Creativity reconsidered - so your firm is creative, but how much? A trans-sectoral and continuous approach to creative industries†

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The paper addresses the problem of conceptualization and operationalization of creative industries. It gives a short review of existing approaches and concepts and points to their limits. It suggests new ways of defining creative industries by emphasizing two aspects: the trans-sectoral character of creativity: it is not sectors that are creative per se; and that creativity has to be conceived along a continuum. On the basis of different characteristics of activities, products and services of firms, an index of creativity ranging from not creative to very creative is developed. A case study based on a survey of firms shows that there is a broad range of creative behaviour and that most firms are creative to at least some degree. This leads to new options for future research and for the analysis of spatial differences as well as to a new focus for policies in support of creativity.

Keywords: creative industries; index of creativity; spatial differentiation; creativity as a continuum trans-sectoral character

1. Creative industries as an open economic and political label

Creative industries has become a key word – in academia as well as in economic and regional policy. Culture and creativity are now considered as an important driver of the economy. The rise of the cultural and creative industries is linked closely to the increasing importance of knowledge for all economic aspects of production, distribution and consumption of goods and services (Cunningham, 2002), the future of the ‘creative class’ has been assigned an important role for economic growth and the creation of jobs (Florida, 2002, Gabe, Florida, & Mellander, 2012). Yet, the art and creativity branches combined under the notion of creative industries are not new at all: Arts, literature, media old and new, music, fashion, motion pictures and industrial design existed since long before they were labelled as ‘cultural’ and later on as ‘creative’ industries in the 1990s (Rothauer, 2004).

Nevertheless, the notion of creativity keeps attracting attention. The prolonged attention has recently centred on several aspects.

At the beginning, its regional dimension was focused on metropolitan areas, large cities and urban agglomerations. Yet, in recent years, the geography of creativity has changed focus and new evidence of the spatial dimension of the impact of creative industries has been produced. In the case of Great Britain, for example, it resulted in a rich and multi-layered picture – not only London but many other places show a strong
creative presence with a rich variety of creative activities (De Propris, Chapain, Cooke, MacNeill, & Mateos-Garcia, 2009, p. 3). This also leads to a new approach to local economic policy that goes beyond ‘urban branding’ rationales, acknowledging the great potential of creative activities in local innovation systems (Chapain, Cooke, De Propris, MacNeill, & Mateos-Garcia, 2010, p. 4).

It has also been found that the number of creative enterprises in rural areas is clearly on the rise. For Austria, it can be shown that although their absolute number shows a concentration in and around the provincial capitals, their development was more dynamic in rural than in urban areas (creative wirtschaft austria, 2013, p. 18).

The attraction has also moved to governments outside the developed world (Cunningham et al., 2009). The emphasis here lies on the cultivation of local talent, on the value of creative production residing in ideas and individual creativity as a basic foundation for creative enterprises in developing countries. ‘The Orange Economy’ (Buitrago & Duque, 2013), as a Latin American and Caribbean version of the creative economy, tries to ‘squeeze all the juice’ from the wealth of talent, intellectual property and the cultural heritage of this region.

This new emphasis is a manifestation that culture, creativity and creative activities are therefore not only characteristics for the cultural and creative industries per se, but also an increasingly important input for other sectors as well as for the development of regions based on such activities leading to a cultural political economy of creativity (van Heur, 2010).

However, the notion of creativity not only keeps attracting attention, it also keeps attracting critical discussions. These discussions centre on the question of defining and measuring those creative industries and creativity as such. Is it only a magic word used by almost everybody – managers, policymakers, but also therapists and mediators – and thus losing content just because of its positive morality (Gielen, 2014)? Is it a coherent construct despite its heterogeneity and does a general public have a coherent picture of it (Wyszomirski, 2004), are those industries a logical concept (Pratt, 2005), are they not more than a constructed policy instrument and instrument of politics in order to legitimize national and regional quite different political action (O’Connor, 2007; Sauer, 2012; Throsby, 2008)? And all past and more recent studies discuss the question of measurement – which are the creative industries, who is in, who is out, is it industries or occupations resulting most of the time in a binary and exclusive definition of creativity?

This paper addresses this problem of conceptualization and operationalization of creative industries. We shortly review existing approaches and concepts and discuss their limitations, then suggest new ways to define and survey creative industries. We emphasize two aspects: the first centres on the trans-sectoral character of creativeness – it is not only a predefined part of the economy (i.e. sectors) that is creative per se. The second aspect underlines that creativity has to be conceived along a continuum rather than in the binary way that is often operationalized for research. To catch both aspects we develop an index of creativity based on activities, products and services of firms with different degrees of creativity. A case study illustrates the applicability and usefulness of our new approach. The paper concludes with some implications for future research and for policy support.

2. From cultural to creative industries to a creative class

2.1. Cultural industries and creative industries

The term ‘culture industry’ was originally introduced by Adorno and Horkheimer (1947; see also Adorno, 1991) as a polemic notion to describe the incompatibility of
arts and culture on one hand and business and economics on the other hand. In the 1980s, ‘cultural industries’ was used to describe the exact opposite – the connection between arts and economic activities, that part of arts and culture that was not financed through public funds but that produced for mass consumption. That definition of cultural industries included primarily television, radio broadcasting, movie production, the music industry, concerts and similar activities (LIQUA, 2006). Many recent European studies of ‘cultural economies’ maintained a somewhat narrow focus on artistic production and services for the arts and culture, but excluded for example the whole information and communications technology sector. Landry et al. (1996) and Pratt (1997) broadened the definition of cultural industries to include additional sectors outside the arts-related activities – for example, industrial design, advertising and media, but also traditional trades and crafts. Pratt (1997) operationalized his definition with a simple four-part value chain: content origination (original production, commissioning and directing), manufacturing inputs (production of the means of production/infrastructure), reproduction and mass distribution, exchange (sites of exchange of rights to consume). Later on, this production chain analysis was coined as ‘depth dimension’, where the production process of a creative product is regarded as an integrated whole (Pratt, 2005) and later interpreted as a cultural production cycle consisting of seven value chains (UNESCO, 2009).

The British Department of Culture, Media and Sport (DCMS) replaced the term ‘cultural industries’ with ‘creative industries’ and defined those as ‘industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property’ (DCMS, 1998, p. 3). The DCMS definition also mentions that creative industries use creative intangible inputs which add more economic and social value than is added by manufacturing. They encompass and link the traditional cultural industries like the performing arts with the new economy info-intensive communication and cultural industries – for example, computer game design. This definition emphasizes the growth potential and market orientation of the creative industries and focuses on activities that meet those criteria, whereas ‘cultural industries’ traditionally focus more on artistic and arts-related activities. Conceptually, the ‘creative industries’ combine – but then radically transform – two existing terms: the creative arts and the cultural industries (Cunningham & Hartley, 2001, Howkins, 2001). Following this line of arguments, cultural industries are apart from the creative industries.

However, following the Wood’s arguments (Wood, 1999), cultural industries should be considered much more broadly. Cultural – just like creative – is an attribute, a characteristic, that can be assigned to many products, services, and activities. It is therefore difficult to draw a clear line around either ‘cultural’ or ‘creative’ industries. This is the starting point for our theoretical considerations and our new approach to defining those industries (for which we henceforth use solely the term ‘creative’).

### 2.2. Sector versus occupation

The definitions used for creative industry studies are usually pragmatic and rather descriptive than analytical. Oftentimes they result in ‘what is in’ and ‘what is out’ lists of industry sectors that do not have any analytical or systematic consistency. The biggest problem with this approach is that creative activities are undertaken by individual people in individual companies, but the industrial classification systems categorize entire industries into sectors, based on the product or service provided. Clearly, not all
companies in a sector can be called creative, and not all employees in a creative company perform creative tasks. At the same time, employees and companies in other sectors will not be included in the lists, even though they engage in creative activities.

Florida (2002) emphasized that ‘the ultimate intellectual property – the one that really replaces land, labor and capital as the most valuable economic resource – is the human creative faculty’ (Florida, 2002, p. 37). Consequently, he focused on the individuals and on the ‘creative class’ that is characterized by people ‘who engage in work whose function it is to create meaningful new forms’ (Florida, 2002, p. 68). The ‘super-creative core’ includes scientists and engineers, university professors, poets and writers, artists, entertainers, actors, designers and architects, as well as the intellectual elite of modern society – for example, publishers, researchers, analysts and other opinion leaders. In addition, Florida identifies ‘creative professionals’ who work in a wide range of knowledge intensive industries, including the high-tech sector, the financial or the health services sector.

With his approach, Florida focused on occupations instead of sectors, avoiding some of the operational problems of the sector approach. In his work he showed that the creative class supports economic development, that both human capital and the creative class have a strong impact on regional income (Florida, Mellander, & Stolarick, 2010) and even on the happiness of nations (Mellander, Florida, & Rentfrow, 2012) and that having a creative class occupation lowers the probability of being unemployed during and after the crisis (Gabe et al., 2012).

Florida argues that in addition to talent and technology, tolerance is an important and necessary condition for cities and regions to attract the ‘creative class’ and thus to prosper economically and to be successful and competitive. This aspect – represented by the ‘gay index’ and Florida’s conclusion that ‘gays predict not only the concentration of high-tech industry, they also predict its growth’ (Florida, 2002, p. 256–257) – is probably the most controversial one in Florida’s work. His critics mainly focus on Florida’s analysis techniques and the more or less explicit causality established between his indexes and population and employment growth (Bures, 2012a, 2012b; Glaeser, 2005; Kotkin, 2003, 2013; Kotkin & Siegel, 2004; Malanga, 2004; Peck, 2005).

Without doubt (and without having the intention to enter into the exegesis of Florida’s work), Florida made an important contribution to raising awareness with respect to creative industries and creative occupations. In particular, the focus on creative activities and the people who perform them is of key importance for the analysis of the creative industry. However, even occupational statistics can only provide an approximation of the total creative potential in a region. Like the lists of sectors that are considered part of the creative industry, the ‘who is in and who is out’ lists of occupations draw a sharp line between people who perform creative activities and others who do not. Again, a generalization takes place – all members of a certain occupational category are considered creative, and all members of another one are considered not creative. It is highly questionable if such a clear categorization reflects reality.

Casey (1999) combines the categories that can be identified based on the occupational and sector approaches: creative or not creative industry, creative or not creative occupation. The following matrix provides an overview:

| Creative industries          | Yes | No          |
|-----------------------------|-----|-------------|
| Creative occupation         | Yes | Creative industries – core |
|                             | No  | Creative industries in a broader sense |
|                             |     | Creative industries in a broader sense |
|                             |     | Not part of the creative industries |
This matrix illustrates the problems associated with the use of secondary statistics. If sectors are used to define creative industries, employment counts will include employees in creative businesses who are not occupied to perform any creative tasks, therefore overestimating the size of the creative industries. At the same time, the analysis does not capture creative occupations in sectors that are not categorized as creative, resulting in an undercount. The size of the combined errors (not creative occupations in creative sectors and creative occupations in not creative sectors) until now is unknown. The same problems occur with the use of occupational statistics, if they follow the sectoral classification. So this is why we believe that we need to ask the people directly, whether they are occupied mainly by creative tasks, but without mentioning creativity directly. While we believe that our suggested method is also suited well to measure the upper right-hand box (not part of the classically defined creative industry but performing creative tasks), in our survey we focused on the two left-hand boxes in order to single out the core of the creative industry.

The definition of cultural activities and cultural industries has traditionally been a narrower one. However, as soon as the question of ‘cultural value’ (see Wood, 1999) is introduced, problems arise that are similar to the question of ‘what is a creative service or product?’ Some products or services outside the traditional ‘cultural industries’ may also have a cultural value. The distinction between cultural and not cultural, creative and not creative industries becomes more and more difficult and blurry.

O’Brien and Feist (1995) work linking micro-census data with SIC (standard industrial classification) and SOC (standard occupational classification) categories provided an essential impulse to the discussion who should be considered a creative worker. The debate resulted in different models, all of which use sector classifications, but different sets of categories. The following list presents a few examples that illustrate the different ‘cultural’ or ‘creative’ industries that result from the use of different pragmatic definitions that are based on industry sectors.

- The production chain model was developed by COMEDIA (2001) for creative industry studies in Barcelona and Glasgow. It includes 60 SIC categories that are grouped based on interdependencies. The analysis of employment data using those groups allows the identification and comparison of patterns and characteristics.
- The creative industries production system (CIPS) was developed by Pratt (1997). His value chain includes content origination, manufacturing inputs, reproduction, and exchange. This model includes 35 SIC categories and puts special emphasis on content origination, which is generally considered a growth area.
- The DCMS minimum set was proposed as a list of cultural activities where the entire SIC category is part of the creative industries. This model produces a reasonably robust set of numbers and brings a close focus on what Pratt in his CIPS included in the content origination phase. (COMEDIA, 2001)

These examples show the wide range in categories that result from the traditional approaches. Clearly, the different models yield completely different results, based on the categories included.

2.3. Limitations of statistical data

In addition to the bias introduced by the inclusion or exclusion of individual categories (sectors or occupations), the use of secondary statistics brings along numerous other
problems. The data availability is limited, data are often outdated, and confidentiality requirements limit the use of statistical data at more disaggregated levels of analysis, and hence limit strongly the consistent analysis at regional levels and their comparison.

Secondary industry statistics generally do not include freelancers and people who are self-employed. As a study for Vienna (Reidl, Steyer, Schiffbanker, & Lukawetz, 2006) showed, a large number of people working in the creative industries are not employed in a company, they are often independent freelancers. Many studies across the world suggest that the creative industries grow mainly through new business startups, not through expansion of existing companies. Surveys in Graz (see the case study below) confirmed this trend and lead to the conclusion that many individuals who started a creative business do not foresee hiring any employees at all in the near future. However, official statistics that include all business sites – and not just businesses with employees – are very often dated; that information is not collected as frequently and regularly as employment information. Moreover, freelancers who do not own their own business and therefore do not have a business site are necessarily excluded from the official statistics.

A particular limitation of secondary statistical data applies to regional analyses. Due to confidentiality requirements, data are often suppressed and it is not possible to perform a detailed industry analysis for small – especially rural – regions. Quantitative results based on a very small number of businesses and employees are also not very meaningful. The biggest problem in this context is also that the creative industry – like many other industries – is most likely to be organized and structured differently in non-urban regions than in cities and agglomerations. It is not possible or meaningful to apply a single standard statistical classification of creative industries to metropolitan and non-metropolitan regions.

3. Creativity as a continuum

As discussed before, it does not seem reasonable or realistic to draw a sharp line between a creative sector and the – not creative – rest of the economy. We therefore developed a new approach that is different from the traditional classification of creative industries. We do not make a distinction between creative and not creative, we see creativity as a continuum. The core of this new approach is the creative activity (process) that results in a product or service. While traditional approaches only distinguish between creative and not creative activities, we focus on the question of how a service is provided. We identify the characteristics of the service or product and are therefore able to make more subtle distinctions among creative businesses.

As a consequence, this approach – by focusing on creative activities, services and products – also allows better capture of creativity that takes place outside what are traditionally considered the creative industries. The underlying assumption is that creativity is not limited to a specific sector of the economy (the creative economy), but that – as Florida (2002) mentions – every human being has (at least in theory) the potential to be creative, and thus every human and economic activity can be creative. Our approach therefore focuses on creativity in the economy, with the characteristics of creative economic activities.

Based on theoretical concepts and literature from a wide range of disciplines (psychology, knowledge management, information sciences, organizational development and regional science), we developed a new approach that forms the hypothesis that creativity in the economy can be observed as a continuum. Instead of drawing a sharp line, this
approach identifies – with the help of a number of descriptive criteria – the degree of creativity that is embedded in a service or a product. The criteria used in this approach were developed with the help of literature about new classification approaches for the service sector and its behavioural aspects (Tether, Hipp, & Miles, 1999; Tether, Li, & Mina, 2012), knowledge management (Gurteen, 1998), definitions of creativity in psychology (De Bono, 1967; Spiel & Westmeyer, 2006) as well as literature addressing new organizational forms and changing labour markets (Eichmann, 2003; Lingo & Tepper, 2013; Martins & Terblanche, 2003; Wilson & Stokes, 2005). We also took up Florida’s more recent emphasis that it is not just education (the usual indicator of human capital) or occupation/class but the actual skills and specific activities that lie behind work which provide a fundamental measure of human capital as skill. He points to three core types of skills: beyond basic physical skill (associated with traditional work) cognitive skill (the ability to acquire knowledge, process information, and solve problems) and – even more critical – social intelligence as ‘capacities used to work with people to achieve goals’ (Florida, 2012, p. 10).

From this diverse and interdisciplinary literature we derive and specify the following characteristics of creative activities to form the core of our definition:

- **Creative services and products are not-standardized or precisely defined.** Standardization is one of the key classification elements in the service sector literature. Standardized output characterizes routine activities, whereas non-standardized services or products are a sign that the needs and ideas of the individual customer are addressed. Lectures that impart basic introductory knowledge would be an example for a standardized output as opposed to seminars on a graduate level.

- **Modular systems or a selection of predefined categories that allow limited adaptations to meet a client’s requests are the simplest form of a creative service or product.** This is an intermediate stage that allows – to a certain extent – adaptation of a solution to individual client needs. While this is not a standardized solution (‘one size fits all’), the number of available alternatives is limited. This allows a response to (some or the most frequent) requests of the clients, while at the same time the variations are easy to plan in terms of complexity and costs. A graphical solution consultancy that adapts predefined sets of coarsely predefined graphical concepts to the customer’s data and selects the ones which are the most appropriate would fit into this category.

- **Creativity means (among other things) to find completely free and new (artistic) solutions for each customer.** This is the most advanced level of creative activity. There are no modules or boilerplates that can be used for a new client. The business or service provider prepares individual solutions and offers greatest flexibility for each client’s needs and requests. A new public relation campaign corresponds to this type of creative activity.

- **Creative services and products are so complex that it is often impossible to determine the exact final result in advance, because the producer–client interaction is so important.** This is directly linked to one of the key principles of creativity. Creativity is defined as an ongoing process of refining, changing and adapting to changing goals. The creative process – providing a creative service or developing a creative product – includes the client as well. Client inputs, interactions and feedback loops as well as readjustments characterize the process. The more creative the service or the product, the less clear is the final result at the beginning of
the process. This is like making a campaign for a product that did not exist before but has to correspond to the corporate design and image and where the customer constantly reacts, declines, alters and makes suggestions for improvement.

- The input necessary to provide the service or to develop the product cannot be estimated precisely in advance. This characteristic is closely related to the previous one. Due to the flexible way in which the services are provided and the products are developed and because of frequent and sometimes extensive revisions and adaptations, it is often difficult for creative workers to estimate in advance the costs and time necessary to achieve the desired result. To take up the example before: you do not know if you have or want to use TV ads, print, online marketing, or social networks for the new product.

- For creative services and products, it is not possible to determine the final result already at the start of the contract, and sometimes not even what the contract is about. This characteristic – like the previous two – refers to the typical flexible adaptations that take place during the creative process. Frequently, neither client nor service provider have clear expectations of what the final result will exactly look like. The final result is usually the outcome of a joint creative process where both parties provide their input. The world of architecture can serve as an example here: suppose you own a hotel and the only thing you know is that you want a famous architect to interact with the existing building and transform it somehow.

Businesses and their services and products do not need to fulfil all those criteria to be considered creative. The criteria are a means to describe the characteristics of services and products in great detail and allow to classify them according to their level (or intensity) of creativity. Creativity is seen as a continuum – it can be expected that there are companies that do not fulfil any of the criteria, others that meet just one or a few, and on the other end of the scale are companies that offer services and products for which all six characteristics apply.

The descriptive criteria listed above are used to calculate an index of creativity (which is different from Florida’s creativity index). The greater the extent to which the criteria are met and the more criteria are either partially or completely fulfilled, the more creative is a company with respect to its products or the services it provides. In the survey companies were asked for each characteristic if it applied completely, somewhat, or not at all to their activities, services or products. The answers are added up to an index that ranges from 0 (not creative, not a single characteristic applies) to 12 (very creative, all criteria are completely fulfilled).

This index is an attempt to measure and quantify creativity: it allows more differentiated statements about the creativity of a business than the simple classification based on its membership in a specific industry sector. The more differentiated and detailed analysis of the actual creative activities that take place in a company also provide a tool for evaluating and verifying the quality and accuracy of the statistical definition of creative industries. It allows identification of the share of businesses within a sector that actually engage in creative activities and to further differentiate those by their level of creativity. The approach can, of course, be extended to include businesses outside the statistically defined creative industry sectors and to identify creative activities that take place in traditional industries or elsewhere in the economy. Thus it is a new tool that enables us to provide more complete quantifiable information about the creative potential of a region.
This index of creativity is significantly different from Florida’s creativity index. Florida analysed statistical data at the macro-level of cities or regions, whereas we developed our index at the micro-level of (creative) businesses, using survey data. Florida uses his creativity index to draw conclusions about how creative a city or a region is, based on underlying socio-economic criteria. Our index, on the other hand, allows the classification of individual businesses and their activities as more or less creative and therefore allows a differentiated assessment of the level of creativity that can be observed in a city or a region.

4. A tentative approach of operationalization

4.1. Index of creativity — a case study on creative firms

The new approach to measure creativity as a continuum was applied to the creative industry of Graz on the basis of a phone survey of 515 businesses with 495 usable replies in Graz and its surroundings (the second largest urban agglomeration — after Vienna — in Austria). The businesses were identified using a traditional sector-based definition that categorized them as creative industries, and according to statistics occupy about 25,000 employees (incl. self-employed). The statistical definition was cross-referenced to the chamber of commerce classification; the chamber then provided membership lists for the categories that — based on the statistical definition — comprise the creative industries in Graz. The randomly selected sample is representative for the creative industry of the region and its sectoral composition, not for the sectoral composition of the regional economy as a whole.

Without mentioning the terms creativity, creative activity, creative service or creative product explicitly, the interviewees were confronted with a list of statements that were derived from the definition and characteristics of creative products and services described earlier in this paper. Based on the responses and the degree to which the characteristics applied to a company’s services or products, it was possible to determine whether a business could be considered creative and, if yes, how creative its activities were. Businesses are not assumed to be either creative or not creative, but to perform their activities in a more or less creative way.

The results of Table 1 show that more than half of the respondents answered that they find individually designed solutions for each client (60.8%) or that limited adaptations are possible to respond to a client’s request (56.3%). Almost half (47.5%) do not offer any standardized products or services. On the other hand, only about 35% of the respondents characterize their services and products so complex that it is impossible to determine the exact final result in advance, and about a quarter of the interviewees enter a contract without agreeing with the client on the exact details of the final result. Despite those uncertainties, about 90% of the respondents indicate that they are able to estimate the necessary inputs (time, material) in advance, at least to a certain degree. This result must be seen in the context of the structure of the creative industries in Graz. The focus of the creative activities is in producer services-related fields (e.g. architecture, design and marketing) that provide inputs and services for the local economy. So it is obvious that those creative businesses need to be flexible and provide individual solutions; on the other hand, the goals and final products are more clearly defined because of the close connection to other local industries and because of the vast experience that many of the creative businesses have cooperating with their partners.
For the analysis, the answers to the statements about characteristics of products and services were coded with 0 (does not apply), 1 (applies to some degree), and 2 (applies completely). By simply adding up the answers, we calculate a simple ‘index of creativity’ that ranges from not creative (not a single characteristic applies) to 12 (very creative, all characteristics apply completely). We chose the small variation of answers because we did not want to presuppose the continuum and our question was not whether the respondents see themselves/their firms as located on a continuum, but if the application of the criteria construct such a continuum. We interpret the fact that the index seems to be normally distributed as affirmative for this hypothesis of continuity and this approach.

Figure 1 shows clearly that, in terms of their level of creativity, most businesses in Graz fall into a wide middle range. In other words, most businesses that according to their classification belong to the creative industries (as measured by predefined sectors) can be considered at least somewhat creative. Only 2.6% of the businesses perform – based on their answers – no creative activities at all; not a single characteristic applies to their products or services. A total of 9% indicate that less than half of the characteristics apply to some degree; those businesses show very limited creativity. At the other end of the spectrum, only 0.6% of the companies report that all characteristics apply completely. A total of 8% meets at least half the criteria completely and the rest to some degree.

Table 1. Characteristics of creative services and products in percent.

| Characteristics                                                                 | Applies completely (%) | Applies to some degree (%) | Does not apply (%) |
|---------------------------------------------------------------------------------|------------------------|----------------------------|-------------------|
| The service/product is not standardized (no ‘one size fits all’ solutions)      | 47.5                   | 22.5                       | 30.0              |
| Limited adaptations are possible to respond to customer requests (e.g. a modular system or a combination of predefined alternatives) | 56.3                   | 20.6                       | 23.1              |
| Generally I develop completely free and individually designed solutions for each client. | 60.8                   | 22.1                       | 17.1              |
| The service/product is so complex that it is difficult for me to define the exact final result in advance | 35.3                   | 21.0                       | 43.7              |
| It is difficult for me to estimate in advance the inputs necessary (time, costs for materials) to perform the service/develop the product | 10.2                   | 19.9                       | 69.9              |
| It is not possible to determine the exact final result already at the start of the contract | 24.4                   | 24.6                       | 51.1              |

Source: own calculations.

Table 2. Degree of creativity of businesses by county.

| Degree of creativity | Graz (City) \((N = 409)\) (%) | Surroundings \((N = 86)\) (%) | Total metropolitan area \((N = 495)\) (%) |
|----------------------|-------------------------------|-------------------------------|-------------------------------------|
| Low                  | 40.8                          | 52.3                          | 42.8                                |
| Medium               | 41.8                          | 37.2                          | 41.0                                |
| High                 | 17.4                          | 10.5                          | 16.2                                |
| Total                | 100.0                         | 100.0                         | 100.0                               |

Source: own calculations.
This result shows that there is at least some degree of creativity in almost every business in the sample that according to the sector-based statistical definition is part of the creative economy. It is important to keep in mind that the relative position on the scale does not represent an assessment or a rating of the quality or the importance of the business or its activities for the local economy. Many businesses with a lower level of creativity can play an important role in value chains or networks and support the activities of the most creative companies, either by providing inputs and services or through marketing and distribution. The presence of a wide range of companies with different levels of creativity is an essential factor for the development and growth of the creative economy in a region.

The results of this study show that the index of creativity is a useful tool to capture and measure creativity in a regional setting. Defining and investigating cultural and creative companies through the analysis of their activities, services and products delivers much more nuanced results than analyses using the traditional pragmatic definitions that primarily rely on industrial classifications.

4.2. Differences between the city and its surroundings

Numerous studies have emphasized the high concentration of many creative industries activities in large cities and agglomerations. In addition to those differences in concentrations, we can assume that there are also significant regional differences in the specialization of creative industries and in the ways that creative activities and services are performed.

A comparison of secondary statistics for the three largest urban regions in Austria (Vienna, Graz and Linz) shows concentrations and specializations suggesting that even in larger economic areas local characteristics and needs play an important role in the development of creative industries. Whereas Linz and Vienna have higher concentrations in independent, somewhat ‘stand-alone’ creative industry sectors such as radio,
television and broadcasting technologies, measuring devices or culture, sports and entertainment, creative industries in Graz are mainly concentrated in sectors that support other businesses, particularly manufacturing. The most important creative industries in the region include creative business services (especially the fields of architecture, engineering and design as well as software development, Internet and telecommunications services providers, and advertising), publishing companies and database services. All those industries show a much stronger integration in the local and regional economy.

In addition, the analysis of employment statistics suggests that there are significant differences between urban and rural areas. Using traditional sector-based definitions of creative industries, the results show an overrepresentation of distribution-related activities (mainly retail) in rural areas and a lack or the absence of core creative activities (content origination). Also in overall numbers of creative industry companies and employees, rural areas also seem to lag behind quite significantly.

These results raise a number of questions. Considering the general problems with the traditional sector approach and the secondary statistics, we would expect the numbers for rural areas to be even less reliable than for larger urban areas or at the national level. For example, there may be a much higher number of self-employed creative professionals in rural areas who are not included in the official statistics. On the other hand, creative activities may be performed within companies that are not part of the creative industries, as statistically defined. For example, an employee in a small company may be responsible for the design and maintenance of the company’s webpage, but may perform this task in addition to other responsibilities. Traditional approaches are not adequate to capture such creative activities that take place outside a clearly defined creative industries sector. However, such a clearly defined sector is even less likely to exist outside the metropolitan areas. In larger regions and rural areas, the only way to identify creative activities is by focusing more closely on the activities that take place within companies or that are performed by individuals working as freelancers.

The new methodology is a tool to identify creative activities and creative potentials that are not detected with traditional statistical analyses. It also produces much more differentiated results. The survey confirms that the creative businesses in the area work very closely with other industries in the region and that their services and products mainly serve the local and regional markets. As can be seen in Table 2, it also becomes clear that businesses in the city of Graz on one hand and businesses in the surrounding, less urban areas (‘Graz-Umgebung’) on the other show different specializations and different levels of creativity in their activities.

5. Options for future research and policy
The paper addressed the problem of defining cultural and creative industries and puts it in a regional context. We presented a new approach that focuses on the definition of creative activities, products, and services instead of using industrial sectors. This definition and its operationalization can enrich existing approaches and offer new opportunities for future research and evaluation of creative activities.

Our conceptual approach does not draw a sharp line between ‘creative’ and ‘not creative’, but treats creativity as a continuum. It is a micro-level, firm-based approach which categorizes specific forms of behaviour of these firms based on characteristics of predefined creative services and products. On the basis of a survey of 515 businesses and their statements about characteristics of their activities, products and services, an ‘index of creativity’ was calculated ranging from not creative to very creative. The
results show that there is a broad range of being more or less creative and that most businesses are at least to some degree creative; most businesses fall into a wide middle range.

Our survey-based index is a tentative approach of operationalization – it certainly can be extended, refined and made to include additional forms of behaviour. Nevertheless, it represents a possible way of getting out of a purely sectoral classification with a binary in or out and regards creativity as a continuum. Like all survey-based approaches it is confronted – as opposed to the use of secondary data – with the time- and resource-intensive task of direct communication with firms. Yet once conceived and applied, the index makes it possible to analyse creative activities in a more differentiated and detailed way. Because the new definition with its focus on activities instead of sectors allows identification of creative activities and potentials that are not detected with the traditional analysis of secondary statistics, it also provides a tool to get better insights to spatially different behavioural attitudes to creativity.

Repeated surveys in the same geographic area and sectors using this method allow a monitoring of creative activities and possible changes and shifts that take place over time. On the other hand, broad representative surveys across industries (not only traditional cultural or creative industries) can capture creative activities that take place in other sectors and thus deliver a much better and more precise picture of the creative activities in a city or region. Those results can be used for a more accurate estimation of actual employment and output numbers in the now differently conceived creative industries.

From a policy point of view, it might result in a differentiated perspective as to the objects of policy support. The notion of creative industries becomes more complex now and might lead to a new focus – how to increase the degree of creativity in various industries. Also the instruments applied might need to be reconsidered – they should be oriented towards an improvement of creative behaviour.

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**References**

Adorno, T. W. (1991). *The culture industry. Selected essays on mass culture*. London and New York: Routledge.

Adorno, T., & Horkheimer, M. (1947). The culture industry: Enlightenment as mass deception. In J. Curran, M. Gurevitch, & J. Wollacott (Eds.), *Mass communication and society* (pp. 349–383). London: Edward Arnold.

Buitrago, R. F., & Duque, M. I. (2013). *The orange economy: An infinite opportunity*. Washington, DC: Inter-American Development Bank.

Bures, F. (2012a). *The fall of the creative class, thirty two magazine*. Retrieved from http://thirtytwomag.com/2012/06

Bures, F. (2012b). *Creative class warfare (or Richard Florida’s Grievous Oraculum)*. Retrieved from http://frankbures.com/2012/08/27

Casey, B. (1999). Employment and skills in the cultural sector: Some reflections on the European commission paper “culture, cultural industries and employment”. In Oesterreichische Kulturdokumentation (Ed.), *Cultural competence; new technologies, culture & employment conference, cultural competence; new technologies, culture & employment* (pp. 40–47). Vienna.

Chapain, C., Cooke, P., De Propris, P., MacNeill, P., & Mateos-Garcia, J. (2010). *Creative clusters and innovation. Putting creativity on the map*. London: NESTA.
COMEDIA. (2001). *Creative industries study. Phase 1. Final Report*. Funded by East Midlands Development Agency and East Midlands Arts Board.

creativ wirtschaft austria. (2013). *Fifth Austrian report on creative industries*. Wien: creativ wirtschaft austria.

Cunningham, S. (2002). From cultural to creative industries: Theory, industry, and policy implications. *Media International Australia, Incorporating Culture & Policy, 102*, 54–65.

Cunningham, S., & Hartley, J. (2001). *Creative industries: From blue poles to fat pipes*. Paper presented to Australia Academy of the Humanities, National Summit on the Humanities and Social Sciences, National Museum Australia, Canberra, 26–27 July.

Cunningham, S. (2009). Trojan horse or Rorschach Blot? Creative industries discourse around the world. *International Journal of Cultural Policy, 15*, 375–386.

De Bono, E. (1967). *The use of lateral thinking*. London: Jonathan Cape.

De Propris, L., Chapain, C., Cooke, P., MacNeill, S., & Mateos-Garcia, J. (2009). *The geography of creativity*. London: NESTA.

Department for Culture, Media and Sport (DCMS). (1998). *Creative industries mapping document 1998*. London: The British Council, The Office of Science and Technology.

Eichmann, H. (2003). *Working in the new economy*. Wien: Guthmann-Peterson.

Florida, R. (2002). *The rise of the creative class and how it’s transforming work, leisure, community and everyday life*. New York, NY: Basic Books.

Florida, R. (2012). *What critics get wrong about the creative class and economic development*. From the Atlantic CITYLAB. Retrieved from http://www.citylab.com/work/2012/07

Florida, R., Mellander, C., & Stolarick, K. (2010). Talent, technology and tolerance in Canadian regional development. *The Canadien Geographer/Le Geographe canadien, 54*, 277–304.

Gabe, T., Florida, R., Mellander, C. (2012). The creative class and the crisis, CESIS Electronic Working Paper Series. Paper No. 272.

Gielen, P. (2014). *Creativity and other fundamentalisms*. (Mondriaan Fund, Hrsg.) Essay 007.

Glaeser, E. L. (2005). Review of Richard Florida’s the rise of the creative class. *Regional Science and Urban Economics, 35*, 593–596. Retrieved from www.creativeclass.org.

Gurteen, D. (1998). Knowledge management and creativity. *Journal of Knowledge Management, 21*, 5–13.

Howkins, J. (2001). *The creative economy*. New York, NY: The Penguin Press.

Kotkin, J. (2003, July/August). Paths to prosperity. *American Enterprise, 14*, 32–35.

Kotkin, J. (2013). Richard Florida concedes the limits of the creative class. Retrieved from http://www.thedailybeast.com/articles/2013/03/20

Kotkin, J., & Siegel, F. (2004). Too much froth. *Blueprint, 6*, 16–18.

Landry, C., Bianchini, F., Ebert, R., Gnad, F., & Kunzmann, K. (1996). *The creative city in Britain and Germany*. London: Anglo-German Foundation Publications.

Lingo, E. T., & Tepper, S. J. (2013, November). Looking back, looking forward: Arts-based careers and creative work. *Work and Occupations 40*, S. 337–363.

LiquA - Linzer Institut für qualitative Analysen. (2006). *Creative industries in the metropolitan region Linz*. Linz.

Malanga, S. (2004). The curse of the creative class. *City Journal, 14*, 36–45.

Martins, E. C., & Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European Journal of Innovation Management, 6*, 64–74.

Mellander, Ch., Florida, R., & Rentfrow, J. (2012). The creative class, post-industrialism and the happiness of nations. *Cambridge Journal of Regions, Economy and Society, 5*, 31–43.

O’Brien, J., & Feist, A. (1995). *Employment in the arts and cultural industries: An analysis of the 1991 census*. ACE Research Paper No. 2. London: Art Council of England.

O’Connor, J. (2007). *The cultural and creative industries: A review of the literature (A report for Creative Partnerships)*. London: Creative Partnerships.

Peck, J. (2005). Struggling with the creative class. *International Journal of Urban and Regional Research, 29*, 740–770.

Pratt, A. C. (1997). The cultural industries production system: A case study of employment change in Britain, 1984–91. *Environment and Planning A, 29*, 1953–1974. London.

Pratt, A. C. (2005). Cultural industries and public policy. An oxymoron? *International Journal of Cultural Policy, 11*, 31–44.
Reidl, S., Steyer, F., Schiffbaenker, L., & Lukawetz, G. (2006). Zwischen Unabhängigkeit und Zukunftssängst [Between Independence and Angst about the Future]. Quantitative Results on Work in the Vienna Creative Industries, Wien.

Rothauer, D. (2004). The run on creativity. In FOKUS & WIWIPOL (Eds.), Creative industries: A measure for urban development? (pp. 58–64). Wien.

Sauer, A. (2012). (Graz). So what are the creative industries? Ein Versuch Creative Industries definitorisch zu erfassen. Karl-Franzens Universität Graz.

Spiel, C., & Westmeyer, H. (2006, April). Creativity: How innovative ideas and products emerge. Vienna: Presentation at: New Frontiers in Evaluation.

Tether, B., Hipp, C., & Miles, I. (1999). Standardisation and specialisation in services: Evidence from Germany. CRIC Discussion Paper No. 30. Manchester, NH: The University of Manchester.

Tether, B. S., Li, Q., & Mina, A. (2012). Knowledge-bases, places, spatial configurations and the performance of knowledge-intensive professional service firms. Journal of Economic Geography, 12, 969–1001.

Throsby, D. (2008). Modelling the cultural industries. International Journal of Cultural Policy, 14, 217–232.

UNESCO. (2009). The 2009 UNESCO framework for cultural statistics FCS. Montreal: UNESCO Institute for Statistics.

Van Heur, B. (2010). Creative networks and the city. Towards a cultural political economy of aesthetic production. Bielefeld: transcript Verlag.

Wilson, N., & Stokes, D. (2005). Managing creativity and innovation: The challenge for cultural entrepreneurs. Journal of Small Business and Enterprise Development, 12, 366–378.

Wood, P. (1999). Cultural industries and the city: Policy issues for the cultural industries at the local level. Keynote speech to the Cultural Industries and the City Conference, Manchester Metropolitan University, 13–14 December 1999.

Wyszomirski, M. J. (2004). Defining and developing creative sector initiatives. In FOKUS & WIWIPOL (Eds.), Creative industries: A measure for urban development? (pp. 25–58). Wien.