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Conference Paper

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Provided in Cooperation with:

The Research Institute for Agriculture Economy and Rural Development (ICEADR), Bucharest

Suggested Citation: Dachin, Anca (2019) : The influence of predominantly rural areas on the development path of Central and East-European regions with structural similarity, In: Agrarian Economy and Rural Development - Realities and Perspectives for Romania. International Symposium. 10th Edition, The Research Institute for Agricultural Economy and Rural Development (ICEADR), Bucharest, pp. 11-17

This Version is available at:

<https://hdl.handle.net/10419/221835>

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THE INFLUENCE OF PREDOMINANTLY RURAL AREAS ON THE DEVELOPMENT PATH OF CENTRAL AND EAST-EUROPEAN REGIONS WITH STRUCTURAL SIMILARITY

ANCA DACHIN¹

Abstract: *The real convergence process within the European Union at regional level is the main goal of the cohesion policy. Less developed regions belong mainly to Central and East European countries and aim at catching-up with other EU regions. According to Eurostat, Romania has 28 predominantly rural NUTS3 areas out of 42, situation that is usually associated with economic lagging behind. The paper focuses on the analysis of seven NUTS2 regions in Romania (excluding Bucharest-Ilfov) compared to other EU regions with structural similarity belonging to Bulgaria, Poland, Hungary, Czech Republic, Slovakia and Slovenia. All these regions have improved their GDP/capita in the period 2007-2017, but most of them still have about 30-50% of the EU28 average. The purpose of the paper is to determine, by using the descriptive statistical analysis, to what extent the predominantly rural regions contributed to the slow rate of economic development at NUTS2 level in the last decade*

Keywords: *regional convergence, predominantly rural regions, structural similarity, economic development*

JEL Classification: O18, R11, R23

INTRODUCTION

Literature regarding regional issues has a special focus on agglomerations, clusters and regional innovation, these being favorable conditions for development. Often the lagging behind of the rural areas is highlighted, since none of these aspects is actually present there. The European Union pays special attention to the development of rural areas through specific policies and resource allocations to reduce the urban-rural disparities (European Commission, 2013). The rural development policy is part of the regional integration policies and it promotes economic and social cohesion.

However, it is still difficult to estimate to what extent the EU support for the peripheral regions in the Central and East European countries will contribute to their favorable development (Abraham, 2011) and consequently to the regional convergence within the EU.

The rural-urban divide is serious in many countries. The long-term trend indicates the increase of the degree of urbanization, largely by attracting young people, so that it has become a worldwide problem to create opportunities for young people from the rural areas to determine them not to emigrate (IFAD, 2019). Some authors, however, criticize the idea of urban-rural or center-periphery comparisons (Souza, 2018).

Romania has progressed economically, increasing GDP (in PPS) from 43% of the EU average in 2007 (the year of EU accession) to 64% in 2018, but the pace of development is relatively slow. This situation is intensely debated, one of the causes frequently mentioned being the weak dynamics of the rural areas.

According to the new typology of the regions (Dijkstra & Poelman, 2014), the predominantly rural regions in the EU are identified at the level of NUTS3 regions where at least 50% of the population live in rural grid cells. Romania has a number of 28 counties classified as predominantly rural regions out of a total of 42 counties, and these cover 67.8% of the area and comprise 54.4% of the country's population (Eurostat, GISCO, based on 2011 population grid, LAU 2014 and NUTS 2013).

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We note that, at EU level, there are numerous countries comprising predominantly rural regions with a significant share of the population, such as Ireland (60.7%), Slovenia (59.3%), Austria (41.6%), Finland (40.9%), Croatia (39.7%), Slovakia (37.6%), Poland (35.3%), France (32.4), Portugal (32%) etc. But between these countries there is a development gap, which has multiple causes.

The paper starts from a comparative analysis of NUTS2 regions in the European Union structurally similar to the development regions in Romania (exclusive Bucharest -Ilfov region). The purpose of this analysis is to identify the common characteristics related to the spatial and population dimensions of predominantly rural regions and their influence on the level of development.

MATERIALS AND METHODS

In Romania, the NUTS2 development regions North-West, Center, North-East, South-East, South-Muntenia, South-West Oltenia and West show significant development gaps compared to the Bucharest-Ilfov region, which is the only one that does not include predominantly rural regions and had a level of GDP per capita (in PPS) in 2017 44% higher than the EU28 average. To ensure the comparability of the regions, the Bucharest-Ilfov region was excluded from the present analysis.

The identification of some EU regions similar to the seven NUTS2 regions in Romania was based on data provided by the Smart Specialisation Platform (European Commission, 2013). This platform indicates similar reference regions in 2011-2012, considering several criteria (geodemography, education level, technological specialization, sectoral structure, firm size, trade openness, institutions/values).

By using these criteria, the present analysis considers only 29 comparable EU regions. For the 29 selected NUTS2 regions, having similar characteristics, corresponding NUTS3 regions were identified (Eurostat, 2018), and of these the predominantly rural regions were specified, using Eurostat GISCO.

The economic performance of the regions is synthetically measured by GDP per inhabitant. The ranking of the selected NUTS2 regions according to this criterion shows the evolution of the regions during the period 2007-2017. The research hypothesis is that rural activities mark the path of development. Thus, for 2016, the calculations indicate the degree of correlation of the weight of the employed population in the four main sectors (agriculture, industry, construction and services) with the level of GDP per inhabitant. The lack of data for the regions of Poland between 2007-2015 and 2017 created difficulties for analyzing the time series 2007-2017.

RESULTS AND DISCUSSIONS

The regions of the European Union with a high degree of structural similarity with the seven regions in Romania are located in Central and Eastern Europe, the majority in Bulgaria, Hungary, Poland and, to a lesser extent, in Slovakia, Slovenia and the Czech Republic (Table 1).

Although the surfaces, the total population and the administrative organization differ between the selected NUTS2 regions, some common features are observed:

- All regions lost population in the period 2007-2017, except for the Severovýchod region of the Czech Republic and Východné Slovensko of Slovakia. The most serious emigration is from the South-West Oltenia, South-East and North-West regions of Romania, to which are added Severozapaden and Severen tsentralen from Bulgaria.
- All regions recorded an increase of GDP per inhabitant, while this positive change is significantly higher in the regions of Romania. During 2014-2017 (the data allowed the calculation of the dynamics for Poland as well), the trend of improving GDP per inhabitant was maintained.

Table 1: Population and GDP per inhabitant in selected NUTS2 regions of EU28 having structural similarity with Romanian NUTS2 regions (excluding Bucharest-Ilfov), 2007-2017

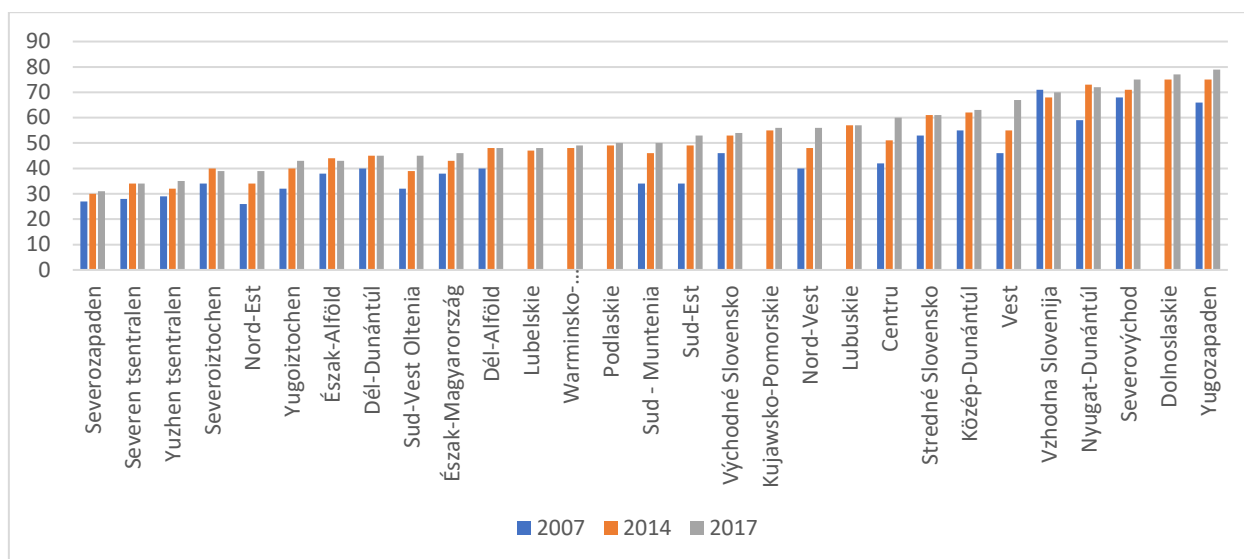
Code	NUTS2 regions	Population on 1 January by NUTS 2 region (Persons)	Change of total population (%)	GDP in PPS per inhabitant	Change GDP per inhabitant (%)	Change GDP per inhabitant (%)	Number of regions NUTS3	Of which: number of regions NUTS3 predominantly rural
		2017	2017/2007	2017	2017/2007	2017/2014	2016	2016
BG31	Severozapaden	769623	-16.0	9300	32.9	12.0	5	0
BG32	Severen tsentralen	805441	-11.5	10200	39.7	8.5	5	2
BG33	Severozitochien	939262	-4.8	11800	32.6	8.3	4	1
BG34	Yugoizitochien	1046125	-5.8	13000	52.9	18.2	4	0
BG41	Yugozapaden	2115344	-0.5	23700	38.6	14.5	5	1
BG42	Yuzhen tsentralen	1426064	-6.4	10400	38.7	18.2	5	2
CZ05	Severovýchod	1508527	1.5	22600	27.7	15.3	3	1
HU21	Közép-Dunántúl	1056097	-4.6	18800	29.7	10.6	3	0
HU22	Nyugat-Dunántúl	983251	-1.6	21500	40.5	7.0	3	1
HU23	Dél-Dunántúl	894223	-7.6	13500	28.6	7.1	3	2
HU31	Észak-Magyarország	1143902	-8.6	13700	37.0	15.1	3	2
HU32	Észak-Alföld	1468088	-3.8	12900	31.6	6.6	3	1
HU33	Dél-Alföld	1251924	-6.7	14500	40.8	8.2	3	0
PL81	Lubelskie	2112787	-2.8	14400	:	10.8	4	3
PL84	Podlaskie	1156947	-3.3	15000	:	11.1	3	2
PL43	Lubuskie	1004892	-0.4	17300	:	10.2	2	0
PL51	Dolnoslaskie	2866218	-0.6	23100	:	10.5	5	1
PL61	Kujawsko-Pomorskie	2060575	-0.3	16900	:	11.2	5	4
PL62	Warmińsko-Mazurskie	1410641	-1.1	14700	:	10.5	3	0
RO11	Nord-Vest	2568730	-5.9	16900	62.5	26.1	6	5
RO12	Centru	2332935	-7.6	17900	61.3	27.0	6	4
RO21	Nord-Est	3239612	-13.1	11600	70.6	24.7	6	5
RO22	Sud-Est	2446734	-13.7	15800	75.6	16.2	6	3
RO31	Sud - Muntenia	3003349	-9.1	15100	69.7	18.0	7	6
RO41	Sud-Vest Oltenia	1973140	-13.7	13600	63.9	25.9	5	4
RO42	Vest	1792503	-7	20000	65.3	30.7	4	1
SI03	Vzhodna Slovenija	1091159	-0.4	21000	13.5	11.1	8	8
SK03	Stredné Slovensko	1342287	-0.6	18200	32.8	7.7	2	1
SK04	Východné Slovensko	1620413	2.4	16300	37.0	10.9	2	1

Source: Own calculations based on Eurostat database

- It is noted that the number of predominantly rural NUTS3 regions is not a decisive factor for the level of economic performance. Thus, it is observed that NUTS2 regions that are composed of only or mostly of predominantly rural NUTS3 regions (Vzhodna Slovenija from Slovenia, North-West and South - Muntenia from Romania) are better positioned than those that do not include predominantly rural NUTS3 regions (Severozapaden and Yugoizitochien from Bulgaria or Dél-Alföld from Hungary).

Compared to the EU28 average, GDP per inhabitant (in the PPS) increased in the decade 2007-2017, reaching in 2017 a level ranging from 30 to 80% (Graph.1).

Graph 1: GDP in PPS (% of EU28) in NUTS2 regions



Source: Own representation based on Eurostat data

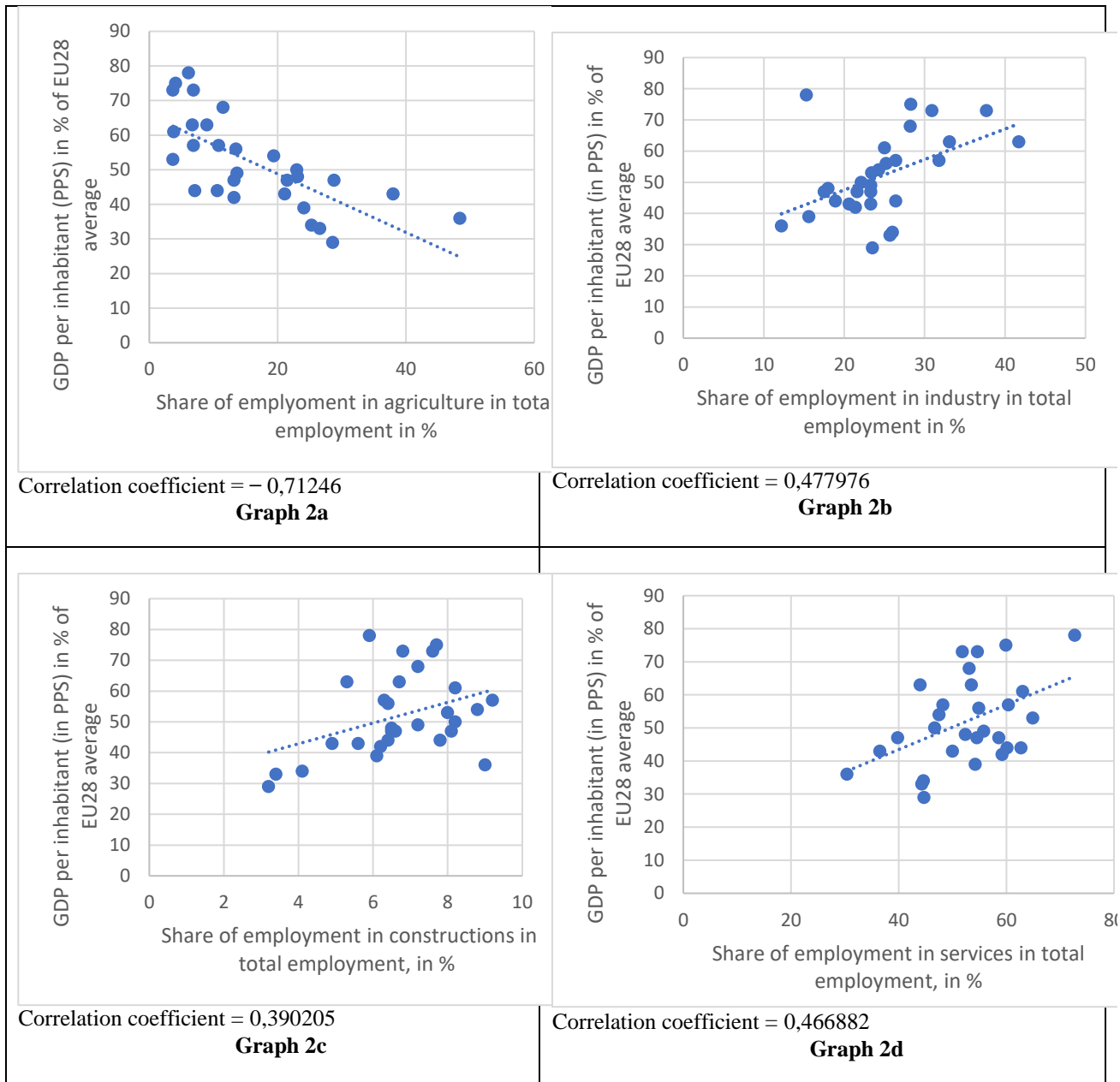
Improving the level of GDP per inhabitant in NUTS2 regions which largely comprise predominantly rural areas is strongly influenced by the decrease of the total population due to the natural demographic decline and to emigration. It is noted that the North-East region had the lowest level of development in 2007, but recovered slightly due primarily to the development of the city Iasi, which has attracted population especially from the rural area. Thus, we considered more relevant the share of the employed population in the economic activities carried out in the analyzed regions.

In Graph 2 are considered the same 29 NUTS2 regions previously selected. It represents the relationship between the share of the employed population in agriculture, industry, construction and services in total population, taken separately, and the GDP in the PPS of the EU28 average was represented. The graphs and correlation coefficients were obtained using Microsoft Excel. The analysis shows that most of the regions had the following structure of the employment in 2016 (Graph 2a-2c):

- weight of the population employed in agriculture was up to 20%, extreme situations being in North-East (48.4%) and South-East Oltenia (38%);
- weight of the population employed in the industry was about 20-30%, extreme cases being Severovýchod from the Czech Republic (37.7%) and West from Romania (41.7%). In the opposite extreme is Yugozapaden in Bulgaria (15.3%), the region with the best economic performance;
- weight of the population occupied in constructions was about 6-8%, with extreme situations in the regions Center (9.2%), North-East (9%) and North-West (8.8);
- share of the population employed in services was about 40-60%, with extreme situations in Yugozapaden (72.7%), Východné Slovensko (64.9%) and Stredné Slovensko (63%) from Slovakia.

The correlation between the share of the population employed in agriculture and the GDP per inhabitant is negative and significant (correlation coefficient = - 0.71), while the share of the population employed in the other three branches positively influences the GDP per inhabitant, but the relation is much weaker (coefficients of correlation varies between 0.39 and 0.47). From these representations results that the differences in economic performance are mostly associated with a lower share of the population employed in agriculture.

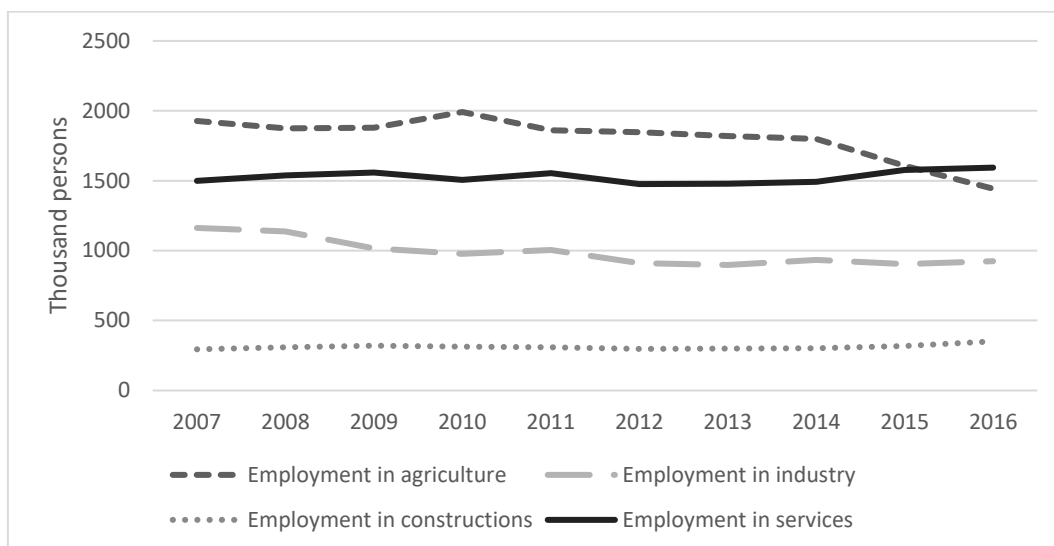
Graph 2: Correlation between share of employment in economic activities (agriculture, industry, constructions and services) in total employment and GDP per inhabitant, in 2016, in selected NUTS2 regions with structural similarities



Source: Own calculations based on Eurostat data

In Romania, the massive reduction of the total population by emigration to urban areas or abroad, especially from the South-West Oltenia, South-East and North-East regions, meant first of all the reduction of the number of the population employed in agriculture. This phenomenon is observable throughout the predominantly rural areas (Graph 3). The population employed in the other activities, especially in services and constructions, has shown a slight increase in the last years. In the predominantly rural areas, the share of the population employed in agriculture during 2007-2016 decreased from 39.5% to 33.5%, especially on account of services (increase on average from 30.7% to 37%) and of constructions (increase from 6% to 8.1%). The industry has shrunk in the years of crisis, but has a slight comeback starting with 2016.

Graph 3: Employed persons in predominantly rural NUTS3 regions in Romania, 2007-2016



Source: Own representation based on Eurostat data

These changes reflect the abandonment to a certain extent of the subsistence agriculture and an increasing degree of diversification of economic activities in predominantly rural areas, but their positive effect is still incipient.

CONCLUSIONS

Within the European Union some member countries comprise large rural regions, which occupy even 80% or more of the territory and have population in predominantly rural areas of about 40-60% of the total population, while other countries are highly urbanized. The structural similarity with the regions from Romania (with the exception of the Bucharest-Ilfov region) has led to the selection of NUTS2 regions from Central Eastern European countries mostly located in Bulgaria, Hungary and Poland. Thus, it can be said that the economic status of the regions depends to a large extent on their belonging to countries with a certain level of development and not necessarily on the size of the predominantly rural regions.

Considering 29 NUTS2 regions with structural similarity, it is found that they had a tendency to improve the level of development in terms of GDP per inhabitant in the period 2007-2016, but also face massive losses of population and other socio-economic difficulties. Even within this group of comparable regions, the rural-urban differences are specific to each country and cannot be generalized. Although rural areas are always associated with agriculture, the reduction of the population employed in agriculture and the development of other activities marks the positive development of these regions.

Since there are NUTS2 regions comprising only or mostly predominantly rural areas, but better developed than others, it can be concluded that favorable systemic transformations in the rural areas are already under way. Consequently, by applying the policies of capitalizing on the strengths of the rural regions, it is possible to reduce the rural-urban gap and the flow of emigration, as well as improve the regional convergence within the EU.

BIBLIOGRAPHY

Abraham, J. (2011, January). Rural development and regional disparities of the new EU Member States. *Agricultural Economics (AGRICECON)*, pp. 288-296.

Dijkstra, L., & Poelman, H. (2014). *A harmonised definition of cities and rural areas: the new degree of urbanisation*. European Commission, The Directorate Generale for Regional and Urban Policy.

- European Commission. (2013). Benchmarking Regional Structure. <https://s3platform.jrc.ec.europa.eu/regional-benchmarking>.
- European Commission. (2013). *Rural Development in the EU. Statistical and Economic Information*. Directorate-General for Agriculture and Rural Development.
- Eurostat. (2018). *Regions in the European Union. Nomenclature of territorial units for statistics- NUTS 2016/EU-28*. Luxembourg: Publications Office of the European Union.
- Eurostat, GISCO. (based on 2011 population grid, LAU 2014 and NUTS 2013). https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Territorial_typologies#Share_of_population_by_type_of_territory.
- IFAD. (2019). *Rural Development Report*. International Fund for Agricultural Development.
- Souza, P. d. (2018). *The Rural and Peripheral in Regional Development. An Alternative Perspective* (1st ed.). New York: Routledge.