

Socio-economic typologies of rural spaces in Moldavia region. Study case: Botosani County, Romania

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This paper aims to provide a regionally integrated image of Botoșani County, by identifying base typologies concerning the administrative units inside the region it belongs. The analysis of the study focuses on the social and economic sectors aiming to underline the inequities from within. The state of the rural environment in region of Moldavia is statistically analyzed based on data provided by the Romanian Censuses for 2002 and 2011. This analysis serves to fulfill the purpose of this paper, which is to place Botoșani County in its integrated regional position argued from a complex perspective but capable to emphasize it at territorial level. The main results of the analysis concerning the economic and social typologies are acquired through the standardized values of the indicators used, through highlighting the existing positive and negative deviations, and also by setting a profile for each base administrative unit. This study is descriptive and analytic, being meant to highlight the evolution of the demographic, economic and social domains in Moldavia and Botoșani County in the period 2002–2011, the tendency of classifying the NUTS 3 administrative units by the deviations from regional means.

Key Words: *typology, inequalities, demography, economics, social, rural space.*

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Introduction

Rural development can be defined as the shaping instrument inside a homogeneous space particularly through land management, capitalization and valorisation of the resources, while aiming to preserve the local identity.

At the European level, rural development is regarded as an interdisciplinary sector, when it comes to elaborate the legislative basis for drafting strategies and

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policies. The studies are normally been made by specialists in economy, sociology, geography, since the objectives of the rural development seek to create a competitive rural economy, to improve life quality, to effectively valorise the rural space resources, as well as to rationally manage land in order to finally create a cohesive and competitive space from the socio-economic and territorial perspective (Bodocan, 2005; Bold, 2003; Mateoc-Sîrb, 2009; Muntele, 2010).

Rural development as a concept has also been studied socially and politically. The accent is on the agriculture, which plays an essential role in the development of rural environment. To restore the economic sectors of rural space it is a necessary to reduce the inequalities in values among rural areas (Bold, 2003).

Research has an important role to develop fundamental theories, empirically speaking, which reflects in a suitable way the reality, presents the practices and the ideal identities, applied on the rural development of European territory. The studies dedicated to rural development highlights the need for supplementing the present model of agriculture and rural life and in the same time, indicates the possibility of reconstruction of rural, having as source of inspiration the models of development (Florian, 2007).

Rural development needs a vision to place positive effects on the rural economy, in a long-term perspective on such territories (Florian, 2007). Often the studies and the references to the development of rural space, focus on paths concerning the modernization of agriculture and running of rural space, while the rural potential of other types (cultural, entrepreneurship) of space, are being left on a second plan despite their economical capability to contribute to rural space development.

The specific indicators of the three important sectors for the analysis of the rural space – economy, sociology and geography – provide the opportunity of correlating them in order to identify the typologies of the rural spaces, the disparities for each category or a complex typology to highlight the problems or opportunities of the rural space from the three perspectives (Surd, 2007).

A complex analysis must comprise distinct analyses for each domain, as well as correlations between the indicators which are specific to each domain, analyses of the current rural space. It must also include analyses of the urban-rural spaces and comparisons between periods, such as 2002–2011 (official statistical data from the Population and Dwellings Census or from the County Statistics Directorate) in order to observe evolutions or regressions of the indicators, which means underlining the issues of the rural space and the requirements of an effective policy of rural development in the following period.

This study aims to identify the current stage of development and of the development potential, by elaborating spatial-temporal and socio-economic typologies in order to underline the opportunities and vulnerabilities of the area etc. The classification of the rural spaces by the indicators specific to the demographic, social and economic domains has the role of emphasizing the two categories of rural spaces in Botoșani County: repulsive and attractive. According to statistics, the rurality within the studied area is accentuated. The dominant aspect is the low development, but the interdisciplinary approach represents a good way to generate a different vision on the rural space in Botoșani because a rural area can be at the same time demographically vulnerable and rich in resources, or it can have unique features that can be turned into

development potential. The study is interdisciplinary in order to pinpoint the current state of the rural environment in Botoşani County and within the regional context.

The main components of the rural environment at the national/local level compared to the European level show major discrepancies regarding its development; hence, the development policies have as an immediate purpose the diminution of the disparities within the rural environment and the shaping of a competitive territorial and socio-economic space (Shaw, 2000).

Methodology

A rural spaces typology was elaborated by using the ascending hierarchical classification of the Philcarto software, opensource, and indicators specific to the demographic, social and economic domain; hence, the positive and negative deviations were meant to classify the rural space in Botoşani County at the local and regional level. The types of spaces for the years 2002 and 2011 are necessary for elaborating comparisons, for drawing conclusions – on a given period – on important fields in the studied area and for indicating its perspectives.

The indicators identified as illustrative for the study, there have been calculated percentages out of the regional or county total. The role of these percentage values is to provide a complex regional image from a demographic, social and economic standpoint and to highlight visual correlations that can be identified between cartograms and the situation of the transport infrastructure, the physical-geographic factors, etc.

Indicators used for this study are the percentage of people with age between 0-19 years, 20- 64 years and >65 years (2011); the percentage of people trained with higher education, post- secondary school, secondary school, primary school and people with no school training (2002, 2001); the percentage of employees ranked on domains such as: primary, secondary, tertiary (2002,2011); activity rate by economic sectors($Rax = \frac{Pax}{pa} * 100$) where Pax shows the employees of activity sector(primary, secondary, tertiary) and Pa shows the total number of economic sectors employees.

Analysis statistical and cartographical spatial typologies created, which have the role of pointing couple of classification and demographic trends: social and economic, between 2002-2011.

The typologies listed below used the following indicators: In order to categorise administrative territorial units with respect to several characteristics (variables), hierarchical clustering methods (Hair et al. 1998) were applied using the statistic program Philcarto. The aim of a cluster analysis is to "partition a set of observations into a distinct number of unknown groups or clusters in such a manner that all observations within a group are similar, while observations in different groups are not similar" (Timm, 2002: 515). Cluster method is used to explain rural regional variations of selected socio-economic indicators. The variables used for the typology have been selected according to their relevance for rural development and their spatial distribution: administrative units classification by level of education in the years of 2002 and 2011: the percentage of people with higher education, post- secondary school, secondary school,

primary school and people with no school training; classification according to the level of education and the structure of employees during 2002: the percentage of people with higher education, post-secondary school, secondary school, primary school and people with no school training, as well as the percentage of employees ranked on domains such as: primary, secondary, tertiary; classification by the housing equipment and utilities and the serving population in the city of Botoșani; basic administrative units classification based on the number of employees of major sectors of activity in 2002: the percentage of employees ranked on domains such as: primary, secondary, tertiary;

Basic administrative units classification according to the following social or economic indicators of 2011 year: The percentage of people with age between 0-19 years, 20- 64 years and >65 years, the percentage of people with higher education, post-secondary school, secondary school, primary school and people with no school training, as well as the percentage of employees ranked on domains such as: primary, secondary, tertiary.

Results

Types of social spaces

Social and economic types of rural areas are identified through hierarchical ascending highlighting spatial typologies, which are meant to characterize a territory, pointing some particularities. The final output of the analysis can be graphically presented throughout a bi-dimensional diagram, known as dendrogram (Kaufmann, 1990). In this case, it is important to notice the particularities in the rural country of Botoșani, both locally and by reference to what is happening at the regional level of 2002 and 2011.

The social typology of Botoșani County emerges from the classification of the localities by the equipment of the dwellings with utilities, people endowed with dwellings with utilities, village development index and village social development index. The social level of an area represents the consequences of economic and demographic indicators, because a high economic level and a demographic balance determine a high social status, while economic and demographic instability indicates poor areas.

The education level plays an important role for the society, because it is a factor which indicates the development potential from the perspective of an instructed, specialized staff, as well as the economic potential, because tuition requires money, and an area with a low living standard may have a lower education level. The education level was determined by using the following indicators: people with an elementary, high-school, secondary school or college degree and people without education for the years 2002 and 2011. It is worth noting that in 2002 people with elementary and high-school degrees were dominant in certain parts of Moldavia, while in the other parts was dominated by people without education, those with various education levels representing the minority.

In 2011, the central part of Moldavian region (Suceava and Neamț counties) had a high education level compared to the general level of the area in question,

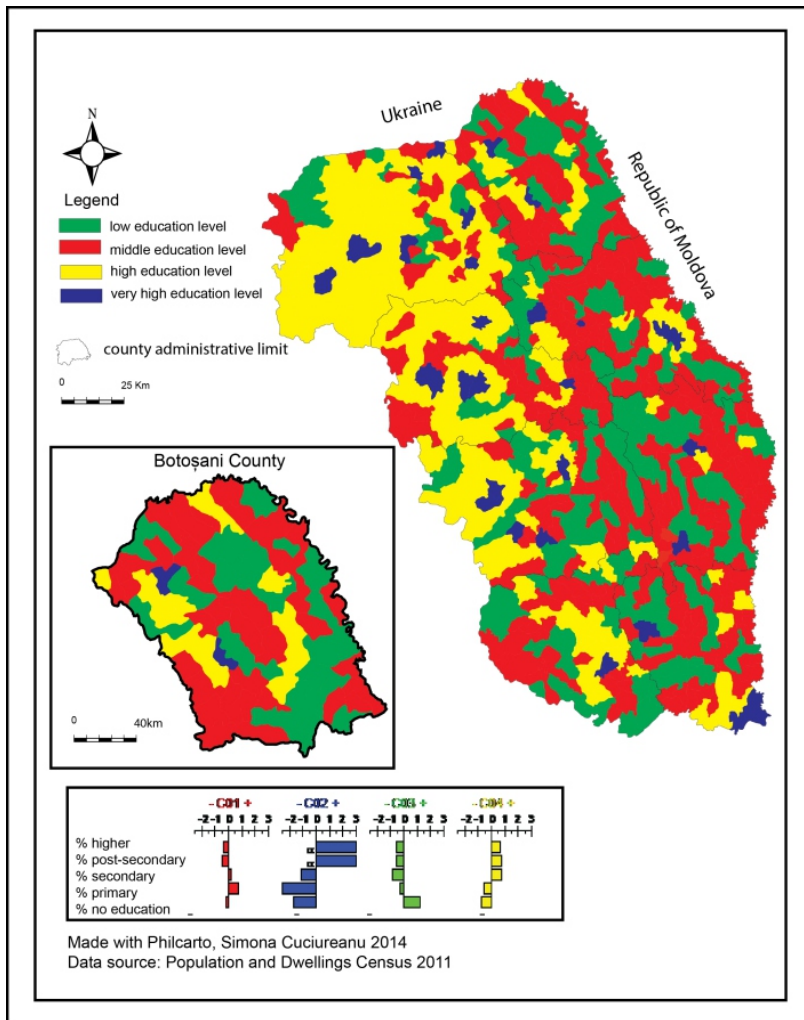


Figure 1. Classification of administrative units by education level in Moldavia (2002, 2011)

where people had only primary education or no education. Hence, there is a difference between the urban regions of the entire area (where people with various levels of education are dominant) and the rural zones (where people with primary education or no education prevail). It is also worth mentioning the influence of the urban areas upon the basic administrative units and the accessibility of the population to high-school units, because the dominant education level is high, being characterized by people with high-school, secondary school and college degrees. The education level can also play an important role in the territorial distribution and concentration of the number of employees. We analyzed the year 2002 by using the statistical data of the Population and Dwellings Census; consequently, we noticed the prevalence of the basic administrative units with a low education level and a small number of employees (Figure.1)

There also can be noticed urban areas with a significant number of employees, higher than that of rural areas, and higher education level. It can be stated

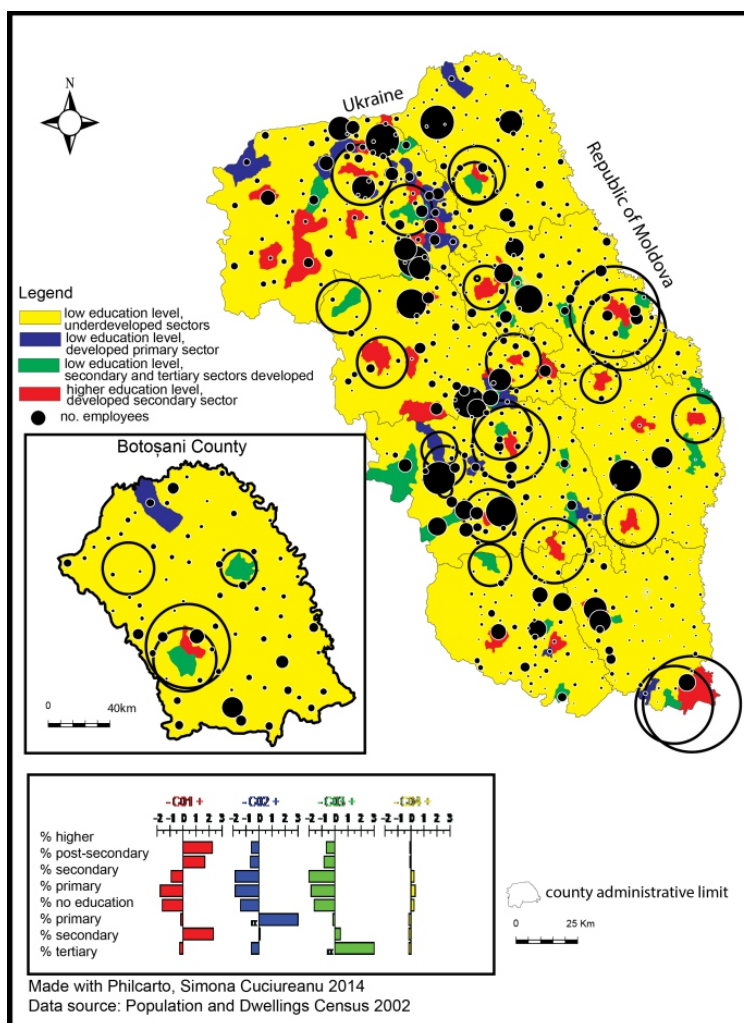


Figure 2. Classification of administrative units by education level and number of employees in Moldavia (2002)

that there is a dependence between the education level and the number of employees, because economic activities can be developed and diversified when the human resource is educated.

It is also worth stating the difference in the education level between urban and rural areas and the influence exerted by urban regions on proximal rural areas through the accessibility of students to high-schools or secondary schools and the automatic increase in the education level. From a demographic perspective, Botoșani County has the same general characteristics as the whole region of Moldavia, thus highlighting the rural-urban differences.

The demographic characteristics of Moldova during 2002–2011 highlights some changes, such as increasing the level of training of the part of Moldova (2011), decreasing the level of training of the eastern part of Moldova in 2011 from trained people with a secondary level (2002) to people prevailing with a primary lever of training (2011), the difference of level education of urban and rural areas and the influence of urban areas over rural ones in a proximity of

high accessibility from pupils at the institutions of high schools or professional and the automatic increase of educational level. Botoșani County stands out in term of demographic general characteristics fits in Moldova, emphasizing rural-urban differences.

Dwellings equipped with sewage system, electricity and gas represent an element of superior comfort, because currently most dwellings have electricity, but the other elements of technical comfort are quite rare. At present, each village has projects to access European funds and to provide inhabitants with the opportunity of benefiting from decent living standards.

The classification of the administrative units by dwelling endowment with utilities and people served by dwellings with utilities underlines the same type of localities. The dominant areas are those with insufficient dwelling endowments or those which only comprise a small number of dwellings with proper endowments. It is noticeable that the city of Botoșani has dwelling endowments above the county limits, with increased habitation comfort. Furthermore, the areas surrounding the city have dwellings with average endowments. Concerning the people served by these dwellings, there is an overlap of the classes corresponding to dwelling endowments.

Social issues influence the socio-economic development and indicate the development of these issues at the demographic level. This county is prone to numerous social, demographic or economic risks, which creates the premises of a pessimistic vision concerning a local development strategy and risk reduction.

The social level of the localities in Botoșani County underlines a low level, with numerous flaws, which means that authorities need to get involved in order to have a high standard of comfort and of social development. Thus, according to the indicators suggested by the sociologist D. Sandu (2005) urban areas have an average development level compared to the other urban areas in Romania but, at the county level, they are more developed than rural spaces, causing an obvious difference between the rural and the urban spaces.

Types of economic spaces

The economic typology of the localities in our study takes into account both the regional and the local context, in order to elaborate an economic hierarchy. The economic analysis was conducted by classifying the administrative units in relation to the occupied population and the number of employees by their activity field.

The labor force is seen as a meaningful indicator for economic variety, the development of basic economic sectors, the integration of the active population for economic development and competitiveness of the economic most important sectors. Workforce integrates in statistical term the labor force (active population occupied and unoccupied active population). The analysis has the purpose to reveal the dynamics of conclusive sectors of activity.

Between 1991–2012 the number of Botoșani County employees it is in a continuous drop (107214 people in 1991 and 48284 people in 2012), from 1991–1998, 40.000 employees have been lost. Between 1998–1999 shows a growth (from 64966 to 68783 people), after that it is a continuous drop until 2006 (52661 people). If 1991 registered approximately 104.000 employees, in

1998 were 64.966, while in 2006 were 52.661. It can be showed the improving of employees number within 15 years, which shows a low competitiveness of sectors, the secondary sector or the specific branches of the industry were in a continuously setback, many factories being dismantled, employees being made redundant, which caused this serious situation due to the decreasing number of employees.

Post Decembrist period had a negative effect on the industry, when specific Botoșani County textile mills were dismantled, some being purchased by foreign investors. Sugar factories such as Trușești factory and Bucecea factory were abolished one by one (until 1996 these factories had 1200 employees, which shows the dynamics of the secondary sector, but in 1996 the Trușești factory and Zatrus factory went bankrupt due to an inefficient administration that bought cheap fuel and damaged the technological line, leading to large debts).

„Industry of apparel in Botoșani County is nationally unique, given the large number of employees in this sector, but also of the existing factories. All these factories are mainly working for export, with agreements either directly or through intermediary companies, with the world's major fashion designers. In Botoșani, there are about 10.000 people, working in these approximately 100 garment factories that have from 10 to 800 employees.”

During the communist regime it has been a development of the garment, being built two large factories where the number of employees was approximately 2000 people, where one is in Botoșani and one in Dorohoi, and a factory of fabric (Uzinele Textile Moldova) with approximately 1000 employees.

Botoșani County was noted during 1990 at a national level by monoindustries, but in a few years began to appear factories vestures and foreign investment (SERCONF company started to work in spaces from Confecția, later Rapsodia Conf with capital investor Josef Aslan Seroussi). This is how begins the period when clothing industry suffers transformations by factories infiltration in possession of Italian, French, British, etc investors. In 1997 appears one of the largest garment factories, Formens, which is owned by Frenchman Gerard Losson (in 2012 this factory had 617 employees, with turnover of 144, 5 million Lei, according to the Ministry of Public Finance). This situation highlights two aspects: Botoșani County never had people with economic potential to invest in these plants and keep a secondary authentic competitive sector and competitiveness clothing factories due to foreign investments unprofitable of Boroșani County, but to investor's country of origin. Also, it can be seen that it is present the Iohn system, these involves partnerships between two foreign countries and rely on a workforce of less qualifies or unqualified.

The transition clothing factories and the dismantling of the sugar factories can be a credible reason that contributed to the sharp drop in the number of employees since 1990. Sectors of basic activities highlights their dynamics at the county level for each basic administrative unit. The analysis of employees number shows an overview of the dynamics of activities that contribute to economic development and society of Botoșani County, indicating the type of rural fields in the study area.

The number of employees of primary sector has been declining during 1991–2010 (from 10.669 people in 1991 to 1342 people in 2010). Major

decrease was due to the abolition of collective farm and the entry into decline of agriculture, which both led to a dynamic low primary sector as people, although were working in agriculture, they were not employees, they were not paid, but they were providing goods for their own household, indicating the practice of a subsistence agriculture.

The activity rate in the primary sector of rural space dropped from peaks of 83,33 in 1991 to 21,67 in 2011, which supplements the previously specified argument, that the abolition of collective farms has led the workforce employed to unemployment and reconversion. The dynamic rate of activity in the primary sector is negative, which shows that there were not identified other solutions to transform this sector into a competitive, either through the establishment of agricultural associations or by small farmers opportunities offered by the European Union since 2007 through the national Rural Development Programme, the European Agricultural Guarantee and Fisheries operational Programme [3].

The evolution of employees number in the secondary sector is steadily decreasing since 1991 (from 66033 people in 1991 to 16416 people in 2012), the industry is declining by dismantling factories or shift their privatization. Bankruptcy sugar factories which had a major number of employees decreased between 1996 and 1997, while the clothing industry went through a reorganization process immediately after 1990. Therefore, the continued decline of employees of secondary.

This County has suffered adverse consequences for the economy, such as for workforce through stagnation or closing the factories, which nationally noticed Botoșani County, garments and sugar factories. The decrease of the number of employees since 2007 (57037 people in 2007 and 48 284 people in 2012) due to integration into the European Union, when the workforce, which was working especially in apparel, emigrated abroad. Lowering wages determined a reorientation of workforce for immigration and the ensurance of a high standard of living in the their outside area.

On a territorial level is a negative dynamic activity rate of the secondary sector in the period 1991/2011, including municipal areas, Botoșani and Dorohoi, were they were holding clothing or textile factories, being affected by the changes that were dealt by the secondary sector. Industrial activities are not specific to Botoșani County, over time standing out in a sugar factory, now closed down and garment factories, currently under foreign capital. Two merging industries are manufacturing of agricultural raw materials and construction. Nevertheless, agricultural potential through numerous livestock and average yields, developed the manufacturing industry for dairy or meat products (slaughterhouse). Slaughterhouses meat exports both national and abroad, which ensures economic competitiveness and profit. There are present the milk processing companies (SC LACTO SOLOMONESCU - Countryside Vlăsinești) which also exports its products, already creating a brand.

Manufacturing industry shows that it is effective for the rural population to deal with livestock by setting up farms because they can sell products worldwide county and benefit from grants provided by the European Union for livestock. It can be taking into consideration a reason for the development of processing industry.

Nevertheless, while the secondary sector has experienced regression of the employees, it could develop and become competitive by developing appropriate industries Botoșani County (processing industry, clothing, construction). The number of employees in the tertiary sector has seen a major decline between 1996-2003 (31093 people in 1996 and 25 028 people in 2003, followed by an increase in the number of employees in 2005 (27 123 people), following a decrease in year 2009 (30981 people in 2009 and 30 208 people in 2012). Unfolding period which characterizes the general situation of the tertiary sector for Botoșani County, is due to: departure to work abroad, diversify services with EU integration and economic crisis (2008).

The activity rate of the tertiary sector shows a value close to 100% between 1991-2011, which apparently shows a diversification and competitiveness of the tertiary sector, but the situation is as follows: as Countryside Pomârla, Mitoc, Drăgușeni, Dobârceni have employees only in the tertiary sector because they are "representatives" of services (administrative, health, educational) that must provide basic administrative unit, and not the dynamics of the sector.

Apparently a positive situation in reality is a negative reality, as the number of employees is minimal, so other sectors have no employees, which has a very reduced competitiveness for the economy (Cuciureanu, 2014).

An important role for the development of the tertiary sector and increasing the number of employees it is entrepreneurship that is considered an engine of growth and a source of its continued creation of jobs in the capitalist countries. At European level, EU entrepreneurs have created 67% of all jobs, while in the United States, startups countries and companies in the last 5 years is almost all the net increase in jobs in the last 30 years (Surd, 2007). In Romania, according to the OECD, IMM's (small and medium sized enterprises) contribute 66% of the total number of employees in private companies, which is a good aspect for the country's economy. Entrepreneurs are designed to create companies and organizations that generate jobs and be able to develop multinational companies. They capitalize on the opportunities offered by the development of a society and creates the premise of development of a community. A simple conclusion of what entrepreneurship is represented in its importance to harness manpower for economic development.

An analysis of the number of employees in the three sectors of basic highlights the continued decline on workers of the three sectors of activity until 2005, after which there was a significant increase in 2006, a downward trend in 2008 and then a maintaining the number of employees by 2012.

The years 2006 and 2008 are two important moments for Romania, the run-up integration in the European Union (2006), which has motivated the development of certain industries or diversification of services, and the onset of the economic crisis (2008), which resulted the dismissal of a number of employees due to the decreasing yields or the reduced services. It is worth underlining that the occupied population prevails in the secondary and tertiary sectors in the city of Botoșani. However, in Dorohoi town, there is a concentration of the population in the secondary sector, while at the county level, most localities have low percentages of occupied population.

The classification of the localities by the number of employees by activity fields at the regional level underlines a deficit from this standpoint, which

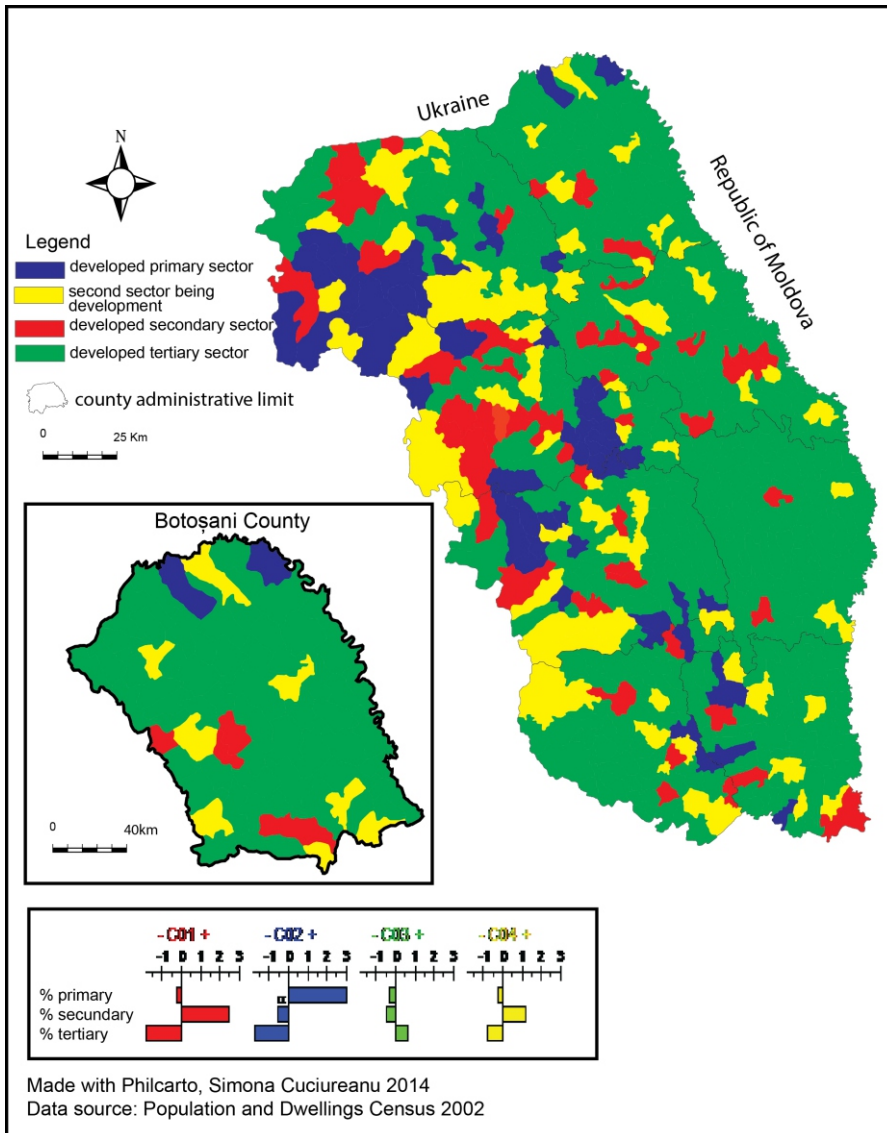


Figure 3. Classification of administrative units by number of employees in major activity sectors in Moldova (2002)

represents a problem of economic development and of ensuring a decent living standard.

The urban areas stand out through a significant number of employees, but the whole image shows that both the region of Moldova and Botoșani County have a low number of employees. The employees in the tertiary sector prevail because each basic administrative unit has a minimum number of employees working in the State's institutions, which provide basic services such as education, health, local authorities, while the secondary sector is weakly developed, Moldova not having a very competitive industry (Figure 3).

A conclusive typology for Moldova at the level of the year 2002 underlines uniformity for the socio-economic indicators at the level of the rural space, only

the urban areas standing out through a higher education level and a developed, competitive industry. This highlights weakly developed low administrative units, with numerous socio-economic problems. Botoșani County records a serious situation as long as only the municipalities of Botoșani and Dorohoi comprise developed areas, the other basic administrative units, including towns, facing major problems, specific to Moldavia.

In 2011, Botoșani County experiences a trend of reducing its socio-economic problems and of classifying the administrative units in a more structured manner. It is worth mentioning the eastern part of the county, with a significant number of employees in agriculture. The urban areas (Botoșani, Dorohoi and Săveni) have a dominant population over 65, but a higher education level and a dominant number of employees in the secondary and tertiary sectors; certain communes that may represent the peri-urban area (such as Răchiți, Curtești, Vlăsinești) have a significant number of employees in the secondary sector, which shows the influence of the urban areas in attracting investors and in the economic development of proximal areas. The general trend remains the same in the areas confronted with socio-economic problems, but it is worth underlining the emergence of some areas of influence (urban areas) that act as a pole for the socio-economic development of the basic administrative units situated in the proximity.

Conclusions

Region of Moldavia faces numerous demographic and socio-economic problems, the rural spaces being vulnerable. They are characterized by the following: weakly developed technical infrastructure, with a minimum living standard of dwellings; low education level, considering that people with average education are dominant; demographic vulnerabilities triggered by demographic ageing and weakly developed economic sectors. Botoșani County has the same general features as the region of Moldavia, with an emphasis on the negative characteristics of the rural space, because only a few basic administrative units have improved their situation.

Botoșani County has the premises of reducing its economic gap by developing agriculture and by creating economic competitiveness, based on modern agriculture. Furthermore, the social infrastructure is currently developing and modernising, which will ensure modern standards for dwellings. The only problem of this area is the demographic factor, the progressive ageing and the significant number of departures, which can only be compensated for by the socioeconomic development of the area and by determining people not to leave the country for work.

The rural space has various problems, the most significant being the following: the numerical decrease in population and the sector level decrease from secondary to primary, which prevents the economy from developing and being competitive. At the regional level, from the demographic point of view, this county fits the general features with a high birth rate and a large number of emigrants, which reveals negative prognoses. There is a discrepancy between urban and rural spaces as long as the educated population is concentrated in

towns and municipalities, there existing a small number of demographically balanced rural spaces.

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