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URBAN PARADOXES – “THE OTHER SIDE” OF URBAN GROWTH AND QUALITY OF LIFE IN EUROPEAN CITIES¹

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Abstract

Despite the centripetal forces that pull the population to a “better life” in the urban areas, analyses which deal with measuring urban characteristics confirm urban paradoxes. The aim of this paper is to describe relationship between urban paradoxes and quality of life in European cities. After theoretical overview of the previous studies, logistic regression has been applied to determine if there is significant association between urban paradoxes and perception of the quality of life. The results indicate that urban paradoxes regarding the availability of adequate housing at a reasonable price and finding a good job have shown significant relationship with the urban quality of life. It is important to define new and apply the existing regional policy instruments that can timely recognize these paradoxes, as well as implement the measures on urban level in order to prevent saturation and negative effects of its growth on the quality of life.

Keywords: urban paradox, quality of life, regional policy, cities

1. INTRODUCTION

Historically, urban areas are known as the places where centripetal forces, e.g. concentration of growth potential, employment and housing opportunities, economic activity, positive effects of agglomeration, innovation,

¹ The extended abstract and the preliminary results of the paper were presented at the annual conference of the Regional Studies Association “The Great Regional Awakening: New Directions” (Dublin, June, 2017).

access to services etc. pull the population towards a “better life”, because of better determinants influencing what people value in their life which also goes beyond income (Colby, 1933; Henderson & Wang, 2007; Eurostat, 2016; Florida, Mellander & Rentfrow, 2013; Węziak-Białowolska, 2016). Despite the numerous chances in the urban areas, analyses that deal with measuring urban characteristics confirm urban paradoxes, e.g. wealth but dissatisfaction, educational and career opportunities but unequal allocation of resources, lack of access to institutions, residential segregations, accessible transport but traffic congestion, pollution etc. (Bhatta, 2010; Dijkstra, Garcilazo & McCann, 2013; Nijkamp & Kourtit, 2012; Eurostat, 2016). This implies that urban concentrations can lead to growth but also to diminishing the urban development potential, where inequalities live in close proximity and can have an influence on the quality of life of the city residents. This is especially seen at the time of rapid growth and uneven distribution of urbanisation.

Urban dimension represents the key aspect of the European Cohesion Policy in 2014-2020. The new policy initiatives have recognized that urban territories are important in economic development, which is also directly seen through European Union (EU) Funds investments linked to sustainable urban development (Eurostat, 2016). European Commission - Regional Policy InfoRegio (2017) sees cities as the source of and solution of the different challenges, as the engines of the European economy, hubs of creativity and innovation but also of problems which implies the need to correlate these confrontations with their influence on the citizens' satisfaction with city life. Looking from European perspective, quality of life has become one of the important goals of the Cohesion Policy, where urban and regional constraints affect the results on national and EU integration level. Although it is expected that growth and employment will lead to better quality of life, there are under-discovered areas which should be observed, starting even from discussions about defining and measuring the quality of life, through different influences which urban characteristics can have on quality of life and may undermine positive effects of urban growth and development (Marans & Stimson, 2011; Slavuj, 2012; Węziak-Białowolska, 2016 etc.). Besides, managing urban concentrations represents important issue in achieving territorial cohesion which is one of the Cohesion Policy goals today, together with economic and social cohesion. Recognising the quality of citizens' lives is necessary in urban development due to the fact that satisfaction with living in the city is as important as economic progress of the city.

The aim of this study is to describe the relationship between urban paradoxes and quality of life in European cities, taking into consideration that urban paradoxes differ between the cities and may have a different influence on citizens' quality of life. Another important question which must be observed before determining this relationship is the possibility to measure the quality of life based on various approaches and determinants that make the measuring more complex. Urban paradoxes in Europe will be discussed (in the third section) after

theoretical overview of the previous investigations on urban paradoxes and measuring the quality of life (in the following second section). Scientific explanations, but also relevant, new institutional findings and policy orientations will be synthesized in theoretical overview. Logistic regression will be applied and presented (in the third section) to estimate if any significant association between urban paradoxes and quality of life in European cities can be seen. The results of the study will be briefly discussed (in the same section) regarding also the European (urban) Cohesion Policy directions. The final section gives conclusions and implications. This paper tries to give contribution to studies and policy debates which deal with managing urban concentrations and explore the relationship between urban characteristics and European urban quality of life.

2. URBAN PARADOXES AND QUALITY OF LIFE – THEORETICAL OVERVIEW

2.1. Urban Growth and Urban Paradoxes

The process of urbanisation and the growing share of population living in cities are well known in today's world and motivate numerous analyses of different disciplines. According to the United Nations - Department of Economic and Social Affairs - Population Division (2015) 66% of the world's population is projected to be urban by 2050, while in Europe it is expected that over 80% of its population will be living in urban areas.² "Europe's urban areas are home to over two-thirds of the EU's population, they account for about 80 % of energy use and generate up to 85 % of Europe's gross domestic product (GDP)" (European Commission - Regional Policy InfoRegio, 2017), but also there were 34 million people living in EU cities who were at risk of poverty or social exclusion and the unemployment rate for people living in cities was higher than that recorded for towns and suburbs or for rural areas (Eurostat, 2016).³

It is expected that sustainable development challenges will be concentrated in cities, while different factors affect city size and growth (United Nations - Department of Economic and Social Affairs - Population Division, 2015). "Whether the growth is good or bad depends on its pattern, process, and consequences" (Bhatta, 2010, p. 17/18). The socio-economic forces which influence the urban life are often contradictory and motivate the authors to observe cities as the centres of progress, production and trade, but also as the places of overcrowding, pollution, crime and poverty (Šimunović, 2007), which

² Estimation and projection of the urban population rely on changes in the population living in urban areas (United Nations - Department of Economic and Social Affairs - Population Division, 2014). Different criteria are used to define urban areas in observed countries so estimates of the proportion of the urban population in their publications are based on national statistics (United Nations - Department of Economic and Social Affairs - Population Division, 2015).

³ More about the definition of the observed territorial units can be found in Eurostat (2016).

implies possible paradoxes⁴. Šimunović (2007, p. 16) connects this opposite effects with the “bright and the dark side” of the city. Challenges of modern European cities (that may be turned in new opportunities) are discussed in Nijkamp and Kourtit (2013), while Dijkstra et al. (2013) note that in the case of largest cities (relative to the rest of the country) concentration of people and economic growth has slowed down in many of the developed European countries. They explain this trend with the large obstacles to further urbanization, with alternative pathways to growth and discuss that negative externalities (congestion costs, pollution, labour crowding and high cost of living) may increase the flows towards smaller centres and rural regions.

Previous analyses have shown that urban paradoxes can be observed in different geographic areas, regarding its different development and administrative levels. Organisation for Economic Co-operation and Development [OECD] and China Development Research Foundation (2010) determine urban paradoxes in OECD countries. Their work on metropolitan regions has demonstrated that wealth creation in urban areas did not result in job creation, while exclusion and poverty in most OECD countries have become urban phenomena, having consequences such as inequalities, criminality, residential segregation, lack of trust, degradation of public infrastructure, the need for higher social assistance etc. According to Eurostat (2016), although European cities foster economic growth, they can be confronted by a wide range of problems and “urban paradoxes” (e.g. people who enjoy comfortable lifestyle living in close with those who have problems with housing or poverty). European Commission (2011, p. 14) confirms urban paradoxes in the EU and state that “the urban dimension of inclusive growth is inversely related to the level of economic development because the more developed Member States tend to have less inclusive cities”. This implies that the strength of the urban paradoxes can be significantly correlated with overall development and quality of life.

Furthermore, Eurostat (2016) has shown through different indicators that urban-rural paradoxes, paradoxes by degree of urbanisation, paradoxes at the city and sub-city (intra-urban) level exist in Europe. In brief, it can be described as follows: predominantly urban regions represent economic hubs with high level of wealth creation, regarding the area occupied they are quite small, relative influence of predominantly urban regions was greater in most sparsely populated regions, in some of the EU Member States employment rates in these regions were lower which was contradictory to the expectations, in some countries predominately urban regions generate economic wealth and provide job opportunities but have high level of unemployment and jobless households, predominantly urban regions were usually resource-efficient in relation to their environment impacts (a low amount of space per person and high-density

⁴ Valuable and unique discussion about the definition of paradoxes with emphasis on economic paradoxes, together with its investigations can be found in Filipić (2012). E.g. some of the paradoxes investigated in the book refer to paradox of poverty and wealth, Easterlin paradox (about relationship between growth and happiness) etc.

buildings), but people who lived in urban regions were often exposed to pollution. By degree of urbanisation, the same publication stated that employment rates tended to be higher in cities than in rural areas but this was not seen for job satisfaction, the strongest inequalities of the income distribution were observed in cities, even though there is high proportion of people that were well-paid, significant share of people were unemployed, a lack of space, poor quality of housing were determined, although people pay more for their housing in cities. Highly educated population in cities didn't result in lower number of problems related to crime, violence or vandalism. According to the presented results of the perception survey on the quality of life in European cities, Eurostat (2016) showed the contradictory between ease with which respondents thought they could find a job and adequate housing at a reasonable price in some of the European cities. In some of the cities respondents do not feel safe, sometimes European cities have problems with lack of green spaces, traffic congestion, parking difficulties, commuting times, inadequate public transport, noise etc., even though it is not unusual that people who live in cities are more likely to walk, take public transport or cycle. Sub-city levels imply disparities and confrontations, which can be observed in other studies.

Presented investigations also confirm differences between the cities within the same and between the EU Member States, because similar results were not seen in all of the observed urban areas. Regarding the above-mentioned, it is interesting to investigate in more detail the strength of the influence of the urban paradoxes, to see if these existing urban paradoxes have significant association with the urban quality of life. Before performing the analysis on this question it is necessary to give an overview of the efforts to define and measure the quality of life, with special emphasis on the sub-national, regional/urban level. Regional level is included to have broader framework of sub-national measuring and due to the fact that urban development is observed as important part of EU regional policy. There are different conceptual orientations in theoretical and empirical investigations on defining and measuring regional and urban quality of life which motivates further studies in this area.

2.2. Quality of Life – the Importance and Attempts in Measuring

Measuring quality of life presents an important part of economic policy especially at the time when the world is facing various multi-level negative effects of economic progress (as it was highlighted for the urban areas in the previous section). The efforts to include broader set of indicators to measure different aspects of progress have attracted the researches of numerous scientists and experts. In line with this are also investigations in the field of geography or planning studies that try to ensure quality of places where citizens live and in the economics of happiness, which connects economy with other disciplines, such as psychology and sociology, analyses quality of life, as well as the other concepts connected with happiness (Tadić, 2010; Marans, 2012; Slavuj, 2012). This is

important especially because geography of happiness may not be the same as the geography of growth (Morrison, 2011). Slavuj (2012) explains that the development of new quantitative indicators has started at the time when it was recognized that quality of life is not a simple function of material well-being and that statistical indicators should include much wider aspects besides the economical ones.

Organisations such as United Nations and OECD have recognized the need to redefine quantity of growth with paying more attention to people's well-being, too. OECD (2017) states there is a growing awareness to go beyond GDP, to understand how society is doing and how life is lived. As in works of other authors, Eurostat (2016) notes that measuring economic output by GDP or GDP per capita has resulted in critiques because it is necessary to include wider range of indicators to define socio-economic or environmental aspects of sustainable growth.

During the reforms of the EU Cohesion Policy there has been a growing demand to "move beyond GDP" (European Commission - Directorate-General for Regional and Urban Policy, 2014). Iammarino, Rodríguez-Pose and Storper (2017) present the reasons why GDP per capita is still accepted as adequate indicator of economic development, due to constraints of alternative measures. This also motivates the researchers to investigate concepts as quality of life in more detail and to evaluate if it is necessary to include this concept in the implementation of the (regional) economic policy. Even though there are some constraints, here it is interesting to note contribution on regional level through attempts in construction of European Social Progress Index, which tries to measure regional social progress as a complement to traditional measuring of economic progress, by encompassing the components which refer to basic human needs, foundations of wellbeing and opportunity (Annoni & Dijkstra, 2016).

When investigating the defining and possible measuring of the quality of life it can be synthesised that it is multidimensional phenomenon which makes measuring more problematic, the perception of quality of life can differ on international, national, regional, urban and individual levels (Šoltés & Nováková, 2015; Royuela, Moreno & Vaya, 2010; Colombo, Michelangeli & Stanca, 2014; Rybakovas, 2014) and it can be observed as objective, subjective or combined indicator (Moro, Brereton, Ferreira & Clinch, 2008; Hájek & Hájková, 2009; Tadić, 2010; Slavuj, 2012). Different determinants influence the perception of the quality of life (e.g. satisfaction of citizens with transportation, health, safety, culture, environment and housing as well as the objective measures (demographic indicators, cultural and social infrastructure) in Hájek & Hájková (2009); economic status in Družić Ljubotina (2012); human capital in addition to income, with housing values and unemployment shaping people's subjective and affective evaluations of their quality of life in Florida et al. (2013); satisfaction with public transport, cultural facilities, availability of retail outlets, green space, air quality, trustworthiness of people, public administration and administrative efficiency are significant in Węziak-Białowolska (2016) etc.). It should be observed with

similar connected conceptions (e.g. happiness, life satisfaction, well-being) in order to have more complete conclusions.

OECD (2014) confirms that regional distribution and local characteristics influence the overall well-being, so it may feel more meaningful to observe the quality of life on lower levels, which is also the approach chosen in this study. In comparison with state level, regional and local - cities level estimates are much less investigated, especially due to methodological constraints. In accordance with that, Slavuj (2012, p. 76) explains that the first attempts to measure quality of life didn't include the dimension of space, even though "people live locally and experience life with their own locality". Citizens' satisfaction with city life is important not only to attract new but also to encourage existing ones to stay (Węziak-Białowska, 2016). It is not unusual today to find quality of life as a part of goals in regional and urban strategic documents (e.g. development strategies of different European regions and urban agglomerations), which confirms that regional and local governments and policy actors have recognized the need to direct activities towards achieving higher quality of life, as well as that it is necessary to have adequate methodology in measuring and comparing the multi-level differences in quality of life.

Valuable contribution in measuring sub-national quality of life can be seen in OECD (2014; 2017) that develops a framework for measuring regional and local well-being in OECD countries. It accounts regional/local differences which may have significant impact on well-being and is based on understanding what matters to people, as well as how local conditions have an impact on well-being. According to OECD (2016) it includes: income, jobs, housing, health, education, environment, safety, access to services, civic engagement and governance, community and life satisfaction. OECD (2014) also highlights that the data for many of the well-being dimensions at city levels are not yet available. Annoni, Węziak-Białowska and Dijkstra (2012) present the results on the measurement of chosen dimensions of quality of life of European (NUTS⁵) regions. Lagas, van Dongen, van Rijn and Visser (2015) calculate the Regional Quality of Living Index for European regions, through nine non-business groups of indicators (relating to public services, purchasing power and employment, housing, social environment, natural environment, recreation, health, education and governance), where they have shown divergence between NUTS regions scores and that capital city regions have better results (Lagas et al., 2015). Regarding local dimension it is important to mention Quality of Life Index by city (Numbeo, 2019), which represents an estimation of overall quality of life taking into account purchasing power index, pollution index, house price to income ratio, cost of living index, safety index, health care index, traffic commute time index and climate index by cities worldwide.

⁵ Nomenclature of territorial units for statistics.

Eurostat, together with the representatives of the EU Member States have designed the framework for analysing the quality of life in the EU, consisting of eight dimensions that measure the overall experience of life (material living conditions, productive or main activity, health, education, social relations and leisure, economic and physical safety, governance and basic rights, natural and living environment), trying to balance objective and subjective measures (Eurostat, 2016). In presenting this concept regarding satisfaction and quality of life in cities, Eurostat (2016) uses data from EU's statistics on income and living conditions (EU-SILC), which are analysed by degree of urbanisation and the results from a perception survey on the quality of life in European cities that will be also used in our investigation in the third section. This approach is chosen in the research because urban paradoxes in European cities are study interest and due to appropriate data availability for performing the analysis. Objective indicators are important in describing the living environment or development framework, while subjective indicators give more personal estimation on the (problems of) quality of life. Slavuj (2012) gives valuable comparison of the advantages and disadvantages in using only one group or both kind of indicators in measuring quality of life. Comprehensive overview of investigating quality of urban life, theory, methodology and empirical researches on chosen case studies can be also found in Marans and Stimson (2011).

It is seen that different characteristics can have an influence on urban quality of life. Above mentioned studies on measuring quality of life confirm that the strength of these effects differs. The relationship between urban paradoxes regarding urban characteristics (determinants that may have an influence on the perception of the urban quality of life based on theoretical overview and data from a perception survey) and perception of the urban quality of life in European cities is presented in the next section.

3. THE RELATIONSHIP BETWEEN URBAN PARADOXES AND QUALITY OF LIFE IN EUROPEAN CITIES – EMPIRICAL ANALYSIS

3.1. Data and Methodology

The survey Quality of Life in European Cities 2015, Flash Eurobarometer 419 (European Commission, 2016; Eurostat, 2017) gives unique database on European citizens' opinions about urban issues and quality of life, in the cities of the 28 Member States, as well as Turkey, Iceland, Norway and Switzerland, which was used as suitable source to observe possible problems of urban paradoxes and urban quality of life in our analysis.

In the mentioned survey, the respondents have evaluated their satisfaction with living in their city as well as with the following urban characteristics: infrastructure and facilities of the city in which they lived, employment opportunities, housing situation, presence and integration of

foreigners, safety and trust, city administrative services, different factors in relation to the environment, satisfaction with their personal situation. The results have shown differences between the cities regarding the observed urban issues. Even though there is a high level of overall satisfaction with living in European cities, satisfaction with chosen urban characteristics yielded contrasting and often lower results⁶. This is a motivation to perform more detailed analysis and determine which paradoxes have the most significant influence on urban quality of life.

Due to data availability, 79 European cities⁷ were included in our analysis. “A researcher should, depending on the aims of a study, area coverage and general possibilities, make a decision which kind of indicators to apply” in quality of life analysis (Slavuj, 2012, p. 74). This was also the approach applied here regarding the aim of the study and European cities as units of observation.

The first step in our analysis was to analyse and describe urban paradoxes. The difference between overall satisfaction with living in the city and the dissatisfaction/disagreement with the particular urban characteristics was observed as the “strength of the paradox” (relying on the definition of urban paradoxes and contrasting results about the satisfaction with urban characteristics). Lower level of the calculated difference was interpreted as stronger paradox due to the fact that this means high overall satisfaction with living in a city, but much lower level of satisfaction with the features which should be evaluated positively in urban areas (e.g. lower level of satisfaction, that is dissatisfaction with health care services, employment or housing opportunities etc.).

A total of 28 variables representing observed urban characteristics were included in our analysis, covering different above noted aspects relating to quality of life.⁸ Cities in which the difference between the satisfaction with living in the

⁶ More about the methodology and results of the study can be found in European Commission (2016) and Eurostat (2017).

⁷ Brussels, Antwerpen, Liège (Belgium); Sofia, Burgas (Bulgaria); Prague, Ostrava (Czech Republic); Copenhagen, Aalborg (Denmark); Berlin, Hamburg, Munich, Essen, Leipzig, Dortmund, Rostock (Germany); Tallinn (Estonia); Dublin (Ireland); Athens, Irakleio (Greece); Madrid, Barcelona, Malaga, Oviedo (Spain); Paris, Strasbourg, Bordeaux, Lille, Rennes, Marseille (France); Zagreb (Croatia); Roma, Napoli, Torino, Palermo, Bologna, Verona (Italy); Lefkosia (Cyprus); Riga (Latvia); Vilnius (Lithuania); Luxembourg (Luxembourg); Budapest, Miskolc (Hungary); Valletta (Malta); Amsterdam, Rotterdam, Groningen (Netherlands); Wien, Graz (Austria); Warsaw, Kraków, Gdansk, Białystok (Poland); Lisboa, Braga (Portugal); Bucuresti, Cluj-Napoca, Piatra Neamt (Romania); Ljubljana (Slovenia); Bratislava, Kosice (Slovakia); Helsinki, Oulu (Finland); Stockholm, Malmö (Sweden); London, Glasgow, Manchester, Cardiff, Belfast, Tyneside conurbation (United Kingdom); Reykjavik (Iceland); Ankara, Antalya, Diyarbakir, Istanbul (Turkey); Oslo (Norway); Zürich, Geneva (Switzerland). It can be seen that the analysis included capital cities of the countries concerned, except for Switzerland, together with between one and six more cities in the countries which are larger, as in European Commission (2016).

⁸ VAR 1: satisfaction with living in the city, Strength of the paradoxes in the city; VAR 2: satisfaction with the public transport, VAR 3: satisfaction with the schools, VAR 4: satisfaction with the green spaces, VAR 5: satisfaction with the sport facilities, VAR 6: satisfaction with the cultural facilities, VAR 7: easiness to find a good job, VAR 8: well-integration of foreigners, VAR 9: easiness to find

city (the percentage of the respondents that “strongly agree” or “somewhat agree” with the statement that relates to satisfaction with living in the city) and the dissatisfaction (the percentage of the dissatisfied respondents or respondents that disagree with the statements) with particular urban characteristics was equal or less than 50 were extracted as the cities in which paradoxes exist. The comparison and rank of the calculated values has shown that paradoxes regarding the following characteristics were found the most usual in the European cities:

- easiness to find good housing at a reasonable price (found in 59 cities),
- easiness to find a good job (54 cities),
- satisfaction with the quality of the air in the city (30 cities),
- satisfaction with the noise level in the city (29 cities),
- satisfaction with the efficiency of the administrative services (28 cities),
- satisfaction with the cleanliness in the city (28 cities),
- well-integration of foreigners in the city (28 cities),
- satisfaction with the state of streets and buildings in the neighbourhood (26 cities).

It was confirmed that the most usual paradoxes pertain to category of people’s views about their city, satisfaction with their city in relation to environment follows, as well as satisfaction with the infrastructure and facilities of the city. In the group of variables describing people’s satisfaction with their personal situation, paradox which refers to financial situation of the household was higher than other paradoxes in this category, even though it is not seen in the majority of the observed cities. It is useful to make comparison between different paradoxes to understand which of the mentioned determinants (that may have an influence on the urban quality of life) represent the most significant problems. This can have policy implications, seen through targeting obstacles to urban development and in using the available instruments of the EU regional policy towards accomplishing the goals of better local and regional quality of life.

good housing at a reasonable price, VAR 10: satisfaction with the efficiency of the administrative services, VAR 11: satisfaction with the health care services, VAR 12: satisfaction with public spaces, VAR 13: the presence of foreigners, VAR 14: trust in people, VAR 15: commitment to the fight against climate change, VAR 16: difficulty in paying the bills, VAR 17: satisfaction with the state of streets and buildings in the neighbourhood, VAR 18: satisfaction with the availability of retail shops, VAR 19: satisfaction with the quality of the air, VAR 20: satisfaction with the noise level, VAR 21: satisfaction with the cleanliness in the city, VAR 22: safety, VAR 23: safety of the neighbourhood, VAR 24: trust in most people in the neighbourhood, VAR 25: trust in the public administration of the city, VAR 26: satisfaction with the personal job situation, VAR 27: satisfaction with the financial situation of the household, VAR 28: satisfaction with the life.

It can be seen that paradoxes referring to easiness to find good housing at a reasonable price (HOUSING) and a good job (GOOD JOB) were determined in the majority of the observed European cities. In 59 of the 79 cities (74.68%) paradox “easiness to find good housing at a reasonable price” is confirmed, while in 54 (68.35%) cities the paradox regarding the “easiness to find a good job” was perceived as an issue. OECD (2011, p. 81) notes that housing conditions are important for well-being because “housing is a major element of people’s material living standards, it is essential to meet basic needs [...], to offer a sense of personal security, privacy and personal space [...], housing costs are a major concern for households’ finances.” European Commission and United Nations Human Settlements Programme [UN-Habitat] (2016, p. 13) explain that “more households in cities have a high housing cost burden than in other areas, [...] more households in cities live in a crowded dwelling than in towns, suburbs and rural areas”. Adequate, affordable, safe housing and basic services by 2030 is one of the targets sets as urban sustainable development goal of the United Nations (European Commission & UN-Habitat, 2016). Described urban paradoxes can undermine the accomplishment of this goal. OECD (2011) furthermore elaborates that the availability of jobs and the earning represent one of the main determinants of individual wellbeing. The presented results on urban paradoxes should also worry because adequate housing and job opportunities people observe when choosing where to live, while citizens won’t be able to satisfy complex human needs if these preconditions are not satisfied, even though there can be seen variations between European cities regarding the results.

The results of the survey in European Commission (2016) address that while 72% of the respondents in Oulu agree it is easy to find good housing at a reasonable price, 95% of the respondents in Paris disagree with this statement. “Housing prices seems to be a significant issue in EU capitals” (European Commission, 2016, p. 74). This was also concluded in our study, by comparison of the calculated values regarding the strength of the urban paradox that refers to “easiness to find good housing at a reasonable price” in European capital cities. Furthermore, in Prague, 72% of respondents agree with the statement that it is easy to find a job in the city, while just 3% of the respondents in Palermo agree this is the case in their city. “Respondents living in EU capitals are slightly more likely to agree that it is easy to find a job in their city” (European Commission, 2016, p. 69) so it can be assumed that this paradox is stronger determined by the influence of the respondents living in cities that are not EU capitals. Here is necessary to highlight that further analysis of the paradoxes in our study has shown that in majority of the observed European capitals the paradox “easiness to find a good job” was also found, which implies that local authorities and policymakers in these cities should be aware of the already visible negative effects that are seen in some of the capital cities, which are maybe not expected or are possibly ignored based on first assumption.

More detailed comparison of the differences in the outcomes and determinants among old (EU 15) and new (EU 13) EU member states in our

study has confirmed that in the group of the old EU member states cities have higher paradoxes regarding the “easiness to find a good housing at a reasonable price”, “easiness to find a good job”, “satisfaction with the cleanliness in the city” and “well-integration of foreigners in the city”. In the group of the mentioned paradoxes, the difference between the old and new EU member states was the highest regarding the paradox “well-integration of foreigners in the city”. The paradox based on “satisfaction with the quality of the air in the city” is higher in the cities of the new EU member states and in the group of paradoxes which are higher in the new EU member states this represents the most significant paradox. Mentioned differences should be investigated in more detail in future studies relying on the heterogeneous characteristics of the observed cities.

Variables (HOUSING, GOOD JOB) that represent the paradoxes determined in more than half of the cities surveyed were included in the further analysis with the final aim to estimate if there is significant relationship between these urban paradoxes and quality of life in European cities, that is to estimate if lowering urban paradoxes is likely to significantly increase European urban quality of life (as can be expected). The variable “satisfaction with living in the city” was chosen as the approximation of the quality of life, where cities in which the percentage of the respondents that were strongly satisfied to live in their city was higher than 50% were coded with 1 (referring to high quality of life), while cities in which this percentage was lower than 50% were coded with 0 (meaning low quality of life). This was necessary in order to highlight the difference between the European cities in their quality of life. Węziak-Białowska (2016), based on Marans (2015), explain that satisfaction is an important outcome in research of quality of life. In their study a question item addressing satisfaction with life in a city (from the Quality of Life Flash Eurobarometer survey) was also used as an indicator for urban quality of life. Dummy variable (DUM) representing cities that have population over 1 million⁹ is included in our study to isolate the effect of the largest metropolitan areas.

Regarding the characteristics of the observed relationship between dependent dichotomous variable in which there are only two possible outcomes and described independent variables, logistic regression was chosen as appropriate method of estimation in our analysis, often used in the investigations of the urban quality of life (Mamuye & Gotu, 2015; Węziak-Białowska, 2016). The results of the performed binary logistic regression are presented below.

3.2. Results of Logistic Regression and Discussion

Logistic regression represents a form of regression with a dichotomous variable (Barbić, Palić & Bahovec, 2016). In order to estimate the relationship of interest in this analysis, binary logistic regression was performed after checking

⁹ Based on Eurostat (2019).

the necessary preconditions for performing the analysis. Table 1 presents the results of the estimated model.

Table 1

Results of the logistic regression estimation

Variable	B	S.E.	Wald	df	Significance (p-value)	Odds ratio
GOOD JOB	1.719	0.440	15.259	1	0.000	5.577
HOUSING	0.703	0.355	3.920	1	0.048	2.019
DUM	-0.487	0.701	0.482	1	0.487	0.615
Constant	1.211	0.399	9.222	1	0.002	3.357
$R^2_{HL}=0.195$, $(\chi^2(8)=11.123)$						

Source: author's calculation

It is shown that the variables HOUSING and GOOD JOB are positive and significant ($p < 5\%$). Regarding the above given definition of the variables and the results of the analysis, increase of these variables means that lowering urban paradoxes (lower difference between satisfaction with life and dissatisfaction with the observed urban characteristics – easiness to find a good job and housing at a reasonable price) influences the increase of the predicted probability of higher quality of life in the European cities. This confirms the significant association between lowering observed urban paradoxes with increase odds of higher European urban quality of life. Dummy variable representing largest metropolitan areas is not statistically significant.

Hosmer-Lemeshow test of the goodness of fit (R^2_{HL}) is not significant ($p > 5\%$), which confirms that model presents a good fit to the data. This test suggests whether or not the observed event rates match expected event rates in subgroups of the model population and the significance of the model means poor model fit (Barbić et al., 2016).

Table 2 presents a classification table which denotes how well group membership is predicted for the total sample, as well for the two groups of cities (cities with high and low urban quality of life).

Table 2

Classification table

Observed group	Predicted group		
	High urban quality of life	Low urban quality of life	Percentage correct (%)
High urban quality of life	4	50	92.6
Low urban quality of life	15	10	60.0
Overall percentage			82.3

Source: author's calculation

82.3% of the outcome is correctly classified, in the group of cities with high urban quality of life 92.6% of cities are correctly classified while this result is 60.0% in the group of low urban quality of life. It can be accepted as a suitable model even though there is a space to include other factors which influence the urban quality of life in the next studies (the aim here was to perform the analysis with the urban paradoxes determined in the majority of the observed cities).

Analysis confirms the conclusion given in Flash Eurobarometer (European Commission, 2016), that minority of respondents recognize that it is easy to find a job in European cities as well as that housing prices represent significant issue. There are exceptions (Prague, Cluj-Napoca, Munich, Bratislava where respondents have recognized better job opportunities, agree that it is easy to find a job; or Oulu, Braga, Malaga and Athens where the challenge of finding good housing at a reasonable price was lower) according to the European Commission (2016), but here it can be seen that these paradoxes has started to produce their significant negative influences through undermining the European urban quality of life, even though there are differences between cities regarding observed urban paradoxes and the fact that overall satisfaction with quality of life in European cities was perceived on high level.

One of the possible solutions for these problems can be found in Cohesion Policy. There are various opportunities for urban areas during the 2014-2020 programming period which may be used to reduce urban paradoxes. This can be seen through investments of the European Fund for Regional Development (ERDF)¹⁰, attempts to implement integrated sustainable urban development, initiatives to perform innovative actions, cooperation through urban development network, the opportunity to use Community-Led Local Development, integrated territorial investments, URBACT III programme, advantages through Urban Agenda which seeks to improve quality of life in urban areas (e.g. by providing access to affordable housing or by boosting inclusive employment), other funds, programmes and actions as can be seen in European Commission (2017) and European Commission - Regional Policy InfoRegio (2017). European policy initiatives linked to the quality of life (e.g. EU's renewed sustainable development strategy etc.) must be also directed towards this problem in their attempts to create communities where citizens want to live and work, inclusive places, that are planned and managed well, with equality of opportunities and accessible services for all (more in Eurostat, 2016), as well as the opportunities of innovative solutions of "smart cities". The goals directed towards satisfied citizens and higher urban quality of life should have their places in urban strategic planning, (implementation of the) urban development strategies and should be under the spotlight of local authorities, planners and policymakers. Housing and employment policies can be used in concordance with these initiatives which may have an influence on lowering significant urban paradoxes, by facilitating the

¹⁰ At least 50% of the sources from the ERDF in 2014.-2020. is planned to be invested in urban areas (European Commission – Regional Policy InfoRegio, 2017).

construction of affordable housing and by creating accessible employment opportunities.

4. CONCLUSION AND IMPLICATIONS

The paper discusses different characteristics of the urban areas and contradictory effects of urban growth that can influence urban quality of life in European cities. It is confirmed that measuring quality of life as multidimensional phenomenon must be determined on sub-national, when possible, local level, which is important because it addresses how local conditions impact people's lives and their perceptions with implications on complete economies.

This study addresses urban paradoxes in European cities where it is seen that some of the paradoxes already worry the majority of the observed cities and influence the perception of the quality of life of their citizens. It is determined that urban paradoxes differ between the cities and may have a different influence on quality of life. Urban paradoxes regarding "easiness to find good housing at a reasonable price" and "easiness to find a good job", as the most usual paradoxes, have shown significant association with quality of life in European cities in this analysis, by using logistic regression which has confirmed to be a good instrument for testing public opinion perceptions. Other urban paradoxes are also highlighted which must be observed in each European city. The approach in analysing urban paradoxes is novel and contributes to studies about positive and negative influences of urban characteristics on quality of life and urban growth.

Policy makers, in cooperation with researchers, urban practitioners and with participation of citizens should recognize and manage the causes of these impacts through integrated approach. Here it is also necessary to timely anticipate the point when the negative effects of urban growth will be seen. Cohesion Policy instruments can be used with this purpose to prevent the saturation and long-term negative effects on the quality of life. The opportunities to use its initiatives for urban areas in the current programming period (2014-2020) are even higher due to the fact that it puts emphasis on urban territories. "Smart, sustainable and inclusive" cities which represent the important part of the EU's 2014-2020 cohesion policy should not be based on disregarded effects of urban paradoxes. It's not an easy task for researchers and policy makers to propose and implement solutions for these multidimensional urban problems, but it is obligatory to react at the time when negative signs of progress are seen. Growth of the cities without satisfied citizens in the long term can undermine the prosperity and sustainability of the urban areas.

According to the results of the European Commission (2016) the most important urban issues as perceived are health services, unemployment and education and training, which are ranked above safety, public transport, road infrastructure, air pollution, housing, social services and noise, so this should be also observed as a potential for arising paradoxes and investigated in more detail

in next researches, together with other possible paradoxes that are not included in the empirical analysis in our study. Regarding individual characteristics can have an influence on the perception of satisfaction with life, it will be interesting to include these dimensions in future studies, as well as to observe the dynamics of changes. The differences between cities of the (old and new) EU member states can motivate discussions in some other papers. One of the constraints of the research which should be mentioned is data availability regarding both dimensions (urban paradoxes and urban quality of life), so future contributions are also expected here.

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URBANI PARADOKSI – “DRUGA STRANA” URBANOG RASTA I KVALITETA ŽIVOTA U EUROPSKIM GRADOVIMA

Sažetak

Istraživanja urbanih karakteristika potvrđuju urbane paradokse iako su urbana područja poznata kao prostori unutar kojih centripetalne sile privlače stanovništvo prema mjestima “boljeg života”. Cilj rada je opisati povezanost između urbanih paradoksa i kvalitete života u europskim gradovima. Nakon teorijskog pregleda dosadašnjih istraživanja, logističkom regresijom procijenjena je povezanost između urbanih paradoksa i percepcije kvalitete života. Rezultati upućuju da su urbani paradoksi koji se odnose na mogućnost pronalaska stambenog smještaja po prihvatljivoj cijeni i mogućnost pronalaska posla značajno povezani s kvalitetom života u europskim gradovima. Bitno je definirati nove i primijeniti postojeće instrumente regionalne politike koji mogu paradokse pravovremeno prepoznati, kao i omogućiti provođenje mjera na urbanim razinama kako bi se spriječila saturacija i negativni učinci rasta na kvalitetu života.

Ključne riječi: urbani paradoks, kvaliteta života, regionalna politika, gradovi.

JEL klasifikacija: I31, R11, R58.