

**CORE-PERIPHERY PATTERNS
ACROSS THE EUROPEAN UNION:
CASE STUDIES AND LESSONS FROM
EASTERN AND SOUTHERN EUROPE**

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CORE-PERIPHERY PATTERNS ACROSS THE EUROPEAN UNION: CASE STUDIES AND LESSONS FROM EASTERN AND SOUTHERN EUROPE

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List of Abbreviations

ADF	Augmented Dickey-Fuller
ADL	Autoregressive Distributed Lag
AMECO	Annual Macro-Economic Database of the European Commission
B	Booming Sector
BM1000	Balance of Internal Migration per 1000 persons
BRICS	Brazil, Russia, India, China and South Africa
CADF	Covariate Augmented Dickey-Fuller Test
CAP	Common Agricultural Policy
CCC	Circular Cumulative Causation
CE	Current Expenditure (government) in percentage of GDP
CEE	Central and Eastern European
CEECs	Central and Eastern European Countries
CEPAL	United Nations Economic Commission for Latin America
CF	Cohesion Fund
CORINE	Coordination of Information on the Environment
CP	Cohesion Policy
DD	Dutch Disease
DOLS	Dynamic Ordinary Least Squares
DOSL	Dynamic Ordinary Least Squares
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
ECAs	Ex-ante Conditionalities
EEC	Eastern European Countries
EFSD	European Fund for Strategic Investments
EIB	European Investment Bank
EM	Expenditures of Municipalities per one inhabitant
EMFF	European Maritime and Fisheries Fund
EMU	Economic and Monetary Union

EN	Eastern Neighbourhood
ENP	European Neighbourhood Policy
EP	Economic Peripherality
ERDF	European Regional Development Fund
ESF	European Social Fund
ESIF	European Structural and Investment Funds
ESPD	European Spatial Development Policy
ESPON	European Spatial Planning Observation Network
EU	European Union
EU12	EU9 and Greece, Spain and Portugal
EU15	EU12 Plus Austria, Finland and Sweden
EU27	EU 15 Plus the Countries that Accessed the EU in 2004 and 2007
EU6	Belgium, France, Germany, Luxembourg, Italy and Netherlands
EU9	EU6 and Denmark, Ireland and the United Kingdom
EUROSTAT	Directorate-General of the European Commission for the Provision of Statistical Information about the Member States
FDI	Foreign Direct Investment
FE	Fixed Effects
FP7	European Union's Research and Innovation Funding Programme for 2007–2013
G	Final Consumption (Government) in percentage of GDP;
GCI	Global Competitiveness Index
GCR	Global Competitiveness Report
GDP	Gross Domestic Product
GDPGR	Real GDP Growth Rate
GFCF	Gross Fixed Capital Formation
GLS	Random Effects Estimator
GMM	General Method of Moments
GPI	Genuine Progress Indicator
GVA	Gross Value Added
GVC	Global Value Chains
HDI	Human Development Index

HDT	High Development Theory
HIIT	Horizontal Intra-Industry Trade
ICTs	Information and Communication Technologies
IG	Intermediate consumption (government) in percentage of GDP
IIT	Intra-Industry Trade
IM	Incomes of Municipalities per one inhabitant
IRS	Increasing Returns to Scale
KG	Gross Fixed Capital Formation (Government) in percentage of GDP
L	Lagging Sector
LRIR	Long Run Interest Rate
LT	Lisbon Treaty
MFP	Multifactor Productivity Growth
MIP	Macroeconomic Imbalance Procedure
MS	Member States
N	Non-tradable sector
ND1000	Number of Dwellings
NE	Number of Employed
NEG	New Economic Geography
NL	Net Lending (government) in percentage of GDP
NMS	New Member States
NPE100	Number of Private Sector Enterprises per 100 inhabitants
NPP	Number of Population in Productive age
NTP	Number of the Total Population
NUTS	Nomenclature of Territorial Units for Statistics
NUTS2	Nomenclature of Units for Territorial Statistics level 2
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
OP	Operational Programme
PD	Population Density
POLS	Pooled Ordinary Least Squares
PPPs	Purchasing Power Parities standard
PPS	Purchasing Power Standard

QR	Quantiles Regressions
R&D	Research and Development
RCI	Regional Competitiveness Index
RE	Regional Economics
RER	Real Exchange Rate (base 2010)
RGDPpc	Real GDP per capita
RGDPpg	Real Gross Domestic Product Growth
RHS	Right Hand Side
RPL1000	Number of Readers in Public Libraries per 1000 inhabitants
SE	Southern Europe
SEC	Southern European Countries
SF	Structural Funds
SF_T	Inflow of external current transfers
SGP	Stability and Growth Pact
SM	Single Market
SMEs	Small and Medium Enterprises
SMEs	Small and Medium-Sized Enterprises
SP	Spatial Peripherality
SRIR	Short Run Interest Rate
TCR	Total Current Revenue (government) in percentage of GDP
TEC	Treaty European Commission
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
TOs	Thematic Objectives
TVA	Total Value Added
UK	United Kingdom
VAIECB	Industry VA Excluding Construction and Building
VAT	Value Added Tax
VIIT	Vertical Intra-Industry Trade
WEF	World Economic Forum
WIIW	The Vienna Institute for International Economic Studies
WLS	Weighted Least Squares
WWII	Second World War

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Introduction: Core-Periphery Patterns in the Development of the EU's regions. Eastern Versus Southern Peripherality

In the aftermath of the Great Crisis and of the European Sovereign Debt Crisis, Europe is confronted with serious threats: internal and external security and defence; the refugee crisis; the waves of Euroscepticism fostered by European nationalists and populists, as well as by foreign leaders, such as Trump and Putin; the North-South productivity divide uncovered by the sovereign debt crisis; Eastern European disenchantment with integration, especially after the Russian annexation of Crimea; and, finally, Brexit, initiated on 29 March 2017, following the UK referendum. All these threats hang over Europe and render the discussion of Europe's future, that is, the future of the process of EU integration, 60 years after its foundation under the Treaty of Rome more difficult and complex yet more urgent than never. In this context, Peace, the primary objective of the founders of the European integration project should not be disregarded as such. Under all these circumstances, Mr. Jean-Claude Juncker produced a white paper on the future of Europe where he presents five scenarios intended to facilitate the engagement of member states into the discussion about Europe they envisage by 2025.

But steps towards a reform of Economic and Monetary Union (EMU) had already been taking place, although the discussion is far from being closed in the sense that crucial decisions about the European construction to address the aforementioned issues are yet to be made. Notwithstanding, there are already clear orientations and guidelines from the EU Commission, ECB, Euro Council and EU Parliament to conduct the discussion and a schedule phasing reforms. In fact, the Euro Summit of 2014 stressed the need for a more complete EMU encompassing a stronger coordination of policies, more solidarity and convergence supported by concrete mechanisms to be designed and implemented. The so-called Five President report summarises the main ingredients and phases of the above-mentioned EMU reform. The document distinguishes two stages: the first one covers the time period from 1 July 2015 to 30 June 2017 and is intended for *immediate steps*, and the second to be accomplished at the latest by 2025 is intended to complete EMU architecture. In straight connection with one of the objectives of the reform, the EU Commission under the Presidency of Mr. Claude Juncker has launched in 16 September 2016 a

public discussion of the European Pillar of Social Rights that ended 31 December 2016 and a final report by the EU Commission is expected by June 2017. This initiative should be regarded as an attempt to not only re-design the European Social policy but also build European labour market institutions more resilient to shocks and to better insure workers against risks. This is a pillar considered of the utmost importance to the well-functioning of EMU.

More resilient European economic structures to negative shocks, to the negative effects of globalisation or technology that seriously endanger social cohesion and alienate European citizens from the European Project need virtuous arrangements of production factors, of structural transformations of production activities, of innovation systems, institutions, governance and policies enhancing regional and local development based on multifactor productivity (MFP) growth within EMU and EU. Needless to say, yet deserving full attention, the project of completing EMU architecture that seems to go, *inter alia*, with the project of EU deepening requires a strong political will in order to be accomplished.

Addressing development and growth issues between European countries, regions or cities where space, increasing returns to scale and agglomeration effects matter call for appropriate European as well as national regional policies designed for different territorial levels in order to mitigate or even overcome the possible negative effects resulting from polarisation forces at work.

The topic '*Core-Periphery patterns in the development of the EU's regions*. Eastern vs. Southern Peripherality' is of utmost importance for the EU and EMU integration processes nowadays and in the years to come. It is a key issue for European economies, citizens' welfare and in framing European Citizenship consciousness. In this context, it follows that the central research question at stake is whether the domestic market system leads to the development of a centre–periphery model, by highlighting gaps, or whether it supports the convergence process. To this end, it is important to analyse to what extent the effect of peripherality determines the development of EU regions. Clearly, a periphery can only be understood in relation to a core, a centre. Regarding the core and peripheries of the EU, the relationship between them is multidimensional. It simply cannot be reduced to one single dimension, subsequently to the domination of the periphery by the centre.

The EMU's debt crisis that emerged in 2010 has identified a group of Southern European countries, especially Greece, Portugal, Spain and Italy as bad performers exhibiting several serious macroeconomic imbalances and a real convergence process that clearly came to a halt. Additionally, it highlighted that EU integration, experienced by Eastern European countries (especially the later-comers to EU), was not accompanied by a rapid

process of real convergence. Consequently, the importance of the aforementioned topic has come back to the spot recently and the research about the effects of peripherality has regained a renewed interest to ultimately ground better regional policy recommendations aimed at achieving a sustained reduction in income per capita disparities across EU regions. Although centred on EU, the topic is also relevant for other countries or regions facing a process of integration, the issue of relationships between centre and periphery in the development of North–South at global level or in the economic dynamics of different regional groups being one of priority interest.

The book seeks to answer some of the challenges currently faced by the EU. The process of economic integration holds a major role in shaping the centre–periphery model as it might generate the development of the periphery but it does not necessarily reduce the gap between the periphery and the more developed regions. For example, internal free trade will be more intense if the proper conditions are met within the area where it takes place (infrastructure, attractive business environment, foreign direct investment, secure formal institutions etc.). The analysis of the so-called effects of peripherality across the EU regions were approached using different methodologies, but all share a common normative perspective intended to bring about policy recommendations solidly grounded in economic theory.

The normative perspective adopted throughout the book contributes decisively on one hand to understand the way in which the southern and the eastern peripherality of EU is related to the EU's regional development measures stipulated in its strategies and programmes. On the other hand, it also contributes to obtain relevant results for decisions within the regional development policies in light of the objectives of economic, social and territorial intra-EU. Policies matter and have to be appropriate; EU funds allocated to EU regional policy do not guarantee *per se* that the selected targets are reached. On the contrary, in the absence of adequate policies, EU funds might act through several channels jeopardising productivity and growth.

Finally, we should mention that, since its inception this book reunites the contributions of several economists from Southern and Eastern European countries that share firm belief that a serious contribution to the deepening of the European process of integration builds on rigorous positive economic analysis from which nationalist feelings have to be excluded.

The book is organised in four parts. **The first part**, entitled *Integration Growth, Convergence. Southern versus Eastern Peripherality*, provides a through characterisation and comparison of the two groups of countries in terms of peripherality and convergence potential.

Chapter 1 Gabriela Pascariu and Adelaide P.S. Duarte make the introduction to the book. First they take a bird's eye view of the challenges Europe faces in the present and in the years to come. By relying on New Economic Geography's (NEG's) theoretical framework, Helen Caraveli proposes a critical approach of the changes in the core-periphery dynamics pattern of Europe and the factors leading to this path. Thus, the author argues that by identifying the drivers of this changes policymakers can be supported in further improving convergence to the EU average. Also, understanding how these forces interact may also help to redesign the EU Cohesion Policy (CP) in order to increase its efficiency. The methodology relies mainly on graphical representations of relevant indicators used to reveal the 'catching-up' process over the last 25 years. Looking at the main trends in the core-periphery dynamics, the author considers that while the EU core still covers the area between London, Paris, Milan, Munich and Hamburg (forming a 'southern development zone' extending from north-eastern Spain to northern Italy), the central eastern member states have turned into the new periphery. New centres have emerged too in capitals such as Warsaw, Prague, Bratislava, Budapest and Bucharest. The author identifies two significant determinants in the core-periphery structural pattern, between the two peripheries, respectively: labour productivity and FDI inflows. Her main conclusion is that although the EU CP lessened the core-periphery division and moved the centre of gravity towards the East, by encouraging growth in peripheral areas, the core-periphery gap remains quite strong in terms of competitiveness and productivity levels, which undermines the EU's competitive position worldwide. Moreover, the author points to the fact that the harmonisation of CP with Europe 2020 strategy and the budgetary targets of Macroeconomic Imbalance Procedure, with a stress on 'competitiveness' and 'convergence', rather than 'cohesion' might limit the CP contribution to the development potential of lagging regions and moreover deepen the core-periphery gaps within the European economy.

Chapter 2 Gabriela Carmen Pascariu and Ramona Țigănașu carry out an analysis in the dynamics of the Eastern and Central European countries during the integration process by emphasising some of the main drivers of economic growth and development, with a key impact on the core-periphery structural convergence perspectives in the European economy. As a new approach, the authors propose and apply a composite index of peripherality, including economic and spatial indicators, so as to identify the member state economies' 'peripherality' characteristics as well as the main factors contributing to the reduction in core-periphery gaps. The main conclusions of the chapter are that: despite the individually different and spatially uncorrelated evolutions, the European economy maintains a clear core-periphery differentiation on the two axes: North/South,

East/West, in terms of both the economic performance and the convergence potential; there is a medium/high correlation between economic and spatial peripherality for Eastern and Central European economies (a stronger spatial dimension is required in CP); a core-periphery structural convergence occurs, but significant differences persist in terms of economic performance, mainly motivated by institutional gaps. In order to advance the CP, a new 'convergence logic' is required, as the reduction in disparities between one region and another not being equivalent to the reduction of its peripheral character. The balance between the objectives of competitiveness stimulated by economic agglomerations and those of cohesion enabled by their structural and spatial dispersion will be increasingly difficult to reach. The repositioning of the core-periphery model within the European economy by the revitalisation of the economic potential of the periphery could be achieved by providing and further strengthening the external dimension of CP through neighbourhood policies.

The second part, entitled *Structural Transformations in Southern and Eastern Enlargements*, selects structural change as a crucial topic to the understanding of the underlying factors and policies that might have acted as polarisation forces explaining structural transformations that occurred under the integration processes experienced by Southern and Eastern European countries.

Chapter 3 Ester Gomes da Silva presents a descriptive structural analysis of production and employment with a focus on technology and uses skill-based industrial classifications applied to Southern (Italy, Portugal and Spain) and Eastern European countries and makes comparisons between the two groups relative to the core considering the pre- and post-crisis periods. The author identifies relevant differences in the structural transformations experienced by the two groups of countries and points out that the Southern group experienced competitiveness problems long before the financial crisis hit Europe. The explanation lies in a sectoral composition conducive to MFP growth deterioration that resulted from changes in manufacturing and market services biased towards low-skill and low-tech technologies assisted by an abundant low skill labour supply that lead to an increasing importance of the nontradable sector in the economy. As for the Eastern group, competitiveness problems were not so acute in the pre-crisis and the group performed better in terms of catching-up and export-led growth. Its sectoral composition where manufacturing keeps a strong place combined with a relatively abundant supply of high-skill labour seems to explain changes towards more intensive technological and skill activities. Finally, Ester Gomes da Silva makes policy recommendations advising policymakers that appropriate industrial policies, aimed

at overcoming structural transformation paths that hamper growth, encompass several dimensions, have to be designed to address individual heterogeneity (countries, regions) and to take into account that policy effects under structural policies take time. These are medium- to long-term effects that take a long time to be felt and to reach the targets and objectives that can only be dealt under suitable industrial policies.

Chapter 4 João Sousa Andrade and António Portugal Duarte develop a macroeconomic analysis to investigate whether or not Central and Eastern European countries have been subject to a Dutch Disease originated by foreign aid and other external inflows. The impact of these external flows in this group of countries is measured through its effect on the real exchange rate. In order to establish the impact of capital inflows on output growth for the period 2003–2013, the authors apply robust new generation augmented Dickey-Fuller (ADF) tests, and autoregressive distributed lag models following the methodology of Arellano and Bond (1991) and Blundell and Bond (1998). The authors underlie several important findings that provide evidence for the existence of the Dutch Disease in this group of countries. Under the integration process of the above mentioned group of countries, financial costs do not play a significant role in the determination of the real exchange rate. External capital inflows, and in particular European structural funds, exert a positive influence on the determination of the real exchange rate. Furthermore, this positive influence is extendable to non-tradable goods and public investments. The negative influence of the real exchange rate on output growth is also confirmed. So the presence of the Dutch Disease is confirmed through either the income effect or the allocation effect. João Sousa Andrade and António Portugal Duarte provide policy implications for this group of countries to eradicate the Dutch Disease. Short-term measures to restrain domestic prices either through wage moderation and/or through the control of the nominal exchange rate, the late if possible, should be taken. In addition, long-term measures should aim at structural transformations conducive to a virtuous sectoral composition of activities of the economies entailing dynamic paths with higher prospects for future growth.

Chapter 5 Maria Adelaide Pedrosa da Silva Duarte and Marta C.N. Simões investigate the nexus between structural change, inequality and growth for a group of Eastern European countries, assuming that income inequality acts as a potential mechanism connecting structural change to growth. The authors make use of two strands of the literature, one relating structural change to growth and the other relating inequality to growth. The former holds that an expanding services sector might not hamper growth – quite the contrary – depending on services composition and on the capacity of

services sub-sectors to incorporate information and communication technologies (ICTs). The latter posits that inequality exerts a negative influence on growth through fiscal policy, socio-political instability, borrowing constraints to investment in education and endogenous fertility channels and a positive one through the savings channel and incentives. The authors provide a descriptive analysis of the profiles of structural change and income inequality and apply dynamic panel methods and estimate to investigate the nexus among services sector expansion, inequality and aggregate productivity considering a maximum period between 1980 and 2010 and outline several findings. Positive growth effects are more than compensated by the negative effects from inequality. The findings point to a positive sign for the relationship between traditional services and inequality, while the sign found for modern services is negative. As for the indirect effects, tertiarisation as equivalent to a relative increase of traditional services employment ratio has a negative indirect influence on output performance and the opposite occurs with modern services employment ratio influence. To promote the expansion of modern services and of its importance vis-à-vis traditional services combined with social policies designed to mitigate the increase in inequality due to traditional services are the policy recommendations.

The third part, entitled *Core-Periphery Particularities in Eastern and Southern Europe: Case Studies*, covers a wider scope of phenomena from EU rural areas through Polish cities and regional development to migration drivers for Southern, and Eastern European countries and tries to unveil underlying periphery forces in action.

Chapter 6 In many discussions, rurality and peripherality are seen as the two sides of a coin. Additionally, peripheral is often perceived/regarded as lagging behind. This is demonstrated by using indicators like income, structure of production, employment rates and rates of out-migration. The chapter by Johanna Werner, Sylvia Herrman and Andrew Lovett describes another perspective of this matter. It concentrates on rural regions and tries to work out their diversity. It uses a factor and cluster analysis to derive different types of rural areas. By including social and ecological indicators in addition to the usual economic ones, the view on core and peripheral regions in Europe is broadened. Visualising the resulting maps added a spatial component to the classification procedure.

The cluster analysis was performed with different combinations of countries. First, the representatives of the EU15 were grouped, leading to four types of rural areas. This typology exemplifies the specific distribution of regions already included for a longer period of time in the context of EU integration. In this typology, the southern periphery regions show a specific

characteristic. The inclusion of the representatives of Central and Eastern European countries resulted in a change of the typology and a set of five types. One type is almost exclusively concentrated on the Eastern periphery. This interdisciplinary approach reveals the fact that peripherality depends on the regional characteristics but is also relative to the compared group. The approach is an easy to understand classification and visualisation tool to show the relative development status of European regions as well as the relationship of the status with their location (core or border region). The classification identified rural areas with common characteristics, development potential and needs. By comparing the advantages or problems of regions, this typology could help the targeting of EU funding.

Chapter 7 Cristian Incaltarau and Loredana Maria Simionov analyse the role of migration in revealing the core-periphery dynamics as it is generally accepted as a process that links the periphery to the core. In a time when migration is being perceived as one of the biggest threats that the EU is facing, this chapter analyses whether Eastern Europe is heading to the same migration transition pattern as the South and turn into a destination region, as explained by the migration transition theories. The authors adopt an econometric methodology based on static panel models applied to a panel sample for the 2000–2013 period, while controlling for the regional specifics and unobserved time effects, in order to assess the importance of transition drivers at regional level (NUTS2). Furthermore, in order to assess the regional attractiveness in terms of migration flows, a hierarchical agglomeration cluster analysis using ranks transformation was performed. After confirming the importance of the transition drivers (namely employment opportunities, income, urbanisation level, labour segmentation and active share) in explaining the migration shifts, the authors prove that the regions from Eastern European countries are generally less attractive and facing higher emigration rates as compared to the Southern European regions. Furthermore, migration flows were proven to be more sensitive to the transition drivers in the eastern periphery as compared to the southern periphery regions. In line with their empirical findings, Cristian Incaltarau and Loredana Maria Simionov recommend policymakers to focus on improving the migration policies as, unlike the southern periphery, the eastern periphery proved to be unable to manage the recent large inflows. Also, policy measures for fostering the transition drivers should be targeted especially to the highly unattractive regions; otherwise these will continue to be drained by large migration outflows.

Chapter 8 Ewelina Szczech-Pietkiewicz addresses the issue of the city–region development characteristics in Poland by analysing the relationship between the city and the surrounding region intended to identify

the pattern of that relationship. More specifically, the author seeks to find evidence for the direction of the core-periphery mechanism that characterises the relationship between the city and its surrounding region. Is it a backwash effect or – on the contrary – is it a spread effect that is in action? Based on static panel models (Pooled OLS and Fixed Effects models) and on a sample of 16 cities and 16 regions in Poland (cities: Białystok, Bydgoszcz, Gdańsk, Gorzów Wielkopolski, Katowice, Kielce, Kraków, Lublin, Łódź, Olsztyn, Opole, Poznań, Rzeszów, Szczecin, Warszawa, Wrocław and regions: Kujawsko-Pomorskie, Lower Silesia, Lubelskie, Lubuskie, Łódzkie, Małopolskie, Mazovia, Opolskie, Podkarpackie, Podlasie, Pomorskie, Silesia, Świętokrzyskie, Warmińsko-Mazurskie, Wielkopolskie, Zachodniopomorskie), the author finds evidence that the prevailing direction of the mechanism is a backwash effect. As for the impact of the mechanism, important differences were found. Wrocław and Rzeszów saw their position strengthened against their regions but Warsaw and Katowice present more intensive city-region relationships. Based on the main finding that the cities follow the growth-pole mechanism where the backwash effect is dominant, Ewelina Szczech-Pietkiewicz provides policy recommendations: she suggests that regional policies should mitigate or overcome the problem of the decreasing growth potential of regions surrounding cities and recommends also actions oriented towards the development of second-tier cities, a complementary policy aimed to reverse the depth of the backwash effect; such a policy should also include a mix of labour market solutions meant to improve the attractiveness of such cities.

The fourth part, entitled *Core-Periphery Patterns and Policy Implications: Sectoral Issues*, discusses the issues of decentralisation and local self-government and trends within EU, undertakes a comprehensive review of the 2014–2020 European CP and ends by revisiting the economic foundations of the core-periphery models.

Chapter 9 Mihaela Onofrei and Florin Oprea make a comparative analysis of decentralisation and local self-government practices in selected EU member states from the Southern and Eastern groups of European countries in order to identify administrative reforms implemented by national authorities and highlight good practices that can be followed by other member states in their administrative reforms. The authors identify the main drivers of decentralisation reforms, characterise the actual state of local self-government and reveal the main features of selected administrative systems (Spain, Italy and Poland). Based on the Spanish, Italian and Polish experiences, the authors argue that regional governments can lead local development in the prior established national framework, if they have proper means and adequate discretionary powers. The authors recommend several

policies addressed at the strategic objective of good governance in the European Union. At the national level, they favour the encouragement by national authorities of municipal associations concentrating the management of public tasks to a higher administrative level, a fruitful policy strategy towards the consolidation of administrative and financial capacity. At a regional level, several forms are envisaged by the authors to enhance local administrative and financial potential, such as the creation of administrative regions with their own decision-making systems, of metropolises through internal arrangements or the merely merge of small rural communities. Furthermore, the authors highlight that these reforms should be designed using financial incentives. The authors also claim that regional governments should be given the bargaining power to negotiate the EU multiannual financial framework and that national initiatives to support better administrative capacity should be implemented.

Chapter 10 In this chapter, Gabriela Drăgan proposes a radiography of the 2014–2020 CP, through a theoretical approach focusing on both main continuity and innovation elements, as well as on some of the likely effects that the current conditionalities might have on the new EU non-euro member countries. The chapter encompasses a theoretical background of the EU CP from a territorial perspective, by contrasting the ‘spatially-blind’ and ‘place-based’ growth theories. Moreover, the analysis correlates theoretical instruments and paradigms to the legal aspects of the CP, displaying the main characteristics of the new 2014–2020 framework. The analysis focuses on the main elements of continuity and innovation: new regions, objectives, areas of intervention etc., paying specific attention to the new conditionalities as well as to the main disparities facing the non-euro countries from Central and Eastern Europe. In order to strengthen the arguments and overall discourse, the study concludes with the case study of Romania’s *catching-up* process. The main conclusion of the author is that a new paradigm in conceiving the whole EU integration process and the CP, especially, appears as necessary and inevitable on the ground of Brexit and all the other existential EU crises (from economic to migration and security crises). As regions in need are mainly placed in the poor or less-developed EU regions and states, while competitive regions and countries are mainly at the EU core, the new conditionalities (ex-ante and macroeconomic), whose main effect in case of non-compliance would be the suspension of EU funds, might deteriorate even more the economic situation exactly in those regions with greatest needs in terms of infrastructure or administrative capacity.

Chapter 11 Valentin COJANU contributes to the conceptual effort to find an ‘encompassing framework’ to understand the rugged landscape of

territorial development. The author revisits the discipline of regional economics and its scientific development based on the key concepts of space that have become dominant and on the regional economic models associated with those concepts. The author starts by discussing the three concepts of space that support the three categories of regional economic models, namely models of a uniform-abstract space, models of diversified-stylised space and models of diversified-relational space and critically reviews their main characteristics and points out to their limitations. As the author argues, a paradigmatic shift is needed to reflect the gains from trade increasingly as a result of territorial communality rather than market optimality. The conventional (spatial) core-periphery models are increasingly questionable when considering the relevance of more appropriate ‘aspatial’ concepts for understanding the conditions for growth and development across territories. All this converges to underscoring the need to drop the norm of a universal policy related to a space of development divided in advanced and lagging areas. Policymakers, especially those concerned with policy coordination over large integration spaces as in EU, should attempt to evade, as Perroux once remarked, the ‘illusion’ of the coincidence of political space with economic and human space, and aim at building on the relational specificity of local economies.

Gabriela Carmen Pascariu
Maria Adelaide Pedrosa da Silva Duarte
Editors

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PART I
INTEGRATION, GROWTH,
CONVERGENCE. SOUTHERN
VERSUS EASTERN PERIPHERALITY

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Chapter 1

The Dynamics of the EU Core-Periphery Division: Eastern vs. Southern Periphery – A Comparative Analysis from a New Economic Geography Perspective

Helen Caraveli

Abstract

The last enlargements of the European Union (EU) shifted the geographical focus of the periphery from the south to the east, upgrading the position of many southern European countries and regions, which were already in a process of convergence with the EU average. The current financial/economic crisis, however, which has particularly hit southern European countries, revitalized the traditional core-periphery division, known as the North-South divide. In parallel, the relocation of economic activity (industrial production and services) within the EU territory, from western-core countries to the eastern periphery, raised the competitiveness and economic significance of many areas in the new, vis-a-vis the old, periphery, leading to the emergence of a number of new centres in its metropolitan regions. A number of questions are raised in the context of the above development, such as: Which factors underlie the differences in growth paths and ‘resilience’ between the eastern vis-à-vis the southern periphery? How important has the industrial relocation from the West to the East been? And what has been the general impact of the EU’s Cohesion Policy? What would the implications of a possible further expansion towards the EU’s ‘Eastern Neighbours’ be on its core-periphery pattern? This chapter approaches critically some of the above issues, adopting a

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qualitative methodology with the use of graphical presentations. In its conclusions, the chapter examines the appropriateness of the new economic geography's theoretical interpretation.

Keywords: Core-periphery in the EU; eastern vs. southern EU periphery; eastward shift of economic dynamism and regional resilience; convergence/divergence in the EU; EU Cohesion Policy; New Economic Geography and changing core-periphery patterns

Introduction

The European Union (EU) enlargement towards southern and eastern European countries (in the decades of the 1980s and 2000s, respectively) shows both similarities and differences. In the first place, both groups came out of authoritarian regimes, though of a different nature, and were poorer and more rural than the average other members. They thus increased the socioeconomic and political heterogeneity of the community. Secondly, both enlargements have been considered as substantially geopolitical, in addition to purely economic, projects (Lessenski, 2014; Samary, 2011).

Similarities among the two groups of countries are also to be found in the structural problems/weaknesses of their economies. Central among these is the debt fuelled type of growth since the decade of the 1980s which marked future developments negatively. In many Central and Eastern European Countries (CEECs) (e.g. Romania, Yugoslavia, Hungary, Poland and East Germany), there were attempts to modernize the economy even before the fall of the Berlin Wall through an increase in higher technology imports from the West which, given the bureaucratic structure of their economy, led to debt crises in that decade (Samary, 2011). In the southern European countries, it was a debt-based rise in consumption in combination with a lack of structural reforms that resulted in a 'fiscal crisis of the state' and a malfunctioning of the economy. The most prominent example is that of Greece which, after its accession to the EC and the assumption of power by the new socialist government in the early 1980s, adopted an economic model based on debt-induced public and private consumption leading to unsustainable development.

Differences stem from the type of economic organization adopted by each group. The CEECs had centrally planned economies until the late 1980s, that is, the state-owned and -managed most means of production, while prices were not determined by supply and demand (Rozmahel et al., 2013). This would require a greater effort on their part to adjust their model of governance to European average standards. Higher transfers of

money would be required on the part of the European Commission to tackle the low development levels of these countries. Of course, the already established single market which the new member states found in 2004 placed them in a privileged position vis-à-vis the southern group at the time of its entrance. Furthermore, the type of adjustment made by the countries of the eastern periphery led to high growth rates and convergence to the EU average, as well as to their resilience during the current crisis. On the contrary, the combined effect of structural deficiencies and high debt levels in the countries of the southern periphery resulted in much lower growth rates and divergence from the EU average. Lessons drawn from the CEECs' transition period could then be important for southern European countries following structural reforms.

Such developments question the old division between core and peripheral countries within Europe, while a number of theoretical strands dealing with 'core-periphery' challenge the conventional neoclassical approach (Caraveli, 2016; Smith, 2013). The most recent of these, the New Economic Geography (NEG), has a prominent role in interpreting current trends in Europe.

This chapter examines the changing core-periphery pattern of Europe, by comparing the path towards convergence to the EU average between southern and central–eastern member states, that is, between the old and the new periphery of Europe, as well as the factors underpinning this path. *The second section* gives a picture of the core-periphery pattern in the EU at the country and regional level, while *the third section* graphically presents the process towards convergence/divergence of the eastern and southern peripheral countries to the EU average, the so-called catching-up process, over the last 25 years. After examining the relationship of the level of development and catching-up with a number of quantitative and qualitative variables established in some studies, *the fourth section* attempts to interpret the diverging growth trends of the southern and eastern periphery through the trends in some basic determinants. The possible role of the EU Cohesion Policy in lessening the core-periphery division by encouraging growth in peripheral areas is briefly discussed in *the fifth section*. *The sixth section* discusses the shift of the economic dynamism within Europe to the eastern periphery and the possible emergence of a new growth zone there. The last *section* concludes by referring to the appropriateness of the NEG's theoretical framework to interpret the above changes and trends.

The Core-Periphery Pattern in Europe

Figure 1.1 compares the GDP per capita (in PPS) as a percentage of the EU average of the 5 southern and 10 eastern member states for the year

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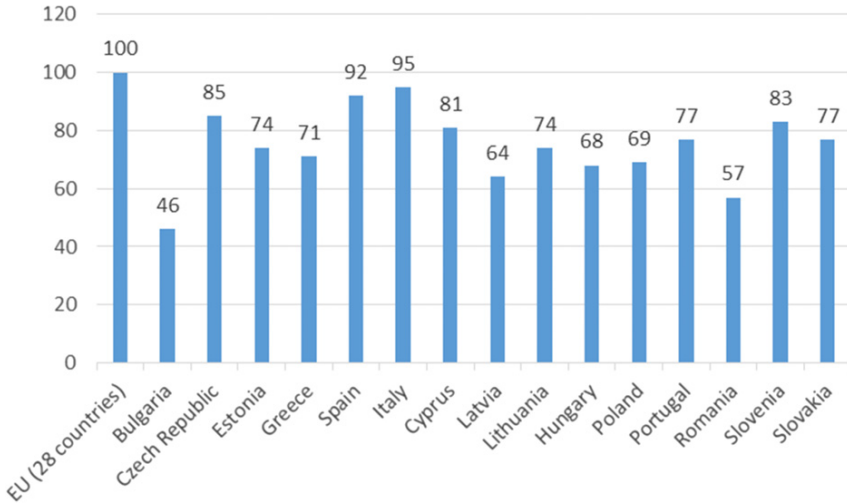


Figure 1.1: GDP per capita in PPS, 2015 (EU-28 = 100). *Source:* Own representation based on Eurostat data.

2015, classified as peripheral depending on whether this indicator is less than 100. Overall, the eastern group shows a relatively lower level of development, but a number of CEECs show higher values than Greece and Portugal (both of which were severely hit by the economic crisis). On the other hand, Spain, Italy and the Czech Republic have almost fully converged to the EU average. So no clear distinction between the two groups can be drawn.

Imbalances at the regional level are even more significant, highlighting the EU core-periphery division, as one in four EU residents live in (NUTS 2) regions with a GDP per capita (PPS) below 75% of the EU average. Most of these regions are found in the CEECs, Greece, southern Italy and Portugal (European Commission, 2014). Lagging regions with lower value added activities (e.g. agriculture and industry), with a GDP less than 50% of the EU average, are mainly located in the CEECs (e.g. Bulgaria, Romania, Lithuania and Poland), but can also be found in the southern member states (e.g. Portugal and Greece). Several of these regions, specializing in textiles and clothing production, as well as steel, electricity and office equipment, are particularly vulnerable to international competition, especially from emerging economies (EM) (Caraveli, 2012, 2016; European Commission, 2010).

A number of studies have established a positive relationship between the level of development, measured by per capita GDP and degree of competitiveness, and qualitative variables, such as the quality of governance and institutions and political stability – with these indicators deteriorating as

we move towards the south or the east of the EU (see for example: European Commission, 2014; Featherstone & Kazamias, 2014; Lessenski, 2014; Rozmahel et al., 2013). Other variables, such as macro-economic policies and market openness, have also been considered as important underlying factors, assisting the improvement in all other indicators (Rozmahel et al., 2013). However, some of the CEECs have shown a remarkable improvement in both quantitative and qualitative indicators, allowing us to say that, overall, the core-periphery divide of Europe, whether North-South or East–West, reflects ‘a divide between a “Europe A” of prosperity, high human welfare, good governance and high democratic standards and a “Europe B” of poorer, more poorly governed, more troubled democracies with more acute social problems and inequalities’ (Caraveli, 2016; Lessenski, 2014).

The Catching-Up Process

The process towards convergence to the EU average of individual countries within each group of peripheral countries, the so-called catching-up process, from 1990 to 2015, is shown in Figures 1.2a, 1.2b, 1.2c and 1.3a, 1.3b, 1.3c.

Figure 1.2a shows the remarkable improvement in the economic performance of all countries of the eastern group and the gradual convergence to the EU-28 average at the end of the entire period. We can distinguish between two periods: the period of ‘transition’ to the market

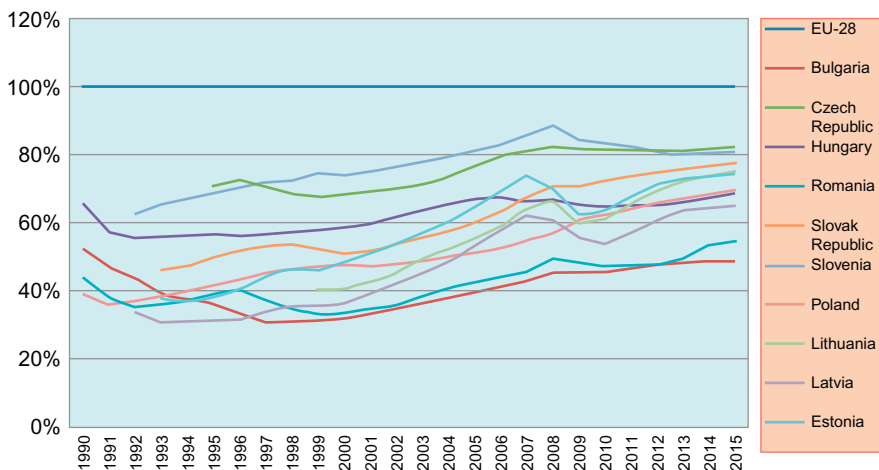


Figure 1.2a: GDP per capita in PPP (percentage of EU-28) in CEECs. *Source:* Own calculations based on IMF data and statistics.

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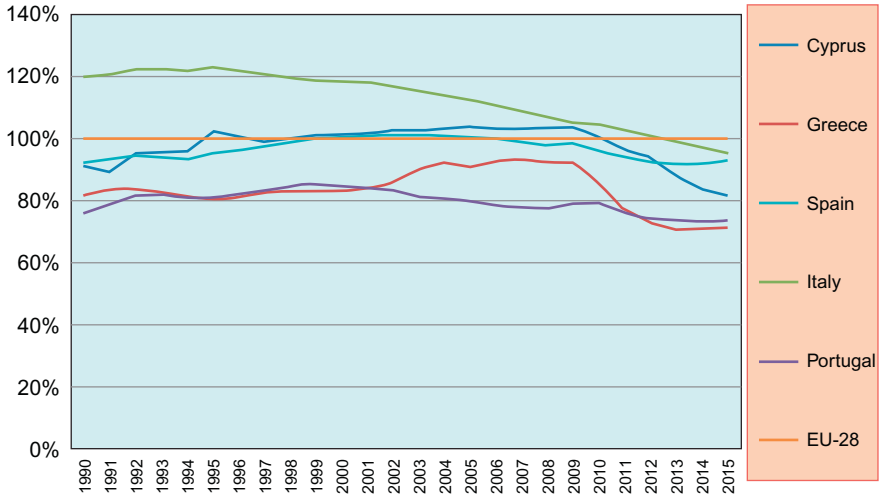


Figure 1.2b: GDP per capita in PPP (percentage of EU-28) in CEECs in southern member states. *Source:* Own calculations based on IMF data and statistics.

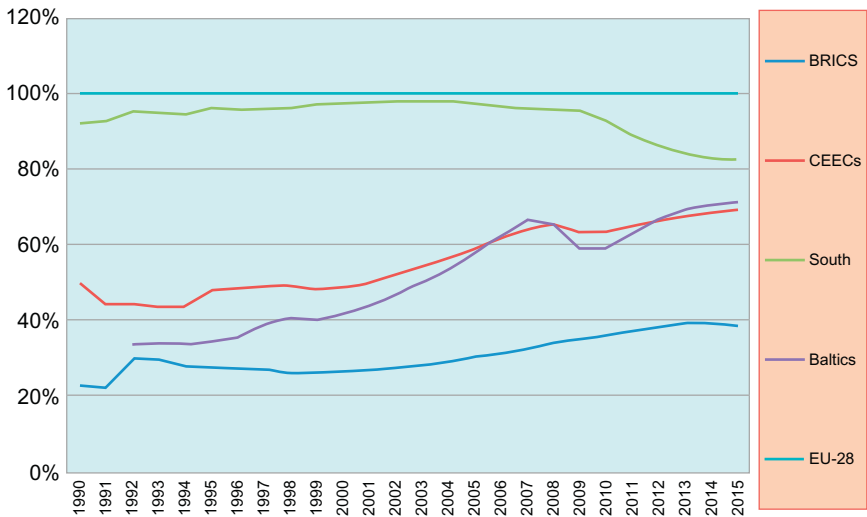


Figure 1.2c: GDP per capita in PPP (percentage of EU-28) in CEECs in groups of countries. *Source:* Own calculations based on IMF data and statistics.

economy – the 1990s – when GDP/capita was growing fast in all countries and the period of ‘integration’ to the EU – the decade of 2000s, in which a slowing down occurs due to the emerging crisis. Romania and Bulgaria are obviously still lagging far behind the rest of the CEECs. The first accession (2004) appears to be strengthening past (rising) trends, whereas the second accession (2007) coincides with the 2008–2009 crisis which reverses the successful path of most countries until about 2010 or 2011 when resumption takes place. On the contrary, [Figure 1.2b](#) shows the overall deterioration in the performance of the southern group of countries and the divergence from the EU average which, for some countries, was quite sharp and followed the successful path towards convergence until about 2010 (the case of Greece and Cyprus). [Figure 1.2c](#) compares groups of countries in their way to convergence/divergence with the EU average; while the CEECs as a whole are converging towards EU-28, the southern group is diverging since about 2010. A temporary halt in the rising path of the eastern group is observed between 2008 and 2011 and a resumption in this path from this year onwards. The trend of the Baltics is shown separately in the same figure, as the three Baltic states (Lithuania, Latvia and Estonia) together with Poland form a sub-group of dynamic performers, leading the catch-up process of the east with the west ([Lessenski, 2014](#)). A comparison of the path of the CEECs to that of EM aims to reveal the growing importance of both groups in the global scene.

[Figures 1.3a, 1.3b, 1.3c](#) shows the trends towards convergence/divergence through the growth rates of individual countries and groups of countries. Five-year averages for 5 periods, from 1991 to 2015, are used. [Figure 1.3a](#) shows for most CEECs a marked rise in growth rates during the ‘transition’ period and a decline in the decade of 2000s, which includes the ‘integration’ period and the 2008–2009 crisis. The fall was especially sharp in the most dynamic economies of the group (the Baltic States and Hungary) with an impressive resumption and a reversal to the convergence path between the periods 2006–2010 and 2011–2015. Exceptions are Slovenia and Slovak Republic which show a declining trend all through this period. [Figure 1.3b](#) shows the overall declining trend in the growth of southern countries in the decade of 2000, with the sharpest fall in Greece and Cyprus. This fall intensifies after the 2006–2010 period which is marked by the onset of the economic crisis. However, the use of 5-year averages conceals the path to convergence with EU-28 until about 2010, as shown in [Figures 1.3a, 1.3b, 1.3c](#).

A clearer picture appears in [Figure 1.3c](#) which compares the trends in growth rates of the eastern and southern groups to those of the EU-28 and the Brazil, Russia, India, China, South Africa (BRICS). While the growth of the eastern group as a whole resumes in mid-2006–2010, after the sharp fall from 2001 onwards, maintaining its dynamism in comparison to

10 Core-Periphery Patterns across the European Union



Figure 1.3a: Five-year average real growth rates in CEECs. *Source:* Own calculations based on IMF data and statistics.

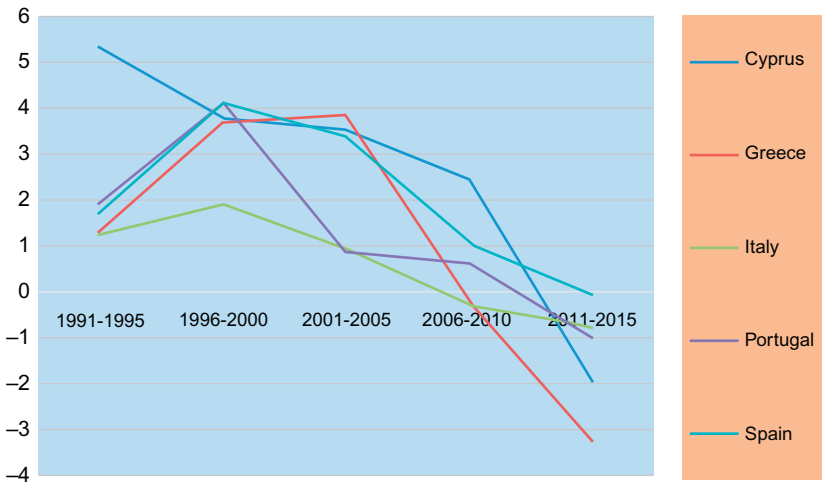


Figure 1.3b: Five-year average real growth rates in southern member states. *Source:* Own calculations based on IMF data and statistics.

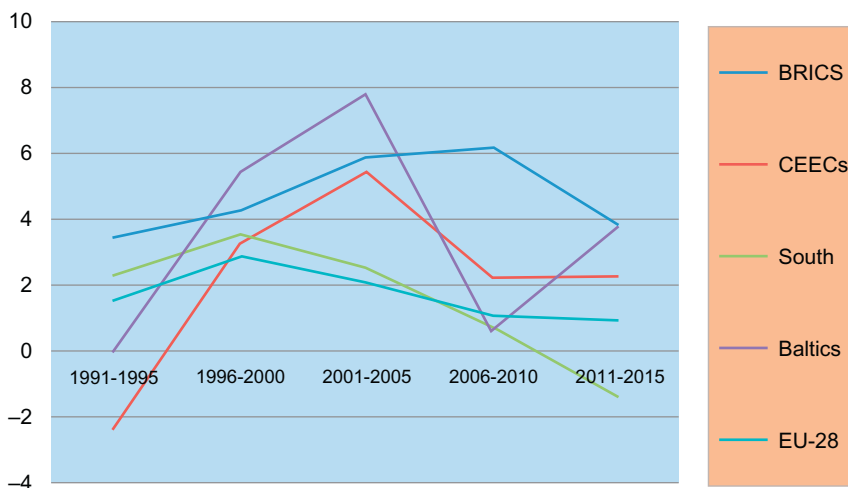


Figure 1.3c: Five-year average real growth rates in groups of countries.
 Source: Own calculations based on IMF data and statistics.

the EU average, the growth of the southern group continued its downward trend (mainly due to Greece and Cyprus) diverging from the EU average. Within the eastern group, the Baltics has the most drastic fall and rise, converging to the growth rates of the internationally dynamic BRICS group – after the latter’s fall between the last two periods.

The Underlying Factors

Some Policy and Structural Factors: Differences between Southern and Eastern EU Countries

The significance of the different policy strategies (e.g. degree of labour market liberalization and privatizations) for variations in the performances of countries and groups which determine their ability to ‘catch-up’ with the European average has been examined in a number of studies (see for example, Lessenski, 2014; Pascariu & Frunza, 2011; Podkaminer, 2013; Rozmahel et al., 2013). Internal structural problems, including a high level of public debt and low productivity levels, have also been taken into consideration in this context. A thorough presentation of the literature on these issues is certainly not part of the analysis at its current state. However, some results on the process of catching-up of different countries will be summarized in the following sub-section.

Measuring the ‘Catching-Up’ in the Literature

A number of studies have tried to measure the catching-up process with both quantitative and qualitative indicators. For example, a ‘Catch-Up Index’ developed by the Open Society Institute of Sofia was applied to 35 countries (EU member states, candidate and potential candidate countries) between 2011 and 2014 and assessed the countries’ performance on the basis of four categories: economy, quality of life, democracy and governance (Caraveli, 2016; Lessenski, 2014). The findings revealed sub-regional patterns of development in Europe, with groups of countries forming clusters of similar levels of performance. An interesting finding was that whereas convergence to the EU average was achieved for a number of economic indicators (such as ‘economy’, where the catching-up was faster), none or a very slow convergence was found for institutional indicators, a phenomenon accentuated by the recent crisis (*ibid*, 8). Such differences increase heterogeneity within the EU, challenging the central goal of the integration process, that is, the achievement of greater equality across Europe, and of course the long-term sustainability of European Monetary Union (EMU). Rozmahel et al. (2013) also used a cluster analysis to explain disparities in levels of development, on the one hand, between old and new member states and, on the other, within the CEECs group, on the basis of quantitative and qualitative indicators. They found that countries in the old and the new group tend to make homogeneous clusters, while the different degrees of success achieved by different countries within the eastern group depended on the type of strategies adopted during the transition to the market economy period of the 1990s. Such strategies were decisive for the more or less successful integration in the EU and the world economy in the decade of 2000s. A significant finding was that political stability (as opposed to political instability which they distinguish between elite and non-elite¹) and the quality of institutions were the most decisive factors in the liberalization process that took place in this period, as compared to macro-economic reforms, with a positive correlation between these quality factors and economic growth. However, they conclude that, given the different welfare state models followed by different member states, a certain degree of heterogeneity can be considered ‘natural’ and point to the need for better coordination of institutions across the EU.

Pascariu and Frunza (2011) examined the impact of the integration process on the development potential of peripheral EU regions. They applied

¹They define as ‘elite’ political instability a situation where government overthrows take place often and as ‘non-elite’ political instability a situation governed by violent riots and clashes.

selected regional synthetic indices (in particular, GDP/capita in PPS, degree of business concentration, level of specialization, accessibility potential to EU core markets and employment level) to 81 regions at NUTS II level of the southern and eastern periphery of the EU, aiming at establishing ‘causality relations between regional development, cohesion and peripherality’ (Pascariu & Frunza, 2011, p. 594). They found that concentration/specialization has indeed been strengthened by the integration process through investments funded by EU structural funds (i.e. EU Cohesion Policy) and this factor is positively correlated with GDP/capita. Thus, Greek and Spanish regions with a higher than the EU-27 average GDP/capita had increased their specialization in tourism developing a competitive advantage in this sector (Pascariu & Frunza, 2011, pp. 610–611). Overall, specialized clusters were observed, comparable in development levels and production structures, which also converged in GDP growth rates. On the other hand, regions with a higher degree of accessibility to EU core markets showed a higher potential to real convergence relatively to other more distant peripheral areas.

Two Significant Determinants: Labour Productivity and FDI Inflows

An attempt to explain the different economic performances between the two ‘peripheries’ of the EU is made on the basis of Figures 1.4–1.7, which show differences in labour productivity and foreign direct investment (FDI) inflows between the two groups.

Figure 1.4 shows labour productivity for year 2015 for the 5 southern EU countries and 10 CEECs, by order of magnitude. In the southern group, Italy and Spain have high scores, approaching or surpassing the EU-28 average, and are classified in the ‘core’ group of countries. Greece and Portugal, on the other hand, have lower scores than Cyprus and some dynamic eastern European economies (Slovenia, Slovakia, Czech Republic). The bulk of CEECs though have the lowest scores.

Figures 1.5 and 1.6 show changes in labour productivity for the same countries in the 2004–2015 period. Figure 1.5 shows labour productivity in each member state as a percentage of the EU-28 average for each year of this period, which reveals in which country productivity had an overall rising or declining trend. Clearly, in Greece and Cyprus productivity decreased in the crisis years, whereas in most CEECs it shows a marked upward trend.

A similar picture is given in Figure 1.6, which shows the growth rate of each country for the whole period. Only Greece, Cyprus but also Italy in the southern group had negative growth rates.

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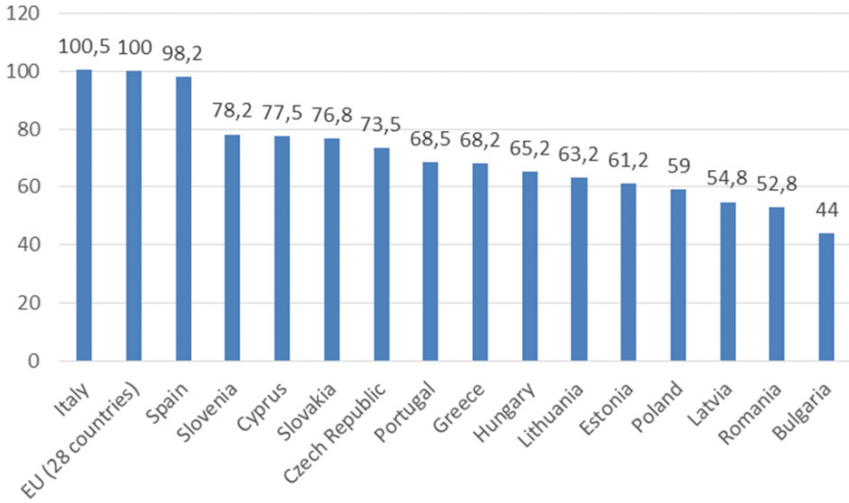


Figure 1.4: Labour productivity by country in 2015. (Nominal labour productivity per person employed and hour worked (EU-28 = 100)).
 Source: Own evaluation based on Eurostat data.

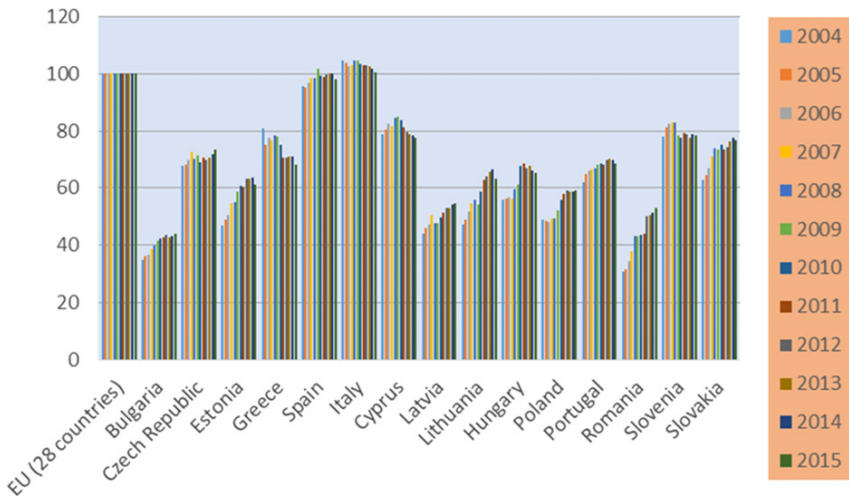


Figure 1.5: Growth in labour productivity. (Labour productivity per person employed and hour worked, Index EU-28 = 100).
 Source: Own evaluation based on Eurostat data.

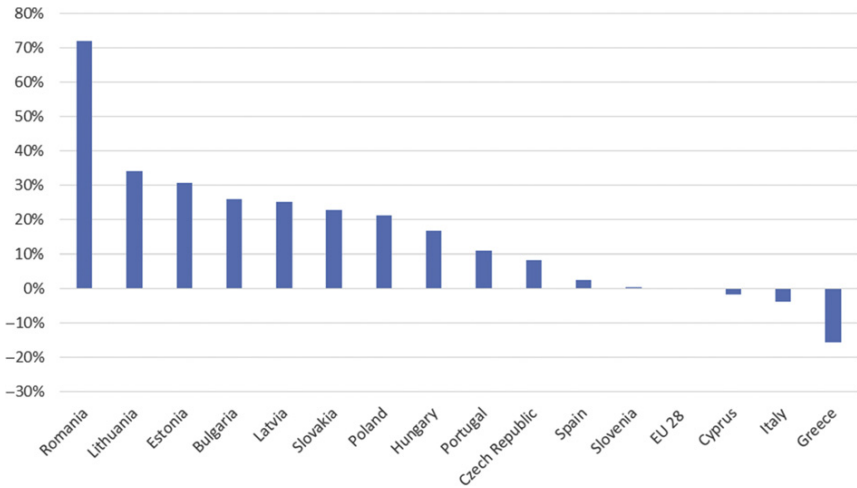


Figure 1.6: Growth rate in labour productivity 2004–2015. (Labour productivity per person employed and hour worked, Index EU-28 = 100).
 Source: Own evaluation based on Eurostat data.

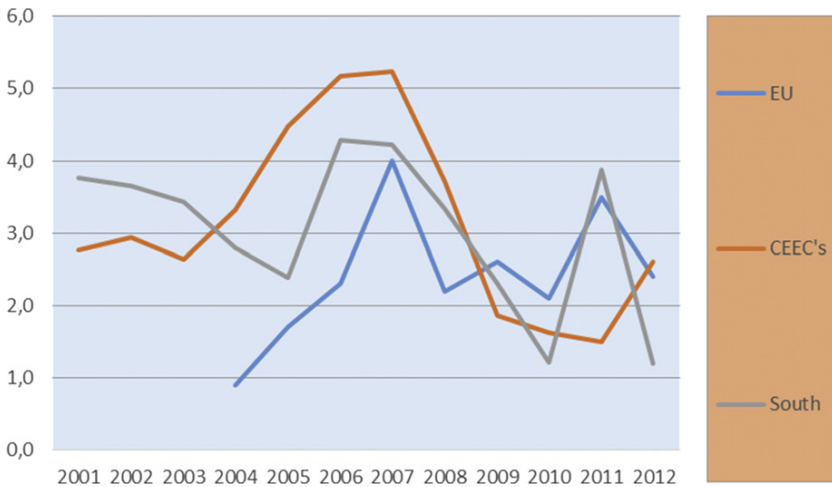


Figure 1.7: FDI inflows as a percentage of GDP by group of countries.
 Source: Own evaluation based on Eurostat data.

Figure 1.7 shows FDI inflows as a percentage of GDP in the EU as a whole, the CEECs group and the southern group of countries between 2001 and 2012. All three groups show a peak in mid-2000s and a sharp fall from 2008, the onset of the crisis, which led to major reductions in FDI in

almost all countries. A reversal of the negative trends appears after 2010 with a new fall in 2011 in the EU and the southern group, which was hit harder by the crisis from this year onwards. On the contrary, a rising trend characterizes the eastern group, the ‘resilience’ of which has been attributed to a series of factors: for example, the policy of deregulation and attraction of FDI adopted during the period of transition to the free market model, the type of sectors in which many countries tend to specialize, their increasing participation in world trade and the fact that some of them continue to delay their membership in the Eurozone.

Of course, as mentioned above, the different performances within the CEECs’ group often reflect the different strategies followed by each country, with the countries that have gone through the toughest reforms in the liberalization phase and had ‘higher quality’ (formal and informal) institutions in the previous periods often being the best performers. The relatively stronger resilience to the crisis of Poland, for example, has been attributed to its more diversified economy, combining export-led growth with internal sources drawing from public and private investments in infrastructure, aided by EU funding.

The EU Cohesion Policy

To what extent has Cohesion Policy assisted in the strengthening of new peripheral areas in the EU and the eastward shift of the centre of gravity? EU Regional or Cohesion Policy was the response to the need for redistributing funds within a single market, recognizing that the openness of economies to free trade and higher integration, combined with weak domestic structural characteristics, induces greater inter and intra-regional inequalities obstructing cohesion (Rodriguez-Pose, 2012). Indeed, the financial support under this policy over the years has consistently focused on less developed regions. Since the Lisbon Treaty (2005), the policy has been promoting regional growth through business support and innovation, employment creation and social inclusion, rather than through investment in hard infrastructure in lagging regions. Thus, in the period 2000–2008, public expenditures and public investments per capita in cohesion countries were directed to R&D, support for SMEs, sustainable energy, human resource development and social inclusion (Caraveli, 2012, 2016; European Commission, 2010). The accession of even weaker member states in mid-2000s and the exclusion of many regions of the southern periphery from the structural funds (due to their transition to higher levels of development) implied that the lagging CEE regions would be the major beneficiaries from such transfers (Caraveli, 2016, p. 45). According to the European

Commission estimates, Cohesion Policy in the 2007–2013 period has made a substantial contribution to growth and jobs in a number of CEECs (in particular, Latvia, Lithuania, Poland, Hungary and Slovakia), where it has increased GDP and employment levels while the longer-term effects are estimated to be even greater due to the impact on the development potential of these economies (EU Commission, 2014). The contribution of Cohesion Policy (CP) to growth and job creation is expected to be strengthened in the current programming period (2014–2020), as expressed in the Europe 2020 strategy. The strategy aims at achieving ‘smart, sustainable and inclusive growth’ by concentrating resources on a few key priorities and a stronger focus on performance and results. The recently adopted legislations on the ‘Macroeconomic Imbalance Procedure’ (MIP), or the ‘Euro Plus Pact’ are based on the assumption of higher structural similarity within the EU, as they are aimed at the reduction in deviations across the EU and the achievement of convergence (Rozmahel et al., 2013). On the other hand, the harmonization of CP with budgetary targets, in the framework of the Europe 2020 strategy, and the emphasis on ‘competitiveness’ and ‘convergence’, rather than ‘cohesion’ raises fears of a limited contribution to the development potential of lagging regions.

Shifting of the Centre of Gravity Towards the East?

The relocation of production from core and semi-peripheral to the Central and Eastern European countries,² resulting in their increased share in production and world trade and the high and often rising rates of growth, stems from the reduced international competitiveness of the old countries in traditional sectors, such as textiles, metals and electro-optical equipment. The financial crisis accelerated these trends further enhancing their production and export potential as well as their competitive position in the EU and globally (though often at the expense of their internal territorial cohesion), which perhaps explains the remarkable resilience of some of these countries during the crisis years. The eastward expansion has then signalled a future growth zone in that area, already expressed in the new industrial map of Europe: while in the past the industrial zone of Europe was extended from Manchester (UK) to Milano (Italy), crossing the Netherlands, Belgium, Western Germany and Switzerland (a zone which in 1989, the year of the fall of the Berlin Wall, was characterized as the ‘blue banana’), nowadays, the industrial chart of Europe has been transformed

²See Caraveli (2016) for a more detailed presentation on the relocation issue.

extending from southern Germany (the centre) to Poland, Czech Republic, Slovakia, Austria and Romania. This group of countries witnessed an increase in their share in the EU market between 2004 and 2013 by 5.3%, with the greatest benefits though accruing to Germany (Caraveli, 2016; Taylor, 2015).

Furthermore, the dispersion of European firms' production globally increases demand for logistics, which favours urban centres hosting this type of activity. Some of these centres are already found in the newer member states, given that the rise in productivity owing to innovation, as well as the production restructuring towards higher value added sectors (including services), appears to be taking place more intensively in the group of 'less developed member states' (European Commission, 2010). This perhaps explains the impressive rise in GDP/capita in PPS terms in the metropolitan regions of Slovakia, Romania and Bulgaria (to 186% of the EU average in the first, 122% in the second and 78% in the third), which in the first two countries corresponds to more than double the national average increase (EU Commission, 2014). This rise was especially distinguishable in most post-socialist member states during their transition period to a free market era (Pociute-Sereikiene, Kriauciunas, & Ubareviciene, 2014, p. 116).

We can conclude that, while geographically the EU core still covers the area between London, Paris, Milan, Munich and Hamburg, it has been subject to transformations over the years: (a) around the 1990s, new centres appeared in southern Europe, forming a 'southern development zone' extending from north-eastern Spain to northern Italy; (b) new centres have emerged in the past 10 years in capitals such as Warsaw, Prague, Bratislava, Budapest and Bucharest. In other words, the core-periphery division of Europe, though generally stable, expresses a fragile equilibrium which reflects the dynamics of change.

On the other hand, the core-periphery gap remains quite strong in terms of competitiveness and productivity levels, weakening the EU's competitive position globally vis-à-vis other large economies, for example, US, Japan and particularly the BRICS. As Smith observes 'the increasing consolidation of economic power in 'newer' parts of the world economy, with the 'spectre' of China looming large around the closing of many factories in both Western and Central Europe' creates serious threats and challenges for both core and peripheral European economies (Smith, 2013, p. 4). As 'it is becoming increasingly evident that the centre of gravity of production and exports is moving toward new high-performing players in low-cost economies', further economic and political integration would be required to enhance regional cohesion in all economic determinants within the EU.

What would the implications of a further expansion of the EU to neighbouring areas in the East (the EaP³ countries) be for the existing European core-periphery pattern? The ‘European Neighbourhood Policy’ (ENP) launched in 2003 aims at strengthening the EU’s ties with countries beyond its eastern borders, so that the dividing lines that existed with the CEECs are not repeated, though the membership perspective has never been clearly on the table. The EaP countries are peripheral to the EU as a whole, to EU core countries and to the CEECs. A new core-periphery pattern on many fronts will then emerge which will determine their relationships as well as their integration perspectives to the EU. A number of geopolitical and geostrategic considerations strongly enter the scene here, often taking the form of Cold War type-rivalries which affect and shape the Eastern Neighbourhood’s (EN) resilience capacity to external shocks as well as its Europeanization perspectives.⁴

Interpreting the Trends with the NEG’s Paradigm

The core-periphery division has been approached theoretically by many schools of thought from the 1950s onwards (Caraveli, 2016). Among these, the theories of development and growth, as well as those of the geographical concentration strand, in particular, the ‘growth poles’ or the ‘cumulative causation’ school, hold a prominent position. Two of the most representative theories are those of Myrdal (1957⁵) and of Kaldor (1972, 1975⁶).

The most recent theoretical approach for interpreting the core-periphery division as well as its dynamic and changing nature, the NEG, stems from the above traditions, emphasizing the importance of ‘history’ in the location process. Given its significance in re-integrating space issues in the mainstream economic analysis, it is worth analysing some of its basic assumptions and questioning the extent to which it can explain recent changes in the European core-periphery model and the gradual rise of the economic significance of eastern territories.⁷

³European eastern Periphery.

⁴For instance, in order to understand EaP’s countries resilience capacity in the economic sphere it is worth considering the EU-Russia energy relations which depend mainly on geopolitical factors: Moscow and USA positions and policies towards Europe; Saudi Arabia, Israel and Iran war by proxy, the evolving geostrategic situation in the Greater Middle East.

⁵Myrdal (1957).

⁶Kaldor (1972); Kaldor (1975).

⁷See also the analysis in Caraveli (2012, 2016).

Initiated with the works of Krugman (1991a, 1991b), the NEG model describes the process of regional polarization within a country, resulting from the interaction among economies of scale, transport costs and market size, assuming inter-regionally mobile labour and product variety. An important analytical question is how the above factors affect spatial location under conditions of increased economic integration (regionally or internationally). It is proved that in intermediate stages of the economic integration process, that is, when ‘transport costs’ (here implying impediments to the movement of capital, people and goods) have fallen sufficiently, economic activity will be concentrated in one or a few regions where growth will be accentuated. The driving force of this process, entirely led by market forces, is agglomeration economies that generate cumulative growth and the establishment of a core-periphery pattern.

This theoretical framework interprets ‘international polarization’ through the ‘vertical linkages’ model developed by Krugman and Venables (1995), which assumes mobility of labour only between sectors of production (e.g. agriculture and industry), but not between countries and regions. This permits the maintenance of large wage differentials which is a substantial motive for production relocation from core to peripheral countries/regions. A further reduction in transport costs in advanced stages of economic integration strengthens de-agglomeration or centrifugal forces in central regions that outweigh the centripetal ones. At this point, capital moves to the periphery attracted by its lower wages, a process eventually leading to convergence. The whole process is not linear since some peripheral regions are more dynamic than others as explained in previous sections.

The NEG model has contributed to reinstating space issues into mainstream economic theory and ‘bringing back to life’ the ‘disequilibrium strand’ – the theoretical tradition interpreting territorial inequalities, represented by most theories dealing with space and geography – rejecting the assumption of perfect competition and efficient markets, and adopting that of imperfect competition and ‘multiple equilibriums’ (Krugman, 2011, p. 4). However, being mainly designed to analyse economic (industrial) concentrations of the older (Marshallian) type, the model would be inappropriate to interpret financial capital flows and financial imbalances which occupy a large part of contemporary imbalances. Equally important is its complete neglect of the substantial role of the state in contemporary economies, which stems from its basically neoclassical origin.

Overall, NEG’s significant contribution lies in its grasping unequal development in space and the emergence of ‘catastrophic agglomeration’ under certain circumstances, but also in the fact that it entails the possibility of change, the result of ‘catastrophic de-agglomeration’ followed by new agglomerations in peripheral areas. The model in particular explains the

persistence of old core-periphery pattern in Europe and the limited convergence that has taken place at the current stage of European integration; the deepening of the North–South divide under conditions of a dramatic external shock such as the current crisis, given the political impediments in the further deepening of European integration; the emergence of new ‘centres’ in the old and new European periphery but also internationally (China, India). As Storper remarks, after being adjusted to current developments, the NEG model could become a pioneering theoretical tool for interpreting ‘the astonishing geographical changes that we are experiencing today’ (Caraveli, 2012, 2016; Storper, 2011, p. 10).

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