

## **Regional Development Disparities and the Provision of Services of General Interest. A Case Study on the Health Care Services Availability in the North-East Region of Romania**

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**Abstract:** This paper proposes an inquiry into the issue of availability of services of general interest, offering as case study the health care services in the North-East region of Romania. The interregional and intraregional (within North-East region) disparities in terms of health care services provision are examined in relation to the overall regional development disparities, confirming that the concern with providing a minimum level of social SGI to all citizens has conducted to health care service disparities lower than those in terms of GDP per inhabitant. The paper also provides relevant evidence on the impact of demography, especially in terms of population density on the availability of health care services.

**Keywords:** services of general interest; health care services; availability; North-East region; Romania

**JEL Classification:** R12; R13; R50

### **1. Introduction**

The services of general interest (SGI) hold an important place in relation to the European model of society, referring to general functions and objectives that are essential for the implementation of fundamental citizen rights and for the accomplishment of economic, social and territorial cohesion goals (Bjørnsen et al., 2013; Constantin et al., 2013). A wide range of activities are included in this

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category, such as: water, gas, electricity supply, transport, postal services, telecommunications, sewage services, education, health care, social housing, etc. The Green Paper on SGI (CEC, 2003) classifies them into three categories, namely *services of general economic interest*, provided by large network industries (e.g. electricity, gas, transport, telecommunication, postal services), *other services of general economic interest* (e.g. water supply, waste management, public service broadcasting) and non-economic services and services without effect on trade. The services in the third category are not subject to specific EU rules, competition, state aid rules and are usually named *social services of general interest* (e.g. education, health care, child care, social housing, etc.) (EC, 2011).

SGI reflect the obligation of public authorities to provide them at certain standards in terms of quality, availability, accessibility and affordability, an important issue in this respect being the *minimum level of SGI* for individuals and enterprises. It brings into discussion terms like thresholds, critical mass, vulnerability applied to local community and regional level. Given the heterogeneity of the EU territories it is not possible to determine quantitative levels of SGI at EU level. Instead, these levels are subject to national policies in relation to ideologies, institutions, macroeconomic performance, also reflecting moral values, demographic structures, traditions, life style aspects, etc. (Rauhut and Littke, 2013; ESPON, 2012).

Besides the socio-economic dimension involved in these discussions, which envisages the provision of SGI to *everyone*, the territorial dimension has to be considered too, as it emphasizes the provision of SGI *everywhere*. The latter is closely related to the territory types relevant to SGI, in line with ESPON territory types, as follows: densely populated regions (metropolitan, urban), sparsely populated regions (sparsely populated, outermost, island, mountainous, rural) and swing regions (border, coastal, industrial, transition) (ESPON, 2012).

This paper aims to investigate how the above considerations are reflected in the case of the North-East region of Romania, which has been selected as one of the nine regions included in the case studies of the project entitled "Indicators and Perspectives for Services of General Interest in Territorial Cohesion and Development (SeGI)", in which the Bucharest University of Economic Studies has been one of the partners. The case studies have aimed to explore the issues of quality, accessibility, availability and affordability in the provision of SGI in regions specific to various SGI types of territories. The North-East region has been chosen as a relevant example of border, rural, intermediate region according to ESPON typology (ESPON, 2012). In this paper the case study results have been updated and discussed with an emphasis on health care services availability. More precisely it compares the situation of health care regional disparities to the overall regional development disparities, seeking to reveal whether the obligation of providing a minimum level of social SGI to all citizens has conducted to health care service disparities lower than those in terms of GDP per inhabitant.

## 2. Regional Development Disparities in Romania. The Situation of the North-East Region

The latest data issued by Eurostat for GDP per capita at PPP indicate that Romania was situated at 47% of the EU average in 2010, being ranked the last but one among all EU-27 states. She also displays high amplitude of regional disparities (Table 1): between the most developed Romanian NUTS2 region – Bucharest-Ilfov, with a GDP per capita at PPP of 111% of the EU average and the weakest region – North-East, with only 29% of the EU average there is a relative distance of 3.87:1.

**Table 1. Regional disparities in Romania in terms of GDP per capita (PPP) in 2010**

Region	GDP per capita		
	Euro, PPP	As % of the EU average	As % of the national average
North-East	7,000	29	61.4
South-East	9,400	38	82.5
South	9,500	39	83.3
South-West	8,800	36	77.2
West	12,900	53	113.2
North-West	10,200	42	89.5
Centre	10,900	45	95.6
Bucharest-Ilfov	27,100	111	237.7
Romania	11,400	47	100

*Source: authors' processing based on Eurostat data*

In fact, North-East region ranked the third among the least developed NUTS2 regions of the EU in 2010. It recorded a very slow growth compared to 2004<sup>1</sup>,

<sup>1</sup> 2004 is the year when the „Convergence” regions for 2007-2013 were established.

when it counted for 24% of the EU average, compared to Bucharest-Ilfov which increased from 68% of the EU average in the same year to 111% in 2010. North-East region is still characterized by a high share of employment in agriculture, namely 49.1% in 2010 (the highest in Romania), a household income per inhabitant of 85.6% of the national average and a share of only 2.4% of total FDI in Romania in the same year, while the share of population is 17.3%. The share of urban population in the North-East region was 42.9% in 2010, compared to 54.9% for the whole country.

However, when it comes to demographic indicators, the situation is different: in 2011 the density of population was 100.3 inhabitants per sq km (compared to the national average of 89.8 inhabitants per sq km), the live birth rate was 9.8 live births per 1000 inhabitants (compared to 9.2 at national scale) and the natural increase, even if negative, was higher than the Romania average (-1.3 natural increase per 1000 inhabitants compared to -2.6 for the whole Romania).

North-East region displays significant variations between its counties (NUTS3 level) with regard to the share of urban population (from 45% in Bacau and 42.7% in Suceava to 37.6% in Neamt), population density (from 150 per sq km in Iasi and 107.6 in Bacau to 82.9 in Suceava and 84.2 in Vaslui (both of them under the national average)), live births rate (from 11.1 per 1000 inhabitants in Suceava and 10.5 in Iasi to 9.1 in Botosani and 8.2 in Neamt (both below the national average) and the natural increase rate (0.5 per 1000 inhabitants in both Iasi and Suceava compared to -3.2 in Neamt and -3.3 in Botosani (a more important decrease than the whole country's average)).

The regional development and demographic disparities which characterise the North-East region will be examined in the next section in connection with the disparities in terms of health care services in order to respond the research question launched by this paper.

### **3. Interregional and Intraregional (North-East region) Disparities regarding the Health Care**

#### **3.1. General Considerations Regarding Health Care In North-East Region**

In 2011, out of the total number at national level corresponding to each category, the North-East Region registered the following percentages: 13.8% of the hospitals, 4,6%<sup>1</sup> of the clinics, 14.0% of dental clinics, 16.0% of pharmacies, 16.0% of family medicine clinics, and 14.0% of specialized medical offices. The number of hospital beds in Romania was of more than 128,5 thou. (19,6 thou. of them representing 15.2% of the total were located in the North-East). Thus, on average, 6.0 beds per 1000 inhabitants were in Romania while in the North-East Region a value slightly lower than 5.3 beds was registered.

Out of the total number encountered at the national level per each category, in the North-East Region were registered: 12.9% of doctors, 14.6% of dentists, 14.2% of pharmacists and 16.1% of the persons with medium qualification in healthcare. In these conditions, it is observed that the access to the healthcare professionals, of the people in the North-East Region is hampered by its relative scarcity. Thus, in the North-East, on average, one doctor was responsible for 546 patients (compared to 406 nationally), a dentist was responsible for 1,899 patients (compared to 1,599 nationally), a pharmacist was responsible for 1,783 people (compared to 1,465 nationally) and a persons with medium qualification in healthcare was responsible for 182 people (compared to 169 nationally).

#### **3.2 Health Care Disparities Analysis**

When the disparities in terms of health care services are analyzed, number of hospitals, number of hospital beds and number of physicians are most frequently taken into consideration. In accordance with the frame built by the ESPON project on SGI for regional typologies that provide evidence on SGI patterns at regional scale, hospital beds per inhabitant is employed as a background indicator for availability of main health care treatment while physicians per inhabitant serves for estimating the availability of first aid treatment (ESPON, 2012)..

In terms of hospitals number the North-East region counts for 64 hospitals, which represent 13.8% of the total hospitals number in Romania (Table 2). This share is lower than the share of population, indicating a weaker representation for this indicator in the North-East region compared to other regions. However, the relative distance in terms of hospital beds per 100 thousand inhabitants between North-East

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<sup>1</sup> The big difference between this value and the reference population (17.3%) can be explained by the fact that an important share of clinics in Romania are private, and, since the financial resources of the population in the North East region are lower, their ability to represent the clientele for clinics is lower. Consequently, following the market principles in the North East region are fewer clinics.

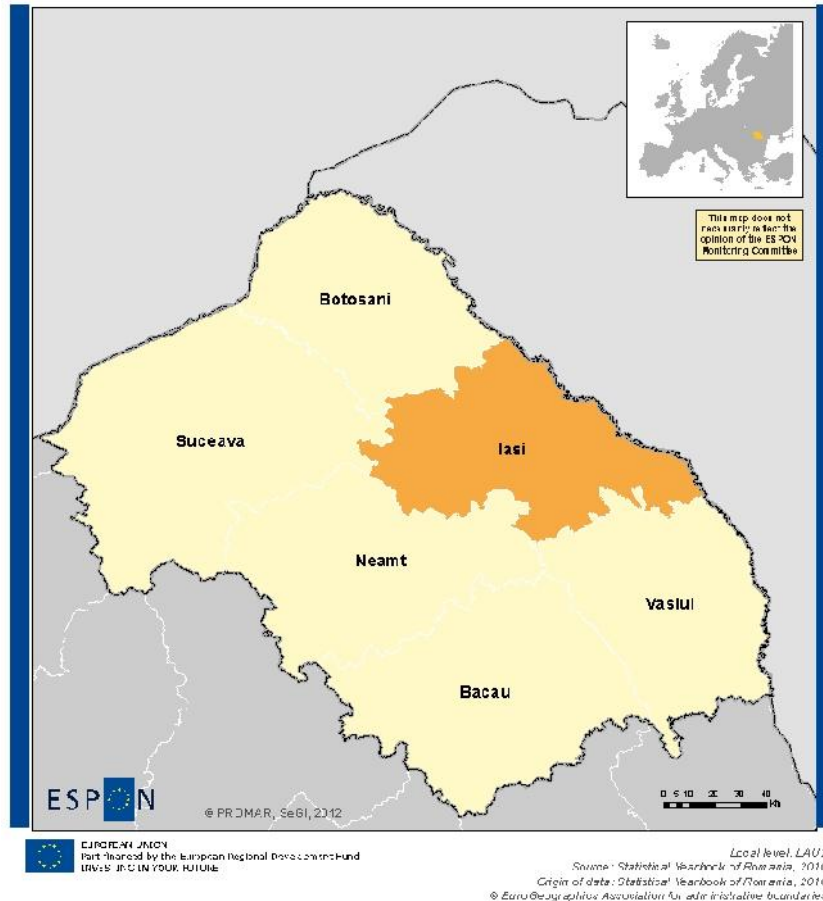
region and the national average is only 1.29:1, lower than the relative distance between the national average and the North-East region in terms of GDP per capita, which is 1.63:1.

**Table 2. Interregional and intraregional (North-East) disparities in Romania in terms of hospitals number in 2011**

	<b>Hospitals</b>	<b>Hospitals per 100 thou inhabitants</b>
<b>ROMANIA</b>	<b>464</b>	2,2
<i>North - West</i>	<b>69</b>	2,5
<i>Center</i>	<b>58</b>	2,3
<i>North - East</i>	<b>64</b>	1,7
Bacău	13	1,8
Botoșani	7	1,6
Iași	25	3
Neamț	5	0,9
Suceava	10	1,4
Vaslui	4	0,9
<i>South - East</i>	<b>49</b>	1,8
<i>South - Muntenia</i>	<b>57</b>	1,8
<i>Bucharest - Ilfov</i>	<b>84</b>	3,7
<i>South - West Oltenia</i>	<b>39</b>	1,8
<i>West</i>	<b>44</b>	2,3

*Source: authors' processing based on primary data provided by the Statistical Yearbook of Romania, 2012*

The intraregional disparities with regard to the number of hospital beds are presented in both Table 2 and Map 1. They indicate the gap between Iasi county and the rest of the region, reflecting the higher economic situation and higher population density of this county compared with the other counties of the North-East region.



**Romania Case Study**  
**Number of hospitals**

- 7.0 - 13.0
- 13.1 - 24.0

**Map 1. Number of hospitals in the North-East Region at NUTS3 level, 2011**

*Source: Statistical Yearbook of Romania 2012, National Institute of Statistics*

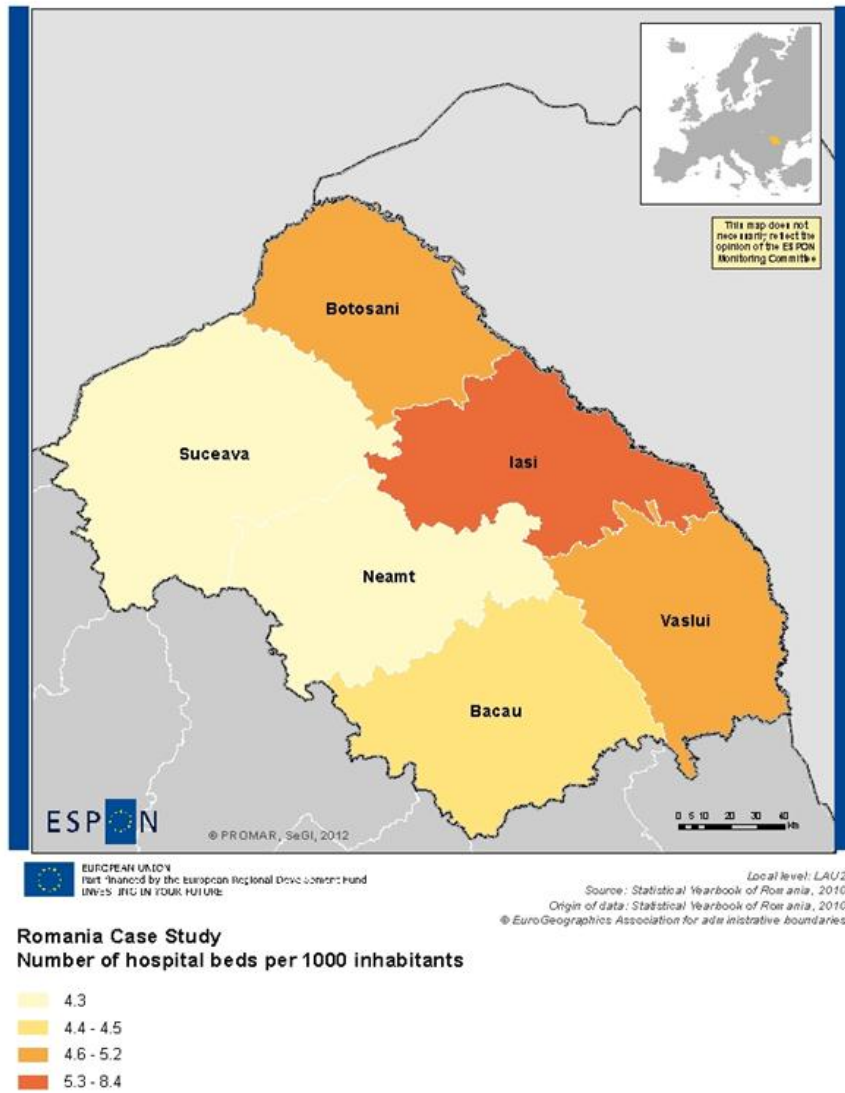
As regards the number of hospital beds per 1000 inhabitants (Table 3 and Map 2), the North-East region has a relative distance of 1.13:1 as against the national average, much lower than the gap in terms of GDP per capita. Moreover, this indicator records a higher level in North-East region than in South-East and South-Muntenia regions, both these two regions having a higher development level than North-East. Instead, the intraregional disparities are bigger, Iasi county having a number of 8.4 beds per 1000 inhabitants whereas all other counties of the North-East region being below 5, less than both the North-East and national average.

**Table 3. Interregional and intraregional (North-East) disparities in Romania in terms of hospital beds in 2011**

	<b>Hospital beds</b>	<b>Hospital beds per 1000 inhabitants</b>
<b>ROMANIA</b>	128501	6
<i>North - West</i>	17954	6,6
<i>Center</i>	15703	6,2
<i>North - East</i>	19591	5,3
Bacău	3131	4,4
Botoșani	2193	4,9
Iași	6938	8,4
Neamț	2259	4
Suceava	2968	4,2
Vaslui	2102	4,7
<i>South - East</i>	13545	4,8
<i>South - Muntenia</i>	14543	4,5
<i>Bucharest - Ilfov</i>	21996	9,8
<i>South - West Oltenia</i>	12352	5,6
<i>West</i>	12817	6,7

*Source: Authors' processing based on primary data provided by the Statistical Yearbook of Romania, 2012*





**Map 2. Hospital beds per 1000 inhabitants in the North-East Region at NUTS 3 level, 2011**

*Source: Statistical Yearbook of Romania 2012, National Institute of Statistics*

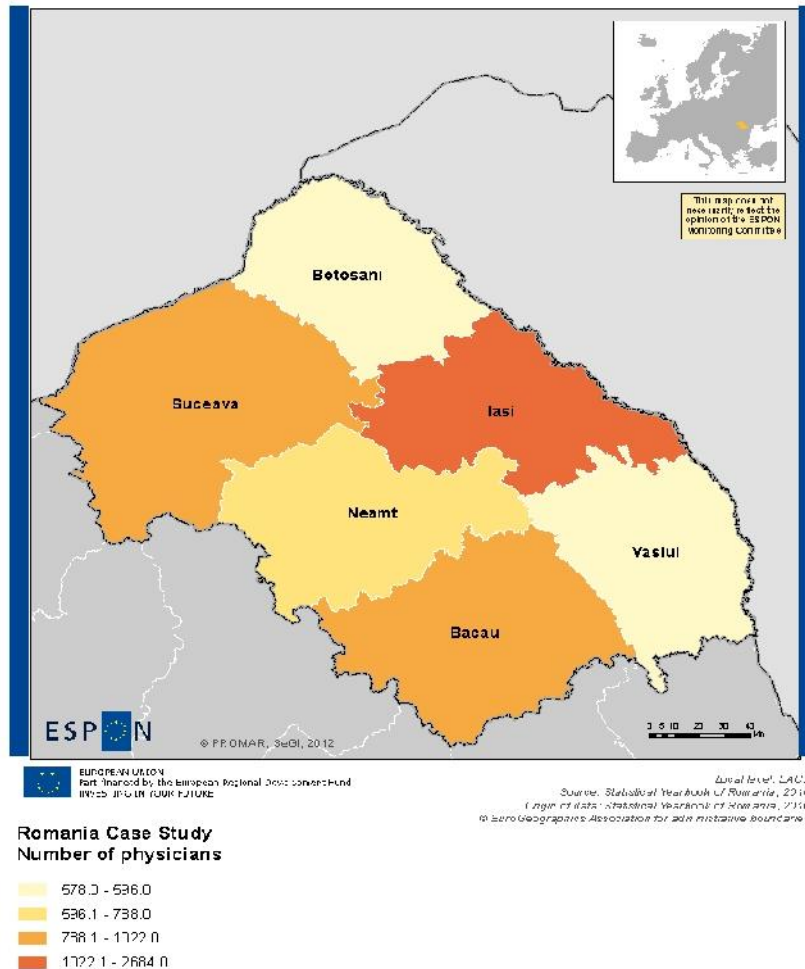
When it comes to the number of physicians and people per physician ratio, data must be analysed in a different manner: the less people per physician the better. The gap between North-East region and the whole Romania is 1.39:1, again lower than the GDP per capita gap. And, again, the situation is better than in South-East and South Muntenia regions (Table 4). Nevertheless, the amplitude of intraregional disparities in the North-East region is considerable, of 2.87:1, resulting from the

lowest ratio in Iasi county, of 282 and the highest in Vaslui County, of 808 people per physician. It reflects the big discrepancy in the standards of living between Iasi County, where one of the biggest growth poles and largest university centers of Romania – the city of Iasi - is located and Vaslui, a county characterized by chronic underdevelopment and poverty. In addition, whereas Iasi county has the highest population density (much higher than the national average), it is significantly lower than the national and region's average in Valsui county. The situation is more nuanced in the North-East region in terms of total number of physicians (Map 3), mirroring the hierarchy in terms of GDP per capita: Iasi is followed by Bacau, Suceava and Neamt.

**Table 4. Interregional and intraregional (North-East) disparities in Romania in terms of doctors and physicians number in 2011**

	<b>Physicians</b>	<b>People per physician ratio</b>
<b>ROMANIA</b>	52541	406
<i>North - West</i>	7714	351
<i>Center</i>	6039	417
<i>North - East</i>	6765	546
Bacău	1024	696
Botoșani	592	751
Iași	2917	282
Neamț	790	710
Suceava	888	798
Vaslui	554	808
<i>South - East</i>	4763	587
<i>South - Muntenia</i>	4499	721
<i>Bucharest - Ilfov</i>	11825	191
<i>South - West Oltenia</i>	4636	480
<i>West</i>	6300	303

*Source: authors' processing based on primary data provided by the Statistical Yearbook of Romania, 2012*



#### 4. Concluding Remarks

The analysis of the statistical data with regard to health care services in the North-East region of Romania points out the concern with the minimum provision of social services of general interest, the disparities of the corresponding indicators between North-East region and national average being significantly lower than those in terms of GDP per capita.

The results also highlight the impact of demography on the distribution of SGI: health care services are concentrated in agglomerations and county capital

municipalities and other urban centres, confirming the overall conclusions of the ESPON project on SGI (ESPON, 2012). Also, the accessibility features are associated to the North-East region's territorial aspects that are reflected by the ESPON typology on NUTS3 level, namely border, rural, intermediate region. The revealed interregional and intraregional (within North-East region) health care services disparities represent a challenge for the applying of the future cohesion policy and SGI management at local level. Their interpretation can suggest realistic starting points for the health care strategies and policies in Romania, in accordance with the territorial cohesion principles focused on rebalancing objective (in relation to the equity and fairness promotion), growth and development and the territorial orientation of the cohesiveness efforts.

## 5. Acknowledgement

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