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Influence of the Creative Industries on the Economies of Europe

This study investigates the creative industries and the phenomena that it influences in the economy of today's world. Based on an extensive academic literature review, the creative industries are listed and defined, together with the concepts of culture and creativity, and a list of economic indicators is created. The scope of the research is composed of 32 European countries and is based on the years from 2007 to 2018. Following the theory of the literature, three hypotheses are made, regarding the impact of the creative industries on the economy of the studied countries, the impact on the economy of Western Europe compared to other cultural groups, and the impact on the economy of the first development level group compared to other development level groups. The results show a clear positive influence of the creative industries on the economy, with the limitation that a strong culture can cause a negative impact, and that development level is not necessarily a proof of positive influence.

Keywords: creative economics, creative industries.

Šis tyrimas tiria kūrybines industrijas ir reiškinius, kuriems ji daro įtaką šių dienų pasaulio ekonomikoje. Remiantis išsamia akademinės literatūros apžvalga, pateikiamos ir apibrėžiamos kūrybinės industrijos kartu su kultūros ir kūrybiškumo sąvokomis ir sudaromas ekonominių rodiklių sąrašas. Tyrimo imtį sudaro 32 Europos šalių 2007–2018 m. laikotarpio duomenys. Remiantis literatūros teorija, pateikiamos trys hipotezės, susijusios su: kūrybinių industrijų poveikiu ekonomikai; tirtų šalių poveikiu Vakarų Europos ekonomikai, palyginti su kitomis kultūrinėmis grupėmis; ir poveikiu pirmojo išsivystymo lygio grupės ekonomikai, palyginti su kitomis išsivystymo lygio grupėmis. Rezultatai rodo akivaizdžią teigiamą kūrybinių industrijų įtaką ekonomikai, su sąlyga, kad stipri kultūra gali sukelti neigiamą poveikį ir kad išsivystymo lygis nebūtinai yra teigiamos įtakos įrodymas.

Reikšminiai žodžiai: kūrybos ekonomika, kūrybinės industrijos.

JEL Classifications: L82/Z21/Z31.

Introduction

Since the birth of humanity, creativity has always been at the centre of mankind's quest to establish itself in the world. From the first appearance of our ancestors a few million years ago, up until our times, the need to create has always been a primary urgency of the man. The need for creativity drives from different sources: nowadays, creating a new concept can stem from only the simple wish of a being, the

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wish to conceive something new, to attain a certain level of recognition from peers, to create an added value to a product in order to drive profit for an organisation, or even simpler, to feel good about oneself. In our time, where the world is not anymore driven by survival instinct, but arguably by the research of profit and/or self-actualisation, creativity has become one of the only means to stand out, be it an individual to stand out from a crowd, or more importantly in this case, an organisation to stand out in the economy. Basic economics teach the prominence of the added value, that will create the need for the customers to buy a good or service: a central theme in order to understand the need for creativity in an economic environment. Economic growth theories advocate for the importance of technology in the pursuit of development, which can in theory be advertised as a proxy of creativity, for in the creation of new concepts lays creativity. In particular, the neoclassical school of economics promoted technological change, and to a further extent innovation, also an integral part of creativity, as a pivot of economic growth, namely the Solow's economic growth model, the Romer's endogenous growth theory, or the Freeman's evolutionary theory. An organisation, be it a company or even a country, needs to add a value to existing products or services, or to create something entirely new that would answer the demand of a relevant group, in order to be efficient: this organisation needs to innovate and/or to invent. As such, the theories that have been discussed so far have given birth to a subject that is at the centre of this paper: the creative industries, the activities integral to an economy that have as nucleus creativity, and in a broader sense added value. While being subject to this day to

controversy, the subject of creative industries and their repercussions on the economy is a thoroughly studied issue, that has even led some governments to take action to ensure that the creative industries are not ignored. However, this relation in a macroeconomic scale has not been properly studied yet. To get a first idea of the importance of the creative industries, Buitrago and Duque (2013) give some hard numbers on the situation of creative industries nowadays: in 2013, the creative industries represented the fourth biggest economy in the world, estimated to 4,29 trillion dollars, or 6 % of the world economy. With 646 billion of dollars, or 3 % of the world's, the creative industries were the ninth largest exporter of goods and services. Employing 144 million workers, or 4 % of the world's total labour force, the creative industries were the fourth largest labour force in the world.

Problem of the paper: What is the influence of the creative industries on the economy of different countries in Europe?

Purpose of the paper: Find the relation between creative industries and economy.

Object of the paper: Creative industries' influence on economy.

Tasks of the paper:
1. To analyse the creative industries and what they are composed of.
2. Identify the economic phenomena that are related to the creative industries.
3. Identify the role of the creative industries in the economies of different countries.
4. Make the research on the topic of creative industries and the methods that can be used to correctly calculate the relation between creative industries and economy.

Research methods: comparative theoretical analysis and synthesis of scientific

literature, linear regression model (pooled OLS, Fixed-Effects, Random-Effects).

Theoretical Background

This paper puts an emphasis on the role of creativity in an international environment: countries will be the object of the study, and a country's economy does not revolve solely around the business part of the creation of value. There enters the important notion of culture. Culture is a perception that has also existed since the beginning of humanity's roaming of the Earth, albeit given a name and thoroughly studied much later in humanity's timeline. The word "culture" has many meanings, but the one relevant here is the beliefs, customs, social forms, arts and other materials that characterise and are shared by a group of individuals; culture is passed down consciously and/or unconsciously from generation to generation and shape a social group, and creativity is an essential part of it. Indeed, a culture cannot exist for a long period of time without having power, and especially cannot coexist with other cultures without having weight: such power, such weight, come from the creation and discovery of knowledge, the making of customs, norms, beliefs, the production of an identity for the social group. A strong identity will prevail against a weak identity, and History has shown that entire cultures, sometimes entire nations, have disappeared, not always because they were destroyed by force, but oftentimes because they were assimilated and/or replaced by another culture. This process has led to nowadays' prevalence of certain cultures of different sizes, for example the Western and Eastern cultures, or even the European, Asian, African, American, Latino-American, etc. cultures. The fluctuations in dominance of cultures are interesting to study in an economic perspective as well, with the recent absolute dominance of the United States and Japan, followed by the slow rise of Europe and the BRIC countries to an extent that China and the European Union have overtaken the United States in GDP purchasing power parity. Such shocks in cultures and the new world order of dominance stemmed from creativity and gave birth in a never-ending circle to new ideas and beliefs that reinforce cultures, and sometimes even make them mix with others. Therefore, the phenomenon of creativity in an economic point of view, allying the processes of culture and value creation, is a very important case of economic development, and the creative economies are a direct result of this statement. Furthermore, creativity is a process that in nature cannot be quantified as such: it is not possible to assign a number to the creativity of somebody. It is however possible to assign a number to what results from this process, and evidently more when such results are administered by an economic body, which is always keen on gathering data for research and analysis purposes. Consequently, the creative industries are once again a result of creativity; and being able to analyse such a volatile process in a statistical way is an important value added of the phenomenon of creativity.

But what are the creative industries made of? Quartesan, Romis and Lanzafame (2007), referenced also in the paper of Buitrago and Duque (2013), classify all the activities related to creation and creativity in three categories. The first category, that they designate as conventional, regroup several activities, namely: "books, publishing industry, printing industry, journals, magazines, newspapers, literature, libraries, audio-visual, film, television,

Phenomenon of the creative industries

What are the creative industries made of?	
DCMS (2015) and Buitrago and Duque (2013)	**Quartesan et al. (2007)**
1. Advertising and marketing 2. Architecture 3. Crafts 4. Product design, graphic design, fashion design 5. Films, TV, radio, photography 6. Information Technology, software, computer Services 7. Publishing 8. Museums, galleries, libraries 9. Music, performing arts, visual arts 10. Other categories	1. Conventional Books, publishing industry, printing industry, journals, magazines, newspapers, literature, libraries, audio-visual, film, television, photography, home video, phonography, discography, and radio 2. Other Visual and performing arts, concerts and performances, museum and galleries, theatre, orchestras, dance, opera, crafts, design, fashion, cultural tourism, architecture, gastronomy, typical products, eco-tourism, and sports 3. New Multimedia, advertising, software, videogames, and media support industry

Source: created by authors using DCMS (2015), Buitrago and Duque (2013), Quartesan et al. (2007).

photography, home video, phonography, discography, and radio". All those activities can be classified as conventional because of their long-standing presence in everyday life and in the economy, and because of their somewhat physical existence, revolving mostly around the arts of oration and scripture. The second category described by the three authors is termed as other, and includes: "the visual and performing arts, concerts and performances, museum and galleries, theatre, orchestras, dance, opera, crafts, design, fashion, cultural tourism, architecture, gastronomy, typical products, eco-tourism, and sports". Such activities are also long-standing in everyday life and in the economy, but they have a less tangible character to them that makes them stand out from the conventional activities. Moreover, conventional activities are often subject to norms that governs them and their making, while the others category is freer of interpretation and creation, because of its nature that drives them closer to what one might dub "art", or "culture".

The third category described by the three authors is titled "new", and regroup activities such as: "multimedia, advertising, software, videogames, and media support industry". Such occupations may strike one as being more recent, fresher, than the other activities pertaining to the other categories, which is the reason for labelling them as new indeed. Besides, such activities are generally intangible in nature, as they do not have a physical existence and are legally classified as such. This specific declination of what the Orange economy is expressed by is consistent among the literature about the creative industries. However, this paper will put more emphasis on the definition of the DCMS (2015), coined in 2015, that regroups the creative economy in 9 categories (Table 1), and that is widely recognised among the international community as the true definition of the creative industries.

Table 2 describes the results of the analysis of the literature about the impact of creative industries on the economy of

Table 2

Recapitulative table of variables, methods, and findings in creative industries' literature

Authors	Scope	Creative industries variables	Impacted variables	Method	Findings
Daubaraitė, Startienė (2015)	Lithuania	Share of employment Share of GDP Added value Share of exports	Unemployment GDP Foreign trade Social inclusion Social and cultural development Quality of life Youth unemployment	Comparison	Decreases unemployment Increases GDP Weakly increases foreign trade Increases quality of life
Kontrimienė, Melnikas (2017)	World	Share of exports	Total exports Culture Employment GDP	Comparison	Increases employment CI more present in developed economies
Stam, de Jong, Marlet (2008)	Netherlands	Geography Urbanisation of country	Population growth Urban economic growth Unemployment	Regression model	Decreases unemployment Increases population growth CI more present in urban areas
Baculakova (2018)	Slovakia	Share of employment Global Creativity Index Self-employment Number of companies Global Innovation Index	Geography Wages	Cluster analysis Comparison	CI more present in urban areas Increases wages
Townsend et al. (2017)	Scotland	Geography	Broadband connectivity	Research interviews	Increases access to Internet
Fahmi, Koster, van Dijk (2016)	Indonesia	Geography Technology Number of companies Share of employment	Education Population density Cost of living Tourism Entrepreneurship (self-employment) Unemployment 19-34 years old in urban population Total population Industrialisation Income inequality	Location quotients Regression model	Increases education Increases population Decreases self-employment Increases population density Increases young population in urban areas Weakly increases tourism CI more present in developed economies CI reduce the income inequalities

Authors	Scope	Creative industries variables	Impacted variables	Method	Findings
Titan, Voineagu, Todose (2008)	European Union	Cultural consumption expenditure	GDP Culture Employment	Regression model	Increases GDP Increases employment
Bakhshi, Lee, Mateos-Garcia (2014)	England	Geography Share of employment	Average hourly wages Total population Education Urbanisation	Regression model	Increases wages CI more present in urban areas Increases urbanisation Increases education
Tubagus (2016)	Indonesia	Creativity	Culture	Structural Equation Modelling	Increases strongness of culture

Source: created by authors using Daubaraitė and Startienė (2015), Kontrimienė and Melnikas (2017), Stam et al. (2008), Baculakova (2018), Townsend et al. (2017), Fahmi et al. (2016), Titan et al. (2008), Bakhshi, Lee and Mateos-Garcia (2014), Tubagus (2016).

different countries. Overall, the findings of the authors seem to converge regarding the variables impacted and the findings made in the studied countries.

Research Methods

As was previously described in this research, the creative industries' statistical study is hampered by the lack of global data comprising the different variables that describe the creative industries, such as share of employment, number of companies, or share of GDP. However, it is possible, though difficult, to find such data for countries on an individual scale, but also possible to find data based on the European Union. Thus, this study, which aim is to analyse the creative industries on a grander scale than other researches based on individual countries while using asserted econometrical methods, shall put emphasis on the Europe's countries. Thus, the geographical scope of the research will regroup the following countries as based on their availability on Eurostat database, the main gather point of large-scale data of

the creative industries: Austria, Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, the United Kingdom, Iceland, Norway, Switzerland, and Turkey. This will allow this study to formulate hypotheses on and analyse the relationships between the creative industries and the other variables on an overall scale, but also on a cultural scale, and on an economic development scale. Following the literature (Stam et al., 2008; Baculakova, 2018; Bakhshi, Lee & Mateos-Garcia, 2014; Kontrimienė & Melnikas, 2017; Fahmi et al., 2016), the selected countries are divided on a geographical and economic level, as presented in Table 3. Additionally, the level of urbanisation is calculated by group, following WorldBank data (urban population, as a percentage of the total population, in 2015). The average per group allows this research to identify the Western Europe group as the most urbanised, which therefore will be the lead in

Table 3

Division of countries by geographic regions and economic level

Regions	Geographic region				Economic level		
	Eastern Europe	Northern Europe	Western Europe	Southern Europe	1 tril. < GDP	100 bil. < GDP < 1 tril.	GDP < 100 bil.
Austria			+			+	
Belgium			+			+	
Bulgaria	+						+
Croatia				+			+
Cyprus				+			+
Czechia	+					+	
Denmark		+				+	
Estonia		+					+
Finland		+				+	
France			+		+		
Germany			+		+		
Greece				+		+	
Hungary	+					+	
Iceland		+					+
Ireland		+				+	
Italy				+	+		
Latvia		+					+
Lithuania		+					+
Luxembourg			+				+
Malta				+			+
Netherlands			+			+	
Norway		+				+	
Poland	+					+	
Portugal				+		+	
Romania	+					+	
Slovakia	+						+
Slovenia				+			+
Spain				+	+		
Sweden		+				+	
Switzerland			+			+	
Turkey				+		+	
United Kingdom		+			+		

Source: created by authors using United Nations Statistics Division (1999), International Monetary Fund (2018).

the study of the creative industries' influence on a geographical scale.

Additionally, still in the perspective of data collection from the Eurostat database, the available years for the data on creative industries are from 2007 to 2018. Having data that is composed of both multiple cross-sectional units, the countries, and multiple time periods, the studied years, defines the statistics as panel data.

In order to carry efficiently this research according to all the different aspects of the economy treated by the literature and related to this study, it becomes necessary to draw up a list of hypotheses that will need to be answered, together with the restrictions on culture and economic development that were drawn from the review of the literature and the problematic of the cultural industries on a large scale. The hypotheses will therefore be divided in three categories corresponding to the different restrictions given by the literature on geographic scope and development level:

H1: The creative industries have a positive impact on the economic factors of the European economies.

H2: The creative industries have a stronger impact on the economic factors in the Western Europe group than in the rest of the groups.

H3: The creative industries have a stronger impact on the economic factors in the first group of development level than in the rest of the groups.

The economic factors presented by the hypotheses are grouped into three categories that represent the different relevant areas of the economy of a country and are described in Table 4.

This research follows a certain method when identifying the econometrical estimators that are required to determine as correctly as possible the different relationships between the variables. All the computations are done using the Gretl econometrical software, for panel data, as the data of this research is composed of both multiple cross-sectional units and time periods. The first step of the method is to plot all the required variables in a pooled OLS model. Doing as such allows to check the panel data diagnostics, which provides information on whether the pooled OLS regression is appropriate for the study or if the fixed- or random-effects estimators are more suitable, according to the joint significance of differing groups means, of which the p-value must be inferior to the confidence level of 0.05 to reject the null hypothesis that the pooled OLS is fitting. In the case of this research, 100 % of the models (36 out of 36 models) were found to have a p-value inferior to 0.05. The second step of the method is to plot the same variables including time dummies using the random-effects estimator, in order to obtain the Hausman test, which checks whether the generalised least squares estimates are consistent. A p-value inferior the confidence level of 0.05 indicates that the null hypothesis of the random-effects estimator being suitable is wrong, and hints towards the fixed-effects estimator. In the case of this research, 86 % of the models (31 out of 36 models) were found to have a p-value inferior to 0.05. The next step of the method is to check whether there exists homoskedasticity in the model, to check whether the variables in the model have finite variances and the regression results are therefore correct to this point. The null hypothesis of homoskedasticity is checked using the groupwise distribution free Wald test for heteroskedasticity (the opposite of homoskedasticity), in which a p-value inferior to the confidence level of

The variables of this research

Category of variables	Purely economic variables	Social economic variables	Demographic economic variables
Dependent variables	• GDP growth: growth rate of GDP *(in constant 2010 US dollars)* • Wages: average annual net earnings *(in Euros)* • Trade: exports *(trade openness, in thousands of Euros)* • Tourism: index of turnover in services of tourism industry *(index, 2010 = 100)* • Income inequalities: income quintile share ratio *(ratio)*	• Education: population percentage by education *(in %)* • Unemployment: unemployed percentage of active population *(in %)* • Quality of life: percentage of households unable to face unexpected expenses *(in %)* • Access to Internet: percentage of households with broadband access *(in %)*	• Population density: population per km^2 *(in persons)* • Urbanisation: percentage of population living in cities *(in %)* • Total population growth: total population of country rate of growth *(in %)*
Independent variables	• Price index of creative industries' goods *(index, 2015 = 100)* • Turnover of creative industries *(in millions of Euros)* • Exports *(trade openness in creative industries' goods, in thousands of Euros)*	• Share of individuals in the population who used Internet to make a purchase *(in %)* • Total cultural employment *(in thousands of people)* • Value added produced by creative industries *(in millions of Euros)*	• Number of enterprises in the creative industries *(in enterprises)* • Business demography statistics of the creative industries *(in thousands of people)*
Control variables	• Unemployment *(when not a dependent variable, in %)* • Total population *(when not a dependent variable, in %)* • GDP growth *(when not a dependent variable, in constant 2010 US dollars)*		

0.05 rejects the null hypothesis of homoskedasticity. If the model is found to present heteroskedasticity, it is corrected by using the Arellano robust standard errors. In the case of this research, 100 % of the models (36 out of 36 models) were found to have a p-value inferior to 0.05, which indicate heteroskedasticity, and have been corrected using the robust standard errors. The last step of this method is to check for serial correlation (also known as autocorrelation) in the models, which corresponds to the correlation of a variable with a lagged copy of itself. Such phenomenon is checked by plotting the same models and including the residuals lagged by one year and checking for significance of the correlation. Significance of the relationships means that serial correlation

is present, and it is corrected by plotting in the model the variables that have been differentiated (first difference) in order to eliminate serial correlation. In the case of this research, 72 % of the models (26 out of 36 models) have presented significance in their lagged residuals and have therefore been corrected.

Following the empirical method that is described above, this study will therefore use three econometrical estimators: the pooled OLS estimator, the Fixed-Effects estimator, and the Random-Effects estimator. Since this research is based on three hypotheses that are each subdivided in three kinds of variables, there are many models which will be estimated. Each variable that are used as dependent

or independent have been previously described and can be found in Table 4.

Results

Table 5 presents a summary of the results and the status of each of the three hypotheses, according to the interpretation provided in this part.

After having obtained the econometric results for the models, it is now convenient for this research to present a discussion of said results, together with the limitations and recommendations for future research.

Hypothesis 1. The results provided by this research, following an econometrical methodology and using the Gretl econometrical software, are edifying. In the case of first hypothesis, "the creative industries have a positive impact on the economic factors of the European economies", the results prove the point given by the literature: the creative industries in general have a positive impact on the economy (Daubaraitė & Startienė, 2015; Kontrimienė & Melnikas, 2017; Stam et al., 2008; Baculakova, 2018; Townsend et al., 2017; Fahmi et al., 2016; Titan et al., 2008; Bakhshi, Lee & Mateos-Garcia, 2014; Tubagus, 2016). Indeed, the results confirm that the creative industries increase GDP growth, decrease the income inequalities, decrease unemployment, and increase the access to Internet. The only negative relationship that can be posited on a general scope is that the creative industries decrease the population density. These results, while not confirming all the points made by the literature on the different dependent variables, still do confirm a good number of points. It is then possible to say that on a general scale, the creative industries are a force to be reckoned with, having positive influence on many of the

aspects of an economy, and that governments should take appropriate actions to ensure that the creative industries are fostered, improved, and given possibility to expand in order to bring positive impacts to an economy. However, it is also important to include the findings of the other hypotheses' study: it seems that the creative industries are not only less efficient, but even have a negative impact on the economy in the Western Europe cultural/geographical group, which is a result that is disapproved by the literature and that is not shown in the other groups. Furthermore, it also seems that development level has an impact on the creative industries: the more the country is developed, the more fallacies start to appear in the creative industries' influence. For discussion's sake, it is possible to theorise different reasons on these effects. Regarding the cultural aspect of the results, such a negative effect can possibly be caused by the internationalisation of the world. Indeed, the Western European countries in History have always been quite predominant in culture, for they have often expanded beyond their own territories, beyond even their own continent, and therefore spread the Western European culture abroad. With the world becoming more and more globalised, the culture of Western Europe is increasingly losing in force, as it is mixed with other cultures in domestic territories, and even supplanted by other cultures in other parts of the world: for example, the United States that were once colonies of the countries of the Old World, namely Western Europe, expanded and created their own culture which is today one of the most dominant in the world, though similar in nature to the Western European one; similarly, the Western European culture that had expanded in History to

Table 5

Summary of results and hypotheses' status

Hypotheses	Effects observed		Status
H1	General		H1
The creative industries have a positive impact on the economic factors of the European economies	*Purely economic variables:* Positive effect on GDP growth (0,74) Negative effect on income inequalities (-0,07) *Social economic variables:* Negative effect on unemployment (-0,11; -0,01) Positive effect on access to Internet (0,01) *Demographic economic variables:* Negative effect on population density (-0,07)		Mainly positive effects: *Accepted*
H2	Western Europe group	Other groups	H2
The creative industries have a stronger impact on the economic factors in the Western Europe group than in the rest of the groups	*Purely economic variables:* Negative effect on wages (-1,29; -0,09) Negative effect on trade (-0,87) Negative effect on tourism (-1,32) Positive effect on income inequalities (0,07) *Social economic variables:* Mixed effect on education (0,21; -0,31) Positive effect on unemployment (2,39) *Demographic economic variables:* Negative effect on urbanisation (-0,03) Positive effect on total population (0,007)	*Purely economic variables:* Positive effect on GDP growth (0,75) Negative effect on income inequalities (-0,09) *Social economic variables:* Negative effect on unemployment (-0,1; -0,09) Positive effect on access to Internet (0,01) *Demographic economic variables:* Negative effect on population density (-0,09) Negative effect on total population (-0,002)	Mixed effects and magnitude: *Rejected*
H3	First development level group	Other groups	H3
The creative industries have a stronger impact on the economic factors in the first group of development level than in the rest of the groups	*Purely economic variables:* Positive effect on GDP growth (9,26) Negative effect on trade (-1,51) Positive effect on tourism (0,22) Positive effect on income inequalities (0,2) *Social economic variables:* Positive effect on access to Internet (0,11) *Demographic economic variables:* Positive effect on population density (0,09; 0,009) Negative effect on urbanisation (-0,03) Negative effect on total population (-0,003)	*Purely economic variables:* Positive effect on GDP growth (0,74) Negative effect on income inequalities (-0,07) *Social economic variables:* Negative effect on unemployment (-0,11; -0,01) *Demographic economic variables:* Negative effect on population density (-0,09) Negative effect on urbanisation (-0,03)	Mixed effects but mainly stronger magnitude for first development level group: *Accepted*

Note: magnitude of a positive or negative effect on the economy is given between parentheses.

Source: created and interpreted by authors, using Gretl econometrical software's output.

Africa and Asia is slowly being super-seded by the domestic cultures, especially with Asian countries' increasing importance on an international economic balance, and with Africa slowly opening to the world and rising development levels. In the case of development level, it seems that higher development levels bring higher competition, and in an environment where everybody is actively trying to be better than its counterparts, creative industries are facing the threat of other industries that expand with exponential speed, or even facing the threat from itself when cultures insert themselves and mix with the very fabric of the creative industries. Therefore, the previous recommendation should be amended, that governments should indeed pay attention to and promote the development of their domestic creative industries, but they should do so in an environment that is suitable for them to flourish: to take a more grounded approach to this recommendation, it is possible to compare the creative industries to a plant species, that firstly needs the appropriate breeding grounds where it will grow and prosper without having to fear too much the aggressive expansion of other plants, an analogy of competition in development levels, and secondly needs the right species of insects to pollinate it and spread it without other species of insects pollinating the grounds with other species of plants, a metaphor for cultures that mix and sometimes substitute each other.

Hypothesis 2. Regarding the second hypothesis, "the creative industries have a stronger impact on the economic factors in the Western Europe group than in the rest of the groups", this research was not able to confirm it, and by default infirmed it. Indeed, following the results provided by the econometrical modelling, it seems that the effects in the more urbanised cultural/geographical group are not stronger in degree than in the other cultural groups, which is contrary to the literature (Stam et al., 2008; Baculakova, 2018; Bakhshi, Lee & Mateos-Garcia, 2014). The recommendation that could be formulated from such results is that the different cultural groups should monitor the comparative force of their culture and play on it with the help of the creative industries to be able to reap higher rewards than other groups. Similarly, in an optic that is less based on competition but more on mutual aid, countries should not hesitate to bring about their collective cultural strengths in order to shape and mould stronger cultural goods, which will ultimately bring higher advantages than by acting alone. Nonetheless, acting on the risk that the negative significant correlations presented, countries should always remain careful that the environment that is created, or if not created, that is taken over by the creative industries, should always remain liberal/open enough for the creative industries not to choke and lose their purpose in value creation.

Hypothesis 3. Finally, the third hypothesis of this research, "the creative industries have a stronger impact on the economic factors in the first group of development level than in the rest of the groups", confirms what logic and literature infer (Kontrimienė & Melnikas, 2017; Fahmi et al., 2016): a stronger development level will bring stronger rewards in the case of the creative industries. It is however important to once again moderate this thought, because of the mixed relationships that the creative industries had with the different studied aspects of

the economy: indeed, stronger rewards do not always mean positive rewards, and countries should always make sure that, to be metaphorical, the dog they are grooming does not suddenly turn rabid and bite back. Doubtlessly, there exists in our world no situation that yields only positive gains and monitoring the creative industries success should always remain a priority when dealing with creativity as a driver of the economy. Nevertheless, this study has proven that the creative industries are a positive force as long as they are not left unchecked.

Limitations. Notwithstanding, this research paper has some limitations that are important to denote. The first limitation is of course the availability of data. In an age where information is at the core of most activities, gathering data on the creative industries should become a global priority, even more when the next age is predicted to be the age of creativity (Kao, 1996). While the Eurostat database provides statistical data on the creative industries, there are anyway partial gaps in the data that potentially hamper the results. This study therefore advocates for the systematic collection of data on the creative industries, in an optic of efficiency and justness when analysing quantitatively the subject.

Another limitation of this study comes from the econometric modelling of the research: first of all, the expansion of the literature that will undoubtedly come in the future will surely help future researchers to better formulate the models, and use maybe more appropriate, or just more, variables to increase the goodness of fit of all models, especially in the cases of the demographic economic variables. Secondly, the Gretl econometrical software does not allow for the correction of cross-sectional dependence, which is an axis of improvement that can be answered by the use of another econometrical package.

Recommendations. A recommendation for the improvement for this paper would be the declination of the different components of the creative industries and the study of their respective impacts on the economy: being able to identify which component has which influence is a strong point of relevance for further research on this topic, and would allow recommendations on which sectors are more important than others, if any.

Another recommendation would be the enlargement of the scope: being able to observe the influence of the creative industries on a bigger group of countries or at least in other regions of the world would allow to extend the understanding of the creative industries' influence and allow for further discussion and recommendations to be made for these areas.

One more recommendation would be an extension of this research: one could study the effects of the creative industries in each of the geographic/culture groups and each of the development level groups and figure where the creative industries have the best or the worst influence, in order to extend the discussion and provide more insights to these areas.

A last recommendation would be to add new variables to the research and/or to modify the ones that are taken as representative of the economy or the creative industries, in order to improve the fit of the models, to understand other and newer phenomena, and to push even deeper the study of the creative industries' influence on the economy.

Conclusions

In the world of today, where communication and information are paramount to the wellbeing of an economy, the creative industries managed to take their place among the bigger industries that compose the economic environment of countries. At the basis of the creative industries, creativity and culture, phenomena that have existed in many different forms since the appearance of life, have always been parts of the creation process of wealth, often in a form that was unknown to the people that were part of the process. But how can such processes be quantified? This is where the child of creativity and culture comes into light: the creative industries are an innovative way to answer this question, and many more. The creative industries are composed of many areas of the economy of varying sizes, and they have many definitions. It is however possible to regroup those definitions and provide a clear understanding of what the creative industries are made of: the advertising and marketing sector; the architecture sector; the crafts sector; the product design, graphic design, and fashion design sector; the films, TV, radio, and photography sector; the Information Technology, software, and computer services sector; the publishing sector; the museums, galleries, and libraries sector; the music, performing arts, and visual arts sector; and the other categories. This paper furthermore chose a list of the different components that identify both subjects in the best way possible and created a delimitation between them to better study the different areas of the economy that would be affected by the creative industries: the purely economic variables, the social economic variables, and the demographic economic variables.

This study therefore made a point as novelty to enhance the scope of the research on the creative industries conjugated with the availability of data, studying a list of 32 European countries, during the years 2007 to 2018, and by using econometric estimators such as the pooled OLS, but especially the Fixed- and Random-Effects estimators, that take into account the time-related effects in the numbers and give out more precise numbers. From such a scope and the academic literature on the subject, the need for studying in detail the creative industries and in an innovative way led to the creation of three different hypotheses. The first hypothesis was accepted due to a clear positive impact of the creative industries on the economy in the European countries.

The second hypothesis was rejected, due to mixed magnitudes in the effects in both the Western European group and the rest of the groups.

The last hypothesis was accepted, as the magnitudes of the effects in the first development level group were generally stronger than in the other groups. Such results led to a number of recommendations for governments in their use of the creative industries to foster economic wellbeing: the creative industries are indeed a rather new concept in the economy, and their development should not be left unattended.

Overall, this study confirms that the creative industries have a positive influence on the economy, but they should not be left unchecked, as the creativity and culture of others, together with national and international competition, in a globalised world such as ours, can always prevail. The gathering of data on this subject should become a priority for the statistical institutions of the Global Economy.

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KŪRYBINIŲ INDUSTRIJŲ ĮTAKA EUROPOS EKONOMIKAI

S a n t r a u k a

Šiame tyrime apžvelgtos kūrybinės industrijos ir reiškiniai, kuriems ji daro įtaką šių dienų pasaulio ekonomikoje. Straipsnio problema – kokia yra kūrybinių industrijų įtaka skirtingų Europos šalių ekonomikai? Darbo tikslas – rasti ryšį tarp kūrybinių industrijų ir ekonomikos. Straipsnio objektas – kūrybinių industrijų įtaka ekonomikai. Darbe aptariami tokie reiškiniai kaip kūrybinių industrijų samprata ir sudėtis, ekonominiai reiškiniai, siejami su kūrybinėmis industrijomis, kūrybinių industrijų reikšmė įvairių šalių ekonomikoms. Remiantis išsamia akademinės literatūros apžvalga pateikiamos ir apibrėžtos kūrybinės industrijos kartu su kultūros ir kūrybiškumo sąvokomis ir sudaromas ekonominių rodiklių sąrašas. Tyrimo imtį sudaro 32 Europos šalių 2007–2018 m. laikotarpio duomenys. Remiantis literatūros teorija pateikiamos trys hipotezės,

susijusios su: kūrybinių industrijų poveikiu ekonomikai; tirtų šalių poveikiu Vakarų Europos ekonomikai, palyginti su kitomis kultūrinėmis grupėmis; ir poveikiu pirmojo išsivystymo lygio grupės ekonomikai, palyginti su kitomis išsivystymo lygio grupėmis. Tyrime naudojami šie tyrimo metodai: mokslinės literatūros palyginamoji analizė ir sintezė, tiesinės regresijos modelis (sujungtas OLS, fiksuotas efektas, atsitiktinis efektas). Rezultatai rodo akivaizdžią teigiamą kūrybinių industrijų įtaką ekonomikai su sąlyga, kad stipri kultūra gali sukelti neigiamą poveikį ir kad išsivystymo lygis nebūtinai yra teigiamos įtakos įrodymas.