



Article

The Creative Services Sector in Polish Cities

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Abstract: The creative services sector plays an important and constantly growing role in the modern economy. This publication presents the results of extensive research on the functioning of the creative sector in Polish cities, conducted on a representative sample of 287 cities located throughout Poland. The sample was good in such a way as to maintain the structure by province. The survey included questions rated on a 5-point Likert scale. The aim of the research was to study the functioning of the creative sector in Polish cities and to determine whether the active involvement of public administration in its development has a positive impact on this sector. The research was carried out on the example of a medium-sized European country, which is Poland. The original contribution of the authors of the publication is to demonstrate, on a large research sample, the existence of a positive impact of the municipal office's activities on the creative sector for example using special funds to boost creativity sector in the city, and to ascertain the existence of a linear relationship between the city size and the level of the creative sector functioning in it.

Keywords: creative industry; creative city; creativity; smart city; quality of life; public management; innovativeness



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1. Introduction

Creative industries are almost equated with cultural industries, but their scope is slightly bigger than in the case of cultural industries. The idea of creativity as an important resource emerged on the first decade of the 21st century. Authors related creativity to innovations, and they see it as a very important factor of development of economic competitiveness [1]. According to the European Union definition, cultural and creative sectors are comprised of all sectors in which activities are based on cultural values or other artistic individual or collective creative expressions [2]. Creative industries are mainly centred on cultural industries but they are not restricted to them. The only way to differentiate cultural industries is that they can have a cultural characteristic which is not measurable by monetary funds. The difference is also connected with the situation where the production of cultural products requires human activity input. In contrast to culture industries, we can observe that creative industries are mainly big or middle size companies. They pay high salaries, especially to the senior staff. Most of the organizations functioning in the creative industries have fixed working hours for their employees [3].

A more extensive conception of analysis of differences between creative and cultural industries was presented by Tomczak and Stachowiak. According to them, in the case of utility value in creative industries we can observe the dominance of utility over symbolic value, in cultural industries the predominance of non-material values. In the case of commercialisation in creative industries we can observe the high level of commercialization but in cultural industries low level of commercialization. In creative industries the final product is an intermediate commodity used in further production but in cultural industries it is a cultural good the consumption of which is the aim of the process. Creative industries are located mainly in a concentrated way or clustered, but in the case of cultural industries they have many dispersed locations in urban and also non-urban areas. Creative industries are

orientated towards the global market, but cultural industries tend to be mainly orientated towards the local market [4–7].

Creative industries are a relatively new sector of the world economy. This sector is based on creative, innovative and talent-driven activities of creators in the broadly understood areas of art, media and design [8,9]. An important factor allowing for the activity in the area of the creative sector is the fact that creators possess rich and interdisciplinary knowledge, as a result of which products and services with added value are produced [10]. Products developed in the creative services sector meet the established market goals and bring significant economic benefits in other sectors, which very often intertwine with the creative services sector. In the case of creators who operate in the creative services sector, the most common source of profit for them is income from trade and intellectual activity.

The international research conducted by Zheng Liu shows that government policies can have an impact on innovativeness of creative industries [11–13]. The creative industries play a very important role in innovativeness generation. Recently they have experienced many changes and transformations connected with user engagement, flexibility, technology advancement, digitalization and open platforms.

The issue of creative industries is very important nowadays, because in developed countries they develop very dynamically and have a significant share in creating added value [10,14,15]. Creative sectors are also associated with the implementation of the Smart City concept in the city, as many of the creative solutions are implemented in the form of smart solutions, positively affecting the quality of life of residents, or the digitisation of city management processes.

It is believed that the creative sector is now a very dynamic part of the economy, having a significant impact on economic growth, job creation and internationalisation. Currently, the creative sectors experience a rapid development, contributing, inter alia, to the growth of exports and to the increase of the GDP level [16–18].

There is also a significant resistance of the creative sector to economic crises [19]. At the same time, it is worth noting that the current crisis related to the COVID-19 pandemic has severely affected creative industries in many countries [20,21]. In particular, the lockdowns introduced and the inability to organise large events had a significant impact on numerous areas of creative activity. However, those creative organisations that could transfer their business activities online handled it the best [22]. Moreover, the creative industry promotes the innovations in society [23,24]. Some authors think that the creative industry has a positive impact on sustainable development and the development of urban economy [25,26].

Despite their growing importance, issues related to creative industries are not widely discussed in the literature on the subject of their functioning in the city. Authors usually focus on individual creative services or individual cities [27–32]. There is a cognitive gap in the literature regarding comprehensive research on the scope of the functioning of creative sectors in cities and the factors that may affect their development. This gap was based on our analysis of the related literature on the subject [15–22,27–33]. Furthermore, we think that the problem is very important from a practical point of view for the current creative industries. These industries are very important to today's economy, and because of that it is worth researching on what level it is now and what are the main factors needed for its development. Especially we think it is interesting to investigate if the engagement of local authorities has a positive impact on the level of creative industries in the city.

This research was designed to fill this gap. The aim of the research, resulting from the identified research gap, was to study the functioning of the creative sector in Polish cities and to determine whether the active involvement of public administration in its development has a positive impact on this sector. The research was carried out on the example of a medium-sized European country—Poland.

To achieve the research goal, the following research questions were asked:

- What is the level of functioning of the creative sector in Polish cities?

- Does the geographical location of the city and its size affect the presence of the creative sector in its area?

For these purposes, the following research hypotheses were defined:

Hypotheses 1 (H1). *There are statistically significant differences between the level of functioning of the creative sector in individual provinces in Poland.*

Hypotheses 2 (H2). *The size of a city has a statistically significant impact on the functioning of the creative sector in its area.*

Hypotheses 3 (H3). *Active activities of the city authorities stimulating the creative sector have a positive impact on its functioning in the city in Poland.*

Hypotheses 3a (H3a). *Public administration support for the creative sector in the city has a positive effect on its functioning.*

Hypotheses 3b (H3b). *Starting special funds for the creative services sector has a positive effect on the functioning of this sector.*

2. Literature Review

The term creative industries appeared in the 1990s, and it began to be used on a larger scale when the Creative Industries Task Force was established in 1997 in Great Britain [34]. The first mentioned report by the research team contained a definition of the creative industry. According to it, creative industries are: activities that stem from individual creativity and talent, and which have the potential to create wealth and employment by producing and using intellectual property rights.

Creative economy is based on innovative ideas but not on the typical use of limited conventional Resources [35–40]. A creative organisation is an organisation in which all types of creative intelligence and awareness play the dominant function [41].

An example of another definition of creative industries is the one proposed by Caves, who stated that the creative industries supply products and services that are broadly associated with cultural, artistic or entertainment value. In the literature on the subject, the creative sector is considered to be activities that are based on intellectual property and have their roots in science or culture. In this case, there is a division into two groups: creative industries and knowledge intensive industries [42].

The contribution of the creative sector to the economy offers creative products and services to the customer as well as direct and indirect influence by the creative sector on other areas of the economy, for example as a result of cross innovations and collaborations between an organisation and suppliers and customers [43–46]. It is not easy to measure the activities in the creative sector [47,48]. When we speak about R&D we can measure it using the innovation indicator [49]. However, in the case of creative innovation this measure cannot be fully allocated. This is because companies doing business in creative industries spend less than industrial companies on R&D [42,50]. This does not mean that they are less innovative, but that the innovations can take other forms. We should mention that the innovation in creative industries is a result of both individual and group creativity and therefore it is more difficult to properly measure it. Moreover, those creative innovations are less spectacular compared to traditional innovations.

An example of the classification of creative activities is the classification according to UNCTAD (United Nations Conference on Trade and Development), which is synthetically presented in Table 1.

Table 1. Classification of creative activities according to UNCTAD.

Type of Activity	Creative Activity
Art	Visual arts (painting, sculpture, photography, antiques)
	Performing arts (live music, theatre, puppet theatre, dance, circus)
Media	Art and audiovisual media (film, television, radio, other information channels)
	Published media (books, newspapers, other publications)
	New media (software, computer games, other digital materials)
Functional creativity	Design (interior design, graphics, fashion, jewellery, toys)
	Creative services (architecture, advertising, R&D, culture, recreation)
Spiritual and material heritage	Traditional forms of cultural expression (arts and craft, shows, festivals)
	Cultural exhibition places (museums, libraries, exhibitions, archaeological excavations)

Source: [51,52].

Another division of creative activity was proposed in the study: The economy of culture [53]. In line with it, the following types of creative activity can be distinguished [53]:

- home arts:
 - visual arts,
 - performing arts,
 - heritage,
- cultural industry areas:
 - film and video,
 - television and radio,
 - video games,
 - music,
 - books and press,
 - design,
 - architecture,
 - advertisement,
- related industries:
 - computer manufacturers,
 - mp3 player manufacturers,
 - mobile phone industry.

In the case of Poland, the Statistics Poland defined, in accordance with the classification of PKD 2007 (Polish Classification of Activities), the areas classified as creative industries as [54]:

- architecture and interior design,
- publishing activity,
- national heritage, libraries, archives,
- artistic education,
- fashion and industrial design,
- film and television production,

- radio and music production,
- programming,
- advertising and related activities,
- artistic handcraft,
- performing arts,
- visual arts.

Creative industries can nowadays become a tool used in many areas of life. They have such aspects as: social, economic, cultural, related to Smart Cities or sustainable development [55–57]. Creative industries in particular are associated with the so-called Creative City concept which is one of the extensions of the Smart City concept [58,59]. Looking from a multidimensional, holistic perspective, the functioning of a modern Smart City can be measured from many perspectives, such as: connectivity, innovation, creativity, diversity, culture and the environment [60,61]. According to Caragliu [62–64] cities' urban performance depends not only on physical capital, but also on human and social capital and its creativity. Camagni [58] thinks that cognitive capital and environmental capital are indispensable parts in the process of building Smart City. The cities today should be very creative and innovative to stimulate existing opportunities and stimulate entrepreneurship [65–71].

A creative city can be considered as a city that has the ability to generate and implement new ideas, projects and innovations, and has the ability to attract and retain creative people and entities from the creative sector. In particular, a creative city should be characterised by presence [16]:

- creative activities that should appear as a response to the formation of the structures of a new, creative economy,
- a creative class, i.e., a certain part of society with high competences, working in strictly defined professions, entrepreneurial, easily adapting to rapidly changing conditions,
- appropriate quality of space, especially in terms of those factors that will be considered by residents to decide on the choice of a place to live or invest,
- technological infrastructure, that is investments in hard and soft projects, allowing to build a strategic advantage in relation to other entities.

A high level of creativity in a city can only be achieved if the city has many different organisations operating in the creative industries. The lack or insufficient number of such organisations may significantly hinder the city's development, as there will be insufficient potential to stimulate innovative and entrepreneurial activities. The presented considerations confirm the importance of the issue of creative services in cities and the importance of conducting a detailed diagnosis of the current situation in the creative industry.

Some authors also put emphasis on the role of happiness in creativity [72–75]. For example, Cloutier analysed the relations between sustainable development and well-being in urban areas. He found that happiness and sustainable development are positively associated. He also thinks that happiness should be a part of the sustainable development index because it is what drives people in almost all areas of their lives [76]. The direct relation between creativity and happiness of the people was found by Ceci and Kumar [72]. According to their research especially intrinsic motivation is significantly correlated with creativity and is also associated with being positive and a happy mood. The positive relation between creativity and happiness was also observed by Tan et al. They found a bidirectional relationship that exists between well-being and creativity in the example of Malaysia.

The implementation of creative city conception on the city level can boost the innovativeness and open innovation ecosystem in the city [51,60–62,66–68]. It is very important to facilitate open innovation in regions, cities and communities. It is possible when we have an innovative ecosystem which can be used to coproduce, cocreate and evaluate new services and products by users and experts [12,13,38,39]. Public policy should create an open innovation environment accordingly with the conception of quintuple helix harmonizing the ecosystem to internalize emerging new innovative concepts in the creative city [77,78].

The main difference between our paper and the previous research is the analysis on the impact of active involvement of public administration on the creative sector. We did not spot any direct research on this problem and we think the problem is important because the identification of this relation can be beneficial both from a theoretical and practical point of view.

The creative sector in Poland combines many different areas of activity and objectives, and one of its main characteristics is strong objectives of activity, and one of its basic characteristics is its strong internal diversity. One of its key characteristics is its strong internal diversity in terms of the organisational forms it takes of its operations and the location of its headquarters.

When analysing the issue of diversification of organisational forms and objectives of operation, it can be noted that within particular sub-sectors of creative industries there appear various organisational forms within particular sub-sectors of creative industries, which may include [79]:

- enterprises (e.g., sole proprietorship, civil partnership, limited liability company)
- public entities (e.g., state, voivodeship, powiat organisational units),
- non-governmental organisations (e.g., foundations, associations, economic self-government).

Such a strong diversity of organisational forms translates directly into the diversity of their operational goals. The creative sector seems to be a unique sector in the contemporary economy, where at the same time there are cooperate entities oriented at profit maximisation and entities oriented at maximisation of indicators other than profit (e.g., providing access to culture and national heritage). The diversity of objectives within this sector creates an original mosaic of forms of activity and directions of action. From this point of view, this sector seems to be an interesting place for activity both for profit and not for profit, and allows for absorption of diverse human activity.

According to entities operating in the creative sectors in Poland, the biggest obstacle to their further individual as well as collective development is the financial deficit. The lack or shortage of money is a significant impediment to day-to-day operations. It seems, however, that the financial barriers are smaller than is commonly believed and do not pose such a big threat to the dynamic development of the creative industries. The basis for optimism is provided by alternative forms of financing business activity development on the financial market. Networks of private investors, the so-called Business Angels, are a good partner for companies from creative industries, but even better may be communities of engaged clients, consumers, users, enthusiasts or fans. Social funding is rapidly gaining in popularity and is slowly playing a more important role [33].

3. Methodology

The research on which this publication was based was carried out at the turn of 2019/2020 by a professional research agency at the request of the Faculty of Organization and Management of the Silesian University of Technology in Gliwice. The Agency was provided with a research questionnaire developed by the authors of the publication concerning, inter alia, the issues of the creative sector in Polish cities. The questionnaire was sent to about 30% of all Polish cities. In Poland in the year of research there were 954 cities—the questionnaire was sent to 314 of them. The agency obtained correctly filled questionnaires from 287 cities located in Poland, the sample selection was done through a random method. The relatively high response rate of the questionnaires results from the fact that cities are obliged to provide public information in the case of conducting scientific research. The sample was selected to maintain the structure of the sample by provinces. The research was carried out using a questionnaire placed on the Internet, to which the link was sent to representatives of Polish cities. The survey included questions rated on a 5-point Likert scale. The questionnaire was addressed to the plenipotentiaries of the city authorities (mayor or city council) in charge of city development or, if such a function does not exist in a given city, to the plenipotentiary dealing with a similar range of tasks.

As a result of the research, 287 correctly completed questionnaires were received. The distribution of the sample by individual provinces was as follows: Dolnośląskie—27; Kujawsko-Pomorskie—16; Lubelskie—15; Lubuskie—13; Łódzkie—13; Małopolskie—19; Mazowieckie—26; Opolskie—11; Podkarpackie—15; Podlaskie—12; Pomorskie—15; Śląskie—21; Świętokrzyskie—13; Warmińsko-Mazurskie—15; Wielkopolskie—34; Zachodniopomorskie—20. We put the amount of researched cities from each of the Polish provinces on the map of Poland in Figure 1.



Figure 1. The amount of researched cities in Polish provinces. Source: Author's own work.

The aim of the research was to determine the level of quality of customer service (residents) by municipal offices and whether the monitoring of the quality of life carried out by the office has an impact on the quality of customer service.

In the first part of the research, the level of functioning of the creative sector and its individual sectors in the city was measured. The variables were determined on the basis of the analysis of the literature on the subject [51–54,65–68] and the expert method. Individual variables were measured on a five-point scale of 1–5, where 1 is very bad and 5 is very good.

The following variables were included in the research:

- C1—The presence of organisations in the city dealing with visual art (paintings, sculptures, photographs, antiques).
- C2—The presence of organisations in the city from a group of cultural sites (archaeological sites, museums, libraries, exhibitions).
- C3—The presence of organisations in the city related to handicrafts, festivals and local traditions.
- C4—The presence of organisations in the city dealing with performance art (live music, theatre, dance, opera, circus).
- C5—The presence of organisations in the city dealing with audio-visual media (television, radio).

- C6—The presence of organisations in the city dealing with new media (computer software, video games, digital creative content).
- C7—Presence of organisations in the city dealing with creative services (architecture, advertising, R&D, cultural services, recreation).
- C8—The presence of organisations in the city design dealing with design (graphics, fashion, jewellery, toys).
- C9—The presence of organisations in the city dealing with publishing and printed media (books, press and other publications).
- C10—Employment in the city in the creative services sector.

To assess the level of support for the creative sector by city authorities, three indicators were used (rated on a scale of 1–5):

- SC1—Public administration support for the creative sector
- SC2—Existence of special funds for the creative services sector

Statistical tools were used to analyse the data collected in the research. Basic statistical measures, such as standard deviation and median, were calculated for individual variables [80]. In the case of individual variables, their histograms were also analysed.

The calculations were made using the Statistica 13 package.

The nonparametric ANOVA Kruskal-Wallis test was used to analyse the differences between individual provinces. This test is a nonparametric alternative to the one-way analysis of variance. It is used to compare the distributions of several variables. The Kruskal-Wallis one-way analysis of variance on ranks has been described by Kruskal and Wallis [81]. It is an extension of the nonparametric U-Mann-Whitney test to more than two populations.

The Spearman's correlation coefficient method was used to analyse the relationship between the variables [82,83]. For the interpretation of the correlation coefficient, the classification of the correlation coefficient proposed by Guilford was used.

When interpreting the presented correlations, the classification of the correlation coefficient proposed by Guilford was used [84]. According to it, the correlations in the 0.51–0.7 range are defined as high, above 0.7—very high, and in the 0.3–0.5 range as average.

4. Results and Discussion

The results of the research conducted in the field of variables concerning the functioning of the creative sector, along with the levels of standard deviation and the median values, are presented in Table 2. On the basis of the collected data for individual cities, the indicator of the functioning of the creative sector in the city (FC) was calculated, which is the arithmetic mean of all the researched variables C1–C10. The distribution graph of the indicator is also shown in Figure 2.

It is impossible to directly compare the discussed variables to global studies due to the fact that they have never been conducted on a larger scale in terms of the functioning of the creative sector in cities. Nevertheless, to some extent it is possible to use the research on the functioning of Smart Cities, which took into account elements of creativity. An example of this type of research was Griffinger's research conducted in 70 European cities [85]. One of the 74 indicators studied was about creativity, and their results also showed the average level of creative services in European cities.

The respondents rated the presence of organisations dealing with visual arts in the city at an average level (rating 3.04 against a median of 3). The lowest rated variable was the variable concerning the presence of organisations in the city from the group of cultural sites, such as: archaeological sites, museums, libraries, exhibitions—rating 2.51, median 3. For this variable, there was one of the largest standard deviations amounting to 1.26, which means that there are significant differences between individual cities in terms of the presence of cultural sites. This type of activity requires the city to have appropriate development opportunities. In particular, the existence of archaeological sites requires archaeological excavations in the city and is mainly possible in cities with a long history. Similarly, in the case of museums which attract tourists, in cities with a longer

history, they have more museum facilities due to the greater number of people interested in visiting them.

In the case of the presence of organisations in the city related to handicrafts, festivals and local traditions, the variable was rated at an average level of 3.05 (with a median of 3). Another variable, concerning the presence of performance art organisations in the city, is the second highest rated variable (rating 3.36, median 3). In most of the surveyed cities, there are activities such as: live music, theatre, dance, opera, circus. They vary in nature depending on the size and specificity of the city, but their average rating is above average.

Table 2. Functioning of the creative sector in Polish cities.

Variables	Average	Standard Deviation	Median
C1	3.04	1.21	3.00
C2	2.51	1.26	3.00
C3	3.05	1.21	3.00
C4	3.36	1.10	3.00
C5	3.48	0.97	4.00
C6	2.98	1.26	3.00
C7	2.75	1.27	3.00
C8	2.70	1.28	3.00
C9	2.93	1.18	3.00
C10	2.90	1.03	3.00
FC	2.96	0.9	3

Source: Author’s own research.

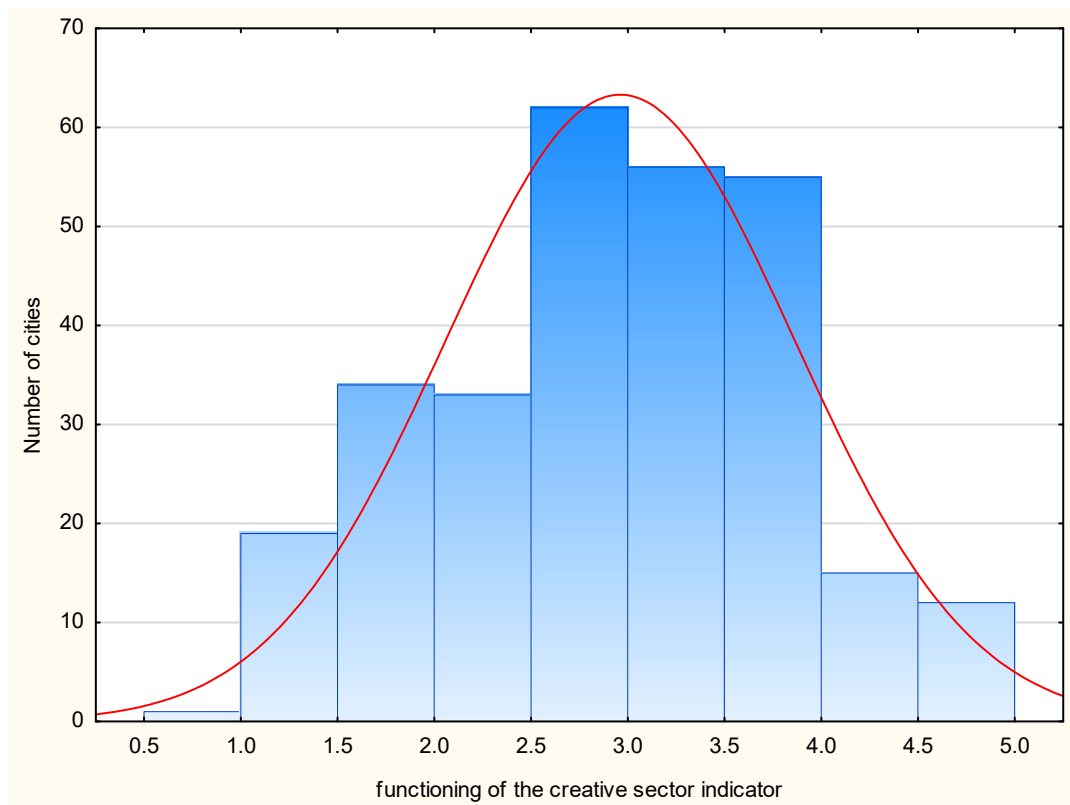


Figure 2. Histogram for the variable functioning of the creative sector indicator. Source: Author’s own research.

The highest rated of the studied variables is the presence of audio-visual media organisations in the city. In this case, the average rating is 3.48. It is also the only variable for which the median is 4 (in all other cases it is 3). Nowadays, in most cities, this type of activity is carried out either directly or indirectly—representatives of national or local TV stations reach the city. In addition, modern technology makes it possible to easily create audio-visual content and share it, for example, using popular online platforms such as YouTube. Förster and Mainka [86] and Hung [87] note the fact that the media, in particular new media, is increasingly used to cover city events. Nowadays, most of the events in cities are broadcast on this type of platform. Cities are also home to local youtubers who create creative audio-visual content.

Another variable studied is the presence of organisations in the city that focus on new media, such as: computer software development, video games, as well as digital creative content. In this case, the average rating is slightly below average—rating 2.98, median 3. Currently, such organisations do not exist in every city.

The presence of organisations in the city dealing with creative services is rated at a lower level. In this case, the average rating is 2.75, with a median of 3. In this case, there are significant differences between individual cities in terms of the existence of organisations in their area focusing on services such as: architecture, advertising, research and development, cultural services or recreation.

The presence organisations in the city dealing with design was rated at the level of 2.7, with a median of 3. This variable had the highest standard deviation. In the surveyed Polish cities, there is a significant variation in the presence of organisations dealing with fashion, graphics, jewellery or toys.

Another variable concerned the presence of publishing and print media organisations in the city. In this case, the mean rating was 2.93 with a median of 3. In the analysed cities, there is an average level of saturation with organisations that focus their activities on traditional, printed media.

The last studied variable was the average level of employment in a given city in the creative services sector. The variable was rated at an average level—2.9 (median 3). According to the conducted research, Polish cities are not inferior in terms of the average level of functioning of creative services regarding the European average [88–91]. However, there are not many examples of cities in Poland with a very high level of the creative sector, such as Silicon Valley, Bavaria Valley, Silicon Glen in Scotland, Silicon Saxony in Germany [92], Barcelona, San Francisco, Glasgow [93], Rotterdam or Amsterdam [94,95]. Among Polish cities, the most creative cities belonging to the UNESCO Creative Cities Network include: Kraków, Wrocław, Katowice or Łódź [96]. At the same time, it is worth taking into account that to be included in this network requires creativity in a certain field, usually related to literature, and not necessarily a particularly high level of creativity in technological areas.

The analysis of data lets us state that the functioning of the creative sector in Polish cities is on the average level slightly below the average value of 3 and amounts to 2.93, with a median of 3. The analysis of the variable histogram presented in Figure 2 shows that the functioning of the creative sector indicator for most cities is in the range of 2.5–4, that is from below average to good. In the case of the largest number of cities (62), the indicator ranges between 2.5 and 3. The next range is the range of 3.0–3.5, in which 56 cities were found. However, in the 3.4–4.0 range, 55 cities were found.

It is worth paying attention to the other ranges in the histogram—they show that more cities are below the average level than at the very good level. Only 27 cities were found in the ranges above 4. These cities can be considered as examples of good practices for the functioning of the creative sectors, but it is worth noting that in many cases it results from the specificity of a particular city, for example its size (we will deal with this problem in detail later in the publication), the existence of universities in them, geographic location, etc., factors independent of the activities of the city authorities. Examples of good

practice in the development of creative organisations in cities were presented by Lampel and Germain [97].

The functioning of the creative sectors was rated in 33 cities at the level below 2.5 and above 2. In the range from 1.5 to 2, a total 34 cities were found. The two mentioned groups of cities are less advanced in terms of the functioning of creative sectors, which requires significant investments and an active self-government policy. A total 19 cities were rated at a very bad level, that is below 1.5. In this case, an almost complete lack of functioning of the creative sector can be said.

Research has shown that there are organisations in cities belonging to the group of creative businesses, but their saturation is not too high and given that the creative sector is increasingly important for the city’s development, the city authorities should be more involved in promoting and facilitating its functioning. The importance of the creative sector for economic development is discussed in numerous publications. For example, Dubaraite and Startiene demonstrated the importance of the creative sector for economic development in Lithuania [98]. Titan in her work [99] presents the impact of the development of the creative sector on economic growth. The same problem, based on the example of the European Union, was presented by Boix-Domenech [100], also demonstrating the positive influence of the creative sector on the economy. Later in the publication, when consideration is given to the extent to which the activities of the city authorities have an impact on the functioning of the creative sector and thus to what extent they can contribute to the improvement of the city’s functioning.

The next table (Table 3) compares the values of individual variables from the point of view of the surveyed provinces. The nonparametric ANOVA Kruskal-Wallis test was used to analyse the differences between the variables. The values of the ANOVA Kruskal-Wallis tests together with the statistical significance p values, for which the test is completed, are presented in Table 4.

Table 3. Assessment of variables in the functioning of the creative sector in Polish cities by province.

Variable	Province															
	Lower Silesia	Kujawsko-Pomorskie	Lubelskie	Lubuskie	Łódzkie	Małopolskie	Mazowieckie	Opolskie	Podkarpackie	Podlaskie	Pomorskie	Śląskie	Świętokrzyskie	Warmińsko-Mazurskie	Wielkopolskie	Zachodniopomorskie
C1	2.89	3.11	2.93	2.85	3.23	3.32	3.23	2.91	3.73	2.33	3.53	3.57	3.00	3.00	2.47	2.85
C2	2.07	2.72	2.80	2.69	2.69	2.32	2.38	2.55	3.07	1.75	3.27	3.19	2.23	2.80	2.00	2.30
C3	2.67	3.56	3.20	3.15	3.23	2.95	2.92	2.91	3.20	2.33	3.67	3.38	2.77	2.47	3.03	3.30
C4	2.96	3.72	3.47	3.38	3.08	3.16	3.31	3.18	3.60	3.00	3.80	3.57	2.62	3.33	3.59	3.55
C5	3.37	3.50	3.80	3.62	3.85	3.00	3.31	3.09	3.80	3.42	3.87	3.24	3.23	3.27	3.62	3.75
C6	2.81	3.44	2.73	3.23	3.23	3.11	3.04	3.18	3.20	2.25	3.60	3.33	2.54	2.73	2.62	2.90
C7	2.56	3.28	2.33	2.69	2.85	2.74	2.58	2.91	3.00	2.25	3.27	2.67	2.54	2.13	2.94	3.10
C8	2.33	3.11	2.07	3.00	2.92	2.42	2.69	2.73	2.67	2.42	3.20	2.90	2.46	2.07	2.85	3.20
C9	3.04	3.50	2.93	2.85	2.85	2.79	2.88	3.09	2.93	2.08	3.73	3.10	2.54	2.93	2.53	3.15
C10	2.85	3.28	2.33	3.08	3.00	3.05	3.04	3.00	2.87	2.25	3.33	3.19	3.46	2.67	2.29	3.10
FC	2.70	3.25	2.87	3.06	3.11	2.85	2.91	2.91	3.24	2.46	3.54	3.21	2.65	2.68	2.89	3.10

Source: Author’s own research.

Table 4. The results of the ANOVA Kruskal-Wallis test for differences in the functioning of the creative sector between provinces.

Variables	H	p
C1	26.28	0.0352
C2	32.25	0.006
C3	23.10	0.082
C4	20.73	0.1554
C5	23.04	0.0832
C6	19.03	0.2122
C7	18.73	0.2265
C8	21.26	0.1285
C9	25.49	0.436
C10	30.62	0.0099
FC	22.48	0.0955

Source: Own study.

Based on the test results, it can be concluded that statistically significant differences (at the level of statistical significance $\alpha = 0.05$) occur for the following variables: C1, C2 and C10.

The conducted research and data analysis do not support the H1 hypothesis concerning the occurrence of statistically significant differences between individual provinces in the functioning of the creative sector in Polish cities. The existence of a correlation was only found for 3 variables, but it did not occur for the others and for the overall indicator of the functioning of the creative sector. On this basis, it can be concluded that there are no statistically significant differences in the level of functioning of the creative services sector as a whole between individual Polish provinces. Despite the fact that individual Polish provinces show considerable differences in terms of economic development, for example in terms of the GDP level, the entire creative services sector has a level of development that can be considered relatively homogeneous from a statistical point of view.

It is worth mentioning why there are no significant differences between many variables between provinces. We think this is due to the relative uniformity of Poland as a country. Poland compared to many other EU countries is a country with high level of uniformity—the cultural, racial and social uniformity is relatively high. Moreover, low regulations are functioning in the whole country. Every voivodeship consists of one big central city and many smaller cities. Furthermore, the difference between size and cultural importance between the capital of Poland—Warsaw—and capitals of particular voivodeships compared for example to Czech Republic Hungary, Slovakian Austria and other countries from central part of Europe—where the capital city strongly dominates the rest of the country.

The differences exist only in those variables where there is a high level of occurrence of the particular phenomenon. Especially they exist in the case of cultural, handicraft and festivals and also employment in the creative sector. The relatively high level of uniformity also is because small sample of cities from voivodeships—in Poland there is 16 voivodeships. Because of that besides the overall sample is big (287 cities), when we divide them into particular voivodeships—among them are only 11–27 cities. It is slightly too small a sample to identify statistically significant differences. We think that in the future it is worth conducting the research on the bigger sample of cities. Maybe then we can identify the statistically significant differences between voivodeship—because according to Table 3 the differences between them exist but they are not statistically significant.

In Poland, there is no comprehensive legislation on the development of creative industries. Creative organisations are often looking for financial means, which are the main reason for their slow development [33], and may use programmes financed from EU

funds, which are implemented in the same way all over Poland. This is one of the reasons for the relative uniformity of the results obtained in terms of individual provinces. An example of those programs is the program called—“Development of creative sectors”. The programme aims to support the development of the Polish cultural and creative sectors and to strengthen their competitiveness in the international arena. The programme covers all creative industries, however priority will be given to actions dedicated to the design, music, video games and new media sectors [101].

The exceptions are three variables worth analysing. The largest differences occur in the case of variable C2 concerning the presence of organisations from the group of cultural sites in the city, such as: archaeological sites, museums, libraries, exhibitions, etc. In this case, the highest rating was given to the level of creative services in the Pomorskie Province—level of 3.27, and the second there is the Śląskie Province—level of 3.19. In the case of the Pomorskie Province, a large share of the creative sector results from the fact that it is a province with old, historic cities such as Gdańsk. It is also a very tourism-oriented province and hence a particularly high saturation of cultural and creative activities. The importance of creative businesses in the Pomorskie Province was identified, for example, in a report compiled by the Creative Business Network [102].

In the case of the Śląskie Province, its specific character is decisive. This province is the most urbanised province in Poland. It is located in the Górnośląsko-Zagłębiowska metropolis consisting of many large and medium-sized cities. It is true that these cities are not the largest in Poland, nor is this province highly saturated with tourist activities, but the fact that there is a very large metropolis and a small number of rural areas means that it is very strongly involved in many areas of creative activity. A detailed analysis of the potential of creative industries in the Śląskie Province was carried out in the report: Analysis of the development potential of metropolitan functions in urban agglomerations of the Śląskie Province, which are centres of economic growth in the Śląskie Province in the context of the processes taking place on the regional labour market—culture and creative industries [82]. The report shows that the Śląskie Province has great potential for the development of culture and creative industries. It is both related to historical conditions and the existing intellectual, social and infrastructural base [103].

For the analysed variable, the last ones were Podlaskie province with a rating of 1.75, then Wielkopolskie province with a rating of 2 and Dolnośląskie province with a rating of 2.07. These provinces are those with a large share of small towns and rural areas, which significantly reduces the presence of cultural creative activity. It is also worth paying attention to the particularly large differences between the best and the worst rated provinces for the C2 variable, amounting to 1.52.

In the case of the second variable with statistically significant differences—C1—concerning the presence of organisations dealing with visual art, the Pomorskie Province came second, after the Śląskie Province. Additionally in this case, the same two provinces were in the first two places. The worst result in terms of the presence of organisations in cities dealing with visual arts was Podlaskie Province (rating 2.33), followed by Wielkopolskie Province (rating 2.47). Additionally in this case, the provinces in the last positions are the same as for the C2 variable.

The third variable with statistically significant differences between provinces was the C10 variable, that is the amount of employment in the city in the creative services sector. In this case, the Świętokrzyskie Province (rating 3.46) was ranked the highest, followed by: Pomorskie Province (rating 3.33) and Śląskie Province (rating 3.19). The worst rate of employment in the creative sectors was rated in the case of Podlaskie (2.25) and Wielkopolskie (2.29) and Lubelskie (2.33) provinces.

In further works, analyses were carried out on the relationship between the level of functioning of the creative sector in the city and the city size. Cities are divided into six size classes: up to 5000 residents; 5001–10,000 residents; 10,001–25,000 residents; 25,001–50,000 residents; 50,001–100,000 residents; over 100,000 residents. The results of the level of functioning of the creative sector for individual classes are presented in Table 5.

Table 5. Rating of variables in the functioning of the creative sector in Polish cities from the point of view of the city size.

Variables	Up to 5000 Residents	5001 to 10,000 Residents	10,001 to 25,000 Residents	25,001 to 50,000 Residents	51,000 to 100,000 Residents	Over 100,000 Residents
C1	2.46	2.65	3.05	3.12	3.43	4.26
C2	1.85	2.14	2.57	2.67	2.67	3.69
C3	2.12	2.83	3.05	3.20	3.52	4.14
C4	2.68	3.04	3.37	3.49	3.81	4.40
C5	3.20	3.25	3.48	3.57	3.71	4.06
C6	2.46	2.63	2.98	3.00	3.24	4.23
C7	1.73	2.22	2.78	3.20	3.43	4.09
C8	1.76	2.30	2.70	2.98	3.24	4.03
C9	2.44	2.53	2.83	3.08	3.19	4.23
C10	2.63	2.80	2.70	2.98	3.10	3.54
FC	2.22	2.60	2.98	3.17	3.35	4.11

Source: Own study.

The nonparametric ANOVA Kruskal-Wallis test was used to analyse the differences between the variables. The values of the ANOVA Kruskal-Wallis tests together with the statistical significance p values, for which the test is completed, are presented in Table 6.

Table 6. The results of the ANOVA Kruskal-Wallis test for differences in the functioning of the creative sector between the city size.

Variables	H	p
C1	64.58	0.0000
C2	49.91	0.0000
C3	61.25	0.0000
C4	61.18	-
C5	26.74	0.0000
C6	55.52	-
C7	92.63	-
C8	77.51	-
C9	71.93	-
C10	24.13	0.0002
FC	98.17	0.0000

Source: Own study.

Based on the test results, it can be concluded that statistically significant differences (at the level of statistical significance $\alpha = 0.001$) occur for all the studied variables. The results support the H2 hypothesis that the size of a city has a statistically significant impact on the functioning of the creative sector in its area.

In order to determine the direction of this relationship, the data collected in Table 5 can be analysed. On this basis, it can be concluded that there is a clear relationship between the city size and all the studied variables. Spearman's correlation coefficient between the studied variables is high. There is a positive, strong (according to the Guilford classification) correlation of 0.56 between the indicator of the functioning of the creative sector in the city and its size.

The data clearly shows that all the surveyed areas that make up the functioning of creative industries occur more often the larger the city is. Organisations dealing with

visual arts, culture, handicrafts, performing arts, media, creative services, design, etc. are especially common in large cities. A similar situation occurs in the case of employment in the creative sector—also in this case, the number of people employed in this sector increases with the size of the city.

The differences between cities of different sizes are very large. For example, for the smallest cities with less than 5000 residents, only one variable—C5—was rated as above average for the presence of organisations dealing with audio-visual media (3.2). For all other variables, the ratings are below 3, some variables are also rated very poorly below 1—in particular, in very small cities there are problems related to: the presence of organisations in the city from the group of cultural sites, the presence of organisations in the city dealing with creative services and the presence of organisations in the city dealing with design.

The functioning of the creative sector is different in the case of the largest cities with more than 100,000 residents. In this case, only two variables are rated below 4—C2—the presence of organisations in the city from the group of cultural sites, and C10—employment in the creative services sector. For all other variables, the rating is above 4, that is above the good level. The highest rated variable in this case is C4—the presence of organisations in the city dealing with performing arts—rating 4.4.

In the future, smaller cities in particular should seek to improve their results and increase the role of the creative sector. It is particularly important due to the fact that the creative sector has a large impact on generating places of employment, which is confirmed, for example, by Hartley [104]. This is important because in Poland smaller cities have a higher level of unemployment compared to large cities [105] as well as a negative migration balance [106]. The development of the creative services sector in these cities would allow for a partial solution to these problems. As early as 2004, Christopherson pointed out that small and large cities must have different approaches to creating strategies for the development of creative organisations in the city [107]. Jurene and Jureniene [108] and Gregory and Rogerson [109] paid attention to similar facts.

In the next stage of the research, the correlation between the level of aid granted by public administration for the creative sector and the availability of special funds dedicated to the creative services sector and individual indicators of the creative sector functioning in the Polish cities surveyed (C1–C10 variables) was calculated. As all the studied variables are qualitative on an ordinal 1–5 scale, the Spearman’s rank correlation coefficient was used to determine the relationship between them. Results of the relevant correlations are presented in Table 7. It shows in bold those correlations that are statistically significant at a significance level of $\alpha = 0.01$.

Table 7. Spearman’s correlations between the SC1 and SC2 variables and the variables concerning the functioning of the creative sector in Polish cities.

Variables	SC1	SC2
C1	0.574	0.480
C2	0.498	0.430
C3	0.617	0.622
C4	0.503	0.600
C5	0.433	0.472
C6	0.597	0.491
C7	0.628	0.711
C8	0.677	0.709
C9	0.673	0.568
C10	0.484	0.392
FC	0.760	0.800

Source: Own study.

The conducted research shows that there are statistically significant correlations at the level of at least $\alpha = 0.01$ between all the studied variables. Research has shown that there is a very high correlation of 0.76 between the level of functioning of the creative services sector in the city and the support of public administration for the creative sector provided by the city. The results support the H3a hypothesis. Research shows that active actions of public administration, which help the creative sector in its functioning, have a positive impact on this sector. On this basis, it can be concluded that municipal offices should become more involved in activities that can help the creative sector in further development.

The relationship between the variables can be expressed in the form of the following equation:

$$\text{Indicator of the level of the creative sector functioning in the city} = -0.79 + 1.105 \times \text{SC1} \quad (1)$$

The results obtained as part of the research also support the H3b hypothesis because statistically significant correlations have been observed between the level of creative services functioning in the city and access to special funds dedicated to this sector. According to the Guilford classification, the correlation between the variables can be rated as very high, as it amounts to 0.8 at the level of statistical significance $\alpha = 0.01$.

The studied dependence can be expressed in the form of the following equation:

$$\text{Indicator of the level of the creative sector functioning in the city} = -0.55 + 1.127 \times \text{SC2} \quad (2)$$

The existence of relation between the functioning of the creative sector in researched country and public administration support is in accordance to the results presented in the paper by Zheng Liu [110]. He analysed the impact of government policy on innovations in creative industries in UK and China on the example of innovation centre. He has found the existence of positive impact of good established government policy on this sector.

There is the relation between support of the city and the magnitude of cultural phenomenon in analysed cities, as lack of access to money and problems with knowledge about what ways organizations can try to access money are some of the most important reasons why Polish organizations from creative sectors cannot grow. The analysis conducted in Poland shows that the core of the creative industries, which includes activities in the arts and culture, requires an efficient system of public funding, to put it simply—state funding. The subsidising of cultural institutions—in the form of permanent, budgetary grants, but also in the form of grants and competitions—is a measure of whether and how seriously the state takes the creative sectors [33,111]. This is the main reason why in cities where there is a significant level of support for the creative sector this sector is functioning better.

Supporting innovation in creative industries, as the examples of many countries indicate, means above all creating conditions for its functioning. This means, above all, generating demand for the products of the creative industries, which allows them to become an integral part of local, regional and national economic systems. The integration of the creative industry into economic systems at various levels creates conditions for its development in terms of opportunities to generate income and partial independence from public financial resources, which are usually limited and supply the creative industry irregularly, depending on the economic development strategy adopted and the resulting priorities, which are translated into various sectoral policies. The integration of the creative industries into economic systems naturally triggers innovative activities, which are necessary to gain a position in the market and develop competitive advantages enabling sustainable development. In a model system, creative industries become a centre sending development impulses to other sectors of the economy, initiating structural changes in larger economic systems [112–119]. All such activities require support from city authorities and therefore there are correlations both between support of public administration and access to special funds dedicated to this sector and the level of the functioning of the creative sector in the city. The main areas that require improvement include issues related to the presence of organisations related to cultural sites (score 2.51). City authorities should lead initiatives to develop the museum base as well as the offer related to various types

of exhibitions. There are also problems in the case of organisations dealing with design (rating 2.7) and organisations dealing with creative services (rating 2.75). Furthermore in these cases, the city authorities should focus on activities that may lead to an increase in the saturation of organisations dealing with R&D, cultural services, recreation, etc., such services contribute to the growth of innovation, creativity, quality of life and have a small, long-term positive impact on the functioning of the city.

5. Conclusions

According to our research the level of functioning of the creative sector in Poland is on the average level—the indicator of functioning of this sector in Poland is 2.96 in the 1–5 scale. Most of the researched cities are between range 2.5–4, that is from below average to good. The largest number of cities are on the level between 2.5–3. The highest assessed variable is C5—the presence of organisations in the city dealing with audio-visual media (3,48) and C4—the presence of organizations in the city dealing with performance art (3,36). The lowest assessed variables are: C2—the presence of organizations in the city from a group of cultural cities—2.51 and C8—the presence of organizations in the city dealing with design (2,7).

The conducted research has shown that there are no statistically significant differences between the individual provinces surveyed. The data does not support the H1 hypothesis concerning the existence of significant differences between the level of functioning of the creative sector in Polish cities between individual provinces. The level of functioning of the creative sector in Polish cities was rated at an average level and it amounts to 2.96 on a five-point scale. Despite the fact that there are no statistically significant changes between the indicators in terms of the aggregated indicator, their existence was found in the case of three variables: C1—the presence of organisations dealing with visual arts in the city, C2—the presence of organisations in the city from the group of cultural sites, and C10—employment in the creative services sector. In the case of the studied variables, two provinces were ranked first: Pomorskie (characterised by a large share of the creative sector due to its great historical and tourist values) and Śląskie (in this case, the decisive role is played by the fact that it is the largest Polish conurbation of numerous, and related with each other cities, with developed creative activities. In the case of all three of the above mentioned variables, Podlaskie Province was ranked last, mainly due to the fact that it is an agricultural area and lacks large university and cultural centres.

The conducted research also showed the existence of large, statistically significant differences in the existence of organisations belonging to the creative sector depending on the city size. The existence of statistically significant relationships was found both for the total indicator of the level of functioning of the creative sector in the city as well as for all ten partial variables. The obtained results support the H2 hypothesis that the size of the city has a statistically significant impact on the functioning of the creative sector in its area. The differences between the individual cities are large. It has been observed that the larger the city, the more creative sector organisations there are.

In the case of cities with more than 100,000 residents, almost all areas that make up the creative sector are implemented at a good level. The only exception is the mentioned C2 variable. However, the smaller the city, the more there is to be done in this respect and the greater the distance compared to large cities. In particular, small towns with less than 10,000 residents and most with less than 5000 residents have a very poorly developed creative sector. To some extent, this is due to objective reasons—no large universities, no R&D companies, no large cultural centres, etc. However, nowadays, when many activities can be performed remotely, including those in the areas of creative work, it seems that there is a great development potential here.

The fact that a city should actively engage in the development of the creative sector is proved by the analysis results of the correlation between the public administration support in a given city and the functioning of creative sectors in its area. There was a strong correlation between the variables at the level of statistical significance $\alpha = 0.01$ amounting

to 0.8. The research results support the H3a hypothesis. This correlation is important from the point of view of the recommendations for the policy pursued by the city, as it allows for the conclusion that the city's active involvement in helping the creative sector benefits the form of its better development.

For this reason, all cities can be recommended to be more involved in helping the creative sector. Where such opportunities exist, the city should establish a special unit dealing with the creative sector. This department should offer an organisation from this sector legal assistance, tax breaks in the field of municipal taxes, investment advice and in particular, advice on the possibility of obtaining funds from various types of projects and assistance in their filing.

The importance of the last issue is confirmed by studies on the relationship between the existence of special funds dedicated to the creative services sector and the presence of this type of organisation in the city. There was a strong correlation between the variables at the level of $\alpha = 0.01$ at the level of 0.76. The results support the H3b hypothesis. Currently, there are opportunities to use numerous sources of financing, including, for example, from European funds, although, companies in the creative sector do not always have sufficient knowledge and competence to prepare a project. This is especially true for small micro-enterprise organisations. In such a situation, the help of employees of appropriate departments of municipal offices may be very necessary.

The original contribution of the authors of the publication is to demonstrate, on a large research sample, the existence of a positive impact of the municipal office's activities on the creative sector. We analysed those impacts on the example of Poland, but we think that similar relation can also be found for other countries and the relation can be universal. We think the problem is worth researching in the future because it is important for global municipal office management. Especially it can be useful in the case of medium sized and small cities where the creative industries are not so widespread and their development needs careful attention and support from local government.

In our research we can observe that the support of local administration and especially special funds for creative industries have significant impact on its functioning. This finding can be useful for municipal offices in the world. They should try to incentivise their activities toward support of creative industries and especially try to create special funds to support them. This should have a positive impact on the increase of creative industries in those cities. Moreover, because the creative industries are very innovative this can have positive impact on innovativeness.

The studies presented in this publication have several limitations. The first limitation worth mentioning was the fact that they were conducted in one country—Poland. The results of the research on the level of functioning of the creative sector in other countries' cities do not have to be the same as in Poland. Nevertheless, it seems, in particular due to the high levels of statistical significance obtained for the H2, H3a and H3b hypotheses that despite the differences in the detailed results, the basic identified relationships would be similar. The second limitation of the research carried out is the fact that the applied method of operationalisation of variables based on the analysis of the literature and expert assessment was one of many possible approaches to the issue. Any other operationalisation of the variables could certainly cause changes in the detailed results, but should not change the overall conclusions of the research. Another limitation is connected with the person which filled the questionnaire in the municipal office. The questionnaire was addressed to the plenipotentiaries of the city authorities (mayor or city council) in charge of city development or, if such a function does not exist in a given city, to the plenipotentiary dealing with a similar range of tasks. We think that this person is competent in the topic of research but we cannot guarantee that in each municipal office this person filled the questionnaire. The fourth limitation is connected with the problem that the level of support of the creative sector by municipal office was assessed by the municipal office itself. This could lead to overestimation and the level of support could be slightly different than we obtained in our results.

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