In 2017, narrowly defined CIs contributed 3.9 percent to the total GVA and 3.7 percent to the total GDP, while the broadly defined CIs contributed 7.8 percent and 7.5 percent, respectively. Other indicators provide additional support regarding the importance of CIs in Serbia. The average annual growth rate of the number of narrowly defined CI entities amounts to 5.6 percent (8.4 percent for broadly defined CIs which is 6 percentage points higher than the average growth rate in the national economy – 2.01 percent). Employees engaged in narrowly defined CIs represent 3.3 percent of the total number of employees in Serbia (5.6 percent in the broadly defined CIs). IT, software and computer services subsector contributes the most of all CIs to the economy. In 2017, this subsector contributed more than 60 percent to the total narrowly defined CI GVA, (more than 55 percent to broadly defined CI GVA).

Keywords: *creative industries, Serbia, gross value added, methodological approaches, economic contribution.*

Sažetak

Rad razmatra relativni značaj kreativnih industrija u Srbiji i pruža kritički pregled postojećih metodoloških pristupa koji mogu biti korišćeni radi određivanja doprinosa ovih industrija. Takođe, prikazujemo rezultate doprinosa kreativnih industrija u Srbiji u periodu od 2014. do 2017. godine korišćenjem „užeg" DCMS pristupa ograničenog samo na osnovne kreativne industrije (uži pristup). U radu prikazujemo i dodatna merenja doprinosa kreativnih industrija na osnovu pristupa koji definišemo kao „širi pristup". U 2017. godini uže definisane kreativne industrije doprinele su 3,9 procenata ukupne BDV i 3,7 procenata ukupnog BDP-a, a šire definisane industrije 7,8 procenata i 7,5 procenata, respektivno. Drugi indikatori takođe ukazuju na značaj kreativnih industrija u Srbiji. Prosečna godišnja stopa rasta broja privrednih subjekata u okviru užeg pristupa merenju kreativnih industrija iznosi 5,6 procenata (8,4 procenta za širi pristup, što je za 6 procentnih poena više od prosečne stope rasta u celoj ekonomiji - 2,01 procenat). Lica zaposlena u uže definisanim kreativnim industrijama čine 3,3 procenta ukupnog broja zaposlenih lica u Srbiji (šire definisne kreativne industrije doprinose ukupnom nivou zaposlenosti sa 5,6 procenata). Podsektor IT, softverskih i računarskih usluga ima najveći udeo kada je u pitanju doprinos pojedinačnih sektora kreativnih industrija srpskoj privredi. U 2017. godini, ovaj podsektor generisao je više od 60 procenata ukupne BDV uže definisanih kreativnih industrija (više od 55 procenata kada je u pitanju širi pristup klasifikaciji).

Ključne reči: *kreativne industrije, Srbija, bruto dodata vrednost, metodološki pristupi, ekonomski doprinos.*

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Introduction

Recent years have witnessed a growing interest in the economic literature on creative industries (CIs) as an important contributor to the economic growth and development [1], [3]. This was accompanied by increasing economic evidence on the size and relative importance of creative industries, as well as discussions on CI impact and spillovers to the rest of economy. In Serbia, as in other countries, creative industries have raised increasing interest in academia. The economic significance of CIs in Serbia has been extensively researched by Jovičić and Mikić [13], Mikić [16], [17], [18] and Radulović et al. [20]. These studies applied different concepts, methodologies and measures to assess and compare Serbia to other countries. This paper critically reviews the existing literature and methodological approaches and provides new results regarding the economic contribution of creative industries in Serbia for the period from 2014 to 2017. Having in mind the lack of a unified approach to the analysis of CIs, one of the main goals of this paper is to provide a better understanding of the existing methodological nuances.

Methodological approaches

The definition of creative industries is the subject of much debate [21]. The term "creative industries" originated from the Australian Government's adoption of the national strategy "Creative Nation" in 1990s, yet it gained attention after it was popularized by the British Department for Digital, Culture, Media and Sport (DCMS). DCMS defines CIs as "industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property" [25, p. 4], [26]. The DCMS approach emphasizes the importance of technological CIs (in contrast to industries that may be viewed as traditional cultural industries) [1, p. 21]. Though most commonly used in literature, the definition was the subject of extensive academic debate, primarily having in mind its potential practical and theoretical limitations, including but not limited to the problems of accurate measurement, the conflation of culture and cultural policy with economy and the coherence of the umbrella term and category itself [14, pp. 4-5].

Several other institutions also provided their perspective on how creative industries may be defined. The EU definition is more comprehensive having in mind that it includes both cultural and creative industries (CCIs). They are defined as "industries that are based on cultural values, cultural diversity, individual and/or collective creativity, skills and talent with the potential to generate innovation, wealth and jobs through the creation of social and economic value, in particular from intellectual property" [9]. Previously, several documents adopted a prescriptive definition of cultural and creative industries with the list of activities included in this concept. In other EU policy documents, CCIs are mostly defined as "industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional" [6, p. 6], [5], [7], [8]. UNCTAD defines creative industries as cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as their primary inputs. They constitute a set of knowledge-based activities and are focused on, but are necessarily not limited to, arts, and they potentially generate revenues from trade and IPR. These industries comprise tangible products and intangible intellectual or artistic services with creative content, economic value and market objectives, they are at the crossroad among the artisan, services and industrial sectors and constitute a new dynamic sector in the world trade [27, p. 13].

Substantial effort has been made to classify and categorize creative industries in literature. However, there are several closely related concepts. While both cultural and copyright-based industries are often (and mistakenly) used as synonyms to creative industries, there are subtle differences that should be taken into account [24], [30]. Multiple supranational organizations as well as several national bodies have recognized different activities as "cultural and/or creative industries". For example, there are studies done by UNESCO [28] and Mikić [18] that were focused on the classification of creative and cultural industries. The term "cultural industries" may be defined as a set of activities that produce and distribute cultural goods

or services and embody or convey cultural expressions, irrespective of their potential commercial value [18, p. 8].

Similar distinction exists between creative and copyright-based industries. WIPO approach regarding conceptualizing and measuring the economic contribution of CIs comes from the perspective of copyright value. The WIPO model is based on the copyright chain that covers creation of content that represents intellectual property and distinguishes between core and non-core copyright industries (interdependent, partial and non-dedicated industries) [29], [30].

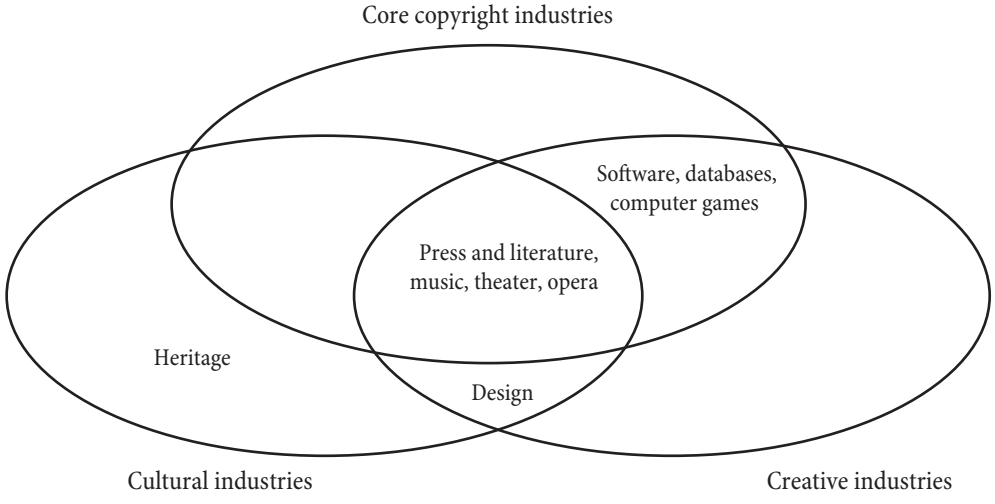
During the last decade, great effort has been made to resolve these methodological issues and define specific activities to be treated as creative (or cultural or copyright-based) industries [24], [30]. While some authors merge cultural and creative industries and perceive them as a single phenomenon [19], it is now well recognized that cultural, creative and copyright-based industries cover similar but somewhat different domains. Figure 1 shows those different concepts and their intersections [30, p. 44]. Industries related to national heritage are not considered to be creative, yet cultural industries. Similarly, industries related to design are considered both creative and cultural, but not core copyright industries.

The differences arising from the usage of different concepts may not necessarily be moderate. Single approach does not fit all countries. For example, the concept of cultural industries is much more suitable for countries where the state has a key role in the promotion and governance of diversity of cultural expressions, while creative industries are more appropriate to the countries focused on interrelation between IT and cultural content. Comparative research studies on this topic show that there is no unique approach to the measurement of CIs and that each new study has brought a new way of measuring [16, p. 61].

There are three methodological approaches regarding the measurement of CIs. The first, industry-based approach determines industries that use creativity as a major input in the production process [4, pp. 2-3]. The second, occupational-based approach determines occupations that can be categorized as creative [10], [11]. The third, combined approach represents a combination of the first two approaches, adding economic contribution of creative occupations from non-creative industries to the industry-based approach [12], [22].

In this paper, we will apply the narrow industry-based DCMS approach that focuses only on core CIs. To show the impact of broader interpretation of CIs and for the sake of comparison with several EU countries, we will also provide a measurement based on what we refer to as the "broad" approach. This approach is partially based on the methodology adopted by TERA for selected EU member states and expands the list of CIs as industries that "produce and distribute creative products aimed at mass reproduction, mass dissemination and exports" [23, p. 14]. Hence, it also considers industries such as printing, retail

Figure 1: Mapping of the core copyright (WIPO, 2015), cultural (UNESCO, 2009) and creative (DCMS, 2001) industries



Source: The chart is adapted from [30, p. 44].

trade of specific goods and telecommunication activities to be creative industries. However, when using the broad approach our estimates are limited only to the core segment of CIs and exclude economic contribution of non–core creative industries (interdependent industries and non-dedicated support industries). TERA study mimics the WIPO methodology that also provides estimates of the economic contribution of non–core creative industries. These non-core creative industries are to a lesser extent related to copyright-protected materials. Interdependent industries are industries engaged in the production and sale of equipment whose function is to facilitate the creation, production or consumption of cultural products, while non-dedicated support industries are industries engaged in the broadcast, communication, distribution or sales of the cultural products. The inclusion of non-core industries creates substantial methodological difficulties with respect to attribution, decisions on selection of industries that are defined as non-core industries, data availability, etc. As a consequence, adding the non-core CIs may be a rather vague exercise that heavily relies on imputations and approximations. Their inclusion may bias the results and inflate the impact of core creative industries [2]. Hence, the broad approach of core CIs in our paper provides for estimates that are only directly attributable to creative industries. Even these estimates, based on the broad approach by including borderline industries, inflate the contribution of CIs.

Data and methodology

To measure the economic contribution of CIs in Serbia, we have used the data from the Serbian Business Registers Agency (SBRA) obtained from financial statements of registered entities (companies and entrepreneurs) in creative industries for the 2014-2017 period. The calculation of economic indicators for public entities (that are not registered in SBRA) was based on budget users' reports collected by the Statistical Office of the Republic of Serbia (SORS). The baseline data from 2010 were extrapolated by yearly change of the number of employees in those activities. For specific industries, corrections were made by including partial financial records for the entities registered under a business activity code that is not covered by our classification, but are nevertheless operating and providing services in creative industries. The most common example may be found in media industries. For example, very often the core registered activity of media companies may be cable communication or telecommunications services and cable distribution, even though they conduct main business activities in the field of broadcasting. Table 1

Table 1: Baseline economic indicators for measuring the economic contribution of CIs

Indicator	Description	Source of data
Business activity	No. of businesses in CIs by size	SBRA
	No. of businesses in CI subsectors by size	SBRA
	No. of new businesses in CIs	SBRA
GVA	GVA of CIs or CI subsectors in absolute terms	SBRA; SORS
	Share of CI value added in the GVA of total economy (%)	SBRA; SORS
	Share of CI subsectors in total GVA of CIs in absolute and relative terms	SBRA; SORS
GDP	GDP of CIs in absolute terms	SBRA; SORS
	Share of CI GDP in the GDP of total economy (%)	SBRA; SORS
Employment	Share of CI employees in total employment (%)	SBRA; SORS
	Share of CI subsectors' employment in total employment in CIs in absolute and relative terms	SBRA; SORS
Export value	Value of export of creative goods in absolute terms	UNCTAD data on international trade
	Share of CI export in total country/regional export (%)	UNCTAD data on international trade
	Increase of export value of CIs (%)	UNCTAD data on international trade
Business performance indicators	Productivity (in EUR)	SBRA
	Total R&D expenses (in EUR million)	SBRA
	Total R&D expenses (in EUR) as % of total business revenues	SBRA
	Export revenue in total business revenue (%)	SBRA
	Value of intangible assets (in EUR)	SBRA

Source: Adapted from [18, p. 19].

provides an overview of indicators for measuring the economic contribution of CIs in Serbia.

Gross value added (GVA) is calculated at current prices by using the income approach. Export value of creative goods is calculated based on the international trade data. This approach was chosen due to the possibility of precise identification of creative goods by sub-analytical product codes.

Narrowly defined CIs include 30, while broadly defined CIs include 51 SIC industry codes (based on the KD 2010 classification). Following the UK DCMS approach, the narrowly defined industries are classified in nine CI groups: 1) advertising and marketing, 2) architecture, 3) crafts, 4) design, 5) film, TV, video, radio and photography, 6) IT, software and computer services, 7) publishing, 8) museums, galleries and libraries and 9) music, performing and visual arts. Based on the classification adopted by TERA, in addition to including most (though not all) SIC codes of the narrow approach, the broader approach comprises codes that are related to printing and related services, retail sale of CI-related products, and most importantly telecommunications services. Table 2 provides an overview of groups and industries that constitute both the narrowly and broadly defined CI sector.

Economic contribution of creative industries in Serbia

The share of CI businesses in Serbian economy may be considered relatively significant. Narrowly defined CI estimates in 2017 are based on 24,089 registered business entities (enterprises and entrepreneurs), including 8,001 enterprises, 16,088 entrepreneurs and 362 public institutions. Broadly defined CI estimates in Serbia are based on 32,908 registered business entities (enterprises and entrepreneurs), including 10,832 active enterprises (approximately 10.1 percent of total number of enterprises), 22,076 entrepreneurs (approximately 9.93 percent of total number of entrepreneurs) and 541 public institutions. The number of CI businesses demonstrates a rising tendency during the 2014-2017 period compared to the rest of Serbian economy. The average annual growth rate of the number of CI enterprises and entrepreneurs was 5.6 percent (broadly defined CIs – 8.4 percent, 6 percentage points higher than the average growth rate of business formation in the national economy – 2.01 percent).

Broadly defined CI sector is predominantly composed of small and microenterprises (23.8 percent of the total number) and entrepreneurs (67.5 percent). The analysis shows that CIs are characterized by a large number of micro organizations with less than 3 employees. There is a high level of sectoral fragmentation in CIs compared to the national economy. However, these overall indicators hide a strong heterogeneity within different subgroups. There is a rather low number of registered enterprises and entrepreneurs in certain branches of CI, which demonstrates underdeveloped value chains, major barriers to entry (human resources, financial, technical, etc.) and non-profitability or instability of particular CI markets (e.g. video gaming, trade in music records and video, renting music and video records, printing newspapers, museum, galleries and libraries).

Almost 14.1 percent of total start-ups in the last 4 years in Republic of Serbia belonged to the creative industries domain. New enterprises in creative industries achieved an average annual growth rate of 3.25 percent, while the same indicator for the whole economy was 2.1 percent. With respect to sectoral distribution of new entrepreneurs, the leading domain is design and creative services, such as graphic design, followed by film and video production. Those activities comprise approximately 50 percent of the total number of new CI entrepreneurial start-ups. New entrepreneurs in creative industries had an average yearly growth rate of 22 percent, while the same indicator for the whole economy was 5.8 percent.

Gross value added (GVA) of the narrowly defined CIs in total GVA was 3.91 percent in 2017, while the broadly defined CI GVA contribution in total GVA was significantly higher, at 7.83 percent. However, in the beginning of the analyzed period, the GVA contribution of the broadly defined CIs was 6.7 percent. Therefore, the increase of the CI share in the total GVA in the economy was about 1.17 percentage points in a short period of only three years. Table 3 provides an assessment of GVA and GDP for the 2014-2017 period, using both narrow and broad approaches.

Table 2: CIs (narrow and broad definition) – division and classification according to SIC 2010 (NACE Rev. 2)

Creative industries group	Activity	SIC code	Narrow	Broad
Advertising and marketing	Public relations and communication activities	70.21	+	
	Advertising agencies	73.11	+	+
	Media representation	73.12	+	+
	Market research and public opinion polling	73.20		+
	Other information service activities n.e.c.	63.99		+
Architecture	Architectural activities	71.11	+	+
	Engineering activities and related technical consultancy	71.12		+
	Technical testing and analysis	71.20		+
Crafts	Manufacturing of jewelry and related articles	32.12	+	
Design	Specialized design activities	74.10	+	+
Film, TV, video, radio and photography	Retail sale of telecommunications equipment in specialized stores	47.42		+
	Motion picture, video and television programme production activities	59.11	+	+
	Motion picture, video and television programme post-production activities	59.12	+	+
	Motion picture, video and television programme distribution activities	59.13	+	+
	Motion picture projection activities	59.14	+	+
	Radio broadcasting	60.10	+	+
	Television programming and broadcasting activities	60.20	+	+
	Wired telecommunications activities	61.20		+
	Wireless telecommunications activities	61.30		+
	Satellite telecommunications activities	61.90		+
	Photographic activities	74.20	+	+
IT, software and computer services	Publishing of computer games	58.21	+	+
	Other software publishing	58.29	+	+
	Other telecommunications activities	62.01		+
	Computer programming activities	62.02	+	+
	Computer consultancy activities	62.03	+	+
	Other information technology and computer service activities	62.09		+
	Data processing, hosting and related activities	63.11		+
	Web portals	63.12		+
	Retail sale of computers, peripheral units and software in specialized stores	47.41		+
	Repair of computers and peripheral equipment	95.11		+
Publishing and printing	Printing of newspapers	18.11		+
	Other printing	18.12		+
	Pre-press and pre-media services	18.13		+
	Binding and related services	18.14		+
	Retail sale of books in specialized stores	47.61		+
	Retail sale of newspapers and stationery in specialized stores	47.62		+
	Book publishing	58.11	+	+
	Publishing of directories and mailing lists	58.12	+	+
	Publishing of newspapers	58.13	+	+
	Publishing of journals and periodicals	58.14	+	+
	Other publishing activities	58.19	+	+
	News agency activities	63.91		+
	Translation and interpretation activities	74.30	+	+
Museums, galleries and libraries	Library and archive activities	91.01	+	+
	Museum activities	91.02	+	+
	Operation of historical sites and buildings and similar visitor attractions	91.03		+
Music, performing and visual arts	Reproduction of recorded media	18.20		+
	Sound recording and music publishing activities	59.20	+	+
	Performing arts	90.01	+	+
	Support activities to performing arts	90.02	+	+
	Artistic creation	90.03	+	+
	Operation of art facilities	90.04	+	+

Table 3: GVA and GDP – total, narrowly and broadly defined CIs, 2014-2017

	2014	2015	2016	2017
Total GVA (current price, bn RSD)	3,257.177	3,346.183	3,749.021	3,946.351
CI GVA (current price, bn RSD) (narrow)	82.4	88.4	119.3	156.5
CI GVA (current price, bn RSD) (broad)	216.8	237.5	266.1	309.2
CI GVA (current price, bn EUR) (narrow)	0.7	0.7	0.9	1.2
CI GVA (current price, bn EUR) (broad)	1,8	2.0	2.1	2.5
Exchange rate EUR	117.31	120.73	123.67	120.80
Contribution of GVA in total GVA - % (narrow)	2.53%	2.64%	3.18%	3.91%
Contribution of GVA in total GVA - % (broad)	6.66%	7.10%	7.09%	7.83%
Total GDP (current price, bn RSD)	3,908.469	4,043.467	4,521.264	4,754.368
CI GDP (current price, bn RSD) (narrow)	98.1	105.3	142.1	178.7
CI GDP (current price, bn RSD) (broad)	258.1	282.5	304.3	358.7
% of total GDP (narrow)	2.51%	2.61%	3.14%	3.76%
% of total GDP (broad)	6.60%	6.99%	6.73%	7.53%

Source: Authors' calculations.

Table 4: Structure of CIs (narrow concept) by distribution of GVA, 2014-2017

	2014		2015		2016		2017	
	Current prices, bn RSD	As a % of total CI GVA	Current prices, bn RSD	As a % of total CI GVA	Current prices, bn RSD	As a % of total CI GVA	Current prices, bn RSD	As a % of total CI GVA
Advertising and marketing	10.5	12.7%	10.3	11.6%	11.1	9.3%	9.03	5.77%
Architecture	2.9	3.6%	3.5	4.0%	4.7	4.0%	2.7	1.73%
Crafts	0.58	0.7%	0.42	0.5%	0.43	0.4%	0.49	0.31%
Film, TV, video, radio, photography	11.3	13.8%	16.1	18.1%	16.4	13.7%	19.6	12.55%
Design	1.7	2.1%	1.3	1.5%	0.89	0.7%	1.03	0.66%
IT, software and computer services	30.2	36.7%	31.6	35.7%	60.5	50.7%	98.2	62.75%
Publishing	14.4	17.5%	14.6	16.5%	14.1	11.8%	13.9	8.87%
Museums, galleries and libraries	4.04	4.9%	4.5	5.1%	4.4	3.7%	5.6	3.57%
Music, performing and visual arts	6.6	8.0%	6.2	7.0%	6.7	5.6%	5.9	3.78%

Source: Authors' calculation.

Using the narrow approach, advertising and marketing, publishing, film, TV, video, radio and photography and IT, software and computer services subsectors have the largest share of total CI GVA in the 2014-2017 period. However, the dynamics of the aforementioned subsectors is significantly different. In 2014, at the beginning of the analyzed period, the shares of the total CI GVA of the first two subsectors were 12.7 percent and 17.5 percent, respectively. Both of these subsectors recorded a significant decline of their share of the total CI GVA in 2017. Namely, in 2017, that share declined by more than 50 percent, amounting to 5.77 percent and 8.87 percent, respectively. The third subsector retained its share in the total CI GVA in 2017 and also recorded a small uptick. On the other hand, IT, software and computer services subsector captured approximately 37 percent of the total CI GVA in 2014, but showed a significant increase in the meantime and more than doubled its share in 2017, reaching 62.75 percent of the total CI GVA. This is consistent with the findings from other studies that also conclude that the ICT sector has become one of the most propulsive sectors of the economy, with high growth rate of operations which came from outsourcing and entering into license agreements with international partners [31, p. 227]. Table 4 provides a detailed assessment of the structure of CIs by distribution of GVA during the period from 2014 to 2017, using the narrow concept.

Table 5 provides the same sort of analysis, but focuses on the broad approach, thus allowing more businesses to qualify as part of the CI. Using this approach, the advertising and marketing subsector recorded a significantly smaller share in the total CI GVA. Other subsectors labeled as

significant in the narrow approach exhibited similar results, with the exception of the IT, software and computer services subsector which had a dominant share of the total CI GVA in 2014 (50.9 percent) and consequently showed a significantly smaller increase in share in 2017 (57.37 percent). Table 5 provides a detailed assessment of the structure of CIs by distribution of GVA during the 2014-2017 period using the broad concept.

Importance of the CI sector for employment

In 2017, a total of 69,139 persons were employed in narrowly defined CIs, while in broadly defined CIs there were 115,899 employees in total. This represents 3.3 percent of the total number of employees in Serbia (broadly defined CIs contributed to the total employment with 5.6 percent). However, CI employment is mostly flexible and project-oriented (preformed under outsourcing, service or copyright agreement), hence "invisible" in registered employment data. Temporary employment accounts for about 11 percent of total employment, as opposed to the economy average where this form of employment accounts for 5.8 percent. The need for permanent hiring of employees in CIs is comparatively small as CIs often hire freelancers or resort to outsourcing to creative entrepreneurs. Nevertheless, the total increase in CI employment is 14.17 percent from the aspect of narrow approach, and 12.7 percent from the aspect of broad approach. Table 6 presents the comparison of employment figures in narrowly and broadly defined CIs from 2014 to 2017.

Employment in CIs is quite specific and this sector mainly employs highly educated temporary workers (about 15 percent of total employment). More than half of the employees are highly educated people, which indicates strong cultural capital within these industries. Also noteworthy is the fact that less than 1 percent of the total employees in CIs represent unqualified and low-skilled workforce. Again, this is in contrast to the economy average where their share is approximately 20 percent.

The IT and software and film and video subsectors represent the most important employment group with about one third of the total number of employees in CIs

Table 5: Structure of CIs (broad concept) by distribution of GVA, 2014-2017

	2014		2015		2016		2017	
	In current price, bn RSD	As a % of total CI GVA	In current price, bn RSD	As a % of total CI GVA	In current price, bn RSD	As a % of total CI GVA	In current price, bn RSD	As a % of total CI GVA
Advertising and marketing	12.1	5.6%	11.9	5.3%	13.1	4.9%	12.5	4.05%
Architecture	19.8	9.1%	24.4	10.9%	28.9	10.9%	32,1	10.37%
Film, TV, video, radio, photography	33.5	15.5%	37.7	16.8%	38.5	14.5%	47.9	15.45%
Design	1.7	0.8%	1.3	0.6%	0.89	0.3%	1.03	0.33%
IT, software and computer services	110.1	50.9%	111.1	49.4%	144.2	54.3%	177.8	57.37%
Publishing and printing	28.1	13.0%	27.4	12.2%	28.4	10.7%	25.9	8.35%
Museums, galleries and libraries	4.3	2.0%	4.6	2.0%	4.6	1.7%	6.5	2.10%
Music, performing and visual arts	6.6	3.1%	6.3	2.8%	6.8	2.6%	6.2	2.00%

Source: Authors' calculation.

Table 6: Employment in CIs, 2014-2017

	2014	2015	2016	2017
Total employment	1,698,000	1,896,295	1,920,679	2,062,588
CI employment (narrow)	60,557	63,889	65,314	69,139
CI employment (broad)	102,839	106,768	110,574	115,899
% of total employment (narrow)	3.57	3.37	3.40	3.35
% of total employment (broad)	6.06	5.63	5.71	5.61
Growth rate of CI employment (narrow)	1.5%	5.50%	2.23%	5.85%
Growth rate of CI employment (broad)	4.23%	3.82%	3.56%	4.81%

Source: Authors' calculation based on administrative employment data from SBRA and the Statistical Office of the Republic of Serbia.

(narrow definition). The crafts and architecture subsectors have the smallest number of employees and those sectors only represent approximately 1.2 percent and 3.2 percent of the total number of employees in CIs, respectively. The shares of different domains of CIs between 2014 and 2017 remained quite stable, with the notable exception of the IT sector whose share nearly doubled during this period, which corresponds with the rise in its share of the total CI GVA. The public sector accounts for about 42 percent of total employees in narrowly defined CIs (about 33 percent for broadly defined CIs). More than 65 percent of personnel in all public CIs were employed in museums, galleries and libraries, music, performing and visual arts and television programming and broadcasting. Tables 7 and 8 show the comparison of employment figures between narrowly and broadly defined CIs during the 2014-2017 period.

The average annual growth of employment in the narrowly defined CI sectors was 4.7 percent in the observed period, while the annual growth in the broadly defined sectors was 4.23 percent. This growth could have been even higher had it not been for the decline in the levels of employment in the film, TV, video, radio and photography subsector. The reduction of employment in radio and TV activities was mainly caused by the transformation of state-owned broadcasting services since they employ more than 45 percent of the total number of employees in this subsector.

The concentration of employment is proportional to the market share of leading companies in several branches. For instance, the top-ranking media companies employ approximately 55.6 percent of employees in the branch; in the film industry, the three biggest telecommunications companies (Telekom, SBB and VIP) absorb approximately 75 percent of employees in the branch, etc.

Exports of the CI sectors

The creative goods are defined as goods conveying ideas, symbols, ways of life, different cultural values and other creative expressions and whose production requires a reasonably significant level of creativity. UNCTAD classification of creative goods covers 6 creative goods

Table 7: Employment distribution by CI groups, narrow approach (number of persons vs. share %)

Creative industries group	2014	2015	2016	2017	2014	2015	2016	2017
Narrow CI concept	No. of persons				% of total			
Architecture	1,437	1,543	2,105	2,235	2.37	2.42	3.22	3.23
Advertising and marketing	5,228	5,222	5,340	5,590	8.63	8.17	8.18	8.08
Design	1,773	1,876	1,959	2,167	2.93	2.94	3.00	3.13
Crafts	1,037	1,020	800	830	1.71	1.60	1.22	1.20
Film, TV, video, radio, and photography	12,587	12,597	11,897	11,934	20.79	19.72	18.22	17.25
IT, software	18,944	20,571	22,149	24,567	31.28	32.20	33.91	35.52
Publishing	7,496	8,484	8,216	8,345	12.38	13.28	12.58	12.06
Museums, galleries and libraries	6,344	6,616	6,711	6,970	10.48	10.36	10.27	10.08
Music, performing arts and visual arts	5,711	5,960	6,137	6,530	9.43	9.33	9.40	9.44
TOTAL	**60,557**	**63,889**	**65,314**	**69,168**	**100**	**100**	**100**	**100**

Source: Authors' calculation based on administrative employment data from SBRA and the Statistical Office of the Republic of Serbia.

Table 8: Employment distribution by CI groups, broad approach (number of persons vs. share %)

Creative industries group	2014	2015	2016	2017	2014	2015	2016	2017
Broad CI concept	No. of persons				% of total			
Architecture	15,065	16,381	17,625	21,670	14.65	15.34	15.94	18.70
Advertising and marketing	5,766	5,929	4,902	4,860	5.61	5.55	4.43	4.19
Design	1,773	1,876	1,959	2,167	1.72	1.76	1.77	1.69
Film, TV, video, radio, and photography	28,339	28,886	30,142	25,579	27.56	27.05	27.26	22.38
IT, software	31,926	32223	34437	41,075	31.04	30.18	31.14	35.44
Publishing	7,529	8,484	8,216	6,838	7.32	7.95	7.43	5.90
Museums, galleries and libraries	6,694	6,986	7109	7133	6.51	6.54	6.43	6.15
Music, performing arts and visual arts	5,747	6,003	6,184	6,577	5.59	5.62	5.59	5.54
TOTAL	**102,839**	**106,768**	**110,574**	**115,899**	**100**	**100**	**100**	**100**

Source: Authors' calculation based on administrative employment data from SBRA and the Statistical Office of the Republic Serbia.

groups: 1) cultural and natural heritage, 2) performance and celebration, 3) visual arts and crafts, 4) books and press, 5) audiovisual and interactive media and 6) design and creative services.

One-seventh of all revenues of CI business comes from abroad. Exports accounted for about 12 percent of all revenues of Serbian CI businesses in 2017. An average company operating in this sector in Serbia earned about EUR 45,000 from exports, which is 15 percent more than the average for the Serbian economy overall. The annual growth rate of CI export revenue was 8.7 percent over the 2014-2017 period. The main exporting CI sectors (that generated more than 70 percent of total CI export revenues) are printing services, telecommunications, programming, and advertising. The average growth rate of Serbian creative goods export was 8.9 percent per year, but there were differences across subsectors. The most dynamic average annual export growth occurred in the area of new media and crafts and publishing. Despite high average value of export growth rates, as well as rapid market penetration of certain CI subsectors, Serbia is still a net importer of creative goods.

For SEE countries, creative goods represent approximately 3.02 percent of the overall export. During the observed period, Croatia participated with 2.74 percent in the regional export of creative goods, Serbia with 2.1 percent, Bosnia and Herzegovina with 1.45 percent, Albania with 0.39 percent and Montenegro with 0.15 percent. Serbian CI businesses mainly export their goods and services to the former Yugoslav republics. Key markets vary for specific CIs. In case of film, TV, video, i.e. audiovisual services, the key markets are Italy, France and the UK, while for publishing activities these are the former Yugoslav republics. Exports of creative goods (covered by UNCTAD classification) in SEE and selected countries are presented in Table 9 bellow.

International comparisons

Making comparisons with global champions can be inspirational. Narrowly defined CIs can only be compared with the UK. The UK is one of the global leaders in providing CI goods and services and it is useful to see how large this sector can be. The table below summarizes some of the main information and provides comparison between Serbia and the UK for the year 2016. As expected, Serbia significantly lagged behind the UK.

Table 10: Contribution of CI GVA and employment in Serbia and the UK (narrow CI definition) in 2016

Countries	CI employment		Creative occupation		GVA	
	No. of persons	%	No. of persons	%	In M EUR	% of total economy
Serbia	65,314	3.4	74,272	3.9	965	3.4
UK	1,808,000	5.8	1,915,000	6.1	66,648	5.2

Note: CI data for the UK are extracted from [26].

Interestingly, when the broad approach is used, the results show that in Serbia CIs are more important than in other countries for which results are available. CIs have the highest share in Serbia both in terms of employment and creation of value added. Compared to France, Germany, Italy and Spain, the share of CIs in Serbian economy is almost two times higher, while the difference in share in total employment is somewhat smaller. However, certain warnings are necessary. Having in mind that this is a

Table 9: Export of creative goods in SEE countries, 2014-2017, in 000 USD

Exporter	2014	2015	2016	2017
World	612,923,593	546,164,424	522,054,222	521,275,796
Southeastern Europe (SEE)	**16,291,727**	**15,178,942**	**16,692,291**	**17,992,391**
Croatia	448,723	430,041	449,669	482,584
BIH	223,120	218,145	240,871	282,782
Montenegro	6,524	5,289	5,760	6,968
Albania	45,017	75,937	95,484	45,090
Serbia	**317,796**	**299,337**	**356,328**	**397,252**
% contribution of SEE CIs in total SEE export	2.66	2.78	3.20	3.45
% contribution of Serbian CIs in SEE export	1.95	1.97	2.13	2.21
Growth rate of SEE CIs	7.56	-6.83	9.97	7.79
Growth rate of Serbian CI export	11.18	-5.81	19.04	11.48

Source: Author's calculation based on the Trade Map data retrieved from www.trademap.org (accessed on 10 November 2018).

dynamic sector worldwide, some of the data presented might be obsolete i.e. the share of CIs has probably increased by now in all of these countries. This comparison puts Serbia in the context of high-income countries where other sectors are developed as well; thus, the share of CIs is smaller. However, in Serbia, being a transition economy, many other sectors are still recovering.

Table 11: Contribution of CIs in GVA and total employment, 2014-2016 (broad CI definition)

Countries	GVA (%)	Jobs (%)
Serbia (2016)	**7.5**	**5.8**
France (2011)	5.1	3.7
Germany (2011)	3.9	4.1
Italy (2011)	3.9	3.7
Spain (2011)	3.4	3.4

Note: CI data for the selected EU countries are obtained from [23].

Due to inclusion of a significantly larger number of subsectors than in the narrow approach, the results are inflated and the significance of CIs is magnified. Hence, one should be very careful when drawing conclusions, especially in the case of emerging economies, and we believe that the proper approach would be to use the narrow concept.

Comparisons with the rest of the Serbian economy

Both narrowly and broadly defined, Serbian CI sectors are gaining in importance in Serbian economy and are showing much faster development than the rest of the Serbian economy. The number of newly established start-ups in CI sectors is also growing much faster than in other sectors of the economy.

Table 12: Contribution of sectoral GVA in total GVA – CIs compared to other sectors of the economy (in current prices, %)

Sectors	2014	2017
Creative industries (narrow concept)	2.5%	3.9%
Creative industries (broad concept)	6.7%	7.8%
Construction	5.1%	5.0%
Tourism	1.3%	1.6%
Agriculture, forestry and fishing	9.3%	7.3%
Mining	1.3%	2.6%

Source: Authors' calculation, the Statistical Office of the Republic of Serbia, Statistical Yearbooks 2015 and 2018.

Businesses which fall under CIs are more productive than other Serbian enterprises. Productivity in narrowly defined CIs amounts to EUR 18,738 (EUR 22,077 for broadly defined CIs, 35.01 percent higher than the economy average, which was 15,838 EUR in 2017 as represented in more detail in Table 13). The high productivity of broadly defined CIs is to some extent explained by spending on Research and Development (R&D) and by high value of intangible assets. R&D spending in the CI sector accounts for 9 percent of total national R&D investment. R&D investment among CI enterprises presents 0.12 percent of total business revenue per year compared to the economy average where the share of R&D investment in total business revenue is around 0.08 percent. Intangible assets in CIs represent about 42 percent of total intangible assets generated in national economy.

Table 13: Business performance indicators of CIs (broad concept) compared to the rest of the Serbian economy (2017)

Sectors	CIs	National average
Productivity (in EUR)	22,077	15,838
R&D expenses total (in EUR million)	5.6	57.1
R&D expenses total (in EUR) as % of total business revenues	0.12	0.07
Export revenue in total business revenue %	10.9	12.3
Intangible assets (in EUR)	901,245,687	2,449,588,568

Source: Authors' calculation.
Note: Only enterprises are included in the calculation of business performance indicators.

Conclusions

This paper reviews methods for assessing the economic contribution of creative industries and presents the differences with respect to their scope and data limitations. It also provides a detailed mapping according to the most relevant industry-based approach and DCMS categorization of CIs. The presented indicators represent a baseline source of information about several economic dimensions of the development of creative industries and provide possibility for international benchmarking comparison and a "big-picture" perspective on the state and prospects of creative industries in Serbia.

Based on the presented data, Serbia exhibits considerable potential for the development of its creative economy. The results show that CIs were among key contributors to the growth of Serbian economy in the observed period, with the average annual growth rate of the number of narrowly defined CI entities of 5.6 percent (8.4 percent for broadly defined CIs; this growth was more than 6 percentage points higher than the average growth rate in the national economy – 2.01 percent). This confirms that creative industries attracted increasing volume of entrepreneurial skills and resources. However, the paper also shows that it is crucial to adequately categorize creative industries. Their economic contribution varies dramatically depending on the initial selection criteria and adopted methodology. In the case of narrow approach, the contribution of creative industries is almost completely driven by the IT, software and computer services subsector. This subsector's contribution increased from 37 to close to 63 percent of the total narrowly defined CI GVA (or by 26 percentage points). This increase was relatively less significant in case of the broad approach where it was just 7 percentage points. However, IT, software and computer services in Serbia have somewhat different structure compared to this field in the developed countries. Usually, the IT-oriented sector, as part of creative industries, is mostly focused on the production of digital creative contents. In Serbia, this sector predominantly depends on outsourcing or licensing contracts with lower levels of creativity and often without potential for intellectual property protection. Currently, the majority of this sector can be described as a pseudocreative activity.

The limitations of the industry-based approach in measuring economic contribution of creative industries in this paper mainly refer to the lack of data related to the craft sector, social entrepreneurship in creative industries, nonprofit organizations, as well fashion, urban and product design. These activities remained out of the scope of our research. Further assessments of the characteristics of creative industries in Serbia should consider these limitations, as well as provide better understanding of regional aspects and impacts of creative industries through spillover. The second limitation of our results is related to the fact that we applied the industry-based method. Hence, we did not take into account creative employment in other industries. The criticism of the industry-based approach has been emphasized by several authors. For example, Markusen et al. show that considerations of the total number of employees working within creative industries may lead to inaccurate estimations since only a part of them may actually be involved in the creative contents production [15, p. 36].

The use of a combined industry and occupation-based approach could provide additional insights and a more detailed assessment and understanding of Serbian creative economy.

The impact of the creative industries in Serbia is not limited only to economic indicators presented in this paper. Serbian creative industries are one of the key drivers of technological progress and long-term development. We believe that this paper provides sufficient basis for further research and sheds light that will contribute to the design of evidence-based policies promoting creative economy in Serbia.

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Hristina Mikić

is Head of the Research Department in the Institute for Creative Entrepreneurship and Innovation and lecturer at the UNESCO Chair in Cultural Policy and Management, University of Arts in Belgrade. Ms. Mikić holds a PhD in Economics from the Faculty of Economics in Belgrade in the field of creative economy. She has been engaged as a consultant and advisor in numerous national and international organizations in the area of cultural and creative industries. These include UNESCO, the Council of Europe, UNDP, World Bank, ministries of cultural affairs in Serbia, Macedonia and Montenegro, Serbian Chamber of Commerce and many others.

Branko Radulović

is Associate Professor of Economics and Economic Analysis of Law at the Faculty of Law, University of Belgrade. Mr. Radulović holds a bachelor's degree from the Faculty of Economics in Belgrade, a Master's degree in International Economics from the University of Birmingham, and a PhD in Economics, Law and Institutions from the University of Turin. He was also visiting scholar at the Cornell Law School. His areas of expertise include economic analysis of law, institutional economics and applied econometrics.

Miljan Savić

is a PhD student of Economic Analysis of Law at the Faculty of Law, University of Belgrade. His main interests include empirical research in the field of behavioral law and economics and economic analysis of intellectual property with the emphasis on economic analysis of piracy. He started his professional career as a legal associate in a law firm in Belgrade. Since 2018 he has been Associate at the Balkan Center for Regulatory Reform and is engaged in multiple projects as Regulatory Reform Expert.