



UNIVERSITY OF BELGRADE
Faculty of Economics

Report:

Analysis of the economic impact of the creative industries sector on the economy of the Republic of Serbia

Report commissioned by
Serbia Creates, national platform



UNIVERSITY OF BELGRADE
Faculty of Economics

Report:

Analysis of the economic impact of the creative industries sector on the economy of the Republic of Serbia

Report commissioned by
Serbia Creates, national platform

Distinguished colleagues,

It is my great privilege to thank you for your trust and support during the realization of this Project - researching and analyzing the impacts of the creative industries sector on the economy of the Republic of Serbia, initially for the period 2014-2018, and with updates for 2019 and 2020.

Considering the dynamics of the creative industries sector, global best-case examples, relevant academic and professional practices, and our Faculty references and authority, and further, an appropriate methodological approach and final discussion of results and recommendations, I trust that this analysis will be of great value to the Serbia Creates platform.


Serbia Creates is the national, intra-governmental, umbrella entity in charge of international promotion of Serbia through the lucrative export sectors of creative industries, tourism and the knowledge-based economy. Serbia Creates is part of the wider initiative of the Prime Minister of the Republic of Serbia, the Hon. Ms. Ana Brnabic, and it performs as a national brand affirming the values of our modern state – creativity, innovation, know-how and talent. Serbia Creates is a brand that communicates Serbia as an authentic and culturally diverse nation of creative and innovative people.

The Scientific-Research Center of the Faculty of Economics (NICEF) was founded in 1974 and has implemented over 1,000 projects. With significant experience in performing fundamental and applied research, NICEF provides top quality research and project services in relation to every segment of business and economy.

With the above in mind, I am proud to take this opportunity to present the “Key results summary report”.

I remain at your full disposal.

Sincere regards,


Kovacević, Dr. Igor

Project leader
Assistant Professor, Department of Business Economics and Management
University of Belgrade, Faculty of Economics
igor.kovacevic@ekof.bg.ac.rs

© Copy Rights

Faculty of Economics, University of Belgrade, 2021.

All rights reserved. This document must be used only in the given form. If parts are used for the purpose of presentation or any other form of reporting, it is necessary to cite the document properly. The document cannot be resold, rented or in any other way put into commercial distribution, in any format, without the prior consent of the Faculty of Economics.

Serbia is an authentic and
culturally diverse country of
creative and innovative
people

**SERBIA
CREATES** 

1. Summary of the report and key indicators

According to the “broad” approach to the creative industries, and in correlation with the best international examples, the creative industries sector in Serbia showed significant growth in the observed period 2014-2020.

In 2019 the creative industries contributed 7.4% to the Serbian GDP and showed continuous growth of 60% when compared to 2014. Proliferation of the creative industries towards national GDP began in 2018, when it reached 6.3% - an increase of 1.6 pp in comparison to 2017.

The number of registered business companies in the creative industries sector has increased from 45,000 (forty five thousand) to over 73,000 (seventy three thousand), which is growth of 62%, with average annual growth rates of over 10%. Even in the crisis caused by COVID-19, an increase of 3.6% was achieved. Entrepreneurs are the backbone of this sector. Over 55,000 (fifty-five thousand) registered entrepreneurs make up 75% of registered business entities in the creative industries sector. The number of entrepreneurs who report their financial reports to the BRA has increased as much as 5 times - in 2019 and 2020, it increased to over 4,000 (four thousand) per year, compared to the period 2014-2018, when the average number at the annual level was 841 (eight hundred and forty one)

Additional analysis from the aspect of enterprise size shows that creative industries are predominantly made up of micro-enterprises, and their share is 94% according to the broad approach.

The impact of the COVID-19 pandemic has shown the “resilience” of the sector and its flexibility in terms of adjusting the way of doing business, demonstrated by the fact that the number of companies and entrepreneurs, after significant initial growth since 2014, is now stagnant at 2018 level. In the period 2014-2018, 670 (six hundred and seventy) more companies on average were opened annually. According to data 2019/2020, there is a change in the trend. Although the number of newly opened companies increased by 11% despite the crisis, the number of companies closing also increased by 824, and thus the actual sector achieved a level 2% higher than in 2018.

In the period 2014-2020, the GVA of the creative industries increased from 178 billion dinars to 236 billion dinars, with the growth rate of 32% achieved. The effects of COVID-19 slowed the creative sector somewhat, but the values achieved are still above the pre-crisis period. **The average annual growth rate is about 7%.**

If we look only at entrepreneurs in the creative industries, **the GVA created increased from 13 billion dinars to 40 billion dinars - or a remarkable 200% increase, almost 3 times. The number of entrepreneurs almost doubled, from 14,000 (fourteen thousand) to 31,000 (thirty-one thousand) entrepreneurs, while their total turnover increased by 55 billion, or 187%.**

The report shows a continuous growth in the number of employees in the creative industries sector, **which reached 127,000 (one hundred and twenty seven thousand). Employees aged 20-45** are the most represented in the total employment of the creative industries and **make up 53.8%.** Creative industries employ **40-45% of women**, showing equal conditions for employment and progress in work, and more than **50% of employees have higher education.**

The cumulative growth of exports of the creative industries sector in the period 2014-2020 amounted to 51%, and in this period the total value of exports were 346.8 billion dinars. While the total export of Serbia increased by 29.6% in 2018 compared to 2014, the total export of the creative industries increased by 46.7%.

Summary table: The impact of the creative industries sector on the Serbian economy

GDP contribution of CI	7,4%
Growth of the CI contribution to the GPP (2014 – 2019)	60%
Growth of the creative industries GVA (2014 – 2020)	32%
Average annual growth rate of CI GVA (2014-2020)	7%
Growth of the number of registered companies in the CI (2014- 2018)	62%
Relative growth of entrepreneurs' turnover in the CI (2014-2018)	187%
Absolute growth of entrepreneurs' turnover in CI (2014-2018)	RSD 55,1 billions EUR 4,69 billions
Number of employees in the CI	127.000
Number of young employees (20-45 years) in the CI	53,8%
Number of employees with higher education in the CI	50%
Participation of women in the structure of employees in CI	40-45%
Growth of exports of the CI (2014-2020)	51%
Value of CI exports (2014-2020)	RSD 346,8 billions EUR 2,9 billions

Source: Authors' calculus based on the Analysis methodology defined in the document

2. Methodology

Gross Value Added (GVA) is the macroeconomic aggregate that represents difference between the total value of production (output) and the total value of intermediate consumption. Intermediate consumption includes costs of inputs, productive and non-productive services, but excludes wages of employees and amortization. Gross domestic product (GDP) is obtained as GVA plus taxes on products, minus subsidies on products, according to the production approach. We use the methodological guidelines of the European system of accounts 2010 (ESA 2010) in order to translate financial accounting principles to national account concepts. The main data sources are balance sheet, income statement, cash flow statement, statement of changes in equity and statistical report. The statistical report is the most important data source. Table 1 presents EDP¹ categories used to calculate production and intermediate consumption.

Table 1: EDP categories needed to calculate gross value added at company level

EDP code	Name of position	Sign
1002	Income from the sale of merchandise	+
1009	Income from sales of products and services rendered	+
1020	Income from the own use of products, services and merchandise	+
1021	Increase in value of finished goods, work in progress and services in progress	+
1022	Decrease in value of finished goods, work in progress and services in progress	-
1017	Other operating income	+
1019	Costs of merchandise sold	-
9078	Land rental fees income	-
	Production = 1002+1009+1020+1021-1022+1017-1019-9078	
1023	Cost of materials	+
1024	Costs of fuel and energy	+
1026	Costs of production services	+
1029	Non-production costs	+
9056	Costs of remunerations according to contracts (gross)	+
9057	Costs of remuneration to manager, members of Management Board and Supervisory Board	+
9065	Tax costs	-
9066	Contribution costs	-
9060	Land lease costs	-
	Intermediate consumption = 1023+1024+1026+1029+9056+9057-9065-9066-9060	

Source: Authors' presentation based on RZS (2018) and SORS consultations

Since the methodological note "Methodology of calculating gross domestic product, sources and methods" (SORS, 2018) is not detailed enough, personal consultations / interviews with the System of national accounts' (SNA) team from Statistical Office of Republic of Serbia (SORS) were implemented.² The above calculus is for non-financial incorporated business (i.e. private companies). It is not possible to calculate GVA for a specific public company, or for all public companies in any particular sector. It is only possible to calculate GVA for the whole government institutional sector. Therefore, we follow SORS guidelines, and do not calculate GVA for public companies. Methodological consistency is the priority, since deviation from official SNA methodology (comparable with ESA) would give artificial results.

When calculating macroeconomic aggregates for entrepreneurs and the self-employed, researchers and statisticians have numerous problems that make it impossible to accurately calculate basic aggregates. The reasons are the high frequency of closure and foundation of entrepreneurial businesses, instability in terms of core business and employment, as well as the high level of shadow economy. Also, entrepreneurs and the self-employed usually have a low response rate in surveys and the quality of data on entrepreneurs and the self-employed is very low. An additional problem is the fact that the personal property of the entrepreneur and the business property of the entrepreneur are not separated. Perhaps the biggest limitation is lack of double entry bookkeeping and detailed financial reporting obligations. The SORS estimates GVA for entrepreneurs through a combination of different methods and with numerous adjustments. The calculation of these values, however, is only available at the double-digit level of activity.

¹ Electronic data processing.

² The authors are thankful for SORS' help.

Based on interview with the SNA team, the only way to calculate GVA for entrepreneurs at the four-digit level of activity, which is necessary in this case, is by applying the following approximation:

- GVA for entrepreneurs at the double-digit level of activity is divided by the sum of the number of entrepreneurs and the number of persons employed by entrepreneurs in the specified activity. Thus, we calculated GVA per employee for entrepreneurs at the double-digit level for each activity. We calculate the value of GVA for entrepreneurs at the four-digit level of activity when we multiply this ratio by the sum of the number of entrepreneurs and the number of employees of entrepreneurs in each activity at the four-digit level. Although this approximation is quite general, this is the only method that can be applied based on the available data.



3. Structure of the creative industries sector in Serbia

We can show the size of the creative industries sector through the number of registered economic entities³ engaged in activities belonging to this sector.

According to the broad definition, the total number of economic entities in 2018 was 70,792. Of that number, there were 18,452 private companies (about 12.6 percent of the total number of private companies in Serbia), there were 52,249 entrepreneurs (around 19.1 percent of all entrepreneurs in Serbia), and there were 91 public (state) companies (16.2 percent of all public companies in Serbia). According to the narrow definition, the CI sector consisted of 45,136 registered economic entities, of which 10,368 are private companies, 34,718 are entrepreneurs and 50 are public companies.

According to the data for 2019 and 2020, the impact of the COVID-19 pandemic had minor negative effects on the CI sector, with the annual growth rate decreasing by about 10 percentage points compared to the previous period, to the level of 5.7% for broader approach and 3.6% for narrow approach. But it is necessary to point out that growth has been achieved.

In order to get an impression of the development of this sector during the observed period (2014-2020), the following tables show the number of registered economic entities, according to a broad and narrow definition, by mentioned groups (private companies, entrepreneurs and public companies).

Table 2: Number of registered economic entities according to broad definition

	Private companies	Entrepreneurs	Public companies	Total	Annual growth
2014	14,489	30,576	107	45,172	/
2015	15,427	34,523	133	50,083	10.9%
2016	16,402	39,911	107	56,420	12.7%
2017	17,432	45,422	103	62,957	11.6%
2018	18,452	52,249	91	70,792	12.4%
2019 & 2020	18,044	55,260	63	73,367	3.6%

Source: Authors' calculus on BRA data

Table 3: Number of registered economic entities according to narrow definition

	Private companies	Entrepreneurs	Public companies	Total	Annual growth
2014	7,923	18,422	80	26,425	/
2015	8,484	21,302	83	29,869	13.0%
2016	9,064	25,314	60	34,438	15.3%
2017	9,709	29,407	56	39,172	13.7%
2018	10,368	34,718	50	45,136	15.2%
2019 & 2020	10,214	37,482	31	47,727	5.7%

Source: Authors' calculus on BRA data

The number of economic entities in the CI sector shows a growth trend. The average annual increment rate of economic entities from the broadly defined CI sector in the period from 2014 to 2018 was 6.2 percent, with the increment rate increasing from year to year. During the observed five-year period, the increment rate increased by more than 5 percentage points. The average increment rate for this sector according to the narrow definition for the same period was 7.8 percent. Similar to the broad definition, this rate increased every year and over a five-year period has increased by close to 7 percentage points.

If we look at the broad definition of the sector 73.8% of the total number of economic entities are entrepreneurs, and according to the narrow definition of the sector, the total number of economic entities that are entrepreneurs is 77%.

The number of entrepreneurs who issue their financial reports to the BRA increased significantly in 2019 and 2020, compared to the period 2014-2018. According to the narrower definition of creative industries, 3,095

³ Economic entities include private companies, entrepreneurs and public companies.

entrepreneurs participated in 2019/2020, while the average annual number in 2014-2018 was 449. By a broader definition, the number rose from 841 to 4,492 entrepreneurs. Also, the number of employees of entrepreneurs who submit financial reports has significantly increased.

In order to get a better impression of this part of the sector, the structure of the company by size was analyzed. The analysis shows that the CI sector predominantly consists of micro enterprises. Their share is 94% by the broader definition, while their share by the narrower definition is 93%. According to the representation, second are small companies with 6.7% according to the broader definition, and 5% according to the narrower definition. The cumulative share of medium and large enterprises, according to both definitions, is below 1% (0.7% and 0.1% according to the broader definition and 0.6% and 0.1% according to the narrower definition, respectively).

Table 4. Structure of the private companies in CI sector

	Micro	Small	Medium	Large
Narrow definition, 2014	93.9%	5.5%	0.5%	0.1%
Broad definition, 2014	93.1%	6.1%	0.7%	0.2%
Narrow definition, 2015	93.9%	5.5%	0.5%	0.2%
Broad definition, 2015	93.2%	6.0%	0.7%	0.2%
Narrow definition, 2016	94.1%	5.3%	0.5%	0.1%
Broad definition, 2016	93.1%	6.1%	0.7%	0.1%
Narrow definition, 2017	93.8%	5.6%	0.5%	0.1%
Broad definition, 2017	93.0%	6.2%	0.7%	0.1%
Broad definition, 2018	93.4%	5.9%	0.6%	0.1%
Broad definition, 2018	92.6%	6.6%	0.7%	0.1%
Narrow definition, 2019 & 2020	94.0%	5.4%	0.6%	0.1%
Broad definition, 2019 & 2020	93.3%	5.9%	0.7%	0.1%

Source: Authors' calculus on BRA data

The impact of the COVID-19 virus pandemic can also be analyzed by observing the difference between newly opened and closed companies, i.e. the number of entrepreneurs who have closed and opened their entrepreneurial businesses. In the period 2014-2018 the difference was positive, with more companies and entrepreneurs starting businesses than closing them. In contrast, according to the 2019/2020 data, the trend is changing, and the number of companies and entrepreneurs closing their business has increased significantly. Nevertheless, given the positive growth rate from the previous period, the total number of companies and entrepreneurs is still growing in entire observed period 2014-2020.



Table 5. Number of opened and closed companies in CI sector

	Private companies			Entrepreneurs		
Narrow definition	Opened	Closed	Difference	Opened	Closed	Difference
2014	508	160	348	2,071	1,428	643
2015	542	146	396	2,777	1,311	1,466
2016	548	137	411	3,674	946	2,728
2017	661	175	486	4,141	973	3,168
2018	689	232	457	5,344	1091	4,253
2019&2020	769	1,173	-404	1,147	5,428	-4,281
	Private companies			Entrepreneurs		
Broad definition	Opened	Closed	Difference	Opened	Closed	Difference
2014	853	281	572	2,935	2,126	809
2015	900	253	647	3,887	2,068	1,819
2016	933	247	686	4,879	1,562	3,317
2017	1059	287	772	5,482	1,523	3,959
2018	1058	376	682	6,892	1,687	5,205
2019&2020	1,174	1,998	-824	1,773	6,898	-5,125

Source: Authors' calculus on BRA data.

If we look at newly-founded economic entities in the observed five-year period according to a broad definition, the average growth rate of newly founded companies (both private and public) was 5.6%, while the average growth rate of newly founded entrepreneurs was 24%. When we look at the narrow definition, the average growth rate of companies in this period was 8.1%, and for entrepreneurs this rate was 27%. The largest number of both companies and entrepreneurs, both by narrow and broad definition, in this period were established in Computer programming activities. If we look at the activities from the broad definition, the next in terms of the number of founded companies and entrepreneurs are engineering activities and related technical consultancy.

Table 6: Activities with the largest number of newly founded companies and entrepreneurs according to a broad definition in the period 2014-2018

Activity	Number of companies	Activity	Number of entrepreneurs
Computer programming activities	1,148	Computer programming activities	8,716
Engineering activities and related technical consultancy	598	Engineering activities and related technical consultancy	2,564
Advertising agencies activities	500	Computer consultancy activities	1,484
Technical testing and analysis	449	Specialized design activities	1,449

Source: Authors' calculus on BRA data

Table 7: Activities with the largest number of newly founded companies and entrepreneurs according to a narrow definition in the period 2014-2018

Activity	Companies	Activity	Entrepreneurs
Computer programming activities	1,148	Computer programming activities	8,716
Advertising agencies activities	500	Computer consultancy activities	1,484
Computer consultancy activities	312	Specialized design activities	1,449
Motion picture, video and television programmed production activities	207	Motion picture, video and television programme production activities	1,180

Source: Authors' calculus on BRA data

Table 8: Geographical distribution of business entities in the creative industries sector

NARROW DEFINITION	2014	2015	2016	2017	2018
Belgrade region					
Private companies	5,037	5,397	5,767	6,248	6,719
Public companies	2	11	11	13	13
Entrepreneurs	8,133	9,503	11,298	13,114	15,244
Vojvodina					
Private companies	1,585	1,707	1,843	1,944	2,045
Public companies	31	29	21	18	15
Entrepreneurs	4,493	5,130	6,156	7,021	8,326
Šumadija and West Serbia					
Private companies	665	718	746	775	820
Public companies	27	22	12	11	10
Entrepreneurs	3,296	3,784	4,426	5,237	6,341
South and East Serbia					
Private companies	604	629	674	707	748
Public companies	19	20	15	13	11
Entrepreneurs	2,440	2,825	3,363	3,950	4,716
BROAD DEFINITION					
Belgrade region					
Private companies	8,346	8,902	9,466	10,145	10,804
Public companies	10	31	30	31	28
Entrepreneurs	12,528	14,324	16,640	19,009	21,677
Vojvodina					
Private companies	3,076	3,265	3,481	3,668	3,865
Public companies	40	41	33	30	25
Entrepreneurs	7,667	8,622	9,937	11,133	12,823
Šumadija and West Serbia					
Private companies	1,682	1,793	1,892	1,977	2,062
Public companies	30	31	21	23	21
Entrepreneurs	6,121	6,795	7,762	8,900	10,337
South and East Serbia					
Private companies	1,319	1,397	1,491	1,568	1,646
Public companies	24	27	20	16	14
Entrepreneurs	4,137	4,648	5,424	6,219	7,239

Note: Data are as of 31st December without entities deleted during the year

Source: Authors' calculus on BRA data

The largest number of private companies and entrepreneurs are registered in the Belgrade region. According to a narrow definition, the number of private companies in 2018 compared to 2014 increased by 1,682, or 33.4%. In the region of Vojvodina, the number of private companies increased by 460, or 29%. The number of entrepreneurs in the Belgrade region increased by 7,111, or 87.4% in 2018 compared to 2014, while in Vojvodina the number of entrepreneurs increased by 3,045, or 92.4% in the observed period. According to a broad definition, the number of private companies in the Belgrade region increased by almost 2,500, while the number of entrepreneurs increased by about 9,000 in 2018 compared to 2014. In the region of Vojvodina, the number of private companies increased by almost 800, while the number of entrepreneurs increased by about 5,000 in 2018 compared to 2014 by a broad definition. The number of private companies is much smaller in the region of Šumadija and West Serbia and the region of South and East Serbia in relation to the Belgrade region and

Vojvodina. The average number of private companies in the Belgrade region in the period 2014-2018 was almost 6,000 according to the narrow definition, while the average number in the region of Šumadija and West Serbia is about 750, and in the region of South and East Serbia is less than 700. Also, the average number of entrepreneurs in the Belgrade region was about 11,000 (narrow definition), while in the region of South and East Serbia was around 3,000. We see that the concentration of private companies and entrepreneurs is highest in the Belgrade region, then in the region of Vojvodina, while it is lowest in the region of South and East Serbia.

Table 9. Geographical distribution per major cities of the private companies in CI sector

	2014	2015	2016	2017	2018	2019 & 2020
Belgrade						
Narrow definition	64.3%	64.0%	63.6%	64.6%	65.5%	65.0%
Broad definition	57.5%	57.5%	57.0%	57.8%	58.4%	57.7%
Novi Sad						
Narrow definition	11.2%	11.0%	11.6%	11.6%	11.1%	11.2%
Broad definition	10.2%	10.0%	10.4%	10.4%	10.2%	10.1%
Subotica						
Narrow definition	2.5%	2.5%	2.4%	2.3%	2.2%	2.3%
Broad definition	2.9%	2.8%	2.7%	2.6%	2.6%	2.6%
Zrenjanin						
Narrow definition	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Broad definition	1.0%	1.1%	1.1%	1.0%	1.0%	1.1%
Niš						
Narrow definition	3.0%	3.0%	3.2%	3.1%	3.0%	3.2%
Broad definition	3.0%	3.2%	3.3%	3.2%	3.1%	3.3%
Čačak						
Narrow definition	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Broad definition	1.0%	1.1%	1.2%	1.3%	1.2%	1.2%

Source: Authors' calculus on BRA data: data were given jointly for 2019 and 2020



4. GVA of the creative industries private sector

Table 10 presents the GVA of creative industries in period 2014-2017. GVA includes GVA of private companies and entrepreneurs (without public companies as explained above). The GVA of creative industries in the private sector as percent of total GVA amounted to around 2% according to the narrow definition and 6% according to the broad definition.

Table 10: GVA of private sector creative industries, 2014-2020

Year	GVA narrow definition, RSD billion	GVA broad definition, RSD Billion	GVA total, current prices in mil. RSD	GVA narrow % GVA total	GVA broad % GVA total
2014	50.0	178.4	4.160.548,5	1,45	5,14
2015	62.4	191.3	4.312.038,1	1,76	5,36
2016	73.5	208.2	4.521.264,7	1,98	5,59
2017	82.5	221.2	4.754.368,4	2,12	5,65
2018	92.0	244.4	/	/	/
2019&2020	84.8	236.0	/	/	/

Source: Authors' calculus on BRA data. SORS for total GVA; data provided included September 2020

The GVA of private sector creative industries (narrow definition) increased by 64.9%, whereas according to the broad definition the increase was 24.1% in 2017 compared with 2014. The average growth rate was 18.1% for narrow definition and 7.5% for broad definition in the period 2014-2017. The above-mentioned growth of GVA continues during 2018 and 2019, whereby due to the effects of the pandemic of the COVID-19 virus, there is a slight decline, but the GVA figures are still above the level of 2017.

Activities within the creative industries sector can be grouped into 9 groups, namely: Advertising and marketing; Architecture; Crafts; Design; Film, television, radio and photography; IT, software and computer services; Publishing; Museums, galleries and libraries; and Music and Performing and Fine Arts. Table 11 shows the structure of GVA of the private sector according to the mentioned groups in % of the total GVA of the private sector of the creative industries according to the narrower definition.

Table 11. Structure of GVA of the private sector by groups of activities in% of the total GVA of the private sector of the creative industries, narrower definition, 2014-2017

	2014	2015	2016	2017
Advertising and marketing	19,6	15,1	13,7	12,8
Architecture	2,1	1,7	1,9	1,6
Craft production	1,0	0,7	0,7	0,6
Film, television, video, radio and photography	0,2	0,2	0,3	0,3
Industrial, graphic and fashion design	7,8	14,6	13,7	11,8
IT, software and computer services	51,4	53,9	57,3	62,5
Publishing	17,0	13,2	11,6	9,6
Museums, galleries and libraries	0,0	0,0	0,0	0,1
Music and performing and fine arts	0,9	0,6	0,8	0,6

Source: Authors' calculus on BRA data

IT, software and computer services have the highest share, and the share increased significantly in period analyzed. The share amounted around 50% in 2014 and above 60% in 2017. Significant shares have also the following groups: Advertising and marketing; Industrial, graphical and fashion design; and Publishing. Contrary to IT, software and computer services, their share reduced in 2017 comparing to the respective share in 2014. The share of Advertising and marketing amounted to 12.8%, Industrial, graphical and fashion design amounted to 11.8% and Publishing amounted to 9.6% in 2017.

Table 12 compares GVA of private sector creative industries as percent of GDP with a respective share of GVA of selected industries. The GVA share of private sector creative industries by broad definition is higher than the share of construction, less than the share of agriculture and significantly less than the share of manufacturing and trade.

Table 12: GVA private sector creative industries and selected industries, % GDP, 2014-2019

Year	GVA narrow	GVA broad	Agriculture	Manufacturing	Construction	Trade
2014	1.22	4.3	7.1	15.0	3.2	11.0
2015	1.46	4.5	6.7	14.7	3.7	11.1
2016	1.64	4.6	6.8	14.7	3.9	11.1
2017	1.76	4.7	6.0	15.1	4.1	11.4
2018	1,9	6.3	/	/	/	/
2019	2,0	7.4	/	/	/	/

Note: GVA is in current prices and revised data. NACE Rev 2. Classification is used: Agriculture, forestry and fishing (A), Manufacturing (C), Construction (F) and Wholesale and retail trade; repair of motor vehicles and motorcycles (G).

Source: Authors' calculus on BRA data for creative industries. SORS for GVA

The operating income of the creative industries⁴ according to broad definition amounted to 690,131,386 RSD in 2018 and 2019⁵. Average growth was 8.5% in period 2014-2017. The biggest growth was recorded in Computer gaming (132.6%) and retail of computers, computer peripherals and software in specialized shops (123%)⁶. The operating income of the creative industries according to the narrow definition amounted to 258,684,011 RSD in 2018 and 2019, and the average growth rate was 14% (2014-2017). The biggest average growth was recorded in Computer gaming (132.6%) and Libraries and archives industry (58.5%).

If we look at the narrower definition, the business revenues of the CI sector in 2018 and 2019 amounted to RSD 258,684,011, with the average annual growth in the same period being 14%. The highest average growth was achieved by the activity of Computer games (132.6%) and the activity of Libraries and archives (58.5%)

If we look at entrepreneurs in the creative industries, the GVA they created increased from 13.4 billion dinars to 40.4 billion dinars, or 200%. The number of entrepreneurs almost doubled from 14,000 (fourteen thousand) to 31,000 (thirty one thousand) entrepreneurs, while their total diameter increased by 55 billion, or 187%.

Table 13. GVA of entrepreneurs

Year	GVA, u in RSD billions	No. of entrepreneurs	Turnover, RSD billions
2014	13.4	14,427	29.5
2015	15.6	15,641	33.9
2016	18.8	18,072	40.3
2017	23.3	21,336	49.8
2018	30.9	25,605	65.5
2019	40.4	30,820	84.6

Source: Authors' calculus on SORS data

⁵ Data for 2018 and 2019 were jointly provided by BRA. Data for 2019 are by 22nd November 2019.

⁶ Significant difference between the growth of those two activities and the average growth is because in certain activities the growth rate was negative (by using both definitions) in period 2014-2017.

5. Export of the creative industries

The following table shows the share of exports in total operating revenues for companies excluding state-owned enterprises in the period 2014-2019. According to the narrower definition, exports accounted for 11.5% of operating revenues, and 8.7% of revenues according to the broader definition in 2014. In 2018 and 2019, exports had a share of 13.9% according to the broader definition, and 10% according to narrower definition in total operating income. The average annual growth rate of exports was 25.3% according to the narrower definition and 14.9% according to the broader definition in the period 2014-2017. Cumulative export growth was almost 100% (96.6%) according to the narrower definition and about 50% (51.7%) according to the broader definition, in 2017 compared to 2014.

Table 14. Exports of creative industries companies, 2014-2020

	Narrow definition, Exports in billions of RSD	Broad definition, Exports in billions of RSD	Narrow definition, Exports in% of total operating revenues	Broad definition, Exports in% of total operating revenues
2014	17.2	41.4	11,5	8,7
2015	22.1	48.9	12,9	9,6
2016	27.5	56.6	13,9	9,9
2017	33.8	62.7	15,3	10,4
2018	35.4	67.6	13,9	10,0
2019 & 2020	29.4	69.9	12,8	9,9

Source: Authors' calculus on SORS data. Data for 2019 and 2020 were jointly provided by BRA. Data do not include state enterprises

In addition to the analysis of exports on the data of APR, we will analyze the exports of the creative industries according based on the data of the International Trade Center.

Table 15. Participation of the creative industries in the total export of Serbia, 2014-2018

	2014	2015	2016	2017	2018	Growth rate of total exports 2018/2014	Creative industries export growth rate 2018/2014
World	2,1	2,2	2,4	2,3	2,4	29,6	46,7
CEI	1,5	1,8	1,8	1,6	2,0	64,3	114,7

Source: <https://www.trademap.org/Index.aspx>

We see that the share of the creative industries in the total exports of Serbia, as well as in the exports of CEI countries, increased in the observed period. Exports of the creative industries of Serbia amounted to 2.4% of total exports, or 2% of exports to CEI countries in 2018. While total exports from Serbia increased by 29.6% in 2018 compared to 2014, total exports of the creative industries increased by 46.7%. Also, the total export of the creative industries to CEI countries increased significantly more than the total export of all products to CEI countries, 114.7% compared to 64.3%. Observed by country in 2018, most were exported to Austria and Romania, 12% and 11% of the total exports of the creative industries, respectively. In third and fourth place are Bosnia and Herzegovina and Montenegro, with a share in total exports of the creative industries of about 8%. Italy, Croatia, Belgium, France and Germany receive a 5% share in the export of Serbia's creative industries.



6. Creative industries impact on employment in Serbia

In order to analyze employment in creative industries, we need data on the number of employees on the four-digit level by NACE Rev 2 Classification. Research on registered employment is based on a combination of the Central Register of Compulsory Social Insurance (CRCSI) and Statistical Business Register data. The term “employee” comprises persons:

- Who have a formal, legal employment contract, i.e. who entered into employment with an employer for definite or indefinite period of time,
- Who work on the basis of contract on performing temporary or occasional jobs,
- Who perform occupations/activities independently, or
- Who are founders of enterprises or unincorporated enterprises,
- Who perform agricultural activities but are in the records of CRCSI.

Analysis of Employment at the four-digit level is not possible to deliver precisely and consistently. Therefore, the Statistical office of the Republic of Serbia (SORS) gave approximate data that is used to calculate creative industries employment.⁷

The number of employees in the creative industries was just above 63,000 (sixty three thousand) in 2016 and 72,000 (seventy two thousand) in 2018 according to the narrow definition. Using the broad definition, the number of employees was approximately 113,000 (one hundred and thirteen thousand) in 2016 and 127,000 (one hundred and twenty seven thousand) in 2018. The share in total employment was 3.3%-3.5% by narrow and 5.9%-6.2% by broad definition in the period 2016-2018.

Table 16: Employment in creative industries, number and share, 2016-2018

	2016	2017	2018
Number of employees in creative industries			
Narrow definition	63,322	67,254	72,112
Broad definition	113,431	119,101	127,357
Total	1,920,679	1,977,358	2,052,546
Share in total employment			
Narrow definition	3.3%	3.4%	3.5%
Broad definition	5.9%	6.0%	6.2%

Note: Total number of employees comprises of employees at legal entities (companies, enterprises, cooperatives, institutions and other organizations), persons individually running business, entrepreneurs and their employees.

Source: Authors' calculus on SORS data.

The highest share of employees is aged 30-34 - 18% by narrow definition and 17% by broad definition. Employees aged 15-24 and 65+ (i.e. the youngest and the oldest group) have the lowest share in creative industries employment. Employees aged 25-45 have the highest share in creative industries employment according to the both definitions. The share of employees aged 25-40 is almost 50%, whereas the share aged 25-45 is more than 60%. The structure is similar according to the both definitions.

⁷ Data are presented by major activity of business subject instead of by activity of business unit. Due to that difference between data provided and data by registered employment methodology, the data used in analysis are not directly comparable with official registered employment data. It is not possible to obtain data by activity of local units which assume intersection of activity and personal characteristics of employees. The activity of local units is obtained by research of local units, meaning that number of employees by CRCSI is distributed by “pure” activity according to the structures obtained from local units’ research data. Annual average of number of employees is stock average for 12 months. It is possible to have slight difference for totals at different levels of aggregation due to averaging and rounding. Detailed CRCSI data exist since 2016.

Table 17. Employment by age intervals in the creative industries according to a narrow definition, number and participation, 2016-2018

Age	Narrow definition					
	2016		2017		2018	
15-19	45	0,1%	75	0,1%	100	0,1%
20-24	2.119	3,4%	2.565	3,8%	3.009	4,2%
25-29	9.049	14,4%	9.994	15,0%	10.994	15,4%
30-34	11.074	17,7%	11.957	17,9%	12.862	18,0%
35-39	10.533	16,8%	10.982	16,5%	11.573	16,2%
40-44	9.162	14,6%	9.519	14,3%	10.072	14,1%
45-49	6.758	10,8%	7.228	10,8%	7.803	10,9%
50-54	5.933	9,5%	5.923	8,9%	5.966	8,3%
55-59	4.618	7,4%	4.792	7,2%	5.186	7,3%
60-64	2.602	4,2%	2.773	4,2%	2.963	4,1%
65+	783	1,2%	808	1,2%	954	1,3%
Unknown	8	0,0%	11	0,0%	14	0,0%
Total	62.684	100,0%	66.627	100,0%	71.496	100,0%

Source: Authors' calculus on SORS data

Table 18. Employment by age intervals in the creative industries according to a broad definition, number and participation, 2016-2018

Age	Broad definition					
	2016		2017		2018	
15-19	139	0,1%	177	0,1%	258	0,2%
20-24	3.634	3,2%	4.349	3,7%	5.085	4,0%
25-29	14.439	12,8%	15.684	13,3%	17.245	13,7%
30-34	19.138	17,0%	20.003	16,9%	21.184	16,8%
35-39	18.958	16,9%	19.396	16,4%	20.265	16,1%
40-44	16.882	15,0%	17.550	14,9%	18.443	14,6%
45-49	13.132	11,7%	13.748	11,6%	14.662	11,6%
50-54	11.336	10,1%	11.390	9,7%	11.714	9,3%
55-59	8.502	7,6%	8.947	7,6%	9.790	7,8%
60-64	4.687	4,2%	5.042	4,3%	5.518	4,4%
65+	1.439	1,3%	1.635	1,4%	1.967	1,6%
Unknown	81	0,1%	97	0,1%	125	0,1%
Total	112.367	100,0%	118.018	100,0%	126.256	100,0%

Source: Authors' calculus on SORS data

Gender distribution shows that the share of male employees is higher than female according to the both definitions. The share of males amounted to 60% according to broad definition. Using the narrow definition, the share of males amounted to 55% and the share of females amounted to 45%.

Table 19. Employment by gender in the creative industries, number and participation, 2016-2018.

		2016			2017			2018		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Narrow	No	35.327	27.989	63.316	37.759	29.483	67.242	40.785	31.315	72.100
	%	55,8%	44,2%	100,0%	56,2%	43,8%	100,0%	56,6%	43,4%	100,0%
Broad	No	67.183	46.231	113.414	70.515	48.564	119.079	75.629	51.705	127.334
	%	59,2%	40,8%	100,0%	59,2%	40,8%	100,0%	59,4%	40,6%	100,0%

Source: Authors' calculus on SORS data.

Distribution of employees according to education level is incomplete, due to missing data. The information of education level is missing for 48.2% of employees according to the narrow definition, and 48.5% according to the broad definition in 2016. The share of missing data is lower in 2018 than in 2016, but still high. The missing data share was 38.1% according to the narrow definition and 42% according to the broad definition in 2018. Therefore, the analysis according to education level is provided only for employees for whom we have data on the level of education.

Table 20. Number and participation of employees without information on the level of education in the creative industries, 2016-2018

	Narrow			Broad		
	Unknown	Total	%	Unknown	Total	%
2016	30.431	63.190	48,2%	54.946	113.197	48,5%
2017	28.222	67.110	42,1%	49.936	118.854	44,1%
2018	27.424	71.976	38,1%	47.487	127.121	42,0%

Source: Authors' calculus on SORS data

The share of employees with a high education level is more than 50% by narrow definition, and slightly lower by broad definition (47.5%, 48.8% and 49.2% in 2016, 2017 and 2018, respectively). The share of employees with a low education level is around 8%. The share of secondary education amounts to 40% according to the narrow definition and slightly more than 40% according to the broad definition. The share of highly educated employees is high by both definitions.

Table 21: Creative industries employment structure by education level, number and share, 2016-2018

		Number of employees				Share			
		Law	Medium	High	Total	Law	Medium	High	Total
Narrow	2016	2,509	13,320	16,930	32,759	7.7%	40.7%	51.7%	100.0%
	2017	3,004	15,137	20,747	38,888	7.7%	38.9%	53.4%	100.0%
	2018	3,468	17,043	24,041	44,552	7.8%	38.3%	54.0%	100.0%
Broad	2016	4,573	26,013	27,665	58,251	7.9%	44.7%	47.5%	100.0%
	2017	5,435	29,833	33,650	68,918	7.9%	43.3%	48.8%	100.0%
	2018	6,436	33,988	39,210	79,634	8.1%	42.7%	49.2%	100.0%

Notes: Total is the total number of employees for whom we have data on the level of education, not the total number of employees in the creative industries. Low education level: without education, primary education and low secondary education (1-2 years); medium education level: higher secondary education (3-4 years) and post-secondary non-tertiary education; high education level: tertiary education (short-cycle tertiary education, bachelor's or equivalent, master's or equivalent and doctoral or equivalent).

Source: Authors' calculus on SORS data.

Analysis of employment by individual characteristics is approximate, since there is no possibility to precisely cross-reference the data on individual characteristics of employees and activity (see footnote number 7). We summarize main conclusions. The creative industries employed 3.5% and 6.2% of total employment according to

the narrow and broad definition, respectively, in 2018. The share slightly increased during period 2016-2018. According to the age categories, the highest share of employees is in the age category 30-34. The distribution according to the age intervals is as expected, since the highest share is in middle age groups (25-45), and the lowest shares are for youth (15-25) and elderly (65+). The share of male employees is higher than female, and the males' share is higher according to the broad definition. Due to the high number of missing data for education level, education level analysis should be taken with caution and only as approximation. The highest share of missing data was 48.5% for broad definition in 2016. The share of employees with tertiary education is around 50%, whereas low education level has a share of 8%. The share of employees with tertiary education is slightly higher according to the narrow definition, than according to the broad definition.

Annex 1

Broad definition of the CI sector industries

Printing of newspapers
Other printing
Pre-press and pre-media services
Binding and related services
Reproduction of recorded media
Retail sale of computers, peripheral units and software in specialized stores
Retail sale of telecommunications equipment in specialized stores
Retail sale of books in specialized stores
Retail sale of newspapers and stationery in specialized stores
Book publishing
Publishing of directories and mailing lists
Publishing of newspapers
Publishing of journals and periodicals
Other publishing activities
Publishing of computer games
Other software publishing
Motion picture, video and television program production activities
Motion picture, video and television program production activities
Motion picture, video and television program post-production activities
Motion picture, video and television program distribution activities
Motion picture projection activities
Sound recording and music publishing activities
Radio broadcasting
Television programming and broadcasting activities
Wired telecommunications activities
Wireless telecommunications activities
Satellite telecommunications activities
Other telecommunications activities
Computer programming activities
Computer consultancy activities
Other information technology and computer service activities
Data processing, hosting and related activities
Web portals
News agency activities
Other information service activities n.e.c.
Architectural activities
Engineering activities and related technical consultancy technical testing and analysis
Advertising agencies
Media representation
Market research and public opinion polling
Specialized design activities
Photographic activities
Translation and interpretation activities
Performing arts
Support activities to performing arts
Artistic creation
Operation of arts facilities
Library and archive activities
Museum activities
Operation of historical sites and buildings and similar visitor attractions
Repair of computers and peripheral equipment

Narrow definition of the CI sector industries

Advertising and marketing	Public relations and communication activities
	Advertising agencies
	Media representation
Architecture	Architectural activities
Crafts	Manufacturing of jewelry and related articles
Design	Specialized design activities
Film, TV, video, radio and photography	Motion picture, video and television production
	Motion picture, video post-production
	Motion picture, video distribution
	Motion picture projection activities
	Radio broadcasting
	Television programming and broadcasting activities
	Photographic activities
IT, softer and computer services	Publishing of computer games
	Other software publishing
	Computer programming activities
	Computer consultancy activities
Publishing	Book publishing
	Publishing of directories and mailing lists
	Publishing of newspapers
	Publishing of journals and periodicals
	Other publishing activities
Museums, galleries and libraries	Translation and interpretation activities
	Library and archive activities
	Museum activities
Music, performing and visual arts	Sound recording and music publishing activities
	Performing arts
	Support activities to performing arts
	Artistic creation
	Operation of arts facilities

Source: DCMS (2016), Table 3, p. 11; World Bank 2017

7. References

1. Banks, M., & O'Connor, J. (2009). After the creative industries. *The International Journal of Cultural Policy*, 15(4), 365-373
2. Barget, E., & Gouguet, J. J. (2007). The total economic value of sporting events theory and practice. *Journal of Sports Economics*, 8(2), 165-182.
3. Barrowclough, D., & Kozul-Wright, Z. (Eds.). (2008). *Creative industries and developing countries: voice, choice and economic growth*
4. Bilton, C. (2007). *Management and creativity: from creative industries to creative management*, Blackwell Publishing, Malden.
5. Caves, R. E. (2000). *Creative industries: Contracts between art and commerce* (No. 20). Harvard University Press.
6. Chapain, C., Cooke, P., De Propriis, L., MacNeill, S., & Mateos-Garcia, J. (2010). *Creative clusters and innovation. Putting creativity on the map*. NESTA London.
7. Cruz, S. S., & Teixeira, A. A. (2015). The magnitude of creative industries in Portugal: what do the distinct industry-based approaches tell us? *Creative Industries Journal*, 8(1), 85-102.
8. Cunningham, S. (2002). From cultural to creative industries: theory, industry and policy implications. *Media International Australia incorporating Culture and Policy*, 102(1), 54-65.
9. DCMS (2016) *Creative Industries Economic Estimates*, DCMS, London.
10. ESSnet-Culture (2012). *European Statistical System Network on Culture, Final report*. Estonian Institute for Futures Studies.
11. Evans, G. (2009). *From cultural quarters to creative clusters—creative spaces in the new city economy*. Stockholm: Institute of Urban History.
12. Falk, R. et al. (2011). *Innovation and competitiveness of the creative industries*. WIFO Studies.
13. Flew, T. (2002). Beyond ad hocery: defining creative industries.
14. Flew, T., & Cunningham, S. D. (2010). Creative industries after the first decade of debate. *The Information Society*, 26(2), 113-123.
15. Florida, R. (2002). *The Rise of the Creative Class. And How It's Transforming Work, Leisure, Community and Everyday Life*. New York: Basic.
16. Foord, J. (2009). Strategies for creative industries: an international review. *Creative Industries Journal*, 1(2), 91-113.
17. Galloway, S., & Dunlop, S. (2007). A critique of definitions of the cultural and creative industries in public policy. *International journal of cultural policy*, 13(1), 17-31.
18. Garnham, N. (2005). From cultural to creative industries: An analysis of the implications of the "creative industries" approach to arts and media policy making in the United Kingdom. *International journal of cultural policy*, 11(1), 15-29.
19. Hesmondhalgh, D., & Pratt, A. C. (2005). Cultural industries and cultural policy. *International journal of cultural policy*, 11(1), 1-13.
20. Higgs, P. L., Cunningham, S. D., & Bakhshi, H. (2008). *Beyond the creative industries: Mapping the creative economy in the United Kingdom*. London: National Endowment for Science, Technology & the Arts (NESTA).
21. Higgs, P., & Cunningham, S. (2008). *Creative Industries Mapping: Where have we come from and where are we going?* *Creative industries journal*, 1(1), 7-30.
22. Howkins, J. (2001). *The creative economy: How people make money from ideas*. Penguin UK.
23. Jones, P., Comfort, D., Eastwood, I., & Hillier, D. (2004). Creative industries: Economic contributions, management challenges and support initiatives. *Management Research News*, 27(11/12), 134-145.
24. KEA European Affairs. (2006). *The Economy of Culture in Europe: A Study Prepared for the European Commission (Directorate-General for Education and Culture)*. EC.
25. Landry, C. (2000). *The Creative City: A Toolkit for Urban Innovators*, London: Earthscan.
26. Moore, I. (2014). Cultural and Creative Industries concept—a historical perspective. *Procedia-Social and Behavioral Sciences*, 110, 738-746.

27. Oakley, K. (2004). Not so cool Britannia: The role of the creative industries in economic development. *International journal of cultural studies*, 7(1), 67-77.
28. O'Connor, J. (2010). The cultural and creative industries: a literature review. *Creativity, Culture and Education*.
29. Potts, J. (2011). *Creative industries and economic evolution*. Edward Elgar Publishing.
30. Potts, J., & Cunningham, S. (2008). Four models of the creative industries. *International journal of cultural policy*, 14(3), 233-247.
31. Potts, J., Cunningham, S., Hartley, J., & Ormerod, P. (2008). Social network markets: a new definition of the creative industries. *Journal of cultural economics*, 32(3), 167-185.
32. Pratt, A.C. (2004). "Creative clusters: towards the governance of the creative industries production system?" *Media International Australia*, 112, 50-66.
33. Roodhouse, S. (2006). The creative industries: definitions, quantification and practice. *Cultural Industries: The British Experience in International Perspective*. Online, Berlin: Humboldt University Berlin, Edoc-Server, 13-32.
34. RZS, (2018), „Metodologija obračuna bruto domaćeg proizvoda, izvori i metodi“
35. RZS, (2018), „Preduzetnici u Republici Srbiji 2018“
36. TERA Consultants. (2014). The economic contribution of the creative industries to EU GDP and employment.
37. Throsby, D. (2001). *Economics and culture*. Cambridge university press.
38. Throsby, D. (2008a). From cultural to creative industries: The specific characteristics of the creative industries. In *Troiseme Journees d'Economie de la Culture: Nouvelles Frontieres de l'Economie de la Culture*, Conference held at Musee du quai Branly.
39. Throsby, D. (2008b). Modeling the cultural industries. *International journal of cultural policy*, 14(3), 217-232.
40. Throsby, D. (2008c). The concentric circles model of the cultural industries. *Cultural trends*, 17(3), 147-164.
41. UNCTAD (United Nations Conference on Trade and Development). 2004. *Creative Industries and Development (Document TD (XI)/BP/13)*. Geneva: United Nations.
42. UNCTAD (United Nations Conference on Trade and Development). 2008. *Creative Economy Report 2008: The Challenge of Assessing the Creative Economy Towards Informed Policy-making*. Geneva: United Nations.
43. UNCTAD (United Nations Conference on Trade and Development). 2010. *Creative Economy Report 2010: A feasible development option*. Geneva: United Nations
44. World Bank Report (2017), under the Results Based Management Reimbursable Advisory Services Agreement (P163203)