M.Sc. in Business and Economics at the Stockholm School of Economics

Creativity as a shortcut to economic prosperity

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ABSTRACT

The major query addressed in this study is whether emerging economies can find shortcuts in their economic development through applying their creative potential. Therefore, this research aims at thorough investigation of creative economy as the next step in economic development following the agrarian, industrial, service or knowledge economy, and experience economy. A bibliographical research of the available literature on creative economy is followed by an empirical research of five creative clusters derived from 33 European nations: a panel regression analysis of creative economy from 2008 to 2010 and qualitative research based on 55 expert interviews. The results obtained suggest that creative economy differs in each of the European countries depending on the creative cluster they belong to and its level of sophistication diminishes, the lower the level of development of a country, but one cluster. Namely, creative economy in the virtuous emerging economies is comparable to that of the knowledge economies. This implies that there are possible shortcuts in economic development that emerging countries can take, in order to achieve the level of economic wellbeing similar to that of the developed countries faster.

Key words: creativity, creative economy, creative industries, economic development, creative country clusters in Europe

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To the extent that there are any errors remaining in the thesis, they are our responsibility alone.

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ABBREVIATIONS

EEA	European Economic Area
EFTA	European Free Trade Association
EU	European Union
MNC	Multinational corporation
NGO	Non-governmental organization
SME	Small and medium enterprise
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme

DEFINITIONS

Creative economy/ (cultural and) creative industries	The creative industries and based on the widened concept of 'creativity' and refer to a range of economic activities which are concerned with the generation or exploitation of knowledge and information. In research, creative industries denote cultural/culture and creative industries or creative economy.
Economic development	The scope of economic development comprises the process and policies that contribute to the economic, political, and social well-being of a given nation.
Economic welfare/ economic well-being	Here, economic welfare or well-being represents a holistic outlook of the input made by individuals, households, businesses and communities to achieve a strong economic growth and favorable societal conditions and society. This input is denoted by their output, salaries and profits, among others, as well as accounts for its both, negative and positive social and ecological impacts.

INTRODUCTION

The shifts in value creation

The recent economic crisis has challenged well-known concepts of economic development in Europe and worldwide in general, both regarding the current stage of economic development of a given country as well as the main constituents of it. Creating growth and boosting competitiveness keep being highly important for business activity as the major driving force for economic development; yet, instant consciousness has shifted towards job creation, salary increase, inequality matters, and fostering lasting, sustainable prosperity (Martin Prosperity Institute, 2011).

Whereas a few decades ago the major source of success of every business was productivity (Taylor, 1911), today productivity cannot serve as a differentiating factor from competition. Instead, it is the ability to produce ideas that are authentic and new that gives the competitive edge, (e.g., Nordström & Ridderstråle, 2000).

The abovementioned shift entails a transition to a completely new level of economic development – *transformation* or *creative economy* (Mermiri, 2009). Gilmore and Pine describe this economy as the next one following agrarian economy, industrial economy, service economy, and the most recent experience economy, previously presented by them in 1999 (Gilmore & Pine, 1999).

As claimed by the authors, transformations, being the latest economic contribution following experiences in the sequence of economic value, occur when businesses use experiences to direct customers to change, i.e. life-transforming experiences. Here, creativity based on culture and art is a key element for businesses to be innovative and successful (Mosquera, 2010). As for the demand side, the customer sensitivity factors for the previous economic development levels are the following: agrarian economy – availability, industrial/goods economy – cost, service economy – quality, experience economy – authenticity (Gilmore & Pine, 2009).

In this context, there are two ways in which modern economy can be considered. Firstly, looking at the demand side, the new economy is something that transforms the way consumers satisfy their needs, changing the patterns of consumption. Secondly, looking at the supply side, businesses in the new economy do not create mere products but add many attributes to their value proposition, which requires a different set of input parameters.

This shift prompted the authors to the thought that both the way the consumption patterns are changing, and the way businesses operate, entails one new common feature, which is *creativity*. Therefore, the economy we live in could also be called the *creative economy*.

From the new sources of value creation to competitiveness

The aforementioned line of thought regarding the stages of economic development suggests that there are certain stages every country has to pass

through on its way to achieving economic welfare. Firstly, agrarian economies turn into industrial economies, then to the post-industrial (or service) economies, and, further, to the experience economies (Gilmore & Pine, 1999).

Therefore, taking into consideration how the modern developed economies in Europe, such as Finland, the UK or Sweden, have reached their current level of development, it may be assumed that every emerging country in this region should follow the same path. Still, industrialization of the currently developed European nations took centuries. Therefore the question is, whether the emerging countries in Europe can reach the same or similar level of economic welfare and not undergo the long process that the developed countries went through. In other words, *can the emerging European countries take shortcuts in their development process* and directly build an economy that is driven by the modern factors of competitiveness, such as creativity?

Research question

In order to address the query mentioned above, it is important to, firstly, understand the way creative economy actually impacts economic development, i.e., whether its influence on a certain level of economic welfare is significant. Secondly, it is important to understand what triggers a country to be creative, i.e., what drives creative economy. These two matters combined will help answer whether emerging economies *should* use their creative potential, as well as whether they *have* a creative potential that they can use.

As there is not much empirical evidence available on the role of creativity in economic welfare, an analysis of the current status of creative economy among the European countries should be performed that will answer the following research question: ***'How does creative economy impact the national economic welfare of the European states based on their economic prosperity and other specific country characteristics[1](1), and what are the key driving forces of creative economy in the researched countries (2)?'***

Based on the previous studies, the following hypotheses related to both parts of the research question were put forward by the authors:

Hypothesis 1a: *Creative economy has a positive impact on the national welfare of a country.*

Hypothesis 1b: *Creative industries have a greater impact on economic growth in more developed economies.*[2]

Hypothesis 2: *The key driving forces of creative economy differ from one group of countries to another, based on their economic prosperity and other specific country characteristics.*

In order to start addressing the outlined research question, the following bibliographical research elaborates on the concept of creative economy and

[1] For the purpose of analysis, European countries are divided into the cluster groups; see Cluster groups and specifications part in Methodology.

[2] Based on the cluster groups in the Methodology part, knowledge and traditional structurally strong economies are considered as more developed ones.

creativity as the driver of modern economy. It also establishes the standpoint the authors took as regards to understanding the concept of creative economy and the way it relates to the concept of economic development. Additionally, the bibliographical research elaborates on the major drivers of creative economy highlighted in the literature.

BIBLIOGRAPHICAL RESEARCH

The literature review conducted for this paper started with, firstly, addressing the coverage of the concept of creative economy in the literature, secondly, placing this concept into a macroeconomic context and, thirdly, understanding creative economy in more detail, including the industries that constitute creative economy, the major factors that drive these industries, the possible ways to measure creative economy, and studying the concepts related to creative economy. In this bibliographical research, the topic of creative economy is presented in a different way, starting with the stages of economic development and placing creative economy in this context, and, further, proceeding with the coverage of the topic of creative economy in the literature.

Initially, the idea of the paper was to understand whether creativity could help developing countries find shortcuts in their economic development path and achieve economic welfare faster than they would have through industrialization and then post-industrialization. In order to understand this, the authors took the long journey focused on reviewing the major factors that were driving economic development of the world since the agrarian age. In the course of this journey, the main stages of economic development and the factors that were the most influential for the growth of economic welfare of a nation on each of the stages were identified. The result of the study of the available literature on the stages of economic development was the model created by the authors to structure the stages of economic development and show, where creative economy is in this scheme.

The structure of the Bibliographical Research is the following: firstly, the authors define economic development and identify the indicators used in order to measure it. Secondly, the stages of economic development are defined, along with the main drivers that were key in each of these stages. Thirdly, the bibliographical research continues with introducing the concept of creative economy as defined by the major thought leaders in this field, along with the related concepts and the mapping systems proposed by the researchers to define and measure creative economy and its input into economic development of a nation.

Economic development in theory

In the book called 'Theory of Economic Development', Joseph Schumpeter introduced the earliest definition of economic development (1934), where he referred to economic development as a separate area of economic analysis. Schumpeter's work drew a distinction between economic growth and economic development. In the Schumpeterian sense, economic growth is purely a

quantitative notion, referring to the dynamics of population and wealth, usually coming down to such indicators as GNP, or GNP per capita. Economic development, at the same time, incorporates qualitative measures, such as human capital, economic sustainability, social and political well-being. Moreover, Schumpeter refers to economic development per se as stationary, i.e., it is static in a given economy, unless qualitative changes, such as innovation and innovative activity occur. These changes are brought in by an entrepreneur, who serves as the external force in disturbing the equilibrium, the force that triggers economic development. Indeed, Schumpeter referred to development as 'carrying out new combinations' (1934).

Later, four approaches towards theorizing economic development evolved that can be classified as: the linear-stages-of-growth model, theories and patterns of structural change, the international dependence revolution and the neo-classical, free market counterrevolution (Todaro & Smith, 2009).

The linear-stages-of-growth model implies seeing economic development as the linear stages that every country is to follow, in order to achieve economic welfare. One of the major scientists to promote this doctrine was W. Rostow, who argued that every underdeveloped country is to pass certain stages, in order to be called developed. One of the major steps in this process was mobilization of domestic and foreign savings in order to achieve sufficient level of investments and accelerate economic growth (Rostow, 1960). The economic mechanism for this was also described in the Harrod-Domar growth model (Harrod, 1939; Domar, 1946).

The structural change theory focuses on the transition of the underdeveloped economies from an agrarian-based production towards a more modern and urbanized system with diverse industrial production and service economy (Todaro & Smith, 2009). The two popular models representing this approach are 'the two-sector surplus labor' model (Lewis, 1954) and the 'patterns of development' (Chenery, 1979). The 'two-sector surplus labor' model is based on the transition of the surplus agricultural labor to the urban industrial centers, thus increasing productivity of the urban areas without diminishing that of the rural areas (Todaro & Smith, 2009). The 'patterns of development' analysis of structural change focuses on the sequential process, through which an underdeveloped economy is transformed overtime to incorporate new industries, and replace the traditional agriculture as the main driver of economic growth. Such structural changes are to take place in all economic functions, including the transformation of production, the changes of consumer demand, resource use, as well as socioeconomic factors, such as urbanization and distribution of population (Todaro & Smith, 2009).

The international-dependence revolution theories are mainly based on the idea that underdeveloped countries are influenced by the developed ones in a way that may hinder or enhance their development. I.e., the false-paradigm model attributed the underdevelopment to faulty advices that the developed countries give to the underdeveloped ones, following the development path that had previously worked for them. Additionally, the neocolonial dependence model views underdeveloped economies as the new colonies that suffer due to the 'first

world – third world' economic relationships (see, e.g., Anderson, Cavanagh, & Lee, 2000; Broad, 2002; Gray, 2000).

The neoclassical growth theories are based on liberalization of national markets that draws additional domestic and foreign investment and thus increases the rate of capital accumulation. The most well known is the Solow neoclassical growth model (Solow, 1956) that added labor as a factor of economic growth and introduced the third independent variable, technology. According to the traditional neoclassical theory, the growth of economic output is subject to one or more of the three mentioned factors. In this situation, open economies grow faster, due to a higher conversion of income into savings and investments because of international trade, foreign investment, etc. (Todaro & Smith, 2009).

Together, the four approaches form a comprehensive view on the notion of economic development. In its essence, economic development is a phenomenon that is caused by various sets of factors, such as capital and labor, or savings and investments, interconnectedness between the different economies, or openness or closeness of the economy. From the historical point of view, at the various stages of economic development of a country, a different set of industries was crucial. Further in this paper, the stages of economic development from the historical perspective are described, based on the economic sectors that were playing the most important role at each of those stages.

Economic development and urbanization

Prior to proceeding with the description of the stages of economic development, it is important to underline the role of urbanization in this process. Understanding the role of urbanization is crucial to understanding the mechanics of the process of economic development from the perspective of how the main factors of production were changing over time.

Urbanization was one of the prerequisites of the industrial revolution. Starting from the agrarian era, cities were the centers of cultural and economic activity, playing the function of connectors between different people to facilitate trade, administration and social interaction (Friedmann, 1961). Whereas urban areas have always had these three functions in society, the relationship between cities and rural areas has not always been the same.

In the agrarian era, the emergence of cities was a result of the need for places to facilitate trade. In the industrial age, it was not only the exchange of goods produced by the country that was the main function of a city. The industry itself became a function of cities (Smith, 1976). Adam Smith's view is in line with the de Vries' work on urbanization (1982). In his analysis of the European urbanization 1500-1800, de Vries describes how, first, cities appeared as centers of trade, with the rural areas dependent on the urban areas that were closest to them. Further, when trade became an activity performed by professional merchants, the dependence of rural areas on the nearby cities decreased, due to the development of international trade that enabled exchange between producers from different geographical areas of the world. The bonds between the city and areas surrounding it weakened, and urbanization changed from local into regional, with the emergence of regional centers of trade.

According to de Vries (1984), the urban system that evolved by the mid-seventeenth's century, was the foundation for the early industrialization of Europe. An analysis of the migration patterns between the sixteenth and the nineteenth century revealed that, whereas migration rates from rural areas to the cities were high until the middle of the seventeenth century, migration to the rural areas that took place afterwards was caused by the aforementioned decline in the importance of cities as trade centers. As the role of cities, which were not only centers of trade, but also of manufacturing, declined, rural areas started to gain importance as the centers of production. This restructuring process was, according to de Vries, the foundation of the industrial revolution, as it led to growth of new cities, which became the industrial centers of Europe at the further stage.

In the post-industrial economy, the role of cities changed, as the service sector grew in importance. The industrial areas in the internal parts of urban areas were gradually relocated to the rural areas, in part, due to companies owning those industrial facilities requiring more space that a city area would allow, as well as due to social tensions connected with pollution, and the development of transport and infrastructure that would allow plants to operate properly in the country. This process has led to a reallocation of space in the cities, and they now started again to transform into centers for exchange of culture, knowledge and information (Kaczmarek, 2003). In creative economy, cities also play an important role, which will be touched upon further in this chapter.

Stages of economic development: the historical perspective

Taken into account the aforementioned theories of economic development and the role of urbanization, from the historical point of view economic development can be viewed as a transition from agrarian to industrial and, later, to the post-industrial economy (see, e.g., Bell, 1973). Each stage in this transition can be characterized by different key drivers and different industries, which were adding the most value to the economy.

When it comes to the agrarian society, this period in the world economy can be related to the period from the feudal society to the early 'proto-industrial stage', which took place until the early eighteenth century (Hohenberg & Lees, 1995). It may be argued, that, despite of the continuous changes in the world economy, before the industrial revolution the major driving factors were agricultural efficiency and development of trade. At the same time, the transition process from the agrarian to the industrial economy was, again, to a significant extent connected with the process of urbanization, which has played a twofold role in creating the prerequisites for the industrial revolution (Braudel, 1981). On the one hand, as the rural population moved to the cities to form nonagricultural populations, cities were prompted to secure food supply from other nations (i.e., import grains from the Baltic region to Northern Europe and the Mediterranean region). This development of international trade decreased the dependence of cities on the rural areas and triggered a more regionalized system to emerge. On the other hand, regional industrialization took place, with growth of rural production for exports that proliferated due to a number of urban crises. In this process, cities were becoming centers for trade of luxury goods, with the urban

manufacturing mainly active in handcrafts and other direct production, whereas the rural areas were turning into manufacturing hubs specialized in ordinary, every day goods (Hohenberg & Lees, 1995). This led to a regionalization of the trade structure within the European region and shaped the basis for a regionalized industrialization of Europe (de Vries, 1984).

The industrial society that evolved from the late agrarian era was a result of the technological revolution of the eighteenth century. Its main driving forces were technological progress and strive for efficiency, and a transition of jobs from the agrarian to the industrial sector. This new development was also characterized by a number of social transformations. In the pre-industrial era, the social life was primarily governed by social relationships and agricultural land-holding, whereas with the growth of industry, social interactions shifted to capital-based, i.e., the relationships between capital owners and those who worked for them (Fridenson, 2001). This shift made capital replace land as the major factor of production.

In the middle of the twentieth century, a new change took place that firstly concerned the areas that had been the first ones to industrialize a century beforehand. This change was evident in the shift of jobs from production of goods to production of services (Fridenson, 2001). This shift, also called the transition to the 'post-industrial' society, is twofold. On the one hand, the emergence of the role of the service sector means a change in the structure of production, i.e., a more significant share of knowledge work devoted to manufacturing of an end product. On the other hand, the emerging role of services as end products implies a higher degree of customization and therefore a higher consumer involvement in the value chain (Cohen, 2009).

This double-sided nature of the post-industrial economy allows making a conceptual distinction between the two other types of economy that it is based on. It may be argued, that the post-industrial economy is built on the *knowledge* economy and the *service* economy, where the knowledge economy corresponds to the side of manufacturers, i.e., suppliers of products, and the service economy corresponds to the demand side, i.e., consumers of products.

One of the first authors to introduce the concept of the knowledge economy was Peter Drucker, who's major contribution was in defining the 'knowledge worker' as the new type of worker who uses information and knowledge as primary inputs of his/her activities. Peter Drucker first described the concept of a knowledge worker in his book 'The Landmarks of Tomorrow' (1957). Having noticed that the productivity of manual labor has come to a point where it is either staying on the same level or decreasing, Drucker asserts that competition has shifted towards the productivity of workers, who generate and use knowledge to deliver goods and services in a more efficient way. The main knowledge-based occupations, such as software engineers, scientists, architects and doctors are those that 'think for a living' (Davenport, 2005). Hence, whereas the main input factor of the industrial economy was capital, the knowledge economy is mainly driven by knowledge.

As for service economy, this has evolved from the changing role of consumer, who has become a more active member in the value chain. On the one hand, technology has started to allow producers to manufacture 'mass customized' goods, i.e., goods that can be mass produced, but consumed in both, a customized and standardized manner, such as, e.g., online encyclopedia, online newspapers, etc. (OECD, 2000). This change also implies that products are consumed involving more cooperation on the consumer part, i.e., whether the service provider is a hairdresser or a doctor, he/she connects directly with the consumer of the service (Cohen, 2009). Again, referring to the aforementioned phenomenon of the stagnating productivity of manual labor, the value of material objects is shrinking as a proportional share of value in the end products (Cohen, 2009), which means that the intangible, or the 'service' element is starting to play a more crucial role.

Taking a step further, it may be argued that there are new developments in both, the knowledge and the service economy. The ability to innovate has become the main source of competitive advantage for businesses, (e.g., Davila, Epstein & Shelton, 2007; Nordström & Ridderstråle, 2000), whereas the role of consumers has gone far beyond the consumption of services (e.g., Gilmore & Pine, 1999). The necessity to generate and use knowledge to maintain competitiveness has transformed into the necessity to innovate, where innovation is referred to as 'the new combinations of new and existing knowledge, resources and equipment with a commercial purpose' (Schumpeter, 1934). Therefore, we can now speak of the *innovation economy* (e.g., Davenport, Leibold & Voelpel, 2006), and the *experience economy* (e.g. Gilmore & Pine, 1999). Further, as the innovation economy refers to the ability of businesses to innovate, experience economy describes the new model of consumption that meets it. The subject of consumption in the agrarian and the industrial economy was a good that meant to satisfy a need. In the post-industrial economy, consumption of goods was extended to consumption of services (not necessarily excluding the good from consumption at the same time). In the experience economy, it is not merely a good or service that are in the center of consumption, but the experience around them. The ability of businesses to constantly innovate allows for a higher degree of customization for every product, which leads to the era where consumer has a deeper relationship with the product, in a way creating it together with the manufacturer (Mermiri, 2009).

The terms innovation economy and experience economy are often used interchangeably with the term *creative economy*. Both concepts, though one referring to the economic *demand*, and the other one to the economic *supply*, imply that development is based on producing *new products by using new combinations of knowledge, information and ideas*. In its essence, the term 'creative economy' characterizes the modern economy by the main input factor (creativity) that drives its development.

This view on creative economy as the next step in economic development has been reflected in the model of economic development created by the authors (See Figure 1).

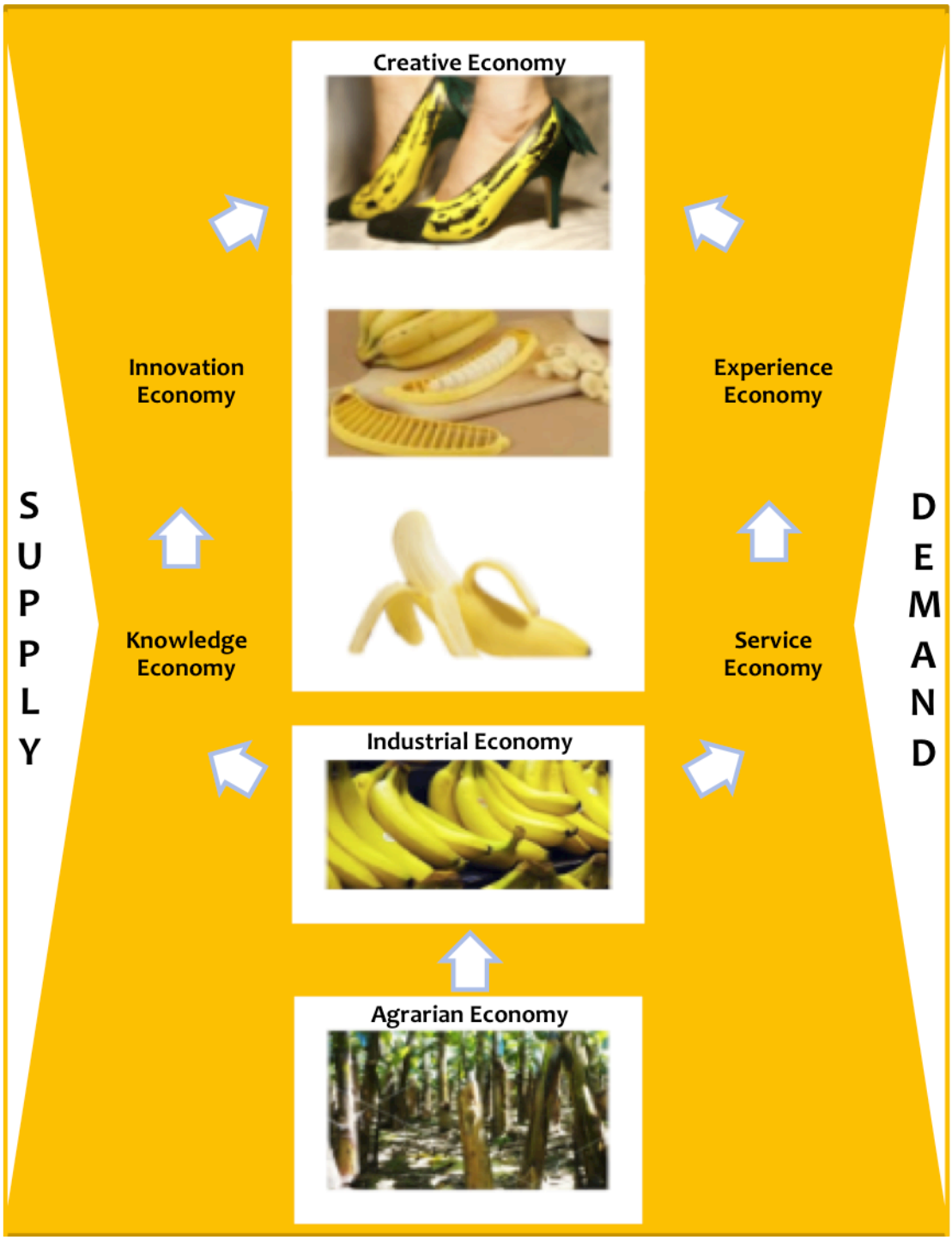

Figure 1 Economic development model: from agrarian to creative economy

Source: Created by the authors

Creative economy

Even though research on creative economy has started in the 1980s, this topic has been significantly underinvestigated, mainly due to the difficulty of defining the concept of creative economy per se, as well as due to the difficulties related to measuring the impact of creativity on business and the economy.

Nevertheless, a number of attempts were made to map creative economy and industries that belong to it, as well as to build a measurement system that would

not only reflect the contribution of those industries to the overall economic development, but also indentify the impact of creativity on the related industries and areas.

As mentioned before, in this paper, creative economy is referred to as the next step in the economic development, following, in broad terms, the agrarian economy, the industrial economy and the post-industrial economy. In the second part of this chapter, the concept of creative economy is defined in more detail. In order to give creative economy an elaborate definition based on the available literature, the authors define the related concepts, such as *creativity*, *creative class*, *creative cities*, *creative goods and services,* etc. Further, the *mapping systems* that indicate the different approaches towards measuring creative economy and its contribution to the economic development of a given country are introduced and the *measurements* of creative economy are listed.

Creativity

In order to define creative economy and understand, in what way it impacts the overall level of economic development of a nation, it is necessary to, firstly, describe the concept of creativity as it is referred to in this paper.

The notion of creativity can be viewed in two conditions: static and dynamic. Defining creativity as static means referring to it as an attribute of people that can be applied to certain actions, whereas in its dynamic way creativity is referred to as a process of generating new ideas, connecting them and transforming them into something that is valued (UNCTAD & UNDP, 2010). In one way or the other, creativity has its major function in creation of genuine content that reaches beyond being intuitive.

There are three main constituents that shape the modern concept of creativity related to its economic value (O'Connor, 2006). Firstly, creativity draws on innovation by accounting for the new thinking and the new visions, from which innovation can originate. Secondly, it draws upon the modernist approach of the shock of new, which is disruptive to old. Thirdly, creativity has been playing a role in construction of social values since the 1960s (Beck, 1992), i.e., a shift from a person finding his/her place in the society to shaping and expressing themselves. These three dimensions of creativity have been recently widely appreciated by businesses, which have started to treat creativity as a resource for building competitiveness (Howkins, 2002; Rifkin, 2000; Leadbeater, 1999; Tepper, 2002).

The definition of creativity made by Richard Florida summarizes this discussion by stating: 'Creativity is not intelligence. Creativity involves the ability to synthesize. It is a matter of sifting through data, perceptions and materials to come up with something new and useful' (2002). In other words, following this definition, in this paper creativity is defined as a *talent-based resource to add value to business*.

The concept of creative economy

As mentioned before, there are two paths that lead to the emerging concept of the creative economy. On the one hand, looking at the demand side, creative economy is the next step in economic development, following the agrarian, the industrial, the post-industrial and the service economy and can also be defined as

transformational or experience economy (see e.g. Gilmore & Pine, 2009; Mermiri, 2009). In their work called 'Using art to render authenticity in business', Gilmore and Pine argue that the next step in the economic development after the service economy is the experience economy, where the main factor driving purchasing decisions of consumers is authenticity of experiences (Gilmore & Pine, 2009). Adding to that, Mermiri (2009) talks about transformation economy, i.e., products that transform and shape consumers' lifestyles, identity and way of thinking. This process of consumer centric co-creation is based on cooperation between the consumer, arts and business, where the creative content of a product is used in order to render authenticity.

On the other hand, the concept of creative economy can be looked upon from the supply side. Whereas during the past centuries we were following the transition from the agrarian economy to industrial and, further, to the post-industrial economy, it was further replaced by the so-called information and knowledge economy (see e.g. Drucker, 1979; Nussbaum, 2005). The next step in this transformation is the transition to innovation economy that has innovativeness and adaptiveness to change as the major success factors of a business (see e.g. Nussbaum, 2005).

Therefore, in order to combine the two views in one, we in this paper refer to the new economy as *creative economy*. One of the first to establish the term creative economy was John Howkins in his book 'Creative Economy: How People Make Money From Ideas' (2002), where he defines creative economy though mapping fifteen creative industries ranging from arts to related fields of science and technology. Generally speaking, most attempts to find a definition of creative economy aim at mapping a distinctive set of industries that shape it. This cluster of industries is often referred to as the Cultural and Creative Industries. Each of the mapping systems for creative economy available in the literature suggests a slightly different approach towards viewing each specific industry as creative due to the differences in the initial standpoints from which creativity and culture are looked upon. E.g., the creative industries may be viewed as those delivering products with cultural and creative content, or, alternatively, copyrighted materials, or those that create employment that requires application of creative skills at the work place. Subsequently, each framework aims at measuring the share of those industries in the overall economy, as well as judging about the contribution of creative economy to the overall economic development of a given nation. As each of the definitions of creative economy represents a mapping system of the creative industries, in this paper the terms (*cultural and*) *creative industries* and *creative economy* will be used as synonyms.

Richard Florida's creative class

A valuable work in defining creativity and creative economy has been done by Richard Florida (2002). In his research, Florida introduces the notion of 'creative class', i.e., the part of population involved in the artistic and other related creative activities, who's economic function is to promote innovation and establish the creative and cultural content generated in a given area. The creative class is people who add economic value through creativity (Florida, 2002).

According to Florida, the creative class consists of two components: the super creative core and the creative professionals. The super creative core includes scientists and engineers (including information technology engineers), artists, entertainers, filmmakers, university professors, writers, actors, designers and architects, editors, cultural figures, think-tank researchers, analysts and other opinion makers. I.e., in accordance with Richard Florida's definition of creativity, the creative class is not limited by the people representing the super creative core, but also includes people from knowledge intensive industries, i.e., people who apply complex bodies of knowledge in their work, such as physicians, lawyers, managers, technicians, etc. The creative professionals therefore are those employed in the knowledge intensive industries, such as high-tech, financial services, legal, healthcare and business management (Florida, 2002).

Creative cities

As urbanization has played an important role at all stages of economic development, the same can be stated about creative economy.

The workers that belong to Florida's creative class are usually concentrated in urban areas, where networking and knowledge sharing contribute to the environment that nurtures creativity. The new concept of creative cities that has evolved herewith looks at urban areas as ecosystems, where cultural, symbolic values act as catalysts in fostering general development (Landry, 2000).

Evolving from the post-industrial centers for exchange of information and knowledge, creative cities are centers where networking and diversity lead to generation of creative ideas. According to Landry (2000), to be creative, a city has to have the appropriate infrastructure to nurture networking among the creative individuals, as well as offer them the tools to implement creative ideas. Creative individuals here are not necessarily the artistic class, but also the part of knowledge workers that use creativity and intellectual capacity in their work.

Creative cities are nothing else but the model of urbanization in new economy. Some of these cities are also the industrial and the service economy centers, such as New York, London or Berlin, but there are a number of new ones that are becoming the centers of modern economic development, such as San Francisco, Tel Aviv, Wroclaw, and others. Consequently, urbanization is linked to the emergence of creative economy, as it was during the transition from the agrarian to industrial and to the post-industrial era (e.g., Boix, Capone, & Lazzeretti, 2009).

Creative economy vs. cultural economy

A lot of talk has been done about the importance of the phenomenon called *cultural economy* for the modern economic development. The terms *cultural economy* and *creative economy* are often used interchangeably. According to the mapping systems of creative economy mentioned further in this paper, creative economy consists of a number of industries, usually centered around the creative core (or the traditional cultural industries) and the peripheral industries that feature creative content to a lower extent (e.g., Hesmondhalgh, 2002; Throsby, 2001). Some or most of the mapping systems also include industries such as software, publishing and some of the knowledge-based services into the classification (see e.g. UNCTAD & UNDP, 2010; DCMS, 2001; CCI, 2007). Cultural

economy, though it is a part of creative economy, is narrower, as it only encompasses some of the industries that feature artistic content. In fact, these industries add significantly lower value to many of the most developed economies than the creative industries taken all together (UNCTAD & UNDP, 2010). For this reason, for the purpose if this paper the term *creative economy* is being used, and the term *cultural economy* that only defines a part of creative economy is not studied in this paper.

Creative goods and services

Consequently, creative industries produce creative goods and services. Creative goods and services are those that require certain amount of creativity in order to produce them (UNCTAD & UNDP, 2010). The amount of creative content in each creative good and service differs depending on the industry, as well as on the product/service itself. E.g., fashion or software products can still be considered as creative goods, even though the level of creativity required to produce them may be lower than that for goods or services that are produced by the purely cultural industries, such as literature, theatre or music.

Creative economy mapping

Many attempts have been made in order to establish a comprehensive framework, on which a rigid measurement system for creative economy could be built. Such attempts include the World Intellectual Property Organization (WIPO) model (2003), the UK Department of Culture, Media and Sport (DCMS) model (1998), the concentric circles model (Throsby, 2008), the Symbolic Texts model (Hesmondhalgh, 2002), the creative trident methodology initially developed by ARC Centre of Excellence for Creative Industries and Innovation (Cunningham & Higgs, 2007), the creative economy model by the UNCTAD and UNDP (UNCTAD & UNDP, 2010), and others. The aforementioned models suggest each a mapping for creative industries, as well as a method of measuring the contribution of creative economy to the overall economic welfare. These creative economy frameworks are described in more detail below.

The WIPO copyright model

The WIPO model is based on the set of industries that produce and support the copyrighted products, such as advertisement, literature, music, etc. Three types of industries are identified, which are: core copyright industries, interdependent copyright industries and partial copyright industries.

As copyright is about defining and protecting the intellectual property rights, it is the basis for identifying those industries where the respective activities take place. While copyright is one of the main branches within the set of the intellectual property rights, it applies to ‘every production within literary, scientific and artistic domain, whatever may be the mode or form of its expression’ (WIPO, 1886). For the purpose of copyright protection, the notion ‘literary and artistic work’ can be referred to any kind of original work of authorship, irrespective of its artistic merit (WIPO, 2003). As such, copyright law does not protect creative ideas, but the forms of their expression, such as paintings, sculpture, literature, etc.

As not only the production of artistic content but also its distribution and consumption represent an added value to the economy, not only the copyright industries themselves, but also those whose primary function is to 'facilitate creation, production or use of works and other protected subject matter' are considered to be part of creative economy (WIPO, 2003). Therefore, the partial copyright industries are those that partially deal with activities related to works and other protected subject matter, such as fashion, furniture, design, etc. Another cluster is the non-dedicated support industries, where part of the activities is related to facilitating broadcast, communication, distribution or sales of copyrighted works. These industries are general wholesale and retailing, general transportation and telephony and the Internet (see Appendix 1).

The DCMS model

In the DCMS model, the creative industries are identified as those that require creativity, skill and talent, with potential for wealth and job creation through exploitation of intellectual property (DCMS, 2001).

The UK Department of Culture, Media and Sports has introduced a major innovation in defining creative economy as an object of policy. Having renamed the cultural industries into creative industries, DCMS has also changed the whole perspective of how the cultural industries are viewed in the overall economic context, underlining their importance. The DCMS model suggested a new approach to macroeconomics, from competition based innovation into an open economy of collaboration, open innovation and networks. The DCMS creative industries incorporated a linkage between the knowledge economy and the cultural industries, which was a very new approach that also encountered a lot of criticism on the part of, e.g., Pratt (2008) and Garnham (2005).

In fact, even though the DCMS definition of creative economy is similar to that provided by Howkins (2002), the list of industries mapped as creative by DCMS is different and less extensive. The creative industries according to DCMS include arts themselves, as well as the classic cultural industries sector, adding design, fashion and software.

Despite the critiques, the DCMS model was an important breakthrough in research on creative economy, as it provided a new vision on creative economy as something more than culture and arts, and, namely, the new economic order, or, possibly, the new step in the economic development after the knowledge economy.

The concentric circles model

Throsby (1998) has mapped the creative industries through allocating them around the cultural value of cultural goods that distinguishes them. The creative ideas that originate in the form of sound, text and image, further diffuse through a series of layers called 'concentric circles'. The further each of the circles is from the core, the higher the commercial content of a cultural product produced by an industry. I.e., the creative arts as defined traditionally, such as music, theatre, dance, visual arts, etc., are at the core of the circle, along with the newer forms of art, such as video art, computer and multimedia art, etc. Further, they are followed by those industries, where both, cultural and non-cultural goods and

services are produced, such as publishing, film, television, etc. Further on, on an even wider level of the concentric circles, are the industries that are essentially not producing any cultural content, but some of their outputs can still be classified as cultural. Such industries include advertising, tourism, architectural services, etc. (Throsby, 2001). The initial model of concentric circles for the cultural industries proposed by Throsby is presented in Figure below.

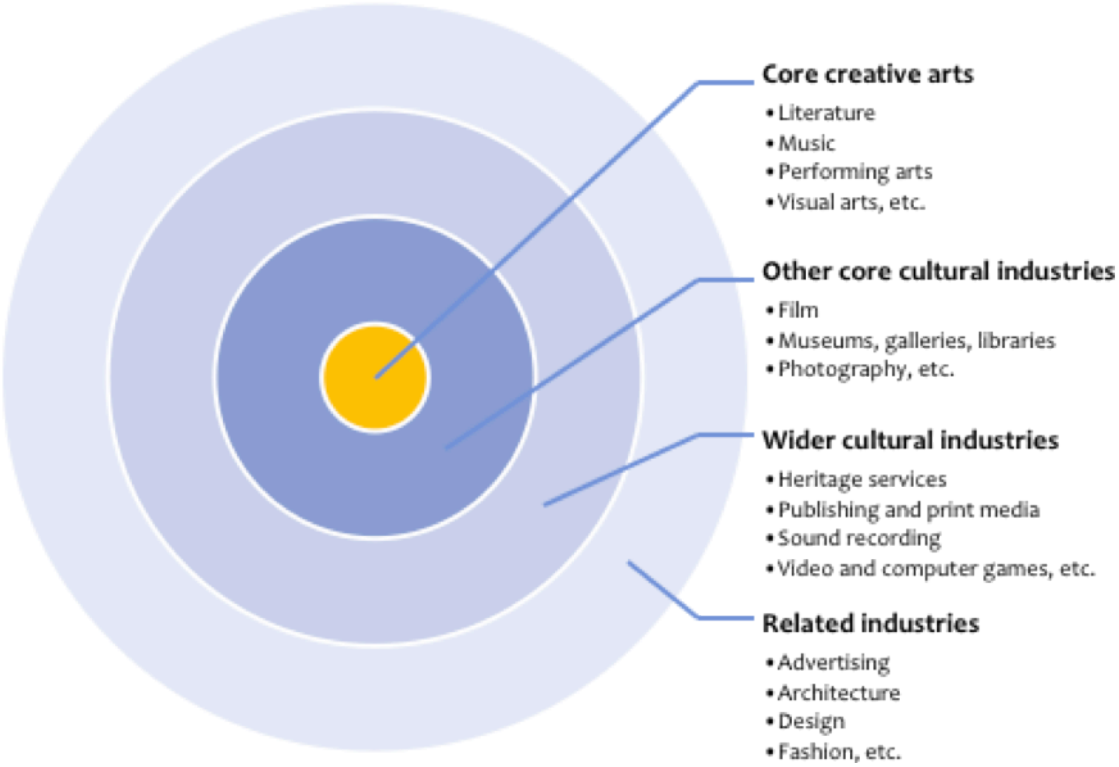

Figure 2 The concentric circles of the cultural industries
Source: Throsby, 2001

The statistical data for the analysis originates from, e.g., general statistical collections, such as censuses, where artists are identified as an occupational category, or, alternatively, from more specific statistical studies aiming at specific cultural sectors. In this case, information about artists is gathered through surveys, where it is possible to gain insights about their level of involvement in the cultural sphere in terms of their working hours and level of professionalism (i.e., amateur or professional). In both cases, there are certain limitations to the data available for analysis, though there are still a number of successful examples, where a valid estimation based on such data could be made.

The symbolic texts model

The symbolic texts model (Hesmondhalgh, 2002) maps creative industries into three clusters: the core cultural industries, the peripheral cultural industries and the borderline cultural industries. This classification aims at broadening the set of creative industries from those producing the core cultural component to including the popular culture. In this model, cultural industries are those that produce products that transmit symbolic texts or messages through various media, i.e., film, publications, etc.

Hesmondhalgh's discussion has its main point in the popularization of culture against arts on the higher level. In his view, creative industries (that also include, e.g., software development, media, etc.) are not part of cultural industries and cannot be considered the same, as a creative industry does not necessarily produce or circulate symbolic texts that involve production of social meaning.

Hesmondhalgh (2002) chooses to separate cultural industries and arts, focusing on the 'classic cultural industries'. According to him, arts represent the 'peripheral cultural industries', because they do not engage industrial methods.

A third set of culture-related industries is the 'borderline cultural industries', such as consumer electronics, fashion, software and sport that do contain a cultural dimension, even though most of their content is utilitarian. Including the industries that serve the utilitarian function, along with the non-utilitarian, broadens the number of cultural industries.

Hesmondhalgh's major input is that he has emphasized the significance of the popular culture and its value and place in creation of the social context and meaning.

The creative trident methodology

The creative trident methodology developed by the Australian Research Council of Excellence for Creative Industries and Innovation (CCI) (Cunningham & Higgs, 2007) is based on mapping creative economy around creative employment, i.e., by identifying the creative specialist occupations within the creative industries, as well as in 'non-creative' firms and organizations. The Trident consists of three employment clusters, i.e., people in creative occupations employed within the creative industries (specialists), people employed within the creative industries but not in the creative occupations (the supporting jobs), and people employed within creative occupations outside the creative industries (embedded creative employment).

As it utilizes combined occupation and industry matrices, the strength of the creative trident methodology is that it allows including in the classification a broader range of creative occupations than, e.g., the DCMS model that should allow for a more precise estimation of creative employment (Higgs & Cunningham, 2007). At the same time, even though the creative trident allows measuring the creative occupations in the non-creative industries, the extent of creativity of these occupations is not measured. This can only be compensated through additional surveying in order to understand the nature of the employment (Higgs & Cunningham, 2007).

The UNCTAD model

The UNCTAD classification of creative industries is based on more than 20 years of research (dos Santos Duisenberg, 2012). According to the UNCTAD definition, the creative industries can be defined in the following way:

- Creative industries are the cycle of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs;

- Creative industries constitute a set of knowledge-based activities, focused on but not limited to arts, potentially generating revenue from trade and intellectual property rights;
- Creative industries comprise tangible products and intangible intellectual or artistic services with creative content, economic value and market objectives;
- Creative industries constitute a new dynamic sector in world trade (UNCTAD & UNDP, 2010).

The UNCTAD structures the creative industries into the following groups: heritage (i.e., cultural heritage), arts (i.e., visual and performing arts), media (i.e., publishing and printed media, audiovisuals) and functional creations, such as design and new media (e.g., architecture, creative research and development, digital and other creative services) (UNCTAD & UNDP, 2010). The approach to mapping the creative industries relies on stretching the concept of 'creativity' from activities with a strong artistic component to 'any economic activity producing symbolic products with a heavy reliance on intellectual property for as wide market as possible' (UNCTAD, 2004).

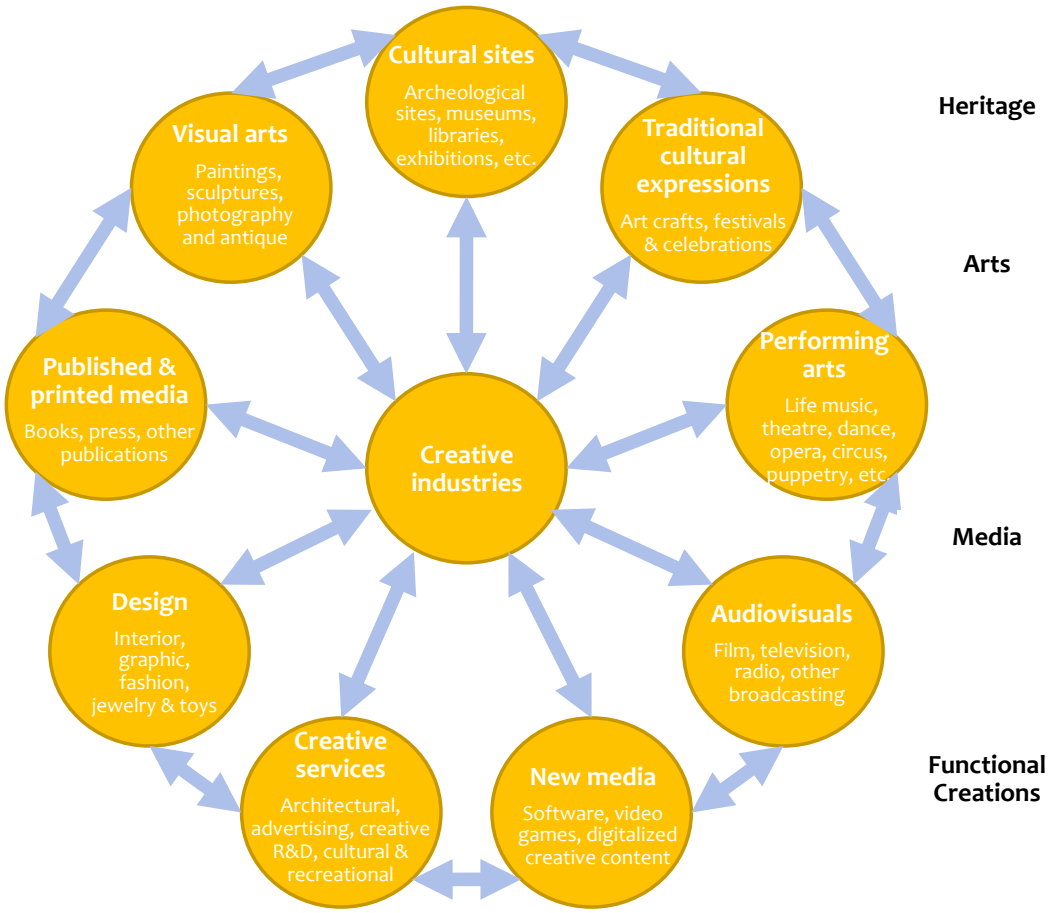

Figure 3 UNCTAD classification of creative industries

Source: UNCTAD & UNDP, 2010

The rationale behind this classification is that it gives a more detailed view not only on the creative industries in general, but also on the cross-sectional

interactions between them (see Figure 2). The UNCTAD gathers comprehensive statistical data based on this classification that allows performing empirical analysis on creative industries across the countries included in the model. Additionally, the grouping of creative industries provided by the UNCTAD is convenient for qualitative analysis, as well as quantitative (UNCTAD & UNDP, 2010).

The aforementioned models are summarized in Appendix 1, listing the industries that represent the creative economy in each of them.

Measurements of creative economy

Many outstanding economists have made their contribution into measuring the growth of a given economy. The neoclassical approach would suggest measuring the productivity of a given economy through measuring a set of factor inputs that contribute to it. I.e., the level of production of a given economy would represent a function of capital, labor and multifactor productivity, also referred to as technology (see, e.g., Cobb & Douglas, 1928).

When it comes to creative economy, the factors proposed by researchers usually break down to: employment, trade and value added, copyright and intellectual property rights, time use, public investment (UNCTAD & UNDP, 2010). Each of these measures refers to the amount of production referred to the creative industries and the resources involved in these industries. Each of the factors has limitations in terms of how its true value can be estimated, due to difficulties with data about creative industries, mainly due to the difficulty of estimating, which economic activities belong to the creative economy and which do not.

Employment

Estimating employment generated by the creative industries is one of the ways to compare the level of activity within the creative industries in different countries. One of the difficulties with measuring employment within creative industries is that creative activities are often project-based, or voluntary, or freelance, and are therefore not subject to the official employment statistics.

Another problem with measuring creative employment is that methodologies differ across economies, which makes comparison not easy. Moreover, most of the creative industries are new and the active participants of those industries may be unevenly concentrated in parts of the world, which complicates research through surveying (UNCTAD & UNDP, 2010).

Additionally, a number of researchers, (e.g., Ross, 2003; McRobbie, 2002; Bilton, 2007), characterize creative employment as having tough working conditions, with sometimes little or no money, individualized responsibility for work, pensions and other social benefits, unequal power relations regarding intellectual property rights, and other aspects that make creative employment sometimes a part-time or additional activity to regular employment. This nature of creative work is another complication related to a comprehensive measurement system for creative employment.

Nevertheless, creative employment is often used as a measure of creative industries, due to the relative availability of the labor statistics, which allows for some degree of comparison between economies.

Trade and value-added

Trade statistics of creative goods and services is another measure of creative activity. This measure is controversial, due to the nature of creative products as such. Trade of creative goods, encompassing, e.g., sales of paintings, involves attaching a monetary value to something that has not necessarily been created for this purpose initially. Moreover, reproducibility of a painting is arguable due to loss of authenticity. Alternatively, photography, as a relatively new type of art, does not have a reproducibility limitation. Additionally, much of the trade in creative industries is informal, especially in developing economies. Again, as mentioned earlier, the voluntary or even recreational basis of certain creative activities, as well as their unstable nature, adds up to the measurement difficulty.

In one way or the other, measuring exports and imports in creative goods and services is a valid tool to estimate the size of creative industries across economies. Additionally, the UNCTAD had established a comprehensive database on creative goods and services in the creative and related industries, which can be used as a solid platform for statistical analysis (UNCTAD, 2006; UNCTAD & UNDP, 2010).

Copyrights and intellectual property rights regulations

The WIPO creative economy model discussed above suggests to map the creative industries based on the copyrighted products. The impact of copyright-based industries on the economy is measured in this case, and it is therefore the contribution of products that entail intellectual property relations that indicates creative input.

Time use

Time use surveys are one of the well established tools to measure, how much time is devoted by certain individuals towards certain activities, including the creative activities, i.e., cultural events or other. The difficulties with applying this tool to measure the creative economy are related to data collection that requires a lot of labor input, as well as the fact that usually it is the profitability of a certain activity rather than the time used that is in the focus, in which case this tool is neglected.

Public investment

Public investment in creative economy can allow judging about the level of development of creative economy in a country, even though this indicator says nothing about the effectiveness of this investment, i.e., whether the resources were spent effectively (UNCTAD & UNDP, 2010).

Other factors discussed in this paper are level of education, cultural heritage, legal regulations (other than copyrights), government support, infrastructure, diversity and the level of interconnectedness and the networking among individuals. The various combinations of these factors define how developed is creative economy in a country, or whether there are prerequisites for creative economy to emerge.

METHODOLOGY

Research design

The study was designed in a way to apply a mixture of methods of secondary source quantitative and qualitative analyses with an extensive primary qualitative fieldwork represented by 33 European countries, all being members of The Council of Europe. The full list of countries in scope as well as their diplomatic statuses and use in this study are presented in Appendix 2.

To get a comprehensive overview of the development of creative economy in Europe and to provide a snapshot of the current situation in this region as well as to take a look on both, micro- and macroeconomic perspectives of creative economy[3], different data collection approaches were used. These include bibliographical research, quantitative, i.e. econometric regression analysis of creative industries and of their impact on the overall economic welfare, expert interviews and case studies (further also referred to as (short) cases). The bibliographical research was presented earlier in this paper. Further, other quantitative and qualitative research approaches used in this study are described in detail. The timeline of the study is presented in the Figure below.

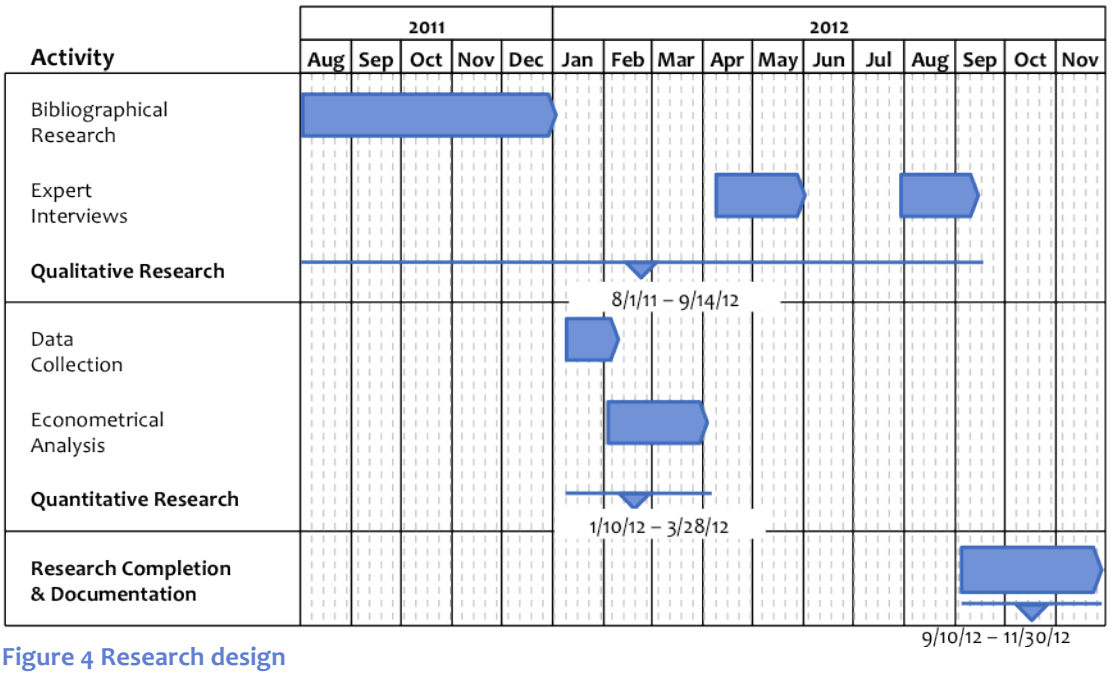

Figure 4 Research design

Source: Created by the authors

Quantitative research

In order to indicate the contribution of creative industries to the national economic welfare, it is worth to look at the root estimates that in one way or another impact the creation of goods and services within these industries and

[3] Here, microeconomic perspective refers to such data sources as, e.g., individuals, businesses and NGOs, whereas macroeconomic perspective – e.g., state and regional governments or their representatives, national accounts, etc.

related goods and services. The aforementioned creative products are the result of activity in the creative industries. Based on the UNCTAD Creative Economy Report (2010) as well as thorough bibliographical research of other creative economy theories and respective methodologies, four measures of activity in the creative industries can be outlined for the sake of this research: employment, trade and value added, copyright (CR) and intellectual property right (IPR) issues, public investment as well as time use. The latter two measurements will, however, not be covered in this study due to the lack of data available for the countries in scope. Additionally, although time use is the most established estimate of creative activities usually represented by the time people spend on particular economic and non-economic activities, it is used for smaller number of observations (UNCTAD & UNDP, 2010). Public investment measurement can be also considered as an weak estimate for a given the period of time in scope, i.e. short time-period of 2008-2010 corresponds to the time of economic recession, thus, public investment's estimate is ikely to depict a temporary fiscal policy solution based on hrash economic situation rather than deliberate long-time oriented governmental support of creative industries in a given country (UNCTAD, 2011).

Although supported in various researches, the abovementioned measures have never been mainly assessed to give empirical content to economic relations between national economic prosperity and country's creative industries. The quantitative analysis presented in this work is focused on the empirically proven accurate economic estimation of activities in creative industries and their influence on the overall economic welfare.

Data description and choice of measurements (variables) for quantitative, i.e. econometric regression analysis as well as econometric model implemented in this study are presented in the next sections.

Data description and choice of variables

In terms of econometric regression analysis of the creative economy's measurements as well as their impact on the overall national economic welfare, the dataset upon which the quantitative research is conducted is based on three data sources: Eurostat, IMF Global Data, and UNCTAD Global Database on Creative Economy. Statistics obtained from the aforementioned databases contain the necessary data on the chosen measurements of economic welfare, employment, trade and value added and CP and IPR issues for all the countries in scope on the annual basis for the period 2008-2010.

Economic welfare. There is no single way to define and measure the economic welfare of a nation. Generally speaking, economic welfare is the level of prosperity and quality of living standards in an economy. This concept mainly refers to economic utility (i.e., satisfaction gained by an individual from consuming a good or a service). As such, economic welfare can be described as part of the social welfare that can be fulfilled through economic activity (Samuelson & Nordhaus, 2004).

Economic welfare is usually measured with such indicators as GDP per capita or GNP per capita in real terms. This method has its limitations, as living standards of

a population are also influenced by factors that are not included into the GDP per capita, such as level of congestion and pollution, distribution of wealth, loss of natural resources and changes in the quality of life, access to healthcare, literacy, etc. In addition, GDP per capita does not capture non-market transactions as well as volunteer and unpaid domestic activities, employment and wage levels, which considerably influences a nation's general economic well-being per se (Branson, 1989; OECD, 2001; Zencey, 2009).

At the same time, the level of GDP per capita still reflects the level of welfare in society: the higher the GDP per capita, the higher the prospects of providing high quality education and access to quality healthcare services, which, in turn, further translates into increased welfare. Moreover, measuring the economic welfare through the GDP per capita is convenient due to the availability and comparability of the respective statistical data across nations. Even though the other indicators, such as the Human Development Index and the UNDP, are more comprehensive, they still face the issues of consistency of the definition of these composite indicators, availability of the data, as well as the likelihood of correlation of these indices with structural variables (Branson, 1998).

For the purpose of this paper, economic welfare will be measured in GDP in current USD per capita for individual countries. These data are taken from the IMF Global Data.

Employment is a focus measurement of the value of creative economy in recent research. Although hampered by a lack of agreement on a sole definition of the sector, employment is an important and plausible measurement of activities within the creative industries, being recognized and used in other areas of economic life. Considering three general types of employment measures (based on occupation, industry or cluster), employment by industry has been chosen as a proxy for employment in this study.

Overcoming the problem of interlinking activities that comprise creative output, choice of employment by sector in this case is supported by consistent data on employment as a total number of fulltime workers at the age of 15 and older by detailed economic activity for the selected economies from 2008 to 2010 obtained from Eurostat. The choice of economic activities corresponds with the new statistical classification of the cultural and creative industries according to the latest classification of economic branches, i.e. European NACE Rev. 2 classification. Thus, employment in selected creative industries as a share of total population in a given country was chosen to estimate employment in creative industries.

Due to the lack of data availability for countries and period of time in scope, chosen economic activities correspond only to the top categories and two-digit subcategories of NACE Rev. 2 classification. Therefore, initially taken data on employment in cultural and creative industries can be considered as slightly hyped, thus, representing not only cultural and creative industries, but also business-activity-related industries. Further on, cultural employment proxies are tested, based on Eurostat methodology using data for five 'cultural' NACE divisions at two-digit level. The full list of economic activities chosen for the proxy

of employment within the creative industries is presented in Appendix 3 (see e.g. Eurostat, 2011; Power, 2011).

Trade and value added. Currently, the most reliable way of benchmarking the contribution of creative industries to the world economy, in general, and to the national economy, in particular, is to use officially available data of trade flows. Therefore, exports and imports of creative goods, creative services and related products represent the measurement of trade and value added in this work's quantitative research. The choice of creative goods and services as well as related products is based on the classification of creative economy products by UNCTAD (2010).

Relevant trade statistics for the countries in scope were obtained from the UNCTAD Global Database on Creative Economy for 2008-2010 and were initially defined for individual economies, expressed in nominal terms in USD. Mapping of creative goods and services as well as related products by category of product defined by UNCTAD is presented in Appendix 4. In the quantitative analyses of this study, imports and exports of selected creative goods, services and related products in current USD per capita are the estimate for creative industries' trade and value added.

Copyright and intellectual property right issues. Although they are hard to track worldwide and lack systematic reporting system, statistics on CR and other IPR issues expressed in royalties and license fees are better tracked for European economies, being mostly represented by the countries with very high economic development levels, compared to the rest of the world. The aforementioned estimate of CR and IPR issues covers receipts (exports) and payments (imports) of residents and nonresidents for the authorized use of intangible non-produced, non-financial assets and proprietary rights, i.e., trademarks, copyrights, patents, processes, techniques, designs, manufacturing rights, franchises, etc. and the use, through licensing agreements, of produced originals or prototypes, i.e., manuscripts, films, etc. (UNCTAD & UNDP, 2010).

Data on royalties and license fees is based by the IMF Balance of Payments Statistics and presented in this paper as exports and imports of royalties and license fees, for individual countries in millions of current USD per capita.

It is also important to underline that in spite of growing importance and recognition of creative economy as a significant value-contributor to national welfare, it is still hard to find sufficiently reliable information on relevant economic activities in creative and related industries. Statistics on total exports and imports of creative goods and services, including related products, are inevitably underestimated due to the lack of systematical reporting and common agreements on classification of creative and related industries.

Econometric model

To address the research question of this work, authors have carried out econometric analysis, based on the initial panel dataset of 99 observations from 33 countries in scope over the period of time from 2008 to 2010.

In particular, three estimates of activity in the creative industries presented in the UNCTAD Creative Economy Report 2010 were used as the key driving forces that form creative economy, influencing the national economic welfare of a given state, i.e. GDP and/or its growth. These estimates are employment, trade and value added and copyright and intellectual property right issues and are expressed according to the chosen measurements (see Data Description and Choice of Measurements (Variables)). Full table of variables, their definitions, measurements and data sources is presented in Appendix 5.

The equation (1.1) shows the proposed estimation of the national output per capita gdp_cap_{it} for a nation i at a given time t, which depends on the employment in the creative and cultural sector as a share of total population in a given country – emp_cap_{it}, trade and value added to national economy from creative and related industries per capita – $allcg\_cap_{it}$, $allcs\_cap_{it}$, $allrg\_cap_{it}$ and $allrs\_cap_{it}$, (for goods and services produced by creative and related industries, respectively). βs are the coefficients of the related estimates and u is a random residual term.

$$gdp\_cap_{it} = \beta_1 \times emp\_cap_{it} + \beta_2 \times allcg\_cap_{it} + \beta_3 \times allcs\_cap_{it} + \beta_4 \times allrg\_cap_{it} + \\ + \beta_5 \times allrs\_cap_{it} + u_{it} \quad (1.1)$$

Taking into consideration that copyright and intellectual property right issues can be associated with related to creative industries services, $allrs\_cap_{it}$ estimate is divided into r_cap_{it} (and intellectual property right issues per capita) and rs_cap_{it} (other services relates to creative industries). Thus, equation (1.1) is changed to equation (1.2).

$$gdp\_cap_{it} = \beta_1 \times emp\_cap_{it} + \beta_2 \times allcg\_cap_{it} + \beta_3 \times allcs\_cap_{it} + \beta_4 \times allrg\_cap_{it} + \\ + \beta_6 \times rs\_cap_{it} + \beta_7 \times r\_cap_{it} + u_{it} \quad (1.2)$$

The latter equation (1.2) is implemented for the further regression analyses: panel data regression analysis and cross-sectional regression analysis. (Cross-sectional data regression analysis disregards the time specification t). Methodologies on both analyses are presented in the following sections.

Panel data analysis

Information gathered in the dataset for this study can be considered as panel data, also known as longitudinal data or cross-sectional time series data. Panel data are data where multiple cases, in this case, 33 European countries, were monitored during several time periods, here, annually during 2008-2010 (Gujarati, 2003; Greene, 2008).

There are two kinds of data in the panel dataset: the cross-sectional information shown in the differences between subjects, and the time-series or internal information presented in the changes within a certain independent variable over time. The later characteristic of panel data suits this research.

Major disadvantages typical for panel datasets are connected with data collection issues and related to data sampling and coverage issues, i.e. lack of response or interdependence. Lack of response is usually present in case of micro panels,

where number of respondents or cases is relatively small and/or it is hard to keep track on the ones in scope. When macro panels are observed, one of the typical drawbacks of panel data is correlation between countries. The latter drawback is rather considerable for this research, due to the fact that all of the countries in focus are located in Europe and most of them are members of the most important European alliances and/or unions vital for common trade and transportation conditions, e.g. the EU, the EEA, the EU Customs Area, etc. (Greene, 2008).

Controlling for omitted variables

Although it is possible to run ordinary multiple regressions on panel data, they may not be the most favorable. The coefficients that result from these regressions may be subject to omitted variable bias, in case of some unknown variable/-s that cannot be controlled for that impact the dependent variable. However cross-sectional time series data enables control for these unobservable or immeasurable omitted variable/-s, e.g., cultural differences, diverse doing business approaches in certain companies and/or countries, or time-specific variable/-s that change temporarily and not across subjects, for instance, national regulations and policies, political activity, international contracts, etc. This means that control for these factors accounts for individual heterogeneity (Gujarati, 2003).

In general, there are three types of regression models that control for omitted variables:

Fixed effects regression model controls for omitted variables that differ between cases but do not change over time. It allows using the changes in the variables over time to assess the influence of the independent variables on the dependent variable.

Between effects model controls for omitted variables changing over time but constant between cases, allowing using the difference between cases to estimate the impact of the omitted independent variables on the dependent variable. In most of the cases, resulted between effects estimator is mostly necessary to produce the random effects estimator.

Regression with **random effects** is the model maintaining control for both fixed and between effects. It is used in case it is observed that some omitted variables are likely to be constant over time but differ between cases, and others may be constant between cases but change over time (see e.g. Stock & Watson, 2012).

Given that quantitative analysis of this study is based on the dataset with the period of time of 2008-2010 for all the cases observed, it is important to choose between fixed and random effects regression model. While both of these models control for omitted variables that are constant over time and change between cases, random effects regression model accounts for possible omitted variables that differ over time and do not vary from case to case.

Hausman specification test (*H*) helps to decide on what kind of effects regression model should be run. It compares fixed and random effects under the null hypothesis that the individual effects are uncorrelated with the other

independent variables in the regression. In case if individual effects are correlated, (i.e. null hypothesis is rejected), a random effect model creates biased estimators, violating one of the Gauss-Markov assumptions. In the later situation a fixed effect regression model should be chosen. Hausman's key outline is that there is no covariance between an efficient estimator and its difference *d* from an inefficient estimator (see Hausman, 1978; Greene, 2008).

Hausman specification test procedure is presented in equations (2.1) and (2.2) below.

$$\hat{d} = \hat{\beta}_{FE} - \hat{\beta}_{RE} \quad (2.1)$$

$$\hat{H} = t\hat{d}'\left[Var(\hat{\beta}_{FE}) - Var(\hat{\beta}_{RE})\right]\hat{d} \sim Chi_K^2 \qquad (2.2)$$

where *K*=dim(*d*).

When the types of effects for given regressions are chosen and respective regressions are run, it is essential to proceed with testing for cross-sectional dependence. In the following, proposed procedure of cross-sectional dependence test is introduced.

Testing for cross-sectional dependence in panel data model

Based on the latest econometric literature, it was revealed that panel data models have a tendency to show significant cross-sectional dependence in the error terms, which may appear due to the common shocks and overlooked constituents. These eventually stick to the error term, spatial dependence, and idiosyncratic coupled dependence in the disturbances having no specific pattern of common components or spatial dependence. On the macroeconomic level, it can be explained through the continuously growing integration among nations, especially on financial markets with international entities and a few vastly growing world financial centers. This results in strong interdependencies between the cases on the cross-sectional level.[4]

The distress caused by cross-sectional dependence in approximation is inevitably influenced by different factors, i.e., the magnitude of the correlations across cross sections and the nature of cross-sectional dependence itself. In case of assumption that cross-sectional dependence is triggered common factors, which are unobserved and at the same time uncorrelated with the built-in independent variables, the standard fixed effects (FE) and random effects (RE) estimators are consistent, even though not efficient, and the estimated standard errors are biased. Thus, different options occur in estimation. (Precisely, if there is a likelihood of unobserved constitutes that generate interdependencies across cross sections are correlated with the included regressors, it is sensible to test for the cross-sectional dependence). (See Gujarati, 2003).

[4] On the micro level, individuals are likely to react in similar ways to common shocks or unobserved aspects, which, to the most extent, are rationalized by social norms, herd behavior, influence from surroundings and authentically inter-reliant choices. For further specifications see Baltagi, 2005.

Overall, testing for cross-sectional dependence is crucial in fitting panel-data models. When total number of periods *T* exceeds total number of cases (or panels), Lagrange multiplier test by Breusch and Pagan should be used. However, if *N* is bigger than *T*, as in the panel data of this study, the Lagrange multiplier test gauge does not experience desirable statistical properties in that it shows substantial size distortions (Breusch & Pagan, 1980; Pesaran, 2004).

In the following, the procedure of Pesaran's cross-sectional dependence test, (designed to test for cross-sectional dependence in large-*N*, small-*T* panels), is shown (Pesaran, 2004).

Firstly, one should consider the standard panel-data model (3.1):

$$y_{it} = \alpha + \beta x'_{it} + u_{it}, \; i=1\ldots N \text{ and } t=1\ldots T, \tag{3.1}$$

where x_{it} is a *K*×1 vector of regressors, β is a *k*×1 vector of coefficients to be estimated, and α_i stands for time-invariant individual constant . According to the null hypothesis, u_i is independent and identically distributed (i.i.d.) over the time periods and across cross sections in scope. An alternative hypothesis claims that u_i may be correlated across cross-sectional units, yet, remaining the assumption of no serial correlation.

The aforementioned test hypotheses are presented as follows (3.2):

$$H_0 : \rho_{ij} = \rho_{ji} = corr(u_{it}, u_{jt}) = 0 \text{ for some cases } i \neq j$$

versus

$$H_1 : \rho_{ij} = \rho_{ji} \neq 0 \text{ for } i \neq j, \tag{3.2}$$

where ρ_{ij} is the product-moment correlation coefficient of the disturbances and is equal to (3.3).

$$\rho_{ij} = \rho_{ji} = \frac{\sum_{t=1}^{T} u_{it} u_{jt}}{\left(\sum_{t=1}^{T} u_{it}^2\right)^{1/2} \left(\sum_{t=1}^{T} u_{jt}^2\right)^{1/2}} \tag{3.3}$$

It is important to note that that the number of possible pairings (u_{it}, u_{jt}) increases with the overall number of cases *N*.

Hitherto the procedure of testing for cross-sectional dependence for all the panel-data models is identical for most of the tests, disregarding whether N exceeds T or not.

Referring to the ostensibly irrelevant regression estimate, Breusch and Pagan suggested a Lagrange multiplier gauge, which is valid for fixed *N* as *T* tends to infinity and is equal to (3.4).

$$LM = T \sum_{i=1}^{N-1} \sum_{j=i+1}^{N} \hat{\rho}_{ij}^2, \tag{3.4}$$

where $\hat{\rho}_{ij}^2$ is the sample estimation of the coupled correlation of the error terms (3.5)

$$\hat{\rho}_{ij} = \hat{\rho}_{ji} = \frac{\sum_{t=1}^{T} \hat{u}_{it}\hat{u}_{jt}}{\left(\sum_{t=1}^{T} \hat{u}_{it}^2\right)^{1/2}\left(\sum_{t=1}^{T} \hat{u}_{jt}^2\right)^{1/2}} \tag{3.5}$$

and $\hat{u}_{it}$ is the proxy of u_{it} in (3.1). Lagrange multiplier is asymptotically distributed as Chi^2 with $\frac{N(N-1)}{2}$ degrees of freedom under H_0. Yet, Lagrange multiplier test is prone to demonstrate considerable size distortions, when *N* is substantially big and time *T* is finite. This situation is commonly met in empirical research, mainly due to the false centration of the Lagrange multiplier statistic, in case of finite value of *T*; this bias deteriorates when *N* is large.

Thus, an alternative cross-sectional dependence test *CD* by Pesaran suggests the testing method presented in equation (3.6).

$$CD = \sqrt{\frac{2T}{N(N-1)}}\left(\sum_{i}^{N-1}\sum_{j=i+1}^{N}\hat{\rho}_{ij}\right) \tag{3.6}$$

Pesaran's test demonstrates that under the null hypothesis of cross-sectional independence $CD \xrightarrow{d} N(0,1)$, when *N* tends to infinity and *T* is significantly large.

In contrast to Lagrange multiplier test, Pesaran's test statistic has mean of zero for fixed values of *T* and *N*. This is suitable for various panel data models, taking into account autoregressive and distributed-lag dynamic models as well as non-stationary models (Nickell, 1980; Pesaran & Smith, 1992).

The abovementioned proposition for the cross-sectional dependence test is valid for balanced panel dataset. Yet, as dataset used in this study does not always have the same amount of observations for each of the cases for all of the chosen variables, it is important to consider applicable for this research *CD* test for unbalanced panel data.

In his work on 'General diagnostic tests for cross section dependence in panels', Pesaran suggests the specified version of *CD* test for unbalanced panel-data models, which is presented in equation (3.7).

$$CD = \sqrt{\frac{2}{N(N-1)}}\left(\sum_{i=1}^{N-1}\sum_{j=i+1}^{N}\sqrt{T_{ij}}\hat{\rho}_{ij}\right), \tag{3.7}$$

where T_{ij} is the number of common observations between cases *i* and *j*,

$$\hat{\rho}_{ij} = \hat{\rho}_{ji} = \frac{\sum_{t\in T_i \cap T_j}\left(\hat{u}_{it} - \bar{\hat{u}}_i\right)\left(\hat{u}_{jt} - \bar{\hat{u}}_j\right)}{\left\{\sum_{t\in T_i \cap T_j}\left(\hat{u}_{it} - \bar{\hat{u}}_i\right)^2\right\}^{1/2}\left\{\sum_{t\in T_i \cap T_j}\left(\hat{u}_{jt} - \bar{\hat{u}}_j\right)^2\right\}^{1/2}}$$

and

$$\bar{\hat{u}}_i = \frac{\sum_{t \in T_i \cap T_j} \hat{u}_{it}}{\#(T_i \cap T_j)} \quad .$$

The modified estimation takes into consideration that the error terms do not automatically have mean equal to zero (Pesaran, 2004).

Qualitative research

As mentioned before, the qualitative research part of this work consists of the three main components represented by three research approaches, respectively: bibliographical research, in-depth interviews (hereinafter referred to as expert interviews), and case studies. The design of the study is structured in a way that each qualitative research approach corresponds to a certain stage of the study: bibliographical research at the beginning is followed by the qualitative analysis on the basis of expert interviews, and chosen case studies support the final findings and conclusions.

Bibliographical research

Bibliographical research, or the literature review, covers the existent theories of creative economy and its role in economic development. The purpose of the bibliographical research was to establish a theoretical framework for the topic of creative economy and its impact on the economic welfare, defining the key terms, definitions and terminology. As a result, the bibliographical research is a presentation of creative economy from a number of scientific standpoints. Incorporating both, the macroeconomic and the microeconomic perspectives, creative economy is viewed as: the next step in economic development, or the 'new economy'; the set of industries that form the basis of this new economy; the economy where business competitiveness is built through applying creativity as a major input factor.

Based on the literature review conducted for this study and as mentioned in the Bibliographic research part, the terms creative economy and (cultural and) creative industries are used interchangeably in this paper. Therefore, whenever any of the aforementioned terms is used, the meaning may refer to any of the three mentioned aspects, depending on the context. Where the context is too general, these terms imply all of the three aforementioned aspects.

Importantly, the literature review carried out for this paper, among others, resulted in the model of economic development created by the authors (see Figure 1). This model, along with a deep investigation of the topic of creative economy as covered in the available literature, later serves as the basis for designing the empirical research of this study.

Expert interviews

For the purpose of this study, expert interviews were conducted in a form of in-depth interviews to get valuable primary sources of information. The process of conducting expert interviews consisted of the following steps: initial planning, developing instruments, collecting the data, analyzing and documenting the data

obtained. Obtained information was used afterwards as a basis for the qualitative analysis on the current and prospective state and influence of creative economy in different cluster groups within the European region, represented by 33 countries in scope.

Process

On the initial planning stage of conducting expert interviews, main interviewee types were identified: academia and research, business, non-profit sector, civil society, public sector. In order to get a holistic view on creative economy, these interviewee types represent major stakeholders of creative economy (see Figure 5) (UNCTAD & UNDP, 2010):

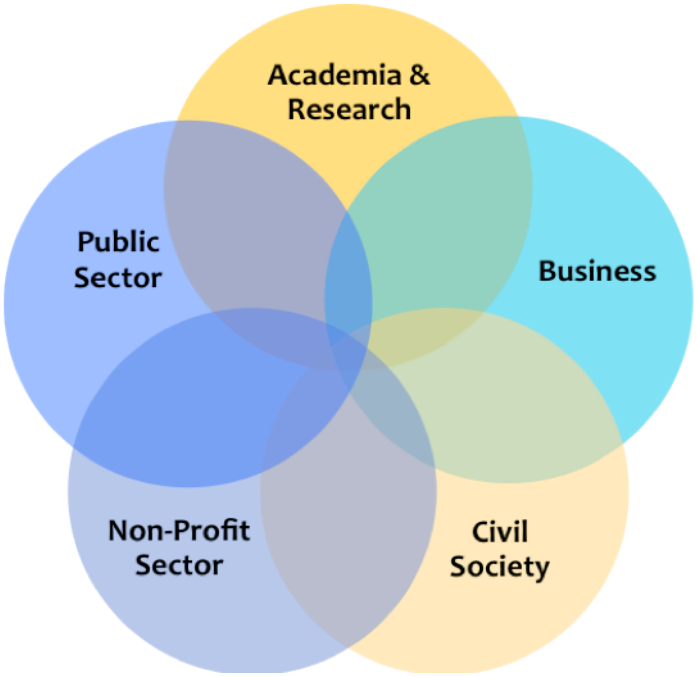

Figure 5 Identified stakeholders of creative economy

Source: Complied by the authors

- **Academia and research** area is represented by all the other four major stakeholder categories, i.e. businesses, civil society, non-profit sector's and/or public sector's agents, e.g., university representatives, private agencies, consultants and researchers in the field of creative economy, government and non-government research initiative pursuers, etc. working mostly for academic and research purposes;
- **Business** or for-profit private sector stands for a wide range of commercial operations in all fields of culture and creative production and distribution;
- **Non-profit sector**'s agents represent theatre and dance companies, festivals, orchestras and other music ensembles, craft cooperatives, etc., some of which may be financially supported by the public sector's incentives;
- **Civil society**'s members work for advocacy NGOs, foundations, artistic and creator's professional associations, etc.;
- **Public sector** is represented by both state and regional governmental bodies as well as by such public cultural institutions as museums, galleries, public service broadcasting organizations, etc.

Interviewees pursuing certain expertise in the fields correspond to the identified creative economy stakeholders; thus, these interviewees are called experts (see, e.g., UNCTAD & UNDP, 2010).

Based on the semantic search as well as the data from the open secondary sources and creative economy network databases, i.e. Creative and Cultural

Economy Database, Cultural Contacts Points, etc. (British Council, 2012a; European Commission, 2011), the authors have built a diverse sample of individuals representing creative economy stakeholders and cultural and creative industries (Guha, McCool & Miller, 2003). In this pool, authors aimed at involving various professionals, including researchers, entrepreneurs, business people, freelance employees, volunteers, etc., from the European countries in scope. Choice of semantic research search method, (usually combined with ranking algorithms present in most of the search engines), facilitated the identification of potential interviewees. Based on word sense disambiguation, this type of search method reduces one of the most common in-depth interview biases – practical difficulty of random sampling (Patton, 2002; Mäkelä, 2005; Efrati, 2012).

As a result, a dataset of 169 creative economy experts was compiled, consisting from at least five people from each European nation. Each of these individuals represents at least one area of expertise in creative economy, thus, constituting one of the creative economy's stakeholders in a given country. All the initial correspondence with selected potential interviewees was performed via personal emails (see Appendix 6). In case of positive response on the authors' inquiry to conduct an individual interview, a 30-minute interview via Skype, phone or on site with an expert was scheduled. All the interviewees received a one-page interview guide with a short summary of topics and questions covered (see Appendix 7). The interview guide reflects the content of prospective interview, asking for the personal interviewee's viewpoint on the topic of creative economy in general, its constituting industries and stakeholders with respect to his/her country of origin. Given that one of the purposes of expert interviews was to provide context to other data, i.e., bibliographical research and quantitative analysis, selected experts were requested to provide their opinions and suggestions about influential factors and measurements of creative economy (Patton, 2002; Romani, 2012).

During most of the interviews both authors were present and each of them had a separate role: core interviewer and protocol-writer. In total, there were 55 expert interviews conducted, equaling the overall response rate to 32.54 percent. For easier and more accurate data documentation, all the experts were asked for permission to be audio-recorded at the beginning of the interviews; in 90.91 percent of interviews, experts agreed on being recorded. Appendix 6 presents a full list of the interviewees and their respective types or fields of expertise.

Assumptions

For the purpose of more accurate interpretation of information received from the expert interviews, several assumptions were made.

One of the most significant obstacles in conducting the interviews among the representatives of 33 European nations is language barrier. However, in order to keep equal conditions for all the expert interviews, all of them were conducted in English. This creates an assumption of general understanding and equal interpretation of definitions between the interviewees and the interviewers.

As the experts were provided with an interview guide beforehand, it was assumed that all the interviewees got acquainted with the interview content and flow.

In addition, presence of both authors during most of the interviews together with written protocols and audio records assumes increased objectivity in interpretation of interview findings in the further qualitative analysis.

Advantages and limitations

The key advantage of in-depth interviews is that they provide more thorough insights and information than other qualitative primary data collection techniques, e.g., surveys or questionnaires. In addition, authors have experienced a relaxed atmosphere while conducting expert interviews: respondents felt comfortable having an open-question conversation, expressing their personal opinions and ideas on topics in question. Still, authors have also faced several limitations of the in-depth interviewing method. In the following, all these limitations as well as interview instruments implemented to reduce them are described:

- **Prone to bias**. Given the fact that this study's initiators conducted expert interviews themselves, it is possible that authors' personal belief in, e.g., significance of the impact of creative industries on economic welfare of a given nation might result in biased interview responses and further biased interpretation of results. Expert responses could also be biased due to the various reasons, e.g., their stake in a special promotional initiative supported by the government or any other stakeholder, under- or overestimation of personal role in creative economy, etc. Such data collection instruments as interview guide, presence of both authors during the interview, written protocols and audio records help to reduce aforementioned bias to minimum.
- **Time spent**. In-depth interviews are presumed to be one of the most time-consuming data collection methods, given the time it takes to conduct interviews, document them, and analyze the results. Audio recording and interview minutes or written protocol are time efficient and practical instruments for interview documentation and contribute to the further data analysis.
- **Interviewing techniques**. Interviewers must be properly prepared before the interview as well as trained in specific interviewing techniques. Pilot testing helps to adjust the interview content and to sharpen interviewer's skills. To get the most important details from an interviewee, it is essential for the interviewing person to make that person comfortable and show interest in his/her answers. Based on the previous training, in their interviews, authors used such effective interview techniques as avoiding yes/no and leading questions, using appropriate body language, if applicable, and being neutral in terms of not expressing their personal opinions.
- **Impossible to generalize**. As mentioned previously, the results of in-depth interviews are usually hard to generalize, given that a small sample of respondents is taken and random sampling methods are not used. However, in this work, supported by certain data collection methods, (e.g., semantic search and usage of extensive networking databases), as well as prior bibliographical

research and quantitative data analysis, conducted expert interviews provided valuable information for further qualitative analysis. Notably, authors became confident in the sample size and its representation following the general rule of in-depth interviewing: the sample size is sufficient enough when identical opinions reappear in the answers of respondents representing identified creative economy stakeholders (Patton, 2002; Boyce & Neale, 2006; Romani, 2012).

Based on the expert interviews performed, authors have proceeded with qualitative analysis on the impact of creative economy and its constituting industries on the national welfare of the European countries in scope. Having noted certain similarities in economic patterns of some countries, results obtained from the in-depth interviews were further structured according to the outlined cluster groups and specifications of the researched economies.

Cluster groups and specifications

Cluster groups and specifications are based on the cross-country analysis of regulatory frameworks and country clustering prepared for the report on 'The Entrepreneurial Dimension of the Culture and Creative Industries' done for the Education and Culture Directorate-General of the European Commission (Utrecht School of the Arts, K2M Ltd. & Eurokleis S.r.l., 2011). In addition, authors have analyzed separately several European countries, not assigned to any of the cluster groups in the aforementioned study; here, the same clustering methodology as in the report for the European Commission was used. The final cluster groups were presented to and approved by the authors of the initial country clustering in May 2012 (Ioannidis, 2012). Table below shows the final cluster groups and specifications of European countries in scope as well as characteristics for each country specification.

Table 1 Cluster groups, specifications and characteristics

Cluster Group	Cluster Specification	Countries	Cluster-Specific Country Characteristics
Knowledge Economies		Denmark, Finland, Iceland, Ireland, Netherlands, Norway, Sweden, United Kingdom	• Reliant on knowledge based products and services • Sound enforcement of intellectual property rights • Support of entrepreneurship and innovation, i.e. favorable conditions for doing business • Presence and implementation of creative-industries' specific governmental programs • High investments in R&D on all levels, governmental, corporate, and individual • Strong innovation nationwide, e.g., high technological advancement and internet penetration level

Traditional Economies	Structurally Strong	Austria, Belgium, France, Germany, Luxembourg, Switzerland	• Sound and strong use of knowledge based products and services • No apparent and/or significant reward for cultural and creative entrepreneurial and risk-taking activities • Rather significant state aid • Creative economy's importance is acknowledged and cultural and creative industries are supported by the government
	Structurally Weak	Cyprus, Greece, Italy, Malta, Portugal, Spain, Turkey	• Strongly developed traditional economic sectors and small and medium enterprises • Below average innovation measures and strategies • Creative industries are recognized, but no coordinated moves from government or corporations are taken
Emerging Economy	Virtuous	Czech Republic, Estonia, Latvia, Poland, Slovakia, Slovenia	• Good innovation performance • Initiation of coordinated actions for further development of creative industries • Lack of robust investment in R&D and infrastructure
	Weak	Bulgaria, Croatia, Hungary, Lithuania, TFYR of Macedonia, Romania	• Lagging behind in terms of economic performance • Recognition of creative industries • No concrete strategies for development of creative industries are implemented or even outlined

Source: Compiled by the authors using data from Utrecht School of the Arts, K2M Ltd. and Eurokleis S.r.l., 2011, and Ioannidis, 2012

Case studies

Presented in the qualitative analysis part, case studies show the most appealing examples of selected European nations with regards to creative economy and its impact on the national well-being and business environment, in particular. At least one country example for each cluster specification appears in a form of a short case study.

The reason for choosing short case studies in the qualitative analysis part lies in the essence of this method. According to Stake (1994, 1995), a case study method is useful when 'opportunity to learn is of primary importance.' In this paper, short case studies provide valuable contribution for in-depth examination of outlined country cluster group specifications with respect to creative economy and are based on the information primarily obtained from the interviewed experts representing selected countries (Stake, 1994; Stake, 1995), as well as other sources, such as internet resources and reports that support this information.

Authors developed short case studies as short empirical investigations, taking into consideration Yin's definition of case study research (Yin, 2003):

- **Case studies facilitate investigation of a current observation within its real-life context.** All the examples presented in the case studies describe the current or recently developed incidents, describing the latest instances of creative economy in one of the selected countries in scope.
- **The boundaries between observation and its context are not clear.** With respect to the topic of this paper, the grounds and prospective outlooks of the current situation in creative industries of countries in scope are not definitively observable.
- **Multiple sources of evidence are used.** As previously mentioned, authors are using different sources of information to develop the case studies, mainly including insights from the expert interviews, i.e. the primary source materials providing specific types of information from the different stakeholders' perspectives, as well as other sources.

According to Yin, case study design facilitates understanding of 'complex social phenomena.' Taking into account that creative economy is a complex socio-economic phenomenon involving respective activities, undertakings, and various conditions and forces within a given nation and beyond its borders, a case study method provides constructive empirical add-on to this work (Yin, 2003).

In order to get a holistic understanding of the major factors influencing the development of creative economy in different country cluster groups, authors are providing at least one revelatory case for each cluster group, aiming to provide the most representative and interesting instance for a given cluster and/or creative economy stakeholder. Notably, it should be considered that presented revelatory cases are the ones assumed to represent the problems, issues and/or conditions common to other nations from the represented country cluster group (Yin, 2003).

In this research, authors are using short instrumental revelatory cases. Instead of thorough focus on one particular case (intrinsic case study) or joint analysis of various cases (collective case study), instrumental case study consists of selected cases that provide information or insight on the researched topic or refinement of theory (Stake, 1994). It was decided to use instrumental case study method to demonstrate the featuring characteristics of creative economy that may be typical for a certain country cluster group and/or creative economy stakeholder(s) in this group.

Despite the deftness and ability to depict the most picturesque examples of the phenomenon of this study, it is important to underline the main limitation of the case study method. For the most clusters, a single case was presented. A major limitation of this method is the lack of statistical generalizability. This limitation was however offset by presented previously numerical analysis and data analysis based on expert interviews. Authors believe that presented cases were helpful in extracting important conclusions on creative economy in European countries with different socio-economic characteristics and political environment with respect to different stakeholders shaping creative economy's further development in these countries.

REVIEW OF EMPIRICAL FINDINGS

Quantitative research

Adjustments for econometric model

To start the quantitative research, necessary adjustments are made. Firstly, the analysis of the panel data at hand is carried out. In summary, the panel dataset consists of 33 European countries annually observed in the period of time from 2008 to 2010, resulting to the maximum of 99 observations; however the number of observations in particular regressions is presented in result tables in Appendices 9, 10, 11, and 12. The smaller number of observations in certain regressions comes from the data availability for certain variables taken for respective regressions.

Thus, based on the econometric model described in the Methodology, unbalanced panel-data regression model is used for analyzing economic welfare for the economies in scope. This panel-data is unbalanced for the reason that there are *N* cases observed over varying periods of time.

Next, taking into account the presence of several time periods in the panels, it is important to check whether the chosen econometric model/-s can be characterized as stochastic and stationary process/-es. Thus, Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test for stationarity of series for all the variables and panels (countries) with all three time-periods in scope (2008, 2009 and 2010) is performed. Considering the null hypothesis of KPSS test that either trend or level stationarity is present, obtained test results (see Appendix 8) show that the null hypothesis is accepted at all the significance levels equalling or less than 10 percent for both, trend and level stationarity. This means that series in the dataset compiled for this study represent stochastic processes. One of the main reasons for this might be the considerably small number of time-periods; therefore it is practically not viable to complete an accurate assessment, whether the data in scope is entirely stochastic or some of the variables considered pursue non-stochastic nature. Consequently, no further adjustments to the measurements chosen in the Methodology part are made.

Considering the unbalanced panel data with considerably low number of observations for panels, the standard panel-data model (3.1) is finally adjusted to the unbalanced panel-data model with one-way error component disturbances that correspond to either equation (4.1) for regressions with fixed effects or (4.2) – with random effects.

$$y_{it} = \alpha + \beta x'_{it} + (\mu_i + u_{it}) \quad (4.1)$$

$$y_{it} = (\alpha + \mu_i) + \beta x'_{it} + u_{it} \quad (4.2)$$

The dummy variable μ_i controls for either fixed or random effects, being part of the intercept or error residual in equation (4.1) or (4.2), respectively. In both equations, condition $u_{it} \sim IID(0;\sigma_u^2)$ holds, (meaning that errors are independent identically distributed).

In case of the unbalanced panel-data nested error component model, equation (3.1) is adjusted with regards to included in this model fixed and random effects. The nested structure of panels requires control for omitted variables related to the panel variable, nested case variable and time variables. Using the unbalanced nested error component model, it is possible to analyze unequal number of cases in each panel with different number of observed time-periods and, thus, to arrange the incomplete data into natural nested grouping and is given by equation (4.3).

$$y_{ijt} = \alpha + \beta' x_{ijt} + u_{ijt}, \; i=1\dots M, \; j=1\dots N_i \text{ and } t=1\dots T_i, \qquad (4.3)$$

where, in this study, y_{ijt} stands for the economic welfare in GDP per capita of the j^{th} country in the i^{th} cluster group for the t^{th} time-period, x_{ijt} is a $k\times1$ vector of input variables. Constant α includes fixed effects, thus, controlling for the time-constant omitted variables. The disturbances are as follows:

$$u_{ijt} = \mu_i + v_{ij} + \varepsilon_{ijt}, \; i=1\dots M, \; j=1\dots N_i \text{ and } t=1\dots T_i,$$

where μ_i stands for the $_i^{th}$ unobservable cluster-specific effect, which is assumed to be IID(0, σ_μ^2), v_{ij} is the nested effect of the j^{th} country in the i^{th} cluster and assumed to be IDD(0, σ_v^2), and ε_{ijt} is the residual disturbance, also assumed to be IDD(0, σ_ε^2). (More information on the unbalanced nested error component model and its specifications and estimation method are explained in more details in Batlagi and Griffin's work 'The Econometrics of Rational Addition: The Case of Cigarettes') (Baltagi & Griffin, 2001; Baltagi, 2005).

Choice between fixed or random effects

In order to proceed further with quantitative analysis, it is crucial to decide whether there should be fixed or random effects included in one or another regression to control for omitted variables. The commonly acknowledged method of choosing between fixed or random effects for both, balanced and unbalanced data is running a Hausman test.

To complete a Hausman test comparing fixed with random effects, it is needed to compare the coefficients of the estimated fixed effects model and the random effects model. The null hypothesis of Hausman test examines whether the coefficients estimated by the efficient random effects estimator equal to the one yielded by the statistically consistent fixed effects. On the one hand, if coefficients estimated with fixed effects are the same as the ones with random effects, (i.e. p-value for the Hausman test's Chi^2 statistic is insignificant or probability of accepting the null hypothesis is more than 0.05), then it is preferable to control for random effects and thus achieve more efficient regression results. On the other hand, in case of computed probability given Chi^2 is less than 0.05, control for fixed effects is recommended (Hausman, 1978). (More information on Hausman specification testing can be found in the Methodology part).

As an example, consider the Hausman test results for the panel-data regression P-I-1 (see Appendix 9), where economic welfare estimate *gdp_cap* is dependent

variable and independent variables are *allcg_cap*, *allcs_cap*, *allrg_cap*, and *allrs_cap*, which stand for net exports of goods and services produced by creative and related industries, respectively, as well as culture and creative employment measurement *emp_cap*. This regression model is run for 27 panels corresponding to selected European countries, with up to three time series for chosen variables. For P-I-1, a Hausman statistic of 19.50 is distributed as $Chi^2(5)$ and is significant with a p-value of 0.0056. Obtained results reject the null hypothesis that regression P-I-1 if controlled for random effects does not yield a consistent estimator. This means that omitted variables are constant over time and vary among countries in this regression, which is compatible with equation (4.1).

For regression P-I-3, with independent variable *gdp_cap* and almost the same combination of independent variables, except for exclusion of *allrg_cap*, a Hausman statistic is equal to 6.98, distributed as Chi^2 with four degrees of freedom and is insignificant, given the resulted p-value of 0.136. Here, it is recommendable to use random effects, as these are more efficient and can be presumed as statistically consistent as fixed ones. Thus, there are both types of omitted variables in P-I-3, varying either over time or among panels and the final regression model corresponds to equation (4.2).

As a result, it is chosen to run most of the regression with control for fixed effects. It means that it was usually decided in favor of more statistically consistent results provided with fixed effects rather than use of random effects, which are often perceived to be a more efficient estimator. In this study, such a twist towards choosing the fixed effects estimator in most of the panel-data regressions can be explained by peculiarity of the data examined. Based on empirical evidence of prior researches, region-specific fixed effects are regularly integrated in cross-regional panels with small number of time-periods and considerably bigger number of cases, which is applicable for the data used in this research. (Arellano, 2003; Baltagi, 2005; Londregan, 2012) Final results of Hausman tests and decision on the use of effects for each of the panel-data regressions run are presented in Appendices 9, 10, and 12.

Hausman specification test is not applicable for the third round of regressions, given the specifications of unbalanced nested error component model used in regressions P-III. It means that fixed and random effects are already included into the original model as it is shown in (4.3).

Panel regression procedure

To start discussing the results of the panel regressions, it is important to state the reasoning behind the chosen regression performance sequence. This is directly linked to the results' reporting sequence in Appendices 9, 10, 11, and 12.

At first, regressions are run for the one-way unbalanced panel-data model with 33 panels corresponding to the European countries in scope of the research with three consequent years of annual observations of time from 2008 to 2010. All the regressions are run with the dependant variable *gdp_cap* (national economic welfare estimate measured in GDP in current USD per capita).

The first round of regressions P-I (see Appendix 9) initially included the following regressors: *allcg_cap*, *allcs_cap*, *allrg_cap*, and *allrs_cap*, standing for net exports of goods and services produced correspondingly by creative and related industries, as well as culture and creative employment or culture employment measurement *emp_cap* (in P-I-1, -3, and -5) or *culemp_cap* (in P-I-2, -4, and -6). In the second round of panel regressions P-II (see Appendix 10), independent variable *allrs_cap* is replaced by *r_cap* and *rs_cap*, which are the estimates of royalties and license fees and other related services, i.e. related to creative industries computer and information services. Both, the first and the second rounds of panel regressions decrease the number of independent variables, removing those with statistically insignificant coefficients.

The third round of panel regressions P-III considers cluster groups of European countries in scope as panels (see Appendix 11). Thus, based on the clustering method previously presented in the Methodology part, five cluster groups correspond with the five panels in the third round of regressions. Dependant variable and independent variables are originally the same as the ones in the second round of panel regressions, with either *emp_cap* or *culemp_cap* for regressions P-III-1, -3, and -5 and P-III-2, -4, and -6, respectively. The third round panel regressions differ from the previous ones in a way that the data consists of the aforementioned panels (cluster groups) with certain number of cases (countries within a given cluster group) and the order of the observations within the cases is equal to the short time-series with three years in scope (2008-2010). This type of regression model is commonly known as the unbalanced nested error component model (4.3) and requires control for random effects of its panel variable, nested or case variable, and includes fixed effects related to the time-constant omitted variables.

As in the first and the second round, the fourth round of regressions uses the unbalanced panel-data model, thus, corresponding to either equation (4.1) or (4.2). The factor variable and regressors are originally the same as the ones in the second round of panel regressions with the changing employment estimate *emp_cap* or *culemp_cap*. Appendix 12 presents the results obtained from the most statistically significant regressions, with the best goodness of fit with respect to the chosen control for omitted variables, (i.e. fixed of random effects) for all the countries as well as for separate cluster groups.

In the next section the most statistically and economically significant and/or interesting results from the above-described regression rounds are presented.

Panel regression results

Based on the first round results (see Appendix 9), the best goodness of fit, (i.e. the biggest R-squared), is represented by the estimates from the regression P-I-5. Yielded regression results show that the net exports of all creative goods per capita have the negative and both statistically and economically significant effect on the economic welfare of a given nation, considering a panel-data of thirty European countries in scope. The reported *allcg_cap* coefficient of -40.7976 with 1 percent significance level can be interpreted in the following way: decreased by one million current USD value of net exports of creative goods per capita

corresponds to a considerable increase of more than 40 million current USD in a country's economic welfare variable – GDP per capita, million in current USD.

Such a strong relationship can be explained by the net exports effect related to the national fiscal policy. Considering the recent world financial downturn, which has severely hampered the economic situation in Europe starting from 2008, large-scale fiscal policy actions were initiated Europe-wide in general and in the euro area in particular. Starting from 2009, national governments in Europe were inclined to pursue expansionary fiscal policies, trying to fight the Great Recession. Implemented expansionary policies lead to higher domestic interest rates, increased demand for respective national currencies, (euro for many European countries) resulting in intended appreciation of domestic currencies, thus, resulting in lower net exports. Thus, a reverse relationship between GDP and net exports is present. This, subsequently, supports the real national welfare with a short-term effect typical for discretionary fiscal policies. This effect is mostly observable in trade of goods, e.g., in this work, creative goods, and in strong economies and/or countries with persistent trade surpluses, e.g. Germany, Turkey and other countries in scope. (See Ivanova & Weber, 2011, Coenen, Straub, & Trabandt, 2012).

Another estimates included in P-I-5, net exports of all related to creative industries services per capita and share of culture and creative employment as a share of population, are not significant. In case if other estimates, (i.e. net exports of creative services and/or net exports of related goods), are included and/or culture employment as a share of population is taken as a proxy for employment, calculated within, for fixed effects, or overall, for random effects, R-squared has lower value if compared to regression P-I-5 (within R-squared=0.5553), and, thus, model has a worse fit to the data.

In the second round regressions (see Appendix 10), run with fixed effects, regression P-II-4 yields to the best fit to data estimates in this, with within R-squared equal to 0.4684, (which is a relatively significant result for the short time series of the panels examined). Regressors included in P-II-4 are net exports of creative and related goods, *allcg_cap* and *allrg_cap*, net exports of royalties and license fees as well as other related to creative industries services, *r_cap* and *rs_cap*, and culture employment variable *culemp_cap*. The P-II-4 estimates show that all the included variables measured in net exports per capita, (creative goods, related goods, royalties and license fees and other related to creative industries services), have a statistically significant impact on the national welfare all over Europe. All of them showed a negative impact on the dependant variable *gdp_cap*, except for net exports of related to creative industries services. Explanation of this ostensibly antithetic negative influence of *allcg_cap*, *r_cap* or *rs_cap* on *gdp_cap* lies behind the aforementioned net exports effect with regards to fiscal policy implementation among the European countries in 2008-2010.

In contrast, coefficient yielded for *allrg_cap* denotes an opposite to the other variables defined by net exports, positive and statistically significant impact of net exports of related goods on the national welfare; this means that ten million current USD in net exports of related to creative goods adds more than ten million current USD to the national economy for the countries included in the

regression P-II-5. Considering that total net exports of related goods in the European countries stayed in 2010 almost the same as in 2008 and both exports and imports fell in the period of 2008-2010 (see Figure 4), it can be concluded that net exports effect was rather inapplicable, for international trade of goods related to creative industries. Possible reasons for this can be simultaneous extensive fiscal policy implementation among the European countries in scope and/or and economic trade interdependence within Europe, (especially within the EU and particularly in the euro area). Based on the related goods trade statistics as well as harsh economic conditions of 2008-2010, it is possible to argue that related goods were produced locally in the European countries during 2008-2010. (See Rytkönen, 2003, Sandholtz & Stone Sweet, 2012, Coenen, Straub, & Trabandt, 2012).

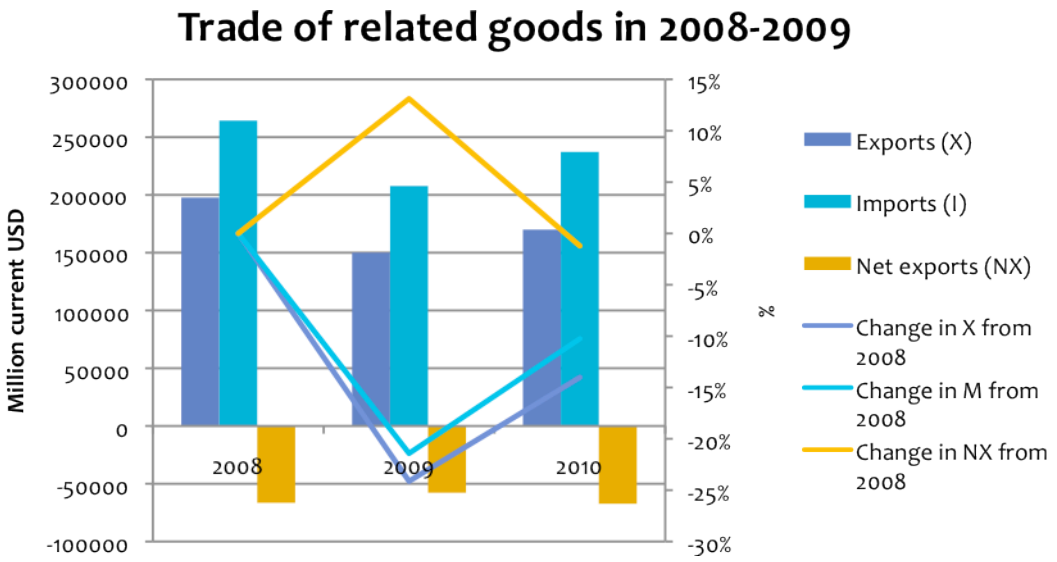

Figure 6 Trade statistics of related to creative industries goods in European countries in scope (2008-2010), million current USD

Source: Compiled by the authors using UNCTAD Global Database

Taking into account nested grouping and simultaneous control for both time- and cases-variant omitted variables, the third round of regressions shows similar results to the previous one. In the series of regressions P-III, regressions P-III-1, -2, and -3 yield to the most statistically significant results, with nor *emp_cap* and nor *culemp_cap* estimates having statistical significance in P-III-1 and -2 and coefficients for net exports of all creative services being also statistically insignificant in all three regressions. Similar to the first and second round results, net exports of creative goods have the most economically significant coefficients. Another interesting takeaway from the third round is the statistical significance of all the random effects parameters, which included the fact of nested grouping in our dataset by cluster groups and countries within these groups. Thus, given the statistical viability of random effects and despite their economic slightness, it is interesting to look at the results of the fourth round with separate regressions for each cluster group.

The fourth round of regressions is made with panels corresponding to countries in 2008-2010. Appendix 12 presents the regression results for the fourth round of

regressions P-IV. Regressions are run separately for each out of five clusters, defined in the Methodology part (Table 1), and the ones with the best fit to data are presented in Appendix 12.

As for the most influential creative economy-related estimates of economic welfare in knowledge economies, these are *allcg_cap*, *allrg_cap*, are *r_cap* (see P-IV-3 in Appendix 12). With inclusion of creative employment as a share of population as well as net exports of creative and other related services, significant share of goodness of fit of the model with the data is lost. At first glance, such a sizeable impact of creative and related goods is rather untypical for knowledge economies, considering its essential focus on services. Yet, in the time of the Great Recession, knowledge economies, i.e. innovative and developed ones, are prone to decrease their net exports of goods to a large extent. Therefore, due to the economic crisis, European knowledge economies are more supported with creative and related goods by other less developed and/or more labor-intensive nations in and outside Europe(Dunn & Mutti, 2004; World Trade Organization (WTO), 2010). This support is fueled by developing economies, which have annually increased their share in world market for creative and related goods, with exports growing faster than imports as in the period of 2002-2009 (OECD, 2011; dos Santos-Duisenberg, 2012).

Chief of UNCTAD's Creative Economy Programme in 2004-2012 Edna dos Santos-Duisenberg argues that importance of creative industries and service-oriented economic environment in knowledge economies resulted into apparent stability in net exports of creative and related services. European knowledge economies are the most innovative, rich and developed economies in this region. Therefore coefficients of all the statistically significant variables are considerably bigger, i.e. impact of a given independent variable on the country's economic welfare is considerably bigger. (Dunn & Mutti, 2004; Ivanova & Weber, 2011; Coenen, Straub, & Trabandt, 2012; dos Santos-Duisenberg, 2012).

Regarding the regression results for traditionally structurally strong economies, it is important to underline the importance of the share of cultural employees in these countries. Referring to regression P-IV-5 it is interesting to note that an additional culture employee in one of traditionally structurally strong economies corresponds to a decrease in its GDP by approximately 452 thousand current USD, referring on statistical significant regression results of variable *culemp_cap*. Accounting for the later, it is important to point out the fact that creative and culture employment per capita as a proxy for creative employment does not have statistically significant impact on national welfare for a given traditional structurally strong economy (see P-IV-4). This means that traditionally structurally strong economies may lose from relying heavily on culture employment only, thus, indicating an opportunity for further development of creative industries, other than culture and arts only related (dos Santos-Duisenberg, 2012). In contrast to knowledge economies, traditionally structurally strong are more service-dependant in terms of international trade of creative products (Dunn & Mutti, 2004).

Traditionally structurally week economies experience net export effect only in the all related to creative economy goods (see P-IV-6, -7 in Appendix 12). Based on

regression P-IV-7, *gdp_cap* in these countries has a strong positively related dependence on net exports of creative goods and royalties and license fees as well as culture employment as a share of total population. This shows that development of IPR policies together with focus on creative goods generated by culture employment facilitate more economic prosperity in traditional structurally weak and currently economically struggling European countries, e.g., Italy, Malta, Spain, etc.

Regression P-IV-8 represents the model for emerging virtuous economies fitting the most to the data. P-IV-8 does not indicate any specifically strong effects by any of the variables, except for positive and statistically and economically strong impact of net exports of all creative services. This shows an importance of exports of creative services as a source of economic well-being in emerging virtuous economies.

Insignificant results in P-IV-8 for *r_cap* indicate a temporary stability on the IPR market in given virtuous European nations. However, in P-IV-9, net exports of royalties and license fees have negative and statistically significant impact on *gdp_cap* in emerging weak countries. The later indicates a strong dependence on the foreign IPR protected products in emerging weak economies; similar effect is denoted by net exports of creative goods, (see P-IV-9 in Appendix 12) (European Commission, 2011). Notably, results for emerging weak economies signify the aforementioned net exports effect caused by expansionary fiscal policies during the recession times.

Generally, econometric analysis of this study demonstrates significance of trade of creative and related industries in forming national economic welfare in Europe. (In contrast, both creative employment proxies, *culemp_cap* and *emp_cap*, rarely indicate statistical significance possibly due to deficiency of data representing the creative employment in this study).

Despite the recent economic recession as well as bounding structure respective political and economic unions and interdependence of European nations (see Appendix 2), the nature of economic prosperity among these countries varies, depending on cluster grouping. This is also proven by the results of the likelihood ratio (LR) test with the null hypothesis of no cross-cluster and cross-country of a given cluster variance being rejected with 1 percent significance level for all P-III regressions, (see Appendix 12)[5]. Additionally, outcome of regression models for all the clusters, i.e. P-I, -II, and –III, match the relationships observed in European knowledge economies in P-IV-3, indicating economic importance of knowledge economies in the European region.

[5] High interdependence of European countries was also shown in regressions P-I, -II, and –IV by Persan's test for cross-section dependence with the null hypothesis of cross-sectional independence being rejected with 1 percent significance level. These results, however, should be considered with caution, given a rather short time series and a considerably high number of countries tested.

In the following, results of qualitative research are presented. These include review on expert interviews conducted for this study as well as sample cases about creative economy in each of the cluster groups.

Qualitative Analysis

As mentioned before, the qualitative analysis is based on the 55 expert interviews that were structured around a questionnaire that can be found in Appendix 7. The main findings of the interviews are presented below and represent a comparison of the various aspects discussed with the interviewees among the creative economy clusters.

As the interviews conducted for this paper have shown, the characteristics of creative economy differ in each of the European countries that were part of the study. I.e., even though the creative industries are present in each of them, the importance of those industries and their structure is different, as well as the factors that impact these industries in each economy.

As mentioned before, based on the country clustering Utrecht School of the Arts, K2M Ltd. & Eurokleis S.r.l. (2011), European countries can be classified according to the five creative clusters, depending on the characteristics of the creative industries in each of them, (see Table 1 in the Methodology part). The further analysis deals with giving an overview of the empirical findings on creative economy and the comparison of the characteristics of creative economy in each of the cluster groups.

Creative economies by cluster

The five creative clusters were each represented in this study by a set of experts that come from various stakeholder categories, including: academia and research, business, non-profit sector, civil society, public sector, (see Table 1 in the Methodology part). For each of the cluster groups, experts representing the different categories were chosen to avoid a biased view on the topic.

The knowledge economies tested for this paper were represented by eighteen experts, the structurally strong traditional economies – by nine, the structurally weak traditional economies were represented by eleven, the virtuous emerging economies – by ten, and the weak emerging economies – by seven experts. Despite the different number of interviewees per cluster, it is possible to identify repetitive patterns in each of them and analyze the differences between the cluster groups.

The empirical analysis has shown that creative economy has similar characteristics in the studied economies according to the cluster they belong to. A highly developed creative economy in a given a country could usually be observed in the most developed countries with a stable economy. With the diminishing level of economic development, the characteristics of creative economy in the way it has been referred to in this paper became less distinctive. Finally, the least developed countries in most cases also had the least developed creative economy. The following analysis elaborates on the differences between the characteristics of creative economy in each of the cluster groups.

General understanding of creative economy

Among the interviewed experts from all clusters, the general understanding of the concept of creative economy was similar, with a set of differences that are described below. The repetitive pattern of agreement with the UNCTAD definition was observed. Even though some of the interviewees did not accept the definition completely and added a personal aspect to it, creative economy was usually viewed as cycles of creation, production and distribution of goods and services that have creativity and intellectual capital as the primary inputs to generate economic value. These cycles take place in a set of industries that, according to a number of criteria, can be considered creative (UNCTAD & UNDP, 2010).

Most of the interviewees accepted the view on creative economy as the next step in economic development, following the experience and innovation economy, whereas some referred to it as an extension of experience economy, or even a synonym to experience economy[6] or to the knowledge economy[7].

An important addition to the concept of creative economy was that creativity as a value adding factor has always been present in human activities.[8] I.e., creative economy and creative industries are not new, even though in the modern economy the value of creativity as an input factor and of the creative industries as a whole at the moment is increasing.

Despite the fact that most of the interviewees accepted the definition of creative economy given by the UNCTAD (2010), it is important to mention a number of reactions and the general level of familiarity with the concept in each cluster. Whereas the interviewees representing the knowledge economies were familiar with the concept and added their opinions in addition to the general knowledge, the level of familiarity diminished cluster by cluster, but one exception. I.e., the level of familiarity in the structurally strong traditional economies was similar to that in the knowledge economies, but there was less familiarity with it in the structurally weak traditional economies, and even less in the weak emerging ones. At the same time, the familiarity with the concept of creative economy and the understanding of it in the virtuous emerging economies was similar to that in the knowledge economies. As for weak emerging economies, knowledge about the concept of creative economy exists among researchers and NGOs that are supported by the international organizations, but less awareness on the part of business was perceived, which can be partially explained by the fact that initiatives in the field of creative economy in those countries are new.[9]

[6] Pors Nielsen, Ottósson
[7] van Dalm, Strannegård, Nordström
[8] Ginsburgh, Lehtonen, Stenström, Sigrún Sigurðardóttir
[9] Petkovska

Creative industries

The general belief among the interviewees was that there is no perfect way to map creative industries.[10] The most frequently mentioned set of creative industries corresponds with the theoretical frameworks discussed earlier in this paper. Those are the cultural industries (e.g., arts, music, theatre, film, photography, architecture, etc.), as well as the more modern creative industries, such as design, information technology, advertisement, etc. In addition, a number of industries not conventionally classified as creative were considered to feature a significant amount of creativity, e.g., the automotive industry, food production and food services, consulting, etc.[11]

In the knowledge economies most interviewees mentioned that creativity is present in more or less every industry, and therefore creative economy in reality is broader.[12] The same was the case with the structurally strong traditional economies[13]. At the same time, most interviewees agreed with the rationale of mapping the creative industries through applying the UNCTAD or similar methodologies. In the structurally weak traditional economies, the most frequently mentioned creative industries were the cultural or artistic ones, such as arts and fashion in Italy[14], arts and design in Spain[15], etc. These industries are also the most developed creative industries in those countries (Boix et al., 2010). Traditionally, many of the structurally weak traditional economies are rich in cultural heritage, and many creative people and creative entrepreneurs are designers, photographers and artists. The new creative industries such as IT or the new media, though present in these countries, are perceived to be less active than those in the knowledge economies or in the structurally strong traditional economies[16]. Creative industries in the virtuous emerging economies, especially Poland and Estonia, on the other hand, encompass the new creative industries. In these countries, such industries are rapidly developing, producing such success stories as Skype[17] (Estonian invention), or the Eastern European Silicon Valley in Wroclaw, Poland[18]. In the weak emerging economies, creative industries are usually mapped in cooperation with the international institutions, mainly on the EU level[19]. The set of creative industries includes the newest ones but is still

[10] Cools, Neuen, Boix, Hájek, Ottósson, Sigrún Sigurðardóttir, Hazelkorn, van Dalm, Rygalik, Öner, Linton, Swann, Mistry
[11] Strannegård, Stenström, Hazelkorn, Linton
[12] Stenström, Sigrún Sigurðardóttir, Lehtonen, Karjalainen, Kaunisharju, Leskinen
[13] Neuen, Mayerhofer, Ioannidis
[14] Boglione
[15] Boix, Caba Asensio
[16] Boglione, Boix, Felice, Attard
[17] Siil
[18] Rygalik
[19] Petkovska

focused around the heritage and culture[20], as the products of the new creative industries so far are mainly imported.[21]

A frequently mentioned opinion was that all industries in the modern economy are creative, and it is only the extent to which creativity is present in each of them that is different.[22] The bottom line in the discussion on whether the conventionally not creative industries should be considered as part of creative economy was, in the authors' view, drawn by Dr. Kjell A. Nordström, who stated that 'it is the most competitive industries, those that are forced to create to survive [such as the automotive industry], that are the most creative'.[23]

Players in creative economy

The set of main players in creative economy indicated during the interviews included: government, international organizations (including the EU level NGOs), the EU, private investors, MNCs, SMEs, etc. The analysis has shown that in each of the creative clusters the role of the major players is different.

International organizations

International organizations, such as the British Council, are active supporters of creative economy. The initiated activities mainly deal with the support for the local governments in finding the right approach to developing creative industries within each country. British Council provides support in mapping creative industries, developing the strategy to support them and running the implementation (British Council, 2012b). In the knowledge economies, these organizations do not play a crucial role in creative economy. In most of the knowledge economies, the strategy for creative industries is under the supervision of the respective governmental bodies.[24] A similar situation can be observed in the structurally strong traditional economies[25] and some of the structurally weak traditional economies.[26] In some of the virtuous emerging economies, the support of the international organizations has been substantial and has triggered a lot of activity.[27] In the weak emerging economies, the role of the international organizations is crucial, as their activity serves as the foundation for further development and promotion of creative economy in these countries.[28]

Government

Government is an important player in creative economy in all countries that were part of the study. In the knowledge economies, governments have been active in initiating research in creative economy, as well as a set of activities in order to support the creative industries (e.g., The Council for Cultural and Creative

[20] Petkovska
[21] Despotovsky
[22] Stenström, Strannegård, Linton, Mistry
[23] Nordström
[24] Linton, Kaunisharju, Leskinen, Burke
[25] Mayerhofer, Ioannidis, Theler
[26] Attard, Felice
[27] Žáková, Rygalik, Ruszecka
[28] Petkovska, Čekanauskas

Industries, 2012; Creative Industries Finland, 2012). The same can be observed in the structurally strong traditional economies, (e.g., WKO, 2012; Bundesregierung, 2012). One of the ways to support creative industries is government funding, as well as initiation of government programs to trigger activity in the creative industries. It is important to mention that the number of non-governmental activities mentioned by the representatives of the knowledge economies was higher, i.e., there is perceived more engagement on the part of the NGOs, as well as the entrepreneurial community itself.[29] Additionally, the legislation when it comes to starting a business is more favorable in the knowledge economies than in the structurally strong traditional economies.[30] Another important point is the nature of help provided by the government. Compared to the knowledge economies, in the structurally strong traditional economies funding was mentioned more frequently as one of the ways to support creative economy.[31]

As for the structurally weak traditional economies, the financial support of the governments for creative industries is low.[32] The overall challenging economic conditions that are present in most of the structurally weak traditional economies at the moment are pushing governments to switch the focus towards the perceived more urgent issues.[33] Additionally, corruption is one of the factors that impact the development of creative economy negatively.[34]

In the emerging economies, governments play a key role in actively promoting creativity. Estonia, Poland and Czech Republic are good examples of how governments also support NGOs, as well as governments of other emerging economies in their efforts in promoting creativity.[35] As for the weak emerging economies, governments that usually lack experience in launching programs to promote creativity transfer this experience on an international level from the virtuous emerging economies. One of the examples is the active support of the Macedonian creative economy by the Estonian government.[36]

NGOs and the non-profit sector

The NGOs are another important player in the knowledge economies, organizing research, events, funding and other types of support for the creative economy. Business incubators, entrepreneurial societies and organizations in support of creative industries are present in every cluster group. In the knowledge economies and the structurally strong traditional economies such organizations often partner with educational institutions to produce white papers and increase the word of mouth on creative economy.[37] Besides, these organizations initiate projects and events in support of creativity. Among the organizations that

[29] Linton, Sigrún Sigurðardóttir
[30] Neuen, Sigrún Sigurðardóttir, Ottósson
[31] Theler, Mayerhofer, Peltz
[32] Boglione, Boix
[33] Moretti
[34] Bolgione
[35] Siil, Ruszecka, Rygalik, Žáková
[36] Petkovska
[37] Karjalainen

promote creative economy in these countries are: LUXInnovation in Luxembourg[38], Flanders District of Creativity in Belgium[39], Generator in Sweden[40], etc. In the structurally weak traditional economies, there are not many organizations of that kind and their activities are in some cases replaced by the governmental initiatives, which mainly focus on the support for the cultural industries in the traditional sense.[41]

SMEs and creative entrepreneurs

SMEs and entrepreneurs are important players in the European knowledge economies.[42] There, entrepreneurial communities are substantial, which is also evident from the number of events taking place in the field (e.g., conferences, networking events, etc.), and the amount of private and public funds (or respective organizations providing them) available.[43]

Entrepreneurship is encouraged by governments, and, as mentioned before, it is relatively easy to start a new business. As mentioned by one of the interviewed experts, 'In Iceland, I can start opening a company now and will be done by 3.00PM'.[44] The easiness of starting a new business and the high living standards, despite the economic crisis, allow many young people who believe in their ideas to not be afraid to try. In the structurally strong traditional economies, the entrepreneurial communities are substantial as well, even though starting a new business is connected with higher initial investment and more bureaucracy.[45] Still, a number of entrepreneurial hubs exist, e.g., Berlin in Germany, or Zurich in Switzerland.

In the structurally weak traditional economies, most of the creative entrepreneurs work in the field of arts, crafts and design. It is not as easy to start a new business due to corruption and bureaucracy, and the economic expectations are not optimistic.[46] Still, there are influential creative hubs, such as Barcelona, Bilbao and Madrid, where creative startups are supported by initiatives from NGOs with a focus on arts and design.[47]

In the virtuous emerging economies, creative entrepreneurship thrives in the entrepreneurial hubs, such as Wroclaw, Poznan, Tallinn, Prague, Riga, etc. Startups in the fields of IT, arts, design, etc., are active, due to the favorable climate and the positive attitude of the entrepreneurs that feel the support of the government and the city officials.[48] In weak emerging economies, the

[38] Trauffler
[39] Cools
[40] Linton
[41] Felice, Attard
[42] Nordström
[43] Linton, Leskinen, Karjalainen
[44] Sigrún Sigurðardóttir
[45] Neuen
[46] Boglione
[47] Boix
[48] Rygalik, Dobbin

entrepreneurial communities are starting to appear and it is perceived that the number of creative entrepreneurs is growing, even though it has not reached the level of the virtuous economies yet.[49]

MNCs

It is important to mention the role of the multinational corporations in creative economy. On the one hand, multinational corporations do not seem to be the key players in this development in the sense that in many cases they are not the ones driving innovation on a small scale. Besides, they are often too big to be able to adapt to changes fast. On the other hand, MNCs are the player that has the most resources and is capable of creating and implementing innovation.[50] In the fast changing environment, the main challenge for the MNCs is to remain competitive through building an innovative capacity. Often, MNCs do that through identifying the high potential innovative hubs and establishing their regional offices there (such as Google, IBM establishing offices in Poland, etc.). Whereas these moves may be rather to follow the newest trends than to set them, they impact the development of certain creative areas (such as Wroclaw).[51]

Measurements

Creative economy and the creative industries are very difficult to measure, which was stressed by all interviewees. Trade and value added[52] and employment[53] were mentioned as the measures that are the most representative of the size of creative economy. As for the IPR, opinions on this measure varied, with no general conclusion to be drawn.

Additionally, the difficulty in measuring creative economy is partly related to the fact that the set of creative industries in every country is different, which makes comparison across countries difficult.[54] Besides, some industries, such as the automotive, feature a certain amount of creative input but are not considered as creative industries.[55] Furthermore, creative people often work as freelancers, or for free, or part-time. These facts make it difficult to apply such indicators as trade and value added and employment while measuring the creative economy.[56] As for the IPRs, using the trade volumes on copyrighted products does not include all the creative input present in the areas where patents are not common.[57] Besides, according to some opinions, IPR do not stimulate, but hinder creativity as they discourage knowledge sharing.[58]

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[49] Petkovska, Despotovsky
[50] Dobbin, Hájek
[51] Dobbin
[52] Kaunisharju, Burke, van Dalm, Leskinen, Swann, Sigrún Sigurðardóttir
[53] Burke, Swann, Sigrún Sigurðardóttir, Neuen, Ioannidis, Mayerhofer, Leskinen, Rolandsen, van Dalm
[54] Žáková
[55] Hájek, Neuen
[56] Swann, Mistry, Strannegård, Lehtonen, Rivas, Ottósson
[57] Trauffler
[58] Trauffler, Čekanauskas, van Dalm

These perceptions did not vary among the interviewees representing the different creative clusters. Even in the knowledge economies, where researchers have been making attempts to measure the creative economy for a significantly longer period of time than in the emerging ones, no perfect measurement has been developed.[59]

The most common opinion among experts is that creativity and creative economy is difficult to measure, and there is no perfect way to do it. The approaches taken by researchers are normally based on a set of clearly defined creative industries, the value of which is measured using the measurements outlined in the UNCTAD methodology and similar.[60]

To conclude the discussion on measurements of the creative economy, a well-said statement on the topic was made by Herman Ottósson (Iceland), who stated that 'maybe the creative industries don't like to be measured'.[61]

Driving and limiting factors

Whereas it is very difficult to measure creative economy, a discussion on its driving and limiting factors allows judging about its development.

The driving factors of creative economy can also be the limiting factors, if they are present in the way opposite to that having the driving effect. Therefore, the discussion about the driving and limiting factors of creative economy comes down to merely a discussion of the factors that influence it in a certain way.

Competition

A crucial driver of creative economy is competition.[62] Competition has always been a driver for economic development, as outlined in economic theory. Whereas in the industrial society competition was mainly for efficiency and quality (e.g. Bell, 1973), now it is for innovativeness, i.e., the ability to create something new, which requires a certain amount of creative input. One of the important ideas here is that different nations and individuals are prone to take risk to a different extent. In a risk-averse culture, the creation of something new is avoided. At the same time, competition is an opposite force that encourages taking risk, as the reward here is not only the economic gain but also the survival of a business as such. In relation to this, antitrust policies and support for market competition can benefit creativity.[63]

The knowledge economies, as well as the traditional economies, have been traditionally open for market competition, including that on the international level. As for the emerging ones, most of them were part of the socialist regime in the twentieth century, which means that they were closed economies until 1992. This now has changed, despite the fact that the old mentality is present in some

[59] Ottósson, Lehtonen, Strannegård
[60] Žáková, Ruszecka, Petkovska, Pors Nielsen, Attard, Sigrún Sigurðardóttir
[61] Ottósson
[62] Nordström
[63] Nordström

cases.[64] Whereas the knowledge economies were specializing on their key strengths, they exported the goods that were competitive on the international level (such as electronics and cars in Sweden, or financial services in Iceland and Switzerland, etc.) and allowed imports in the other areas. This has raised competitiveness of the key industries in each of the countries.[65] As for the emerging economies that were closed until the early 90s, the virtuous ones have been able to build their competencies during the aforementioned time period. An example for this is Poland, which is one of the IT sourcing providers for Europe and the rest of the world.[66] The weak emerging economies have not yet managed to achieve the same state, among other, due to the fact that not all of them are part of the EU and have not been receiving support from the EU government until recently.[67]

Networking

Another key driving factor mentioned by most of the interviewees is networking (i.e., communication, sharing of ideas, and collaboration) between individuals representing different sectors of the economy.[68] Discussions about the importance of networking were mainly based on the idea that creativity is not only an individual merit, but that it is often a combination of various aspects, minds and ideas[69] that results in a creation of something new (see Bibliographical research).

Creative economy was in some cases considered to be a product of globalization and connectivity, which allows for significantly more cooperation and sharing of knowledge between individuals with different backgrounds in every part of the world.[70] Along with this idea, immigration is one of the important factors that benefit the development of creative economy. A country that is open for immigration provides more opportunities for cooperation to diverse individuals.[71]

The knowledge economies have realized the importance of networking, which can be seen from the events, conferences and other networking activities that are a crucial part of the business culture in these countries.[72] This is also the case with the structurally strong traditional economies and, in some cases, with the structurally weak traditional economies.[73] Besides, due to the high living standards in these countries, accessibility of the Internet and communications is

[64] Despotovsky
[65] Nordström
[66] Ruszecka, Rygalik
[67] Petkovska, Despotovsky
[68] Pors Nielsen, Stenström, Nordström, Karjalainen, Mistry, Lehtonen, Öner, Bille, van Dalm, Demetriou, Ignatiadis, Rygalik, Petkovska, Žáková, Ruszecka, Čekanauskas, Siil
[69] Stenström, Nordström, Strannegård
[70] Nordström, Demetriou, Ignatiadis
[71] Nordström
[72] Karjalainen, Linton, Rolandsen
[73] Neuen, Ioannidis, Trauffler, Cools, Felice, Boglione

high. The virtuous emerging economies are following the same track.[74] As for the weak emerging economies, the networking and cooperation on an individual level is hindered by the visa regimes of some of these countries with the rest of Europe, and in some cases the Soviet mentality that was not in favor of open-minded thinking.[75]

Education

Education is another key factor for creative economy.[76] Educational programs that are designed in a way to foster creative economy provide students with the necessary tools to be up to date and on the edge of the newest trends. The reality is that information taught in most of the educational institutions gets obsolete in a matter of days. Therefore, the crucial skill for competitiveness is the ability to process information quickly and apply it, in order to generate new value.[77] Additionally, multidisciplinary approach in education is crucial. Following the same mechanism as with networking, multidisciplinary education creates diversity of mind, which triggers creativity.[78]

Such changes in education are taking place in the knowledge economies, e.g., Sweden, Finland, the UK,[79] etc., but are not so often present in the traditional economies, both structurally strong and structurally weak.[80] On the contrary, the educational systems remain very traditional and are designed to provide students with a predefined track they could pursue, instead of educating them about the variety of options they could choose from.[81] As for the emerging economies, the virtuous ones have realized the necessity of innovation in the education system, even though such changes take time and are not in place at the moment.[82] As for the weak emerging economies, no changes in this direction have taken place yet.[83]

Living standards

Another important factor is the level of economic development that triggers creativity.[84]

People in developed nations, and especially in the knowledge economies, tend to be creative due to the fact that their quality of living is high enough for them to do so.[85] As mentioned before, being creative involves a certain amount of risk-

[74] Žáková, Rygalik, Ruszecka, Siil
[75] Despotovsky
[76] Trauffler, Ginsburgh, Ivanov, Sigrún Sigurðardóttir, Ottósson, Burke, Swann, Karjalainen, Demetriou, Lehtonen, Pors Nielsen
[77] Nordström
[78] Swann, Karjalainen
[79] Stenström, Karjalainen, Swann, Leskinen
[80] Ioannidis, Neuen, Trauffler
[81] Ioannidis, Neuen, Brauntsch
[82] Rygalik, Ruszecka, Žáková
[83] Čekanauskas
[84] Ottósson, Stenström, Sigrún Sigurðardóttir
[85] Sigrún Sigurðardóttir, Ottósson

taking, and in the conditions of abundance and slack creative people in developed countries are not threatened by that risk when they know that in case they do not succeed 'they do not have to starve'.[86]

In the structurally strong traditional economies, the entrepreneurial spirit and level of activity of creative individuals seems to be lower. Even though the level of economic welfare is high, it is more difficult to start a business and the fear of failure is stronger.[87]

In the structurally weak traditional economies, creativity in its artistic sense was always developed, but in the new creative industries entrepreneurship is comparatively not active, despite the relatively high living standards. Despite the abundance of creative ideas, the social system is not designed to support creative entrepreneurship, mainly due to the weak economic situation at the moment, the difficulty of starting a new business, as mentioned before, as well as the perceived pressures in the society, including corruption and the bureaucratic mindset (e.g., in Italy, Greece, Cyprus, etc.).[88]

In the emerging economies, this picture is different. For many years, people in these countries have been put in the economic conditions that featured a lot of control and few resources. In such a situation, people were bound to be creative, in order to achieve a certain level of well being through avoiding the tough control, while not officially breaking the restrictions. This type of 'creativity for survival' resulting from conditions of deficit that is present in individuals who represent the former Soviet member states has been applied now in the virtuous emerging economies to foster economic development. This feature may have allowed the virtuous emerging economies to be creative, not yet having achieved the living standards present in the knowledge economies and the traditional economies.[89] Taking into account other factors, e.g., better geopolitical position, these countries have gone far ahead of the weak emerging economies in their level of development.

Support from the governments and other administrative bodies

Government support and support of the regional administrative bodies (such as city authorities, etc.) is another important factor for the development of the creative industries. In this context, the cooperation between business and such administrative entities was frequently mentioned as crucial for this support to be effective.[90] At the same time, the interference of authorities can sometimes be questionable, as, e.g., some government measures may influence the competitiveness of creative industries in a negative way.[91] As briefly mentioned

[86] Sigrún Sigurðardóttir
[87] Neuen
[88] Boglione, Demetriou, Ignatiadis
[89] Stenström, Rygalik, Despotovsky, Onckule, Boglione, Nordström
[90] Pors Nielsen, Karjalainen, Rolandsen
[91] Nordström

before, legislation is another important factor for the entrepreneurial climate in a given country.[92]

In the knowledge economies, governments and regional authorities support creative economy and creative industries by, e.g., establishing the respective bodies, such as the Council for Cultural and Creative Industries in Sweden, and the specialized programs, such as the 'Development Program for Business Growth and Internationalization of the Creative Industries in Finland 2007-2013', etc. Such initiatives aim at supporting creative enterprises, regardless of the industry they belong to, as the general approach of the authorities is that creativity can be present in any business, and not necessarily in the artistic or cultural field (The Council for Cultural and Creative Industries, 2012; Creative Industries Finland, 2012). In the structurally strong traditional economies, there are a number of government initiatives that support cultural and creative industries, such as the 'Cultural and Creative Economy' initiative of the German Government (Bundesregierung, 2012). These countrywide programs aim at supporting the cultural industries, rather than creative economy in the sense discussed in this paper. At the same time, there are other initiatives, including regional, such as the 'Creative Industries in Flanders' (Flanders District of Creativity, 2011) in Belgium, that are designed to support the creative industries such as the new media, software, etc., as well.

In the structurally weak traditional economies, the support for creative economy is focused mainly on the traditional cultural industries, such as fashion, heritage, arts, crafts, design, etc.[93] In most of these countries, there are no state or regional programs created to support the creative industries. As for the virtuous emerging economies, some of the governments and regional authorities support the new creative industries, such as the new media, IT and the game industry, etc.,[94] as well as the creative cities, for example in Poland, where some of the city officials strongly support creative economy, e.g., in Wroclaw.[95] In the weak emerging economies, the support for creative industries from governmental and regional authorities is similar to that in the virtuous emerging economies, though at an initial stage.[96]

Neat creativity and artistic creativity

In the course of several expert interviews, an idea was raised that creativity that drives modern business is not the same as the one that is used to create arts. In its dynamic sense, i.e., as the process of creation of something new, artistic creativity does not always have a clear goal but is an expression of human emotions that results in a creation of an artistic object.[97] The other type of creativity that can be called the 'neat' creativity is goal-oriented, and in this case the creative process as such may be initiated only in order to achieve a concrete objective.

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[92] Lehtonen
[93] Boix, Boglione, Felice, Attard
[94] Žáková, Ruczecka
[95] Rygalik
[96] Petkovska, Čekanauskas
[97] Stenström

In its static interpretation, creativity as an attribute of people applied to certain actions may be also different. Firstly, artistic creativity does not have a structure, but is merely an ad hoc process that is driven by the need to create. The neat creativity, on the other hand, may be a structured process of, e.g., brainstorming and funneling new ideas in order to come up with a few that are considered valuable and implementable.[98]

As a result, creativity as such aims at a constant total surplus, i.e. overall value-generation process focused on three areas: economic, social and environmental value. Regarding artistic creativity, it can have a purely self-centric nature with no specific value creation except for personal satisfaction of an artist; then again, artistic creativity can bring, consciously or unconsciously, one or all three types of value. In contrast, neat creativity is focused on one of the three possible areas for value creation (i.e., economic, social and environmental), thus, bringing a balanced composite of value to a given nation.[99]

In order to support the aforementioned findings with real examples, a series of short case studies is presented in the next part of the qualitative analysis. These cases depict the most remarkable stories that were collected during the interviews. With at least one story per creative cluster, these case studies aim at pointing out the most striking differences between the European creative clusters.

Case studies

In the following, short case studies representing creative economy in selected European countries are presented. These cases correspond to five different cluster groups (creative clusters) in Europe. Particularly, knowledge economies are represented by Sweden, Austrian case stands for the traditional structurally strong creative cluster group, Italy – traditional structurally weak cluster, Estonia and Poland – emerging virtuous economies, TFYR of Macedonia – emerging weak creative cluster.

Sweden: the role model for creativity

One of the countries with the most developed creative economy is Sweden. Sweden is the role model of a country that has passed through all the stages of economic development and built a strong and competitive knowledge economy with developed creative industries.

Having been dependent on agriculture until the early nineteenth century, Sweden was able to rapidly industrialize by taking an open approach to innovation and foreign competition. An indication of this is the growth of the total factor productivity (TFP) (see e.g. Solow, 1956) starting from the 1870s, the early age of industrialization. In the post-war period, the volume of services increased strongly. TFP reached its highest peak in the 1970s, thus indicating the increased role of human capital, technology and innovation in the economic growth (Schön,

[98] Stenström
[99] Rivas

2007). Therefore, by the end of 1970s Sweden has a well-developed service economy with a strong industrial sector, ready for the new shift to creativity.

With the increased interconnectedness and emergence of the Internet, the open Swedish economy was able and ready to embrace the implications coming from this new setting. Sweden was one of the first countries to adopt a strategic approach to development of creative industries by the government (The Council for Cultural and Creative Industries, 2012). In addition, the activity of NGOs (see e.g. Generator, 2012) and entrepreneurship remains on a high level, building up awareness about creative economy. A number of events organized by the NGOs involve different stakeholders (government, academia, business, etc.) in the cooperation and promotion of creative economy (e.g., Stockholm School of Entrepreneurship (SSES), 2012). In Sweden, creative industries go beyond the cultural aspect, and supporting creative economy means supporting innovation and entrepreneurship (Ministry of Culture, 2011). The international attitude in a small economy is fostering transformation and adaptation of human skills to the new circumstances, a major force that determines the long-term growth (Schön, 2007).

Austria: building creative economy with a cultural twist

Austria is one of the structurally strong traditional economies with a great cultural heritage. The economy has been showing steady growth since the end of the World War I. There are not many industrial giants in the country, but the basis of the economy is shaped by SMEs in the service sector and account for 69% of the GDP (CIA, 2012). Many of the service SMEs provide knowledge-based services, such as consulting, research and legal advice. Another important part of the Austrian economy is tourism (CIA, 2012). Therefore, due to its economic structure, Austria has historic prerequisites for a strong creative economy.

The Austrian government strongly supports creative economy with an emphasis on not only the traditional, but also the modern creative industries, e.g., supporting SMEs in the fields of science and technology. The Austrian Federal Economic Chamber and the Ministry of Economy, Family and Youth are the key players in this field (WKO, 2009).

In addition to the developed service economy, Austria has a strong cultural sector. Vienna is a hub for creative professionals in the traditional creative industries, such as arts, architecture, performing arts, etc. To a significant extent, this is due to the number of educational institutions in the field of arts, as well as the cultural centers, such as the Museumsquartier.[100]

Despite the strong focus on creative economy, there are a number of hurdles that keep it from reaching the level of countries such as Sweden or Finland, such as bureaucracy that negatively affects entrepreneurial activity, as well as the lack of networking between the different types of creative professionals.[101] Compared to the mentioned knowledge economies, the initiative still originates from the side

[100] Mayerhofer, Brauntsch
[101] Mayerhofer, Peltz

of the government and is not coming to the same extent from the business community or NGOs.

Italy: decline of the creative empire

Italy is one of the richest, if not the richest, country in its cultural and creative heritage and at the same time a dramatic example of how favorable historical prerequisites for creativity have not been able to serve as a ground for a developed creative economy in its modern sense.

Whereas creative economy is still building up a lot of value into the country's GDP[102], the value-adding industries are the traditional cultural industries, as well as fashion. Employment in the traditional creative industries accounts for around 66% of the total employment in creative industries (Boix et al., 2010).

Though Italy was not the first to industrialize, the industrialization of the country during the fourth quarter of the nineteenth century was rather rapid. Still, industrialization was limited to a few industries (such as chemicals and electricity) and covered only certain regions of the country (e.g., Gianetti, 1998; Vasta, 1999). Besides, significant share of growth could be still attributed to traditional industries, such as food and textiles (e.g. Bonelli, 1979; Cafagna, 1989).

The shift to the service economy in Italy was based on tourism, communication and transport, which is a good prerequisite for the creative economy to emerge. Still, the general understanding of the creative economy in Italy comes down to the cultural aspect. Research on creative industries is rare, and most studies are done with a focus on the cultural sector (Boix & Capone, 2007). In addition, the level of corruption is high which negatively affects innovativeness and the entrepreneurial climate.[103]

Therefore, despite the high potential for building an innovative economy, for this shift to occur, significant changes are required in order to foster business activity in the modern creative industries, such as the government focus on creative industries, increased easiness of starting a new business and elimination of corruption.[104]

Estonia: the creative hero

A country of 1,4 million inhabitants in population, Estonia is an example of a real breakthrough in terms of realizing its creative potential.

Before the World War II, Estonia was had a strong agricultural sector that formed the basis for the whole economy. Additionally, the knowledge sector was strong, with the city of Tartu and its University known for scientific contributions. This rapidly developing economy was in the 1940 forcefully annexed to the Soviet Union, which was followed by 40 years of demise (Laar, 2007).

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[102] See UNCTAD & UNDP, 2010 as well as Quantitative research part, where Italy represents traditional structurally weak economies, and Appendix 12 P-IV-6 and -7

[103] Boglione

[104] Boglione

After Estonia again became an independent capitalist economy, the country has been developing at a rapid pace (CIA, 2012). Besides liberalization, one of the main focal areas of the government is promotion of innovation and creativity.[105] The two main bodies responsible for creativity in Estonia are the Estonian Ministry of Culture and the Estonian Ministry of Economic Affairs and Communications. Besides the strong support from the government, the number of NGOs is playing an important role in promoting creativity, networking and innovation, such as the Tallinn Creative Incubator, the Tartu Centre for Creative Industries and the Viljandi County Creative Incubator (Loov Eesti, 2011).

Estonian economy has been showing impressive growth rates before the economic crisis of 2008 and has managed to improve its credit rating in 2011 to the second highest in Eastern Europe with a projected GDP growth in 2012 of 2,7% (Ummelas, 2011; Swedbank, 2012). Estonia represents the brightest example of a ***shortcut in development from agrarian to knowledge economy***.

Poland: the Eastern European Silicon Valley

Poland, along with Estonia, is a country that managed to find a shortcut in economic development and start building up its own creative economy. Having pursued a policy of economic liberalization since 1990s, it represents another success story among the emerging economies. The only European country not to suffer from the economic crisis (CIA, 2012), Poland has a developed industrial base that contributes 33,3% to its GDP (CIA, 2012). The country has also a well-developed knowledge-intensive sector with a growing pharmaceutical market and developed media industry. In addition, the country has highly qualified labor in the field of IT, which makes companies like Microsoft choose Poland as their regional hubs (Kopp, 2008). In addition, Poland has an open economy with favorable climate for international startups. This climate is supported by the Polish and European governmental bodies, international investors and local population represented by significant share of highly educated knowledge workers (Komorowski, 2012; van Blommestein, 2012).

All the mentioned factors make Poland attractive for foreign and domestic investments and trigger entrepreneurial activity and the development of the modern creative industries, such as IT. Wroclaw, which is sometimes referred to as 'the Polish Silicon Valley', has accommodated not only a number of creative startups in information technology, but also such international corporations as Google and IBM (Frost & Sullivan, 2006).

Macedonia: with a little help from friends

Having been traditionally dependent on agriculture, the Macedonian economy still has 20% of its workforce occupied in this sector. Industrialization of the country started only after World War II and was always hindered due to unfavorable political conditions, such as the collapse of the former Yugoslavia and the Greek economic embargo (CIA, 2012). Still, the main export commodities remain food and beverages, tobacco and mineral resources (CIA, 2012). As the unemployment rate in the country is above 30% (CIA, 2012) and the industry is not

[105] Siil

competitive, one of the ways for the country to create jobs and develop economically is through creative economy.

Macedonia has only recently started work on promoting creative economy. The government is working on a development plan for the creative industries with the help of other countries within the EU. One of the countries playing a key role in helping Macedonia accumulate the necessary knowledge about creative economy is Estonia.[106] Even though at the moment the knowledge about creative economy among businesses is low[107], the effort in the field has much potential, mainly due to the fact that Macedonia has good entrepreneurial climate with an index of economic freedom the highest among the former Yugoslavian republics (The Heritage Foundation, 2012). This will be facilitated with the accession to the EU and the further integration of the Macedonian economy with the world economy.

The findings from the expert interviews provide a description of creative economy in the 33 European countries depending on what creative cluster each country belongs to. These findings were illustrated through a series of case studies that represent the brightest examples of creative economies in each cluster. Hence, the qualitative research part provides a detailed description of how exactly creative economy impacts the overall level of economic welfare in the European countries as described in the quantitative research.

In the following part of this thesis, the most important findings are summarized and the concluding remarks are drawn that lead to the authors' further research suggestions.

[106] Petkovska
[107] Despotowsky

CONCLUDING REMARKS

The main purpose of this paper was to explore the concept of creative economy, understand what it means for the modern economy and investigate whether creative economy is the next step in economic development. Additionally, if the aforementioned statement is right, the authors of the paper would aim at understanding, what are the main drivers of creative economy, i.e., what makes creativity generate value. Answering these two questions would help address the primary issue raised in this paper, i.e., whether there are shortcuts that emerging countries could take, in order to achieve economic welfare through applying their creative potential. The shortcuts were proven to exist, which was shown empirically, including examples of virtuous emerging economies that have already made or are in the process of making this transition.

The four methods of analysis, i.e., the bibliographical research, the econometric regression analysis, the expert interviews and the case studies, have all contributed to the overall result of the paper.

The result of the *bibliographical research* conducted for this paper was the model of economic development that indicates that creative economy is the next step in economic development following the agrarian economy, the industrial economy, the knowledge and the service economy, and, possibly, the innovation and the experience economy. The model of economic development combines the different stages of economic development from two perspectives: the demand side and the supply side. Whereas the agrarian and the industrial economy are related to both sides, the knowledge and the service economy relate to the two separate perspectives, both representing the post-industrial economy. This reflects the change in the consumption patterns that started in the early twentieth century and implied higher degree of consumer involvement in the value chain. The same concerns the innovation and the experience economy. Eventually, in the age when consumption patterns are shifting even further into a model of increased participation of the consumer in the creation of a product and of the business in the consumption of a product, this new economy is called creative economy.

In the *quantitative research*, effects of selected variables, (denoted by creative and related industries trade and creative employment), on economic prosperity of European nations were econometrically analyzed and tested. As a result, unbalanced panel regressions performed in this study report statistically and economically significant dependence of the level of economic prosperity of the European countries on trade of creative and related products. Although the actions of the European governments during the recent economic recession were mostly represented by expansionary fiscal policies, the effects of trade of creative and related products in a given nation vary considerably from one cluster group to another. The latter also contradicts with the generally assumed trade interdependence among European nations, especially in the EU. This can signify the need of deliberate governmental support of creative industries on the local level in critical times.

Additionally, knowledge economies can be perceived as European trend makers in trading creative and related products. It is mostly explained by the economic significance of these countries in the region as well as their self-sufficiency in producing creative and related services. On the other hand, emerging virtuous economies are likely to be the most efficient ones in exporting creative and related services among other European countries.

Although, based on theory and qualitative research, creative and cultural employment plays a crucial role in the development of creative economy, quantitative analysis reveals rather reverse results on the influence of creative and cultural employment on economic prosperity in a given European nation. Yet, in traditional economies, cultural employment has a significant impact on the economic well-being of a country, with a negative effect on structurally strong traditional economies and a positive effect on the structurally weak traditional economies.

The *qualitative part of the analysis* has shown that creative economy differs in each European country, depending on which cluster it belongs to. Even though creative industries are present in every economy, but their place on the economic agenda depends, among other factors, on the level of economic development of each country. So, whereas in knowledge economies creative economy is a highly important topic and item on the agenda of the government, business and society, e.g., in the traditional economies, especially in the structurally weak ones, creative economy is not devoted much attention.

The perceived economic contribution of creative industries to the economy in the knowledge economies is high and these industries are dynamic and growing. The same concerns the structurally strong traditional economies. An important finding is that creative industries in the virtuous emerging economies are way more developed and play a more important role in the development strategies of these nations than in the structurally weak traditional economies. The virtuous emerging economies are rapidly growing in creative industries, as well as other sectors, whereas the structurally weak traditional economies are still rehabilitating from the economic crisis. In the weak emerging economies, creative industries are still new, and local governments support development of these industries.

The structure of the creative industries also differs according to cluster. In the knowledge economies, IT and Software, media and other service-related creative industries are more developed than the traditional creative industries such as arts, theatre, literature, etc. In the structurally strong traditional economies, cultural industries are mostly developed, whereas the new creative industries are also strong. In the structurally weak traditional economies the strongest creative industries are mostly the cultural ones, with little activity in the new creative industries. As for the virtuous emerging economies, the new creative industries are booming. In the weak emerging economies, the cultural industries are still stronger than the new creative ones, whereas the new creative industries are devoted special strategic attention.

In addition to the importance and structure of the creative industries in an economy, the factors that are driving creative economy and creativity in each of the clusters differ. In the knowledge economies, high creativity of individuals is usually attributed to the high living standards that allow people to be creative when they are confident about their future. The same can be said about the structurally strong traditional economies, except for a few limiting factors such as the fear of failure and unfavorable government regulations. In the structurally weak traditional economies, where the strongest creative industries are the cultural ones, creativity is driven by the mere artistic impulse, the desire to create. In the emerging economies, the picture is different. Having been long deprived from economic freedom, people in the post-socialist countries are used to being creative in order to survive in stringent conditions. Here, the creativity is a product of the necessity to be satisfied with a limited amount of resources and 'deficit', as well as tough and unfavorable legislation. This observation, further referred to as the 'creativity of slack' and the 'creativity of deficit', is key to understanding the nature of creative economy and the modern patterns of economic development.

It is also worthy to note that the type of creativity that drives creative industries is different in each of them. For instance, the cultural industries are driven by the artistic creativity, which is a natural human desire. The new knowledge-intensive creative industries are driven by creativity that aims at creation of innovative ideas that result in new solutions, products and services. This type of 'neat' creativity can be the creativity that drives modern economy. In fact, as the empirical analysis has shown, many of the interviewees believe that creativity, be that artistic or neat creativity, has always been driving economic development.

Suggestions for further research

As stated previously, there are a number of theories evolved from the research as well as model limitations that require further investigation and proof. Although the model of creative economy as the new economy that reflects the change in consumption patterns has proven to be valid, additional investigation is needed in terms of whether creative economy merely combines innovation economy and experience economy or whether it is actually the next step following both of them.

Based on the empirical findings of this study, creativity itself has always served as a crucial driving factor in economic development. Seeking for the perfect equilibrium condition on the market with no further need for changes and adjustments, 'neat' creativity pushes demand and supply to prevent either deficit or slack. Given mutual dependencies of different economies, constantly changing demand and supply on the local markets as well as restless human nature, achieving this equilibrium appears to be a utopian dream. Thus, the 'neat' creativity may be a constant driver of economic development, be that creativity of slack or creativity of deficit.

This brings us to interesting questions that require further investigation.

First of all, in order to assure more accurate numerical analysis certain limitations should be fixed. Most importantly, current lack of data on creative economy subtracts credibility from the obtained results. Although it is perceived as a minor

issue for the European region, mostly represented by highly developed economies, short time series on trading of creative industries as well as lack of precise data on creative employment are still limiting the quantitative analysis on creative economy in Europe.

Secondly, the concepts of 'creativity of slack' and 'creativity of deficit', which are briefly covered in this paper as the drivers of creativity in a given economy, should be investigated further. Particularly, it is important to understand, what kind of economy corresponds to a certain type of creativity or composition of both and whether it changes with time. For instance, whereas, on the one hand, virtuous emerging economies are partially driven by creativity of deficit, it is reasonable to assume that if they keep the pace of development they have at the moment, they will soon reach a level of well being where they will hardly be driven by deficit anymore. Instead, creativity of slack will replace creativity of deficit, and these countries will be developing in a way similar to knowledge economies.

Finally, it is interesting to investigate, whether it is the neat creativity, disregarding its nature (slack or deficit), that pushes economic prosperity or whether there is any specific type of creativity, i.e., artistic or scientific, that drives economic development in either long- or short-term perspective, whether these two types of creativity can be separated from each other and whether it is possible to identify the impact of each of them. Moreover, it would be noteworthy to consider the impact of each of them measured and/or explained in a combination of three types of value created: economic, social and environmental. The latter condition will allow understanding the dynamics and effects of each sort of creativity.

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APPENDICES

Appendix 1: Creative economy mapping

Table 2 Creative economy mapping

Model	DCMS	Concentric circles	WIPO	UNCTAD	Creative trident	Symbolic texts
Industries	• Advertising • Architecture • Art and antiques market • Crafts • Design • Fashion • Film and video • Music • Performing arts • Publishing • Software • Television and radio • Video and computer games	• **Core creative arts:** Literature, music, performing arts, visual arts • **Other core cultural industries:** Film, museums and libraries • **Wider cultural industries:** Heritage services, publishing, sound recording, television and radio, video and computer games • **Related industries:** Advertising, architecture, design, fashion	• **Core copyright industries:** Advertising, collecting societies, film and video, music, performing arts, publishing, software, television and radio, visual and graphic art • **Interdependent copyright industries:** Blank recording material, consumer electronics, musical instruments, paper, photocopiers, photographic equipment • **Partial copyright industries:** • Architecture, clothing, footwear, design, fashion, household goods, toys	• **Heritage** • Traditional cultural expressions: Art crafts, festivals and celebrations • Cultural sites: Archaeological sites, museums, libraries, exhibitions • **Arts** • Visual Arts: Painting, sculpture, photography, antiques • Performing arts Live music, theatre, dance, opera, circus, puppetry • **Media** • Publishing and printed media: Books, press, publications • Audiovisuals: Film, television, radio, other broadcasting • **Functional creations** • Design: Interior, graphic, fashion, jewelry, toys • New media: Software, video games, digitalized computer content • Creative services: Architectural, advertising, cultural and recreational, creative RandD	• Advertising and Marketing • Architecture, design and visual arts • Film, TV, Radio and Photography • Music and Performing Arts • Publishing • Software, Computer Games, and electronic publishing	• **Core cultural industries:** Advertising, film, internet, music, publishing, television and radio, video and computer games • **Peripheral cultural industries:** Creative arts • **Borderline cultural industries:** Consumer electronics, fashion, software, sport

Source: Compiled by the authors based on DCMS (2001), Throsby (2008), WIPO (2003), UNCTAD (2010), NESTA, 2008, Hesmondhalgh (2002)

Appendix 2: List of countries in scope, their diplomatic statuses and use in this study

Table 3 List of countries in scope

Country	Diplomatic status				Use in study			
	EU	EU Customs Area	EEA	EFTA	Econometric analyses	Expert interviews		Case studies
	(Status, entry year)	(Status)	(Status)	(Status)	(Yes/No)	(Yes/No)	(Number)	(Name)
Latvia	Member, 2004	Member	Member	-	Yes	Yes	2	-
Austria	Member, 1995	Member	Member	-	Yes	Yes	1	Austria: Building creative economy with a cultural twist
Belgium	Member and founder	Member	Member	-	Yes	Yes	3	-
Bulgaria	Member, 2007	Member,	Member	-	Yes	Yes	1	-
Croatia	Candidate, 2013	-	-	-	Yes	Yes	1	-
Cyprus	Member, 2004	Member	Member	-	Yes	Yes	1	-
Czech Republic	Member, 2004	Member	Member	-	Yes	Yes	2	-
Denmark	Member, 1973	Member	Member	-	Yes	Yes	2	-
Estonia	Member, 2004	Member	Member	-	Yes	Yes	1	Estonia: The creative hero
Finland	Member, 1995	Member	Member	-	Yes	Yes	4	-
France	Member and founder	Member	Member	-	Yes	Yes	1	-
Germany	Member and founder	Member	Member	-	Yes	Yes	3	-
Greece	Member, 1981	Member	Member	-	Yes	Yes	1	-
Hungary	Member, 2004	Member	Member	-	Yes	Yes	1	-
Iceland	Candidate	-	Member	Member	Yes	Yes	2	-
Ireland	Member, 1973	Member	Member	-	Yes	Yes	2	-
Italy	Member and founder	Member	Member	-	Yes	Yes	2	Italy: Decline of creative empire
Lithuania	Member, 2004	Member	Member	-	Yes	Yes	1	-
Luxemburg	Member and founder	Member	Member	-	Yes	Yes	1	-
TFYR of Macedonia	Candidate	-	-	-	Yes	Yes	2	Macedonia: With a little help from friends
Malta	Member, 2004	Member	Member	-	Yes	Yes	2	-

Netherlands	Member and founder	Member	Member	-	Yes	Yes	1	-
Norway	-	-	Member	Member	Yes	Yes	1	-
Poland	Member, 2004	Member	Member	-	Yes	Yes	3	Poland: The Eastern European Silicon Valley
Portugal	Member, 1986	Member	Member	-	Yes	Yes	1	-
Romania	Member, 2007	Member	Member	-	Yes	Yes	1	-
Slovakia	Member, 2004	Member	Member	-	Yes	Yes	1	-
Slovenia	Member, 2004	Member	Member	-	Yes	Yes	1	-
Spain	Member, 1986	Member	Member	-	Yes	Yes	3	-
Sweden	Member, 1995	Member	Member	-	Yes	Yes	4	Sweden: The role model for creativity
Switzerland	-	-	-	Member	Yes	Yes	1	-
Turkey	Candidate	Member	-	-	Yes	Yes	1	-
United Kingdom	Member, 1973	Member	Member	-	Yes	Yes	2	-

Source: Compiled by the authors using information from Europa (EU, 2012)

Appendix 3: List of NACE Rev. 2 subcategories for creative employment estimation

Table 4 List of NACE Rev. 2 subcategories for creative employment estimation

NACE Rev. 2 top categories	NACE Rev. 2 subcategories	Culture and creative industries	Cultural divisions
	(Two-digit code)	(Yes/No)	(Yes/No)
C: Manufacturing	C10: Manufacture of food products	No	No
	C11: Manufacture of beverages	No	No
	C12: Manufacture of tobacco products	No	No
	C13: Manufacture of textiles	No	No
	C14: Manufacture of wearing apparel	No	No
	C15: Manufacture of leather and related products	No	No
	C16: Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	No	No
	C17: Manufacture of paper and paper products	No	No
	C18: Printing and reproduction of recorded media	No	No
	C19: Manufacture of coke and refined petroleum products	No	No
	C20: Manufacture of chemicals and chemical products	No	No
	C21: Manufacture of basic pharmaceutical products and pharmaceutical preparations	No	No
	C22: Manufacture of rubber and plastic products	No	No
	C23: Manufacture of other non-metallic mineral products	No	No
	C24: Manufacture of basic metals	No	No
	C25: Manufacture of fabricated metal products, except machinery and equipment	No	No
	C26: Manufacture of computer, electronic and optical products	**Yes**	No
	C27: Manufacture of electrical equipment	No	No
	C28: Manufacture of machinery and equipment n.e.c.	No	No
	C29: Manufacture of motor vehicles, trailers and semi-trailers	No	No
	C30: Manufacture of other transport equipment	No	No
	C31: Manufacture of furniture	No	No
	C32: Other manufacturing	**Yes**	No
	C33: Repair and installation of machinery and	No	No

	equipment		
G: Wholesale and retail trade; repair of motor vehicles and motorcycles	G45: Wholesale and retail trade and repair of motor vehicles and motorcycles	No	No
	G46: Wholesale trade, except of motor vehicles and motorcycles	No	No
	G47: Retail trade, except of motor vehicles and motorcycles	**Yes**	No
J: Information and communication	**J58: Publishing activities**	**Yes**	**Yes**
	J59: Motion picture, video and television programme production, sound recording and music publishing activities	**Yes**	**Yes**
	J60: Programming and broadcasting activities	**Yes**	**Yes**
	J61: Telecommunications	No	No
	J62: Computer programming, consultancy and related activities	**Yes**	No
	J63: Information service activities	**Yes**	No
M: Professional, scientific and technical activities	M69: Legal and accounting activities	No	No
	M70: Activities of head offices; management consultancy activities	No	No
	M71: Architectural and engineering activities; technical testing and analysis	**Yes**	No
	M72: Scientific research and development	No	No
	M73: Advertising and market research	**Yes**	No
	M74: Other professional, scientific and technical activities	**Yes**	No
	M75: Veterinary activities	No	No
N: Administrative and support service activities	**N77: Rental and leasing activities**	**Yes**	No
	N78: Employment activities	No	No
	N79: Travel agency, tour operator reservation service and related activities	No	No
	N80: Security and investigation activities	No	No
	N81: Services to buildings and landscape activities	No	No
	N82: Office administrative, office support and other business support activities	No	No
P: Education	**P85: Education**	**Yes**	No
R: Arts, entertainment and recreation	**R90: Creative, arts and entertainment activities**	**Yes**	**Yes**
	R91: Libraries, archives, museums and other cultural activities	**Yes**	**Yes**
	R92: Gambling and betting activities	No	No
	R93: Sports activities and amusement and recreation activities	No	No

Source: Compiled by the authors using NACE Rev. 2 classifications (Arndt, Backes, Brünink, & Söndermann, 2009; Eurostat, 2011)

Appendix 4: Goods and services produced by creative and related industries

Type of product	Product categories and composition
Goods produced by creative industries	• **Art crafts:** Carpets, celebration, paper ware, wicker ware, yarn, and other goods • **Audio visuals:** Films • **Design:** Architecture, fashion, glassware, interior, jewelry, and toys • **New media:** Recorded media and video games • **Performing arts:** Music (CD, tapes) and printed music • **Publishing:** Books, newspaper, and other printed matter • **Visual arts:** Antiques, paintings, photography, and sculpture
Services produced by creative industries	• **Advertising, market research and public opinion polling** • **Architectural, engineering and other technical services** • **Personal, cultural and recreational services:** Audiovisual and related services and other personal, cultural and recreational services • **Research and Development**
Goods of related to creative industries	• **Inputs in the creation process** • **Supporting equipment needed for the consumption or distribution of creative content**
Services of related to creative industries, including royalties and license fees	• **Computer and information services:** Computer data and news-related service transactions between residents and nonresidents. These cover data bases, e.g., development, storage, and online time series, data processing, hardware consultancy, software implementation, e.g., design, development, and programming of customized systems, maintenance and repair of computers and side-line equipment, news agency services, and direct, non-mass subscriptions to periodicals. • **Royalties and license fees:** Receipts and payments of residents (and nonresidents) for the authorized use of intangible non-produced, non-financial assets and proprietary rights, e.g., trademarks, copyrights, patents, processes, techniques, designs, manufacturing rights, franchises, etc., and the use via licensing contracts of produced originals or prototypes, e.g., manuscripts, films, and other products.

Source: Compiled by the authors using data from UNCTAD Global Database and IMF Global Data (UNCTAD, 2011; International Monetary Fund, 2012)

Appendix 5: Definitions of variables used in regression analyses

Table 5 Definitions of variables used in regression analyses

Variable	Variable definition	Measurement unit	Data source
gdp_cap	GDP per capita	Million of current USD	IMF Global Data
allcg_cap	Net exports (exports-imports) of all creative goods per capita	Million of current USD	UNCTAD Global Database, IMF Global Data
allcs_cap	Net exports (exports-imports) of all creative services per capita	Million of current USD	UNCTAD Global Database, IMF Global Data
allrg_cap	Net exports (exports-imports) of all related to creative industries goods per capita	Million of current USD	UNCTAD Global Database, IMF Global Data
allrs_cap	Net exports (exports-imports) of all related to creative industries services per capita	Million of current USD	UNCTAD Global Database, IMF Global Data
rs_cap	Net exports (exports-imports) of related to creative industries services, (except for royalties and license fees), per capita	Million of current USD	UNCTAD Global Database, IMF Global Data
r_cap	Net exports (exports-imports) of royalties and license fees per capita	Million of current USD	UNCTAD Global Database, IMF Global Data
emp_cap	Employees from culture and creative industries as a share of population	Share	Eurostat
culemp_cap	Employees from culture industries as a share of population	Share	Eurostat

Source: Compiled by the authors

Appendix 6: Expert Interviewees

Table 6 Expert inerviewees

Country	Creative economy stakeholders	Name	Job title	Institution
Austria	Academia and research, civil society, business	**Elisabeth Mayerhofer**	Managing Director; Researcher	IG Kultur Österreich; FOKUS
Austria/ Germany	Academia and research, business	**Philipp Peltz**	Composer, Sound Designer, Producer; PhD candidate, Department of Media, Music, Communication and Cultural Studies	Philipp Peltz; Wirtschafts-universität Wien and
Belgium	Business	**Erik Saelens**	Founder and Strategic Director	Brandhome
Belgium	Academia and research	**Victor Ginsburgh**	Honorary Professor; former co-director of European Center for Advanced Research in Economics and Statistics	L'Université libre de Bruxelles
Belgium	Civil society, business	**Pascal Cools**	General Manager	Flanders DC
Bulgaria	Academia and research	**Stanislav Ivanov**	Vice Rector for Academic Affairs	International University College
Croatia	Academia and research, government	**Jaka Primorac**	Research Associate	Institute for International Relations
Cyprus	Business, non-profit sector	**Renos Demetriou**	Founder	Daedalus Design Studio
Czech Republic	Academia and research, government, non-profit sector	**Eva Žáková**	Member of Expert Working Group; Member of Council for the Arts; Head	OMC European Commission; Ministry of Culture, Czech Republic; Arts and Theatre Institute
Czech Republic	Business	**Petr Hájek**	Director	The Chemistry Gallery
Denmark	Government	**Jakob Pors Nielsen**	Head of Section	Ministry of Culture, Denmark

Denmark	Academia and research	**Trine Bille**	Associated Professor	Department of Innovation and Organizational Economics, CBSl
Estonia	Government, non-profit sector	**Ragnar Siil**	Head of Development Department	Ministry of Culture of the Republic of Estonia
Finland	Government, civil society	**Riikka Leskinen**	Senior Programme Advisor	Centre for International Mobility CIMO
Finland	Government	**Kirsi Kaunisharju**	Counselor for Cultural Affairs	Ministry of Education and Culture, Finland
Finland	Academia and research, business	**Toni-Matti Karjalainen**	Research Director, IDBM Program	Aalto University
Finland	Academia and research, civil society	**Miikka Lehtonen**	PhD candidate	Aalto University
France	Academia and research, business, non-profit	**Philippe Mihailovich**	Founder and Luxury Brand Architect	HAUTeLUXE
Germany	Business, civil society	**Fabian Neuen**	Founder and COO	Fair Observer
Germany	Academia and research, business	**George Ioannidis**	Managing Director	iN2,multimedia search and interfaces; K2M
Greece	Business, civil society	**Panagiotis Ignatiadis**	CEO	Incubator for Creative Industries
Hungary	Academia and research, business	**Bence Ságvári**	Managing Director	ITHAKA Research and Consulting
Iceland	Academia and research, non-profit	**Margrét Sigrún Sigurðardóttir**	Assistant professor	University of Iceland Business School
Iceland	Government, business	**Hermann Ottósson**	Director, Market Development	Promote Iceland
Ireland	Government	**Aidan Burke**	Operations Director	The Arts Council
Ireland	Academia and research	**Ellen Hazelkorn**	Director of Research and Enterprise, Dean at Graduate Research School	Dublin Institute of Technology
Italy	Business, civil society	**Patrizia Boglione**	Creative Director; Board Member	Angelini Design; Art Directors Club of Europe

Italy	Academia and research, business, civil society	**Franco Moretti**	Professor; former President	IULM Libera Università di Lingue e Comunicazione, Art Directors Club of Europe
Latvia	Academia and research, business, civil society	**Fionn Dobbin**	Creative Director; Creative Advisor and Lecturer; Alumnus	MAMMU; Stockholm School of Economics in Riga; Grameen Creative Lab
Latvia	Business, civil society	**Zane Onckule**	Executive Director	kim?
Lithuania	Business	**Darius Čekanauskas**	Designer/Director/Co-owner	AD Grupe Ltd
Luxembourg	Academia and research, government, non-profit	**Gaston Trauffler**	Head of Innovation Management	LUXInnovation
TFYR of Macedonia	Academia and research, government	**Antoanela Petkovska**	Coordinator, Creative Industries	Creative Industries mapping, British Council
TFYR of Macedonia	Academia and research, business, civil society	**Ljupco Despotovski**	Board Advisor; Executive Director	CodeWell, Youth Entrepreneurial Service Foundation
Malta	Academia and research, government, non-profit sector	**Toni Attard**	Creative Economy Advisor	St. James Cavalier Centre for Creativity
Malta	Business, civil society	**David Felice**	Founding Partner	Architecture Project
Netherlands	Academia and research, civil society	**Roy van Dalm**	Journalist, Speaker on Creative Economy	Various
Norway	Government, non-profit	**Hilde Rolandsen**	Representative, Observer	Nordic Council of Ministers, Nordic Innovation
Poland	Business, civil society	**Tomek Rygalik**	Designer, Architect, Founder	Studio Rygalik
Poland	Academia and research, government	**Weronika Ruszecka**	Partnerships and Projects Manager, Creative and Cultural Economy	British Council in Poland
Poland	Business, civil society	**Monika Brauntsch**	Designer	Kafti Design
Portugal	Business, civil society	**Joana Astolfi**	Designer, Artist, Architect, Founder	Studio Astolfi

Romania	Academia and research, business, civil society	**Teodora Migdalovici**	Director	The alternative school for creative thinking
Slovakia	Non-profit, civil society	**Ivan Jancar**	Director	Bratislava City Gallery
Slovenia	Academia and research, government, non- profit	**Andreja Jenko**	Secretary of the Competitiveness Council	Government Office for Growth and European Affairs
Spain	Academia and research, business	**Miguel Rivas**	Partner, Cluster Development, Innovation	TASO Economic and Business Development
Spain	Business, civil society	**Oriol Caba Asensio**	Creative Producer, Founder	El tigre de Ciberia, Creative Consultancy
Spain	Academia and research	**Rafael Boix**	Associate Professor, Applied Economics	University of Valencia
Sweden	Academia and research,	**Emma Stenström**	AssociateProfessor , Department of Management and Organization	Stockholm School of Economics
Sweden	Academia and research,	**Lars Strannegård**	Professor, Department of Management and Organization	Stockholm School of Economics
Sweden	Academia and research, business	**Kjell A. Nordström**	Professor; Business Writer, Top Management Thinker	Stockholm School of Economics, IFL Executive Education
Sweden	Government, civil society, non-profit sector	**Anna Linton**	Project Leader	CRED
Switzerland	Academia and research, business	**Hubert Theler**	Professor; Private Consultant	Zürich University of Fine Arts; Cultur-Consulting
Turkey	Academia and research	**Özge Öner**	Ph.D candidate	JIBS
United Kingdom	Academia and research, business, non-profit	**Vanessa Swann**	Chief Executive	Cockpit Arts
United Kingdom	Academia and research, civil society, business	**Dipak Mistry**	Senior Manager, London and Regions	Arts and Business

Source: Created by the authors

Appendix 7: Interview guide – Creative economy

Question 1: General concept of creative economy/industries (CIs)

In the recent economic research, creative economy is described as the next step in the economic development, following the agrarian economy, the industrial economy, the service economy, and the most recent experience economy.

The concept of **creative economy** or **creative industries** refers to 'the cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs. They comprise a set of knowledge-based activities that produce tangible goods and intangible intellectual or artistic services with creative content, economic value and market objectives.' (UNCTAD & UNDP, 2010)

Q1.1 Do you agree with this definition of creative economy? Why?

Q1.2 In your view, what are the industries that constitute creative economy as of the definition above?

Q1.3 In your opinion, to what extent do creative industries influence national economic development?

Question 2: Major players of the CIs

Q2.1 What are the most influential players that impact development of creative industries in your country?
(E.g., government, the EU, NGOs, SMEs, MNCs, foreign (external) players, educational institutions, individual investors, etc.)

Q2.1.1 To what extent does each of these players influence this development?

Q2.2 Are there any activities of which you are aware that have been conducted at a local, regional or national level to support creative industries?

Q2.3 What additional activities, in your view, would contribute to the development of the creative industries in your country?

Question 3: Key drivers and measurements

Q3.1 Having considered the topic of this study, what would you consider to be the main ***driving*** factors of the creative economy?

Q3.2 And what would you consider to be the main ***limiting*** factors of the creative economy?

Q3.3 In assessing the creative economy in a given country for this study, we propose to focus on the ***three key measures***, (based on the UNCTAD Creative Economy Report 2010), which are listed below. Which of the following measures would you consider most important:

1) Employment in the creative industries,
2) Value added and trade volumes in the creative industries,
3) Copyright regulations and national policies

Q3.4 How would you describe the impact related to values of these measures on the creative industries in your country?

Q3.5 In your view, are there any ***other measures/factors*** that are significant?

Appendix 8: Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test for stationarity

All variables having series of three periods from all the countries in scope were tested for stationarity using KPSS test. KPSS test results for economic welfare estimate GDP per capita in current USD (*gdp_cap*) are presented below. Similar results of non-rejection of KPSS test's H_0 at least 10% significance level were obtained for the following variables: *allcg_cap, allcs_cap, allrg_cap, allrs_cap, rs_cap, r_cap, emp_cap, culemp_cap*. (Definitions for all variables are in Appendix 5).

Table 7 KPSS test for stationatiry

Variable	Panels	Specification	Test statistic	Critical values for KPSS test's H_0: variable is trend/level stationary		
(Name)	(Countries)	(Trend/level)	(Result)	(10%)	(5%)	(1%)
gdp_cap	All	Trend	0.111*	0.119	0.146	0.216
	Austria, Italy	Level	0.31*	0.347	0.463	0.739
	Belgium,	Level	0.316*	0.347	0.463	0.739
	Bulgaria, Croatia, Cyprus, Denmark, Estonia, Germany, Hungary, Latvia, Lithuania, Luxembourg, Malta, Romania, Slovakia, TFYR of Macedonia	Level	0.278*	0.347	0.463	0.739
	Finland	Level	0.301*	0.347	0.463	0.739
	France	Level	0.33*	0.347	0.463	0.739
	Iceland	Level	0.343*	0.347	0.463	0.739
	Ireland	Level	0.321*	0.347	0.463	0.739
	Netherlands	Level	0.305*	0.347	0.463	0.739
	Norway	Level	0.187*	0.347	0.463	0.739
	Poland	Level	0.206*	0.347	0.463	0.739
	Portugal	Level	0.325*	0.347	0.463	0.739
	Slovakia, Spain	Level	0.316*	0.347	0.463	0.739
	Sweden	Level	0.146*	0.347	0.463	0.739
	Switzerland	Level	0.135*	0.347	0.463	0.739
	Turkey	Level	0.111*	0.347	0.463	0.739
	United Kingdom	Level	0.254*	0.347	0.463	0.739
+ 1 lag	All	Level	0.333*	0.347	0.463	0.739

Note: Test statistics do not reject H_0 at least at the *10%, **5%, ***1% significance level

Appendix 9: Panel data regression analysis of economic welfare I, by countries and time

Table 8 Panel data regression analysis I

Dependant variable: *gdp_cap*

Regressor	**P-I-1**	**P-I-2**	**P-I-3**	**P-I-4**	**P-I-5**	**P-I-6**	**P-I-7**	**P-I-8**
allcg_cap	-26.5915 (19.5050)	-39.4944** (20.7022)	-44.7447** (20.0281)	-51.4173*** (13.8190)	-40.7976*** (16.2388)	-24.8656* (14.2040)	-17.7200* (9.8554)	-21.3421** (11.662)
allcs_cap	-0.7173 (0.7675)	-0.3659 (0.8518)	-0.1853 (0.4087)	-	-	-	-	-
allrg_cap	2.5310 (6.7573)	7.1474 (7.4558)	-	10.1145** (4.4288)	-	9.5286** (4.6170)	-	-
allrs_cap	-13.9359* (7.5485)	-13.1461 (9.9699)	-7.9810 (7.2554)	1.2906 (8.6524)	6.1709 (7.9655)	-	-	-
emp_cap	0.2941** (0.1279)	-	0.2959** (0.1481)	-	0.2419 (0.2162)	-	0.2652* (0.1707)	-
culemp_cap	-	0.0027 (0.2469)	-	-0.0640* (0.0342)	-	-0.1305 (0.2503)	-	-0.1087 (0.2693)
cons	0.0017 (0.0123)	0.0301 (0.0129)	-0.0002 (0.0140)	0.0330 (0.0047)	0.0059 (0.0209)	0.0402 (0.0148)	0.0078 (0.0171)	0.0382 (0.0160)
# of observations	62	62	88	86	88	91	93	91
# of countries	27	27	30	30	30	32	32	32
R-squared	0.4013	0.2891	0.5107	0.3899	0.5553	0.2357	0.1704	0.1265
rho	0.9830	0.9803	0.9710	0.9672	0.9572	0.9791	0.9696	0.9740
Hausman's specification test: Control for fixed (FE) or random effects (RE)								
Ho: Coefficients estimated by RE estimator equal to the ones estimated by FE estimator								
Chi^2 (…)=	(5)=16.50	(5)=25.89	(4)=6.98	(4)=4.81	(3)=7.79	(3)=25.08	(2)=14.02	(2)=17.02
Prob>Chi^2	0.006***	0.000***	0.137	0.305	0.051*	0.000***	0.001***	0.000***
Control for…	FE	FE	RE	RE	RE	FE	FE	FE
Persan's test for cross-section dependence								
Ho: Cross-sectional independence of units								
Probability	0.001***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***

Note: Heteroskedasticity-robust standard errors are given in parenthesis under estimated coefficients. Coefficients are significant and test statistics are rejected at the *10%, **5%, ***1% significance level. Results are presented for both proxies of employment, culture and creative employment as well as culture employment, and for the regressions with the biggest R-squared values.

Appendix 10: Panel data regression analysis of economic welfare II, by countries and time

Table 9 Panel data regression analysis II

Dependant variable: *gdp_cap*

Regressor	**P-II-1**	**P-II-2**	**P-II-3**	**P-II-4**	**P-II-5**	**P-II-6**
allcg_cap	-30.0679 (20.8451)	-42.6336** (20.7166)	-18.0083 (9.2284)*	-32.4892*** (9.0652)	-19.2316** (8.8006)	-36.5891*** (11.2554)
allcs_cap	-0.5052 (0.6089)	-0.0916 (0.6289)	-	-	-	-
allrg_cap	4.063217 (5.6801)	8.7898 (6.0429)	-	10.8311** (4.5066)	-	10.0936* (5.4846)
rs_cap	-22.8714** (10.3739)	-24.5247** (11.2611)	-3.3943 (5.4187)	-10.4699* (5.6315)	-	-
r_cap	-36.9701* (18.8475)	-42.1344** (19.2776)	-18.9952*** (6.1938)	-25.3167*** (6.5429)	-14.8832** (6.1203)	-12.1979* (6.2925)
emp_cap	0.2477* (0.1319)	-	0.2437 (0.2014)	-	0.2577 (0.2193)	-
culemp_cap	-	-0.0714 (0.2447)	-	-0.2776 (0.2140)	-	-0.2003 (0.2092)
cons	0.0012 (0.0144)	0.0236 (0.0134)	0.0045 (0.0179)	0.0371 (0.0116)	0.0029 (0.0199)	0.0389 (0.0117)
# of observations	62	62	88	86	88	86
# of countries	27	27	30	30	30	30
R-squared	0.4471	0.3969	0.3388	0.4684	0.3337	0.4244
rho	0.9909	0.9925	0.9876	0.9921	0.9867	0.9882
Hausman's specification test: Control for fixed (FE) or random effects (RE) H0: Coefficients estimated by RE estimator equal to the ones estimated by FE estimator						
Chi^2 (…)=	(6)=27.98	(6)=39.36	(4)=18.58	(5)=31.93	(3)=19.23	(4)=13.66
Prob>Chi^2	0.000***	0.000***	0.001***	0.000***	0.000***	0.009***
Control for…	FE	FE	FE	FE	FE	FE
Persan's test for cross-section dependence | H0: Cross-sectional independence of units						
Probability	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***

Note: Heteroskedasticity-robust standard errors are given in parenthesis under estimated coefficients. Coefficients are significant and test statistics are rejected at the *10%, **5%, ***1% significance level. This regression includes CR and IPR estimate as a separate independent variable *r_cap*. Results are presented for both proxies of employment, culture and creative employment as well as culture employment, and for the regressions with the biggest R-squared values.

Appendix 11: Panel data regression analysis of economic welfare III

Here, regressions are run, including fixed effects, (controlling for time-constant but carrying over cases omitted variables), and random effects related with regards to cluster groups and nested within countries, (controlling for time-constant and case-variant (and vice versa) omitted variables).

Dependant variable: *gdp_cap*

Table 10 Panel data regression analysis III

Regressor	P-III-1	P-III-2	P-III-3	P-III-4	P-III-5	P-III-6
allcg_cap	-46.2286*** (8.7571)	-47.037*** (8.6513)	-47.3781*** (8.4998)	-44.2239*** (7.1499)	-44.3113*** (7.1022)	-32.5626*** (5.8814)
allcs_cap	0.2759 (0.2869)	0.3159 (0.2839)	0.2956 (0.2789)	-	-	-
allrg_cap	6.3004* (3.7424)	6.6169* (3.6979)	6.7971* (3.6422)	8.3898*** (3.2041)	8.2710*** (3.1365)	5.9108* (3.1249)
rs_cap	-11.4196* (6.0719)	-11.6053* (6.1229)	-11.8202* (6.0445)	-1.0088 (4.5926)	-	-
r_cap	-11.4841* (6.2442)	-11.6052* (6.2561)	-11.7233* (6.1907)	-2.0977 (4.6813)	-1.1295 (1.5190)	-
emp_cap	0.0881 (0.1103)	-	-	-	-	-
culemp_cap	-	0.0658 (0.1687)	-	-	-	-
cons_FE	0.0218 (0.0137)	0.0269 (0.0123)	.0305 (0.0087)	0.0298 (0.0081)	0.0297 (0.0080)	0.0301 0.0083
Random effects parameters						
cons_country	0.0179** (0.0070)	0.0182** (0.0073)	0.0188** (0.0072)	0.0173*** (0.0066)	0.0171*** (0.0066)	0.0180*** (0.0068)
cons_cluster	0.0110*** (0.0020)	0.0106*** (0.0018)	0.0106*** (0.0018)	0.0115*** (0.0018)	0.0114*** (0.0017)	0.0113*** (0.0016)
u	0.0028 (0.0004)	0.0029 (0.0004)	0.0029 (0.0004)	0.0031 (0.0003)	0.0031 (0.0003)	0.0033 (.0003)
# of obs-s	62	62	62	89	89	95
# of countries	27	27	27	31	31	33
# of clusters	5	5	5	5	5	5
Wald's test						
H_0: No joint significance of regressors						
$W.Chi^2$ (…)=	(6)=33.98	(6)=34.22	(5)=34.52	(4)=40.82	(3)=41.22	(4)=30.94
$Prob>Chi^2$	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
Likelihood ratio (LR) test						
H_0: No cross-cluster or cross-country variance						
Probability	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***

Note: Heteroskedasticity-robust standard errors are given in parenthesis under estimated coefficients. Coefficients are significant and test statistics are rejected at the *10%, **5%, ***1% significance level. This regression includes an IPR estimate as a separate independent variable *r_cap*. Results are presented for both proxies of employment, culture and creative employment as well as culture employment indicating both constant variable coefficients for both fixed and random effects, indicating residual as *u*. Initially obtained in Stata probabilities for LR test were halved to obtain a less conservative test (Steenbergen, 2012).

Appendix 12: Panel-data regression analysis of economic welfare IV, division by cluster groups

Table 11 Panel data regression analysis IV

Dependant variable: *gdp_cap*

Regressor	All clusters		Knowledge economies	Traditional structurally strong e-s		Traditional structurally weak e-s		Emerging virtuous e-s	Emerging weak e-s
	P-IV-1 (P-II-1)	P-IV-2(P-II-4)	P-IV-3	P-IV-4	P-IV-5	P-IV-6	P-IV-7	P-IV-8	P-IV-9
allcg_cap	-30.0679 (20.8451)	-32.4892*** (9.0652)	-80.32937*** (19.4175)	-	-	12.1568 (9.6939)	29.0049*** (8.5102)	-	-27.2423*** (5.5604)
allcs_cap	-0.5052 (0.6089)	-	-	-19.6357*** (3.8546)	-15.6345*** (2.0236)	-	-	1.1827*** (0.3447)	-1.1741 (9.2343)
allrg_cap	4.063217 (5.6801)	10.8311** (4.5066)	14.9861*** (1.0342)	-	-	-37.0664*** (8.6145)	-49.2872*** (10.9475)	-	-
rs_cap	-22.8714** (10.3739)	-10.4699* (5.6315)	-	-	-	-	-	55.2132 (52.5254)	-
r_cap	-36.9701* (18.8475)	-25.3167*** (6.5429)	-5.3309* (2.8189)	-	-0.5986 (0.3069)	11.7411 (10.7699)	49.7814*** (8.6086)	-33.8416 (26.9504)	-40.4579* (23.5895)
emp_cap	0.2477* (0.1319)	-	-	-0.2246 (0.1280)	-	0.3487* (0.2053)	-	-	-
culemp_cap	-	-0.2776 (0.2140)	-	-	-0.4521*** (0.0460)		0.7924** (0.3414)	-	-
cons	0.0012 (0.0144)	0.0371 (0.0116)	0.0489 (0.0048)	0.0917 (0.0124)	0.1324 (0.0265)	0.0040 (0.01671)	-0.0089 (0.0147)	0.01468 (0.0029)	0.0096 (0.0028)
# of observations	62	86	22	11	8	18	18	16	11
# of countries	27	30	8	5	4	6	6	6	5
R-squared	0.4471	0.4684	0.7381	0.8232	0.8313	0.7263	0.7749	0.6212	0.7562
rho	0.9909	0.9921	0.9706	0.9996	0.9850	0.9771	0.8299	0.8157	0.9825
Hausman's specification test: Control for fixed (FE) or random effects (RE)									
H0: Coefficients estimated by RE estimator equal to the ones estimated by FE estimator									
Chi^2 (…)=	(6)=27.98	(5)=31.93	(3)=19.23	(2)=100.66	(3)=85.95	(4)=80.91	(4)=5.67	(3)=7.45	(3)=1.81
Prob>Chi^2	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.179	0.059*	0.614
Control for…	FE	FE	FE	FE	FE	FE	RE	RE	RE

Note: Heteroskedasticity-robust standard errors are given in parenthesis under estimated coefficients. Coefficients are significant at the *10%, **5%, ***1% significance level. This regression includes CR and IPR estimate as a separate independent variable *r_cap*. Results are presented for both proxies of employment, culture and creative employment as well as culture employment, and for the regressions with the biggest R-squared and adjusted R-squared values as well as highest significance levels of respective coefficients.