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PERIPHERIALISATION AS A RESULT AND DRIVING FORCE OF TERRITORIAL MOBILITY IN POST-SOCIALIST ROMANIA

Abstract. Over the past two and a half decades, the transition from a centralised to a market economy has affected Romania's spatial configuration by re-widening the gap between cores and peripheries at a regional scale. Through a statistical analysis carried out for the North-West Region (NUTS 2), my contribution focuses on one of the mechanisms interrelated with peripheralisation, namely territorial mobility. The aim is twofold. First, to show how increasing core-periphery disparities impact mobility flows by offering different levels of structural (dis)advantages. Second, to exemplify how various social groups can influence these (dis)advantages by choosing their place of residence and work.

Key words: peripheralisation, core-periphery structure, internal migration, commuting, Romania.

1. INTRODUCTION

Over the past two and a half decades, countries in Central and Eastern Europe have seen fundamental socio-economic transformations as a result of their transition from state socialism to democracy. The most impactful changes have been the establishment of democratic institutions, market liberalisation and large-scale privatisation of the public sector (Timár, 2001). Some regions and cities (especially capitals and regional urban centres) have adapted successfully to the transition and have found ways to integrate into global production networks. Others however (such as rural regions, the former mono-structural industrial regions or the mining areas) have not coped very well, but rather entered a deepening crisis, and experienced increasing peripheralisation and marginalisation (Pütz, 1999; Surd *et al.*, 2011; Török, 2014; Benedek, 2015). In Romania too, the transition from a centralised to a market economy has re-widened the gap between centres and

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peripheries at a regional scale (Kurkó, 2010), with deindustrialisation, suburbanisation and out-migration being some of the key processes referred to in explaining this socio-economic restructuring (Brown *et al.*, 2005; Benedek, 2015).

Building on the existing literature, this paper argues for the fundamental role played by territorial mobility in light of increasing peripheralisation, seeing that over the past 25 years the redistribution of population and the socio-economic development have evolved according to similar patterns. But unlike previous research that exemplifies the relationship between mobility and unequal development, the present analysis goes to a deeper level, beyond administratively defined regions. Taking Romania's North-West Region (NUTS 2) as an example, this paper looks at core-periphery relations between settlements and describes the flows of internal migration and commuting, which have taken place between them over the past two decades (1991–2011). Focusing more on the development trajectory of peripheries, the aim of this research is to show how core-periphery disparities affect mobility flows by offering different levels of structural advantages and how various social groups can add to these advantages by choosing their place of work and of residence. Relying on yearly statistics and census data, the paper first shows how internal migrants have moved between centres and peripheries of the NUTS 2 region during the post-socialist years and how commuters move presently. Secondly, the article shows who exactly is more mobile in terms of key demographic indicators (age, education and occupation) and who is not.

The paper has been divided into three sections. The first section links theoretical remarks on core-periphery disparities and peripheralisation to Dumitru Sandu's Local Human Development Index (LHDI) (Sandu, 2011; Ionescu-Heroiu *et al.*, 2013), on which the empirical delimitation of the analysed core-periphery system is based. The second part introduces the concept of territorial mobility, both theoretically and through a descriptive statistical analysis, presents the flows of internal migration and commuting observed in Romania's North-West Region over the past two decades (1991–2011), and interprets them in relation to the developments in the LHDI-based core-periphery structure of the region. The third section concludes with some remarks regarding the interrelatedness between unequal spatial development and territorial mobility, in order to better understand the continuous changes within core-periphery structures and the afferent peripheralisation processes.

2. UNDERSTANDING SOCIO-SPATIAL RESTRUCTURING IN ROMANIA'S NORTH-WEST REGION THROUGH THE CONCEPTUAL FRAMEWORK OF CORE-PERIPHERY DISPARITIES

Peripheralisation describes a socio-spatial process in which peripheries experience a long-lasting solidification of structural deficits and a gradual decline in socio-spatial development, in relation to a dominant centre. Brought on by a contin-

uous weakening of socio-economic capacities and a diminishing scope of action for social actors and institutions, these deficits translate into a limited capacity of the peripheral space to secure a high quality of life for its population (Keim, 2006). As an analytical concept, peripheralisation emphasizes the inherent relationship between a periphery and its dominating centre, thus facilitating a relational understanding of spatial core-periphery disparities (Keim, 2006; Beetz, 2008; Lang, 2011). In this sense, peripheralisation implies also processes of centralisation and polarisation:

The logic and dynamics of spatial centralisation determine the peripheralisation of other spaces by attracting population, economic productivity and infrastructural functions to the disadvantage of other regions (Lang, 2011, p. 3).

As definitions of peripheralisation further underline, together with the gradual decline in socio-spatial development of an already disadvantaged periphery in relation to a dominant centre (Keim, 2006), various forms of dependencies emerge between cores and peripheries – dependencies that are shaped by the political, cultural and historical contexts, in which agents with different levels of power form relations and strategies. So in addition to the actual lack of physical and social infrastructures peripheries face, one of the outcomes of being in a position of less power is that the local workforce in peripheries is placed in a position of dependency. This is the outcome of neoliberal competitiveness-centred policies followed by the governments of Central and Eastern Europe, through the organization of public services and through market-driven devaluation of assets found in peripheries (cheap labour, agricultural land, local skills and relations) (Nagy *et al.*, 2015).

The interrelatedness between processes of centralisation and peripheralisation can be seen in Romania as well. Over the past 25 years, Romania and other former socialist countries in Central and Eastern Europe have become part of the capitalist global market and have embarked on a process of economic and social restructuring. They have adopted the model of neoliberal democracies, in which the role of the government changed to the detriment of welfare liberalism and in favour of private-public partnerships (Harvey, 1989; Hutchison, 2010). As such, the countries were fully exposed to neoliberal capitalism and its inherent spatial logic, which produced socio-spatial inequalities in the form of an imbalanced relationship between cores and peripheries (Nagy *et al.*, 2015). Through the growing concentration of capital investment in urban centres and suburban settlements, where the rate of return is the highest, core-periphery disparities have been increasing, creating a more polarised space at a regional scale. In this system, centres benefit from the cumulative effects set off by higher levels of capital investment: creating jobs, generating tax revenues, engaging in a variety of political and innovation networks, and enabling public investments to improve their infrastructure and the

quality of life (Gottdiener and Budd, 2005). Conversely, peripheries are left struggling with limited access to generally available and desirable resources (material or symbolic), and with restricted room for autonomous action (Kreckel, 2004). In this cumulative process, the respective quality of space creates different levels of quality of life and different opportunities for the residents of cores and peripheries. The focus of the present study is then to analyse to which extent the above discussed processes are prevailing at a sub-regional scale, and to explore the spatial results that they produce in the North-West Region's core-periphery structure, by showing how the gap between cores and peripheries, between thriving and poor places, keeps on growing.

Core-periphery inequalities are usually studied quantitatively with the help of conventional economic indicators, such as GDP growth, rates of inward investment, distance from metropolitan centres etc. However, this approach may hide growing regional and local inequalities under slowly equalizing figures at national scale (Ehrlich *et al.*, 2015) and it fails to give a clear image on a place's welfare and standard of living (Benedek *et al.*, 2015). Therefore, in order to present a more complex measurement of core-periphery disparities in the North-West Region of Romania, the LHDI devised by Dumitru Sandu has been employed. The LHDI builds on the United Nations Human Development Index methodology and was developed as a way of defining lagging regions at the locality level by using available statistical data (Ionescu-Heroiu *et al.*, 2013) that goes beyond GDP.¹ The indicator represents a factorial score for the human, health, vital and material capital of Romanian municipalities (Fig. 1) and it ascribes a higher development level to settlements where the inhabitants are experiencing a higher level of well-being, as indicated by: a high medium level of education, a high life expectancy at birth, a lower medium age of the population, a good material state of the belonging households and a high level of public consumption for comfortable living (Sandu, 2011).

By applying the LHDI scores for 2002 and 2011, the present paper groups the 444 municipalities of the North-West Region² into three categories: core, semi-periphery or periphery,³ and reveals the core-periphery structure at two moments in

¹ The LHDI scores, calculated by Dumitru Sandu for the two census years 2002 and 2011, are openly available at: <https://sites.google.com/site/dumitrusandu/bazededate>, last accessed on 16.12.2016. However, there still is quite a strong correlation between the LHDI and overall economic growth. As Ionescu-Heroiu *et al.* (2013) show, 'an increase in GDP/capita of one thousand RON is accompanied, on average, by an increase of LHDI, at county level, by 0.88 points' (p. 102).

² Because very small localities of less than one thousands inhabitants are excluded from calculations in Dumitru Sandu's database, four of the settlements lack a LHDI score for both 2002 and 2011. They have been marked in Fig. 2 as 'missing data'. In addition to these, 23 villages have not been ascribed a LHDI score for 2002 because they have been established as autonomous localities only after that year. For the purpose of the analysis, they have been ascribed the scores of the locality that they used to belong to before becoming autonomous.

³ The categories were build using the Natural Breaks (Jenks) classification method.

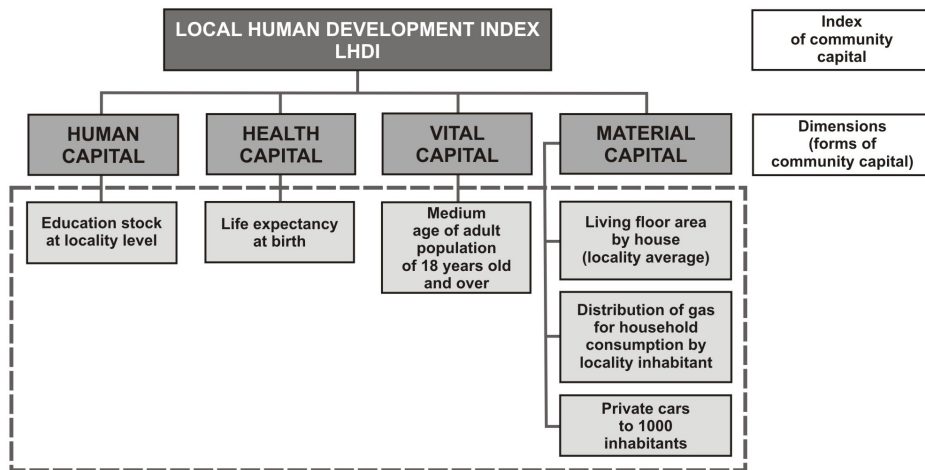


Fig. 1. The four dimensions of the LHDI by Dumitru Sandu

Source: Ionescu-Heroiu *et al.*, 2013, p. 238

time (Fig. 2).⁴ The *cores* (with an LHDI score of 57–84 in 2002, 72–106 in 2011, and an average growth of 16.9 LHDI points from 2002 to 2011) include the large and medium-sized cities/urban centres of the North-West Region, some of their surrounding villages, and some small towns. The highest scores have been awarded in both years to the regional centre Cluj-Napoca, while the biggest growth in terms of LHDI score (from 68 to 104) has been seen by Cluj-Napoca's largest suburb, Florești. The *semi-periphery* (LHDI index of 42–56 in 2002: 55–71 in 2011, and an average growth of 13.7) consists mostly of rural settlements and some small towns, and the *periphery* (LHDI index of 17–41 in 2002: 33–54 in 2011, and an average growth of 11.6) of rural settlements. The spatial core-periphery structure has been quite persistent in time, as over 80% of settlements belonged to the same category in 2011 as they did in 2002. Only 37 settlements (8%) moved up one category – 32 of them are peripheral villages that became semi-peripheral – and 46 settlements (10%) moved down one category – 38 semi-peripheral villages moved to the periphery.

In general, there has been an increase in development in the entire region, albeit at different speeds, as only four settlements have not received at least one point more in 2011 than in 2002. Still, when also looking at the population distribution (Tab. 1), the LHDI groups show different development dynamics: cores

⁴ In comparison, Dumitru Sandu delimits the LHDI into the following categories, using the same intervals for both 2002 and 2011, at a county level: 80–103 upper developed, 75–80 developed, 70–75 upper-middle developed, 60–70 middle developed, 55–60 lower-middle developed, 50–55 poor, 40–50 very poor (Ionescu-Heroiu *et al.*, 2013, pp. 101–102).

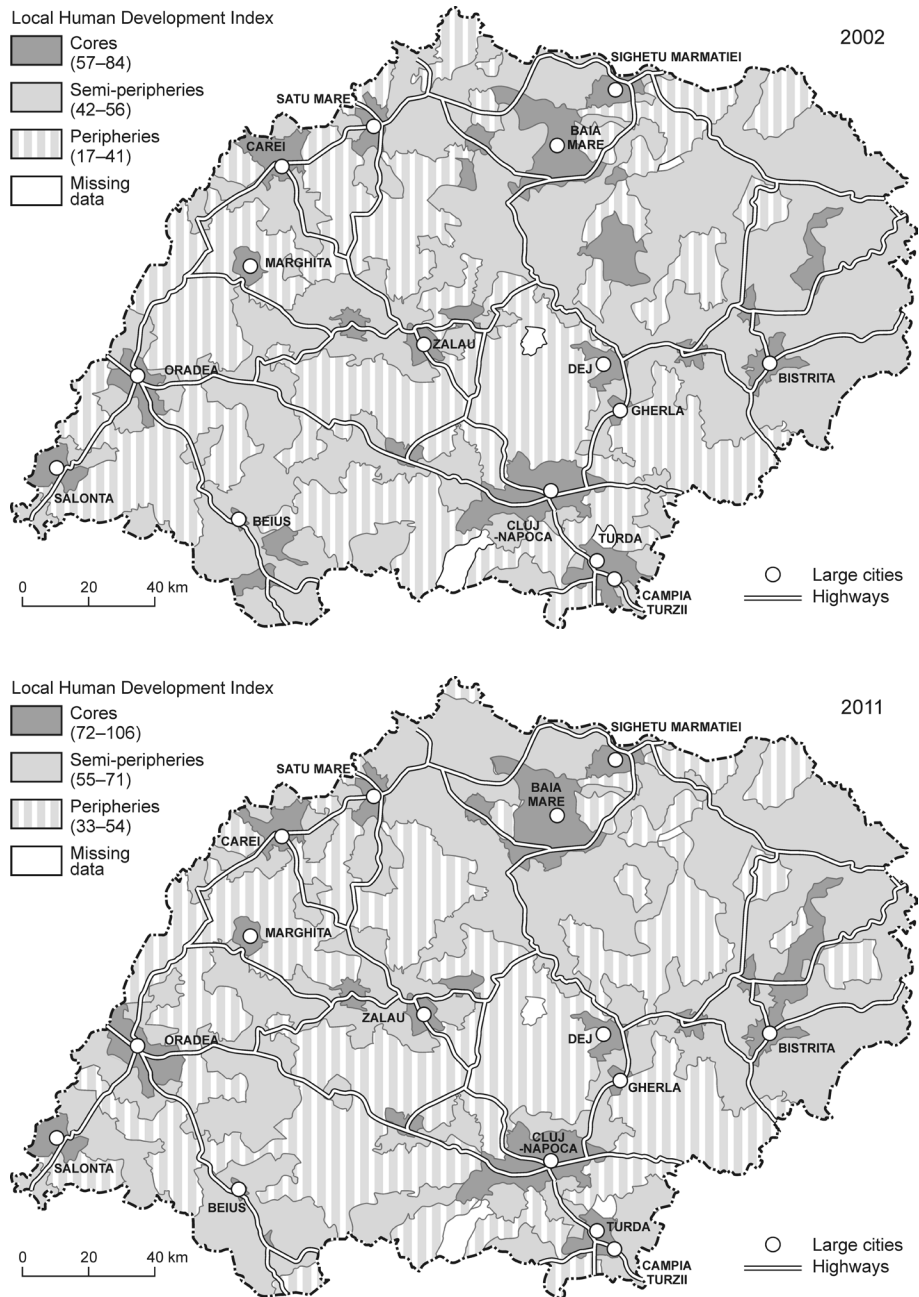


Fig. 2. The core-periphery structure for Romania's North-West Region in 2002 and 2011

Source: author's elaboration on the basis of data from Dumitru Sandu

Table 1. Distribution of the population among LHDI groups

LHDI groups	2002			2011		
	number of settlements	population size	population share (in %)	number of settlements	population size	population share (in %)
Cores	44	1 506 376	52.3	41	1 488 599	52.4
Semi-periphery	213	842 590	29.3	210	869 856	30.6
Periphery	183	530 734	18.4	189	483 473	17.0
TOTAL	440	2 879 700	100.0	440	2 841 928	100.0

Source: author's elaboration on the basis of annual data from the National Institute of Statistics.

and the semi-periphery have become more concentrated, and host an increased share of the region's population in fewer settlements, while the periphery has de-concentrated, and grew in terms of settlements, but shrunk demographically. As the spatial distribution of LHDI scores shows, the key axes of core-periphery disparities are related to rural-urban residence, population density and the diversification degree of the local economy, with all the diversified high-density cities of the region acting as cores, and the periphery consisting of rural agricultural settlements. Higher accessibility to service and employment centres, as well as a wider social capital of the inhabitant population contribute to achieving a higher development level too (Ionescu-Heroiu *et al.*, 2013). This effect is visible when analysing the evolution of the core-periphery structure in time: large urban settlements (marked by labels in Fig. 2) were surrounded by more localities belonging to the core group or the semi-periphery in 2011 than in 2002. At the same time, the core group itself can be seen as less dispersed and more concentrated around the larger cities of the region in 2011 than in 2002 (Fig. 2). For rural communities, the distance and accessibility to urban growth centres, with rich internal markets, are crucial. Being located closer to a large city and to a highway is related to having a better educated, more vital population, with a longer life expectancy and more material capital, as well as a higher growth in terms of LHDI from 2002 to 2011. Conversely, longer distances and reduced accessibility due to poor infrastructure deepen rural poverty and dwindle the pace of growth. This illustrates the strong polarising effect exercised by the largest cities and the concomitant relations of dependency.

3. PATTERNS OF TERRITORIAL MOBILITY EMERGING IN RELATION TO CORE-PERIPHERY DISPARITIES

3.1. Conceptualising Territorial Mobility as an Outcome and a Contributing Factor to Peripheralisation

Because of the structural disadvantages that people in peripheries face – the lack of equal access to occupational, educational and financial opportunities, the exclusion from the social networks with most power, and the slim chances of influencing the decisions that affect their daily lives – peripheries become strongly associated with poverty, marginalisation and social inequality. The resulting differentiated life chances that residents have in centres or peripheries support the reproduction and the further increase of unequal development (Gottdiener and Budd, 2005). Given the lack of services in peripheral areas, including educational facilities and the limited choices of career paths, unsatisfied inhabitants (when possessing the necessary means) try to re-place themselves in a preferred living environment, perceived as having a higher quality, which promise to increase the chances of well-being for them and their family (Boyle *et al.*, 1998). At an individual level this engagement in mobility (migration or commuting) can be seen as a strategy to adapt to, or to overcome peripheralisation. But collectively, after a certain threshold is reached, the actions of agents can re-shape the local structure, by influencing the sustainability of existing local economies and the prospects of new economic projects. Thus, because it is mostly the young and the skilled who have sufficient assets to become mobile, peripheries are left to also cope with the out-migration of highly educated and young people, and with demographic ageing and shrinkage (Kühn, 2015). Ultimately, this diminishes even further the available human capital and the internal capacity of development, which leads to a vicious circle that reproduces peripherality (Massey, 1990).

As the model of Western neoliberal democracies shows, local labour markets are becoming increasingly segmented and polarised: instead of mid-level jobs in old manufacturing and in the public sector, new jobs were created mostly in two areas, as Castells describes: highly paid jobs in high-technology and advanced services sectors, and low-paid jobs in services, downgraded manufacturing and in informal and black economies (Hutchison, 2010). In terms of core-periphery disparities, this enables the centres to have a more diversified economy and better infrastructure, which allows them to attract workers at both the top and the bottom ends of the occupational and income distribution (Sassen, 1991). It is the highly-skilled workforce – the ‘creative class’, as Florida (2005) has famously dubbed them – which then consequently become a key driving force for further economic development. Meanwhile, peripheries, because of their lack of opportunities, low level of investments and low-income job opportunities, are caught in a slow

decline, since the population decrease caused by out-migration and demographic ageing translates into shrinking markets and a decline in local productivity (Ionescu-Heroiu *et al.*, 2013).

These interrelated patterns of mobility and development can also be found in Romania's North-West Region. Here, migration and commuting manifest themselves differently in rural settlements of the periphery and of the core. Being more engaged in territorial mobility – with the exception of return migration – is more common in places with a higher LHDI score, as the more developed villages have more internal in-migrants, more temporary emigrants abroad, and a larger commuting rate to urban centres (Ionescu-Heroiu *et al.*, 2013). As the following sections will show in more detail, the urban centres of the region and the suburbs around them are attracting a young and skilled workforce as internal in-migrants, as well as lower skilled and unqualified workers as commuters from peripheries. Meanwhile, the mobility to and from peripheries is decreasing, which – combined with a low fertility rate⁵ and high rates of external migration⁶ experienced throughout the entire country – is leading to demographic shrinkage, to reduced chances of further development, and to an increasing dependency on the cores.

3.2. Methodological Remarks

The LHDI-based core-periphery structure introduced in the previous section represents the foundation for the following empirical analysis, in which mobility flows are analysed in terms of their interrelatedness to peripheralisation, in the context of post-socialist transition and the related socio-economic restructuring. The two forms of territorial mobility included in the analysis, because of their different but significant role as driving force and outcome of peripheralisation within the region, are internal migration and commuting. The analysis on spatially differentiated mobility flows was conducted by using existing census and yearly data at municipality level, provided by the Romanian National Institute of Statistics. First, it describes and visually represents how internal migrants have moved between centres and peripheries of the North-West Region after 1991 (with the post-socialist period being split into two decades, 1991–2001 and 2002–2011, according to the

⁵ In Romania the fertility rate is low. The World Bank reported 1.4 births per woman in 2014: <http://data.worldbank.org/indicator/SP.DYN.TFRT.IN> (last accessed on 14.11.2016).

⁶ While official statistics give different figures, it is estimated that 2–3 million Romanians (from a country of approximately 20 million inhabitants) are working abroad, or migrating back and forth (Boboc *et al.*, 2012; Ionescu-Heroiu *et al.*, 2013). Accurately capturing the phenomenon in numbers is very difficult given the temporary and circulatory character of Romanian international migration. Not only are people moving back and forth between Romania and a country abroad, staying different periods of time, but plenty migrants also move between different countries abroad, with or without returning to Romania first (Croitoru *et al.*, 2014, p. 4).

years of the national censuses), and how commuters move presently.⁷ Secondly, it compares the mobile and the total population of the municipalities in terms of basic socio-demographic characteristics (age, education, occupation), in order to show how the incoming population affects the chances of further development in their area of destination. International migration has been excluded from the analysis, not because its effects are irrelevant to the development potential of the sender area,⁸ but because it fails to highlight linkages between cores and peripheries within the studied region, and is consequently beyond the scope of this paper. At the same time, a gap in the literature is being addressed, since previous studies have extensively followed the effects of international migration on Romanian settlements, while internal migration has been a less popular topic, despite it being very relevant in shaping regional disparities (Török, 2014).

To analyse linkages between unequal development and territorial mobility, the following empirical analysis looks at the Romanian North-West Region (NUTS 2). The meso-scale has been chosen in order to address a gap in the literature: theoretical references on the subject tend to describe polarisation and peripheralisation processes either at a macro-level (how countries and regions are affected by occupying a place in the capitalist global market), or at a micro-scale (underlining how centrality and peripherality are being lived and experienced differently by individual actors). Instead, the present paper looks at the core-periphery relations between the settlements within a NUTS 2 region, thus enabling the analysis of dependencies created within the region, beyond the aggregated administrative units. As a region of analysis, the North-West Region represents an appropriate choice for highlighting processes of peripheralisation, considering that one of the region's counties, Cluj, reported among the highest figures on social development and on intra-county urban-rural disparities in the country (Romania's Territorial Development Strategy, 2015).

⁷ In order to reproduce the mobility flows, 2011 census data was aggregated according to recorded places of origin and departure – in case of internal migration – and places of residence and of work respectively – in case of commuting. While in the case of internal migration the census data provided the opportunity to include a temporal dimension (recording the year in which people have settled in their place of residence), for commuting the census only recorded mobilities of the year in which it was conducted, with no other data being available on commuting at such a small spatial scale. Surely, adding a longitudinal perspective to commuting patterns would have improved the method for the present paper, however the same depth of analysis could not be achieved using already aggregated, yearly statistics.

⁸ The remittances sent back home by Romanians working abroad represent a substantial share of money inflows, although these numbers are also hard to calculate, given that they are mostly private transfers between family members and are often handed through informal channels. Estimates show that in the 2000s the remittances' ratio from the GDP grew to more than 5% (Litan, 2009, p. 23). And after 2009, when foreign direct investment (FDI) decreased because of the economic crisis, remittances represented the higher share of money inflows (Ionescu-Heroiu *et al.*, 2013, p. 194). Thus, remittances thus have a significant economic impact on the national, regional and local development potential.

3.3. Empirical Evidence from Romania's North-West Region

The mobility of individuals between cores and peripheries is closely connected to processes of socio-economic restructuring, which is why the following presentation of empirical results concerning mobility flows is accompanied by a summary of the major economic, political and social transformations that have impacted Romania and the North-West Region in the post-socialist period. As with other former socialist states, after the collapse of state socialism the industrial production in Romania was drastically reduced, since the entire secondary sector suffered without state intervention and was not able to compete on the global market. During the first years of the 1990s, numerous factories had to be either downsized or closed entirely, job opportunities in cities became scarce, unemployment rates grew, and many people were not able to afford the living costs in urban dwellings anymore. Thus, the general downsizing of industrial employment affected not only the economic structure of cities and regions, but also triggered a major redistribution of the population, generating a strong flow of internal migration from urban to rural settlements. Figure 3 visualises this trend. It depicts the largest relative flows of the first post-socialist decade, expressed as the ratio between incoming migrants from a specific settlement of origin and the total population at the settlement of destination. And all of the depicted one-way flows lead from large cities of the core area to villages, mostly of the semi-periphery and periphery.

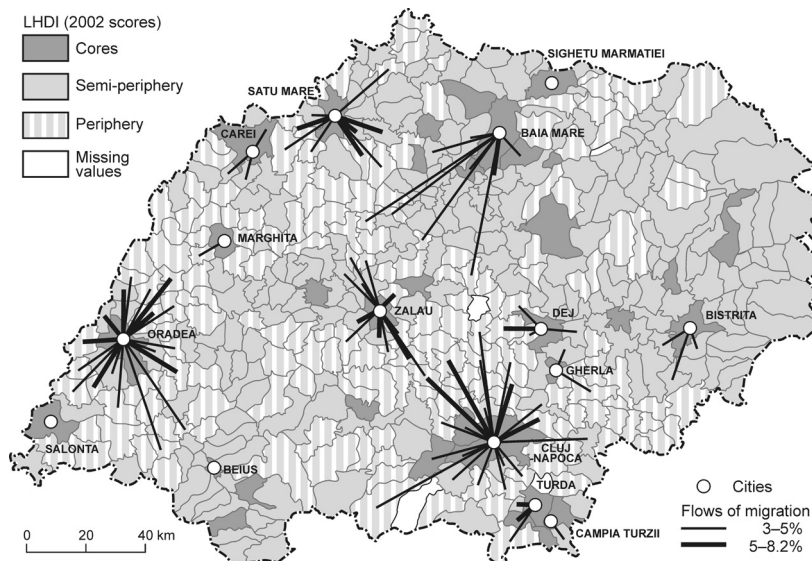


Fig. 3. The largest one-way flows of internal migration in 1991–2001, from urban to rural (relative size: percentage of migrants from the total population at place of destination)

Source: author's elaboration on the basis of data from 2011 National Census

As the data further shows, within these flows, middle aged and older adults, and the unemployed are over-represented. If in the total population of the semi-periphery and the periphery approximately 39% are 35–64 years old and, separately, 25% are adults with no registered occupation, among the internal migrants settling in this area, 58% are 35–64 year old, and 31% are adults without occupation. This trend is slightly more pronounced in the periphery. The explanation for this difference in age and (lack of) occupation comes from the fact that for most of these migrants moving away from cities constituted in fact a return migration. During state socialism, the rapidly expanding industrial sector met its increasing demand for workforce through a transfer of labour from agriculture, by relocating rural dwellers in quickly-built standardized apartment blocks in urban areas. So when the factories closed after 1989, many people were in fact returning to their places of birth. Since at the same time the new democratic state was also returning agricultural land to landowners previously deprived of their property through forced collectivisation, these returning migrants could substitute unemployment or early retirement for agriculture – albeit just an agriculture of subsistence, due to the fragmentation of agricultural land and the lack of machinery and equipment after the dismantling of the cooperatives (Török, 2014). And although the return migrants are on average better educated and (when working) better qualified than the total population of the periphery, they still present little potential to help slow down the process of demographic shrinkage and to initiate processes of growth, as return migration is the only form of migration reported to have a negative correlation to local development (Ionescu-Heroiu *et al.*, 2013).

After the second half of the 1990s, having overcome the transition crisis, urban centres began to recover from the economic downfall and improved their economic performance. This economic development coincided with an increase in internal migration. As census data shows (Tab. 2), all LHDI groups saw an increase in incoming migrants in the second post-socialist decade (2002–2011). But it was the mobility within the core region which grew most steeply, as suburbanisation intensified and the villages around the biggest cities recorded the highest population growth. These incoming migrants are mostly young and highly educated adults: 62.8% of those settling in the core in 2002–2011 are 18–34 years old, and 35% of them hold university degrees – significantly more than the corresponding share within the total population of the core, where only 26.8% are in the same age group and 23% are university graduates. Given their level of education, these in-migrants are also employed in more skilled and better paid jobs (Tab. 3). The jobs, however, are located mostly in the cities, which means that the increasing number of internal migrants settling into the suburbs is accompanied by strong commuting flows to the cities. Figure 4 visualizes the share of out-going commuters from every settlement of the North-West Region and highlights again the strong effect that the proximity and accessibility to large cities has on the development potential of nearby rural communities. Because commuters reproduce

a dynamic interdependency between the places where they live, work and use services, an intensive commuting flow strengthens functional links between two settlements (Servinski *et al.*, 2015) and illustrates how core cities are inseparable from their hinterland, coming together as a whole (Roose *et al.*, 2015).

Table 2. Place of destination for the internal migrants relocating within the North-West Region

Place of origin for internal migrants		Place of destination for internal migrants							
		Cores		Semi-periphery		Periphery		Total	
		Count	row N %	count	row N %	count	row N %	count	row N %
1991–2001	Cores	28 313	48.0	16 846	28.6	13 819	23.4	58 978	100.0
	Semi-periphery	21 977	59.9	10 190	27.8	4 508	12.3	36 675	100.0
	Periphery	20 027	63.8	6 237	19.9	5 129	16.3	31 393	100.0
	TOTAL	70 317	55.3	33 273	26.2	23 456	18.5	127 046	100.0
2002–2011	Cores	58 441	59.1	25 604	25.9	14 884	15.0	98 929	100.0
	Semi-periphery	21 576	57.6	10 848	29.0	5 045	13.5	37 469	100.0
	Periphery	14 326	55.6	6 757	26.2	4 677	18.2	25 760	100.0
	TOTAL	94 343	58.2	43 209	26.6	24 606	15.2	162 158	100.0

Source: author's elaboration on the basis of data from 2011 National Census.

Table 3. Occupational structure of population groups in the core settlements (in %)

Occupational groups	Internal in-migrants 1991–2001	Internal in-migrants 2002–2011	Total population 2011
Leadership positions	4.6	4.9	3.8
Specialists	29.9	34.4	23.1
Technicians	10.8	13.2	11.3
Administrative officers	6.3	6.4	6.0
Service employees	16.7	16.2	17.8
Qualified labourers in agriculture	1.8	1.7	3.3
Qualified labourers	15.1	11.1	17.5
Machinery and machine operators	9.5	7.6	10.0
Unqualified labourers	5.2	4.5	7.1
TOTAL	100.0	100.0	100.0

Source: author's elaboration on the basis of data from 2011 National Census.

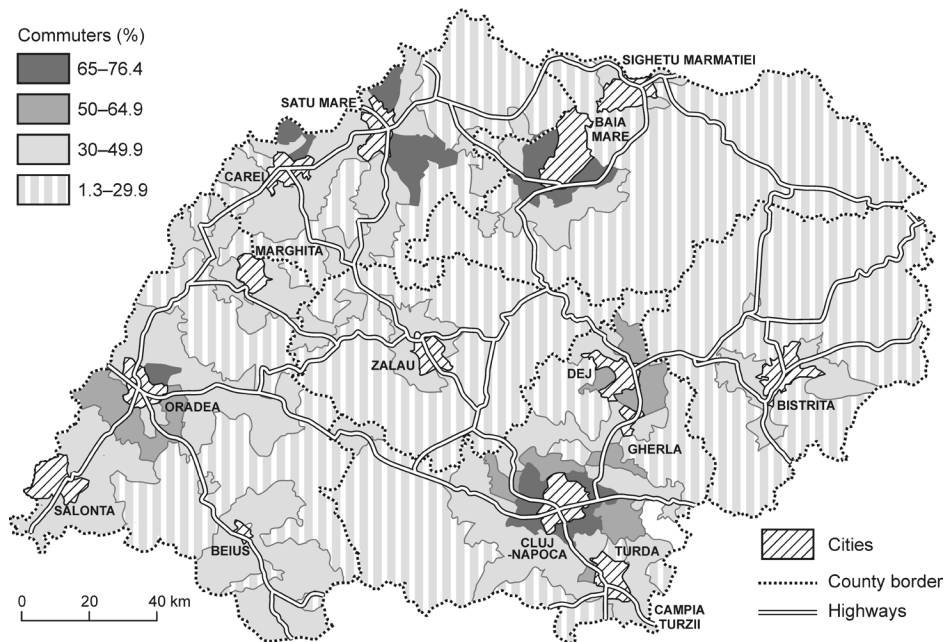


Fig. 4. Percentage of out-going commuters from the occupied population (2011)

Source: author's elaboration on the basis of data from 2011 National Census

While the core settlements were experiencing an increased development and managed to attract young highly skilled in-migrants between 2002 and 2011, the periphery's demography declined, despite the small increase in incoming migrants it received compared to 1991–2001 (as already seen in Tab. 1 and 2). Table 2 further reveals that the periphery is becoming less connected to the core through internal migration: not only has the share of in-migrants from cores to the periphery decreased by 8.4% over the two analysed decades, but the out-migration from the periphery to the core area has also shrunk by 8.2%. Instead, in the second post-socialist decade (2002–2011) the number of people moving within the periphery has increased. This shows that the periphery has become more enclosed, as individuals were less able to move to better developed settlements – or less willing to choose internal migration as a strategy of coping with peripheralisation over the alternatives (external migration, commuting etc.). Indeed, commuting is a more popular response among people dissatisfied with the performance of peripheral local economies and with the available socio-economic opportunities. In 2011, 37094 of people residing in peripheral villages were commuting for work. This represents 21.3% of the periphery's occupied population and exceeds by far the total number of 25760 people who had decided to move away in 2002–2011 from their residence located in the periphery.

The commuter flows registered by the 2011 census point towards the relation of dependence between peripheries and cores. The commuters who reside in the periphery seek employment in the centre, where they work mainly in jobs that require low skills (machinery operators, qualified and unqualified labourers) (Tab. 4). Commuting offers them access to a bigger labour market, with a more diversified offer of jobs, outside of agriculture. Additionally, the commuting patterns in the opposite direction also play their part in strengthening the relation of dependence between the two types of localities. The empirical analysis shows that commuters residing in cores and working in the semi-periphery or the periphery are significantly better educated and employed in more skilled professions, compared to the total population of the semi-periphery and periphery (Tab. 4). They work especially as what the census calls specialists and technicians, categories which include positions such as doctor, veterinarian, teacher, accountant, lawyers etc. This shows how peripheries depend on cores in order to maintain such specialised services locally, since they are not seen as attractive enough for these commuters to choose as a new permanent residence.

Table 4. Compared distribution of occupation (Column N%) between the total population and the incoming commuters (with place of work) in the core-periphery structure

Occupational groups	Cores		Semi-periphery		Periphery	
	total population	incoming commuters	total population	incoming commuters	total population	incoming commuters
Leadership positions	3.8	2.3	0.9	2.4	0.6	3.7
Specialists	23.1	14.4	6.7	18.7	4.9	34.8
Technicians	11.3	7.5	3.3	6.5	2.0	6.1
Administrative officers	6.0	4.7	2.3	4.2	1.7	4.5
Service employees	17.8	15.0	10.6	10.4	8.3	12.5
Qualified labourers in agriculture	3.3	3.0	34.0	1.2	44.8	2.0
Qualified labourers	17.5	26.8	17.1	22.8	12.6	16.5
Machinery and machine operators	10.0	17.7	9.1	23.0	7.3	12.0
Unqualified labourers	7.1	11.4	16.0	10.8	17.9	7.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: author's elaboration on the basis of data from 2011 National Census.

4. SUMMARY AND CONCLUSIONS

The analysis of Romania's North-West Region traces a complex pattern of interrelatedness between peripheralisation and territorial mobility. Acting as an indicator of increasing peripheralisation for the North-West Region, the evolution of the LHDI-based core-periphery structure shows that despite the general increase of LHDI scores in time – which implicitly indicates an overall increase in socio-economic development and well-being – the periphery category has not only seen the lowest levels of growth, but it has also expanded in terms of comprising settlements from 2002 to 2011. One of the contributing factors for this is the specific socio-demographic composition of the main flow of internal in-migrants moving to the periphery: the return migrants, consisting of a higher share of middle aged and older adults, and of unemployed, affected negatively the vital and material capital of the area.

Starting from a position of disadvantage and dependency in relation to cores, peripheries lack equal access to occupational, educational and financial opportunities, and generally struggle with poverty and marginalisation. For their inhabitants, the less developed infrastructure and low-income job opportunities result in a reduced quality of life and differentiated life chances, which accumulate in time and support the reproduction and the further increase of unequal development, leaving peripheries caught in a slow decline. In light of these structural disadvantages, peripherality becomes a driving force for territorial mobility, seen by the individual as a strategy to adapt to or overcome peripheralisation, an active attempt to re-place himself/herself in a more rewarding place. However, because it is mostly the young and the skilled who have sufficient assets and motivation to become mobile, peripheries are left to also cope with the out-migration of highly educated and young people (the so-called brain drain), and with demographic shrinkage. Thus, mobility becomes one of the causes of peripheralisation itself, by diminishing the available human capital, which translates into a decline of local productivity and shrinking markets. Ultimately, this reduces the internal capacity of development even further, and leads to a vicious circle that reproduces peripherality.

Because of growing employment opportunities in centres, combined with a market-driven devaluation of assets found in peripheries, the local workforce of the periphery depends more on job opportunities offered in the cores and relies on commuting as an alternative strategy to adapt to peripheralisation. As the data shows, in the centres too, the local workforce from the periphery is placed at the bottom end of the production network, being employed mainly in low-skilled and low-wage jobs in services or downgraded manufacturing, as machinery operators, qualified and unqualified labourers. Their share among more specialised and better-paid occupations is small, not only when commuting but also at their place of residence, as commuters coming in from cores to settlements in the periphery occupy a higher share among specialists and technicians. Having residents of the

cores occupy positions such as doctor, teacher or accountant, which are necessary to provide basic public services to the community, highlights the chronic problem of the periphery in keeping the more educated population as residents, and its dependence on the core to provide the necessary specialised workforce needed to keep such essential facilities.

In conclusion, the data shows that in the North-West Region territorial mobility has both followed and influenced the changes in the core-periphery structure, by strengthening or weakening linkages created between settlements. Thus, tracing the mobility patterns has also empirically revealed the relational aspect of peripheralisation: while peripheries are shrinking in terms of demography and experiencing the lowest average growth in development, core areas are reaping the cumulative benefits set off by higher capital investment and are attracting human resources through both internal migration and commuting. Consequently, the incoming mobile population becomes a driving force for further economic development, making it increasingly difficult for the less developed areas to catch up.

As a final remark, territorial mobility is surely just one of the several factors that affect the direction and scope of processes of peripheralisation. But because this article has focused on territorial mobility, other contributing factors unfortunately had to be deemed beyond the scope of the paper. In this sense, a more thorough analysis of the socio-economic processes and of the changes in policy making, which have occurred in Romania after 1989, would undoubtedly bring more depth to the analysis. Future attention also deserves to be given to individual motivations and agency behind engaging – or not engaging – in territorial mobility in light of increasing peripheralisation, which could not be captured through the statistical approach of this paper.

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