

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

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

EDITED BY

**GABRIELA CARMEN PASCARIU**

*Centre for European Studies, Alexandru Ioan Cuza University  
of Iași, Iași, Romania*

**MARIA ADELAIDE PEDROSA DA SILVA  
DUARTE**

*Faculty of Economics, University of Coimbra, Coimbra,  
Portugal*



United Kingdom – North America – Japan – India – Malaysia – China

Emerald Publishing Limited  
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2017

Copyright © 2017 Emerald Publishing Limited

**Reprints and permissions service**

Contact: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. Any opinions expressed in the chapters are those of the authors. Whilst Emerald makes every effort to ensure the quality and accuracy of its content, Emerald makes no representation implied or otherwise, as to the chapters' suitability and application and disclaims any warranties, express or implied, to their use.

**British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-78714-496-5 (Print)

ISBN: 978-1-78714-495-8 (Online)

ISBN: 978-1-78714-948-9 (Epub)



ISOQAR certified  
Management System,  
awarded to Emerald  
for adherence to  
Environmental  
standard  
ISO 14001:2004.

Certificate Number 1985  
ISO 14001



INVESTOR IN PEOPLE

# List of Contributors

<i>João Sousa Andrade</i>	CeBER and Faculty of Economics, University of Coimbra, Coimbra, Portugal
<i>Helen Caraveli</i>	Department of Economics, Athens University of Economics & Business (AUEB), Athens, Greece
<i>Valentin Cojanu</i>	Bucharest University of Economic Studies, Bucharest, Romania
<i>Gabriela Drăgan</i>	Faculty of International Business and Economics, Bucharest University of Economic Studies, Bucharest, Romania
<i>António Portugal Duarte</i>	CeBER and Faculty of Economics, University of Coimbra, Coimbra, Portugal
<i>Maria Adelaide Pedrosa Da Silva Duarte</i>	CeBER and Faculty of Economics, University of Coimbra, Coimbra, Portugal
<i>Sylvia Herrmann</i>	Institute of Environmental Planning, Leibniz Universität Hannover, Hannover, Germany
<i>Cristian Incaltarau</i>	Centre for European Studies, Alexandru Ioan Cuza University of Iași, Iași, Romania
<i>Andrew Lovett</i>	School of Environmental Sciences, University of East Anglia, Norwich, UK
<i>Mihaela Onofrei</i>	Alexandru Ioan Cuza University of Iași, Iași, Romania
<i>Florin Oprea</i>	Alexandru Ioan Cuza University of Iași, Iași, Romania
<i>Gabriela Carmen Pascariu</i>	Centre for European Studies, Alexandru Ioan Cuza University of Iași, Iași, Romania
<i>Ester Gomes Da Silva</i>	Faculdade de Letras, Universidade do Porto, Porto, Portugal
<i>Loredana-Maria Simionov</i>	Centre for European Studies, Alexandru Ioan Cuza University of Iași, Iași, Romania
<i>Marta Cristina Nunes Simões</i>	CeBER and Faculty of Economics, University of Coimbra, Coimbra, Portugal

**viii** *List of Contributors*

<i>Ewelina Szczech- Pietkiewicz</i>	Institute of International Economic Policy, Warsaw School of Economics, Warsaw, Poland
<i>Ramona Țigănașu</i>	Centre for European Studies, Alexandru Ioan Cuza University of Iași, Iași, Romania
<i>Johanna Werner</i>	Verband Region Stuttgart, Stuttgart, Germany

## List of Abbreviations

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

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

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

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

# List of Figures

## Chapter 1

Figure 1.1	GDP per capita in PPS, 2015 (EU-28 = 100).. . . . .	6
Figure 1.2a	GDP per capita in PPP (percentage of EU-28) in CEECs.	7
Figure 1.2b	GDP per capita in PPP (percentage of EU-28) in CEECs in southern member states.. . . .	8
Figure 1.2c	GDP per capita in PPP (percentage of EU-28) in CEECs in groups of countries. . . . .	8
Figure 1.3a	Five-year average real growth rates in CEECs.. . . . .	10
Figure 1.3b	Five-year average real growth rates in southern member states. . . . .	10
Figure 1.3c	Five-year average real growth rates in groups of countries. . . . .	11
Figure 1.4	Labour productivity by country in 2015. (Nominal labour productivity per person employed and hour worked (EU-28 = 100)). . . . .	14
Figure 1.5	Growth in labour productivity. (Labour productivity per person employed and hour worked, Index EU-28 = 100).	14
Figure 1.6	Growth rate in labour productivity 2004–2015. (Labour productivity per person employed and hour worked, Index EU-28 = 100). . . . .	15
Figure 1.7	FDI inflows as a percentage of GDP by group of countries. . . . .	15

## Chapter 2

Figure 2.1a	National GDP/capita trends in the EU, 2000–2014. . . . .	34
Figure 2.1b	National labour productivity trends in the EU, 2000–2014. . . . .	35
Figure 2.2a	Global Competitiveness Index Dynamics EU15, 2003–2016. . . . .	37
Figure 2.2b	Global Competitiveness Index Dynamics EU13, 2003–2016. . . . .	37
Figure 2.3	Trade openness (EU12, EU27, Euro Zone), 2000–2014..	39

Figure 2.4	People at risk of poverty after social transfers in the EU, 1995–2014. . . . .	42
Figure 2.5	Risk of poverty after social transfers: grouping by geographic area, (% out of total population). . . . .	42
Figure 2.6	Inequality of income distribution in the EU, 1995–2014. . . . .	44
Figure 2.7a	Institutional Index EU15, 2003–2016. . . . .	50
Figure 2.7b	Institutional Index EU13, 2003–2016. . . . .	50
Figure 2.8a	Selection of indices included into the analysis of economic peripherality (EP) using network-type approach. . . . .	57
Figure 2.8b	Selection of indices included into the analysis of spatial peripherality (SP) using network-type approach. . . . .	58
Figure 2.9	Peripherality index in 2003 and 2014. . . . .	67
Figure 2.10	Peripherality index, 2003; 2014. . . . .	70
Figure 2.11	EU states by groups depending on PI. . . . .	70
<b>Chapter 3</b>		
Figure 3.1	GDP per capita comparatively to the EU-15, 1995–2015 (2014 US\$ converted to 2014 price level with updated 2011 PPPs). . . . .	92
Figure 3.2	Labour productivity comparatively to the EU-15, 1995–2015 (GDP per Hour, 2014 US\$ converted to 2014 price level with updated 2011 PPPs). . . . .	93
Figure 3.3	Multifactor productivity growth in EU-15 countries (annual average growth rates in per cent. 1995–2008). . . . .	96
Figure 3.4	Current account and trade balance as a percentage of GDP (1995–2015).. . . . .	101
Figure 3.5	Population (15–64 years) by educational attainment level, in per cent (1997, 2015). . . . .	102
Figure 3.6	High and medium-high tech manufacturing shares in total manufacturing GVA (current prices, EU-8 = 100, 1995–2014). . . . .	103
Figure 3.7	Knowledge-intensive market services shares in total market services GVA (current prices, EU-8 = 100, 1995–2014). . . . .	104
Figure 3.8	European innovation scoreboard composite indicator (2008, 2015). . . . .	106

**Chapter 4**

Figure 4.1	Evolution of real GDPpc. . . . .	123
Figure 4.2	Conditional density of real GDPpc. . . . .	124
Figure 4.3	Evolution of GDP growth rate. . . . .	124
Figure 4.4	Evolution of GFCF. . . . .	125
Figure 4.5	Evolution of the real exchange rate. . . . .	125
Figure 4.6	Evolution of the inflation rate. . . . .	125
Figure 4.7	Evolution of the short-run interest rate. . . . .	126
Figure 4.8	Evolution of the long-run interest rate. . . . .	126
Figure 4.9	Evolution of government current expenditure. . . . .	127
Figure 4.10	Evolution of tradable goods (proxy). . . . .	127
Figure 4.11	Real exchange rate/structural funds. . . . .	128
Figure 4.12	Real exchange rate/external inflows. . . . .	128
Figure 4.13	GDP growth rate/RER. . . . .	129

**Chapter 5**

Figure 5.1	Traditional services quantile estimates. . . . .	167
Figure 5.2	Modern services quantile estimates. . . . .	168
Figure 5.3	Total health expenditure (% of GDP) quantile estimates. . . . .	169

**Chapter 6**

Figure 6.1	Urban–rural classification (Werner, 2015). . . . .	182
Figure 6.2	Indicator selections for the RUFUS typology of rural regions. . . . .	184
Figure 6.3	Statistical steps and settings within the methodology of rural typology (Werner, 2015). . . . .	186
Figure 6.4	Typology of rural regions: Typology A (Werner, 2015) – four rural types. . . . .	187
Figure 6.5	Typology of rural regions: Typology C (Werner, 2015) – five rural types. . . . .	189
Figure 6.6	Changes in rural types depending on selected EU countries. . . . .	192

**Chapter 7**

Figure 7.1	Total net migration share during 2002–2007 period (% population 2002). . . . .	219
Figure 7.2	Total net migration share during 2008–2013 period (% population 2008). . . . .	221

Figure 7.3	NUTS2 regional classification according to migration transition drivers (2011–2013). . . . .	222
Figure 7.4	Profile of regions according to the migration transition drivers (2011–2013). . . . .	223
Figure 7.5	Migrant integration policies index within eastern and southern European countries in 2014. . . . .	225
<b>Chapter 8</b>		
Figure 8.1	Results from the Regional Innovation Scorecard 2014. . . . .	238
<b>Chapter 9</b>		
Figure 9.1	Distribution of Local Expenditures in Italy by Function (2015, % of Total).. . . . .	261
Figure 9.2	Distribution of Local Expenditures in Spain, by Function (2015, % of Total).. . . . .	269
Figure 9.3	Distribution of Local Expenditures in Romania by Economic Activity (2015, % of Total).. . . . .	276
Figure 9.4	Distribution of Local Expenditures in Romania, by Function (2015, % of Total). . . . .	277
Figure 9.5	Annual Rate of Absorption of European Structural and Investment Funds, 2007–2013 (% , Selected Countries). . . . .	280
Figure 9.6	Evolution of Regional GDP in Poland, 2004–2014 (Millions of Euros, GDP per Capita in PPS). . . . .	285

# List of Tables

## Chapter 2

Table 2.1	GDP per capita and labour productivity by EU enlargements, national level. . . . .	27
Table 2.2	GDP per capita and labour productivity dynamics, 2000–2014, regional level. . . . .	28
Table 2.3	The dynamics of institutional environment in EU member states: 2003, 2008, 2015.. . . .	47
Table 2.4	System of structural equations determining peripherality.	56
Table 2.5	Peripherality indices for the economies of the European Union (2003/2014). . . . .	63
Table 2.6	Dynamics of peripherality 2003–2014 and correlation between economic and spatial peripherality. . . . .	64
Table 2.7	Confidence intervals for the two dimensions of peripherality.. . . .	68
Table 2.8	Competitiveness deficits of EU13 economies, 2016–2017.	73

## Chapter 3

Table 3.1	Contributions to real output growth and labour productivity growth, Italy, Spain, Portugal (annual average growth rates in percentage points). . . . .	94
Table 3.2	Contributions to real output growth and labour productivity growth, Czech Republic, Hungary and Slovenia (annual average growth rates in percentage points).. . . . .	95
Table 3.3	Shares in gross value added (1995–2014). . . . .	98
Table 3.4	Shares in total employment (1995–2014). . . . .	100
Table 3.5	Trade shares in technology classes.. . . .	105
Table 3.6	Decomposition of business expenditure in R&D (2014, in per cent). . . . .	108

## Chapter 4

Table 4.1	Unit root tests.. . . .	131
Table 4.2	Models for GDP growth rate. . . . .	133

Table 4.3	Models for GDP growth rate (continuation). . . . .	134
Table 4.4	Models for the real exchange rate. . . . .	135
<b>Chapter 5</b>		
Table 5.1	Selected indicators in the NMS11 and Southern Europe (1990–2010).. . . . .	147
Table 5.2	Panel unit-root tests. . . . .	162
Table 5.3	Inequality and output performance estimates. . . . .	163
Table 5.4	Structural change and inequality estimates. . . . .	165
Table 5.5	Key elasticities $\epsilon_{yrpc, gini}$ , $\epsilon_{gini}$ , $\epsilon_{trad}$ and $\epsilon_{gini, emod}$ . . . . .	166
<b>Chapter 6</b>		
Table 6.1	Description of types of typology A: Typology with four rural types. . . . .	188
Table 6.2	Description of types of typology C: Typology with five rural types. . . . .	190
<b>Chapter 7</b>		
Table 7.1	Average net migration rates (per 1000 inhabitants) in Southern European countries, 1960–2013 . . . . .	205
Table 7.2	Data description. . . . .	209
Table 7.3	Regression results for fixed-effects models relating migration transition drivers to migration balance in EU at NUTS2 level. . . . .	214
Table 7.4	Regression results for fixed-effects models relating migration transition drivers to migration balance in Southern and Eastern European countries at NUTS 2 level . . . . .	215
<b>Chapter 8</b>		
Table 8.1	Pooled OLS model estimation . . . . .	242
Table 8.2	Fixed effects model estimation. . . . .	243
Table 8.3	Estimation of core-periphery effects for selected Polish cities and regions – POLS and FE models. . . . .	243
Table 8.4	Gap in the urban and region’s competitiveness in 2006 and 2013. . . . .	244
<b>Chapter 9</b>		
Table 9.1	Share of Local Expenditures in Overall Government Expenditures in States on the Periphery of Southern Europe (%). . . . .	256

Table 9.2	Overall and Local Government Revenues as Percentage of GDP in Italy, Compared with the EU-28 Average (2008–2015).. . . . .	259
Table 9.3	Structure of Budgetary Revenues in the Provinces and Municipalities in Italy (2014). . . . .	260
Table 9.4	GDP Share of National and Local Expenditures in Italy, Compared with the EU-28 Average (% , 2008–2015).. . . . .	261
Table 9.5	Division of Responsibility among Local Governments in Spain. . . . .	264
Table 9.6	Distribution of Budgetary Revenue in Spain by Government Level as of 2015 (% of the Total and % of GDP). . . . .	266
Table 9.7	Main Sources of Revenue in Autonomous Community Budgets in Spain, 2015. . . . .	267
Table 9.8	Distribution of Public Expenditures in Spain Based on Government Level (% of the Total and % of GDP). . . . .	268
Table 9.9	Main Expenditures in Autonomous Community Budgets in Spain, 2015. . . . .	269
Table 9.10	General Share of Local Government Expenditures among Countries on the Eastern Periphery of the Europe Union (%). . . . .	271
Table 9.11	Distribution of Responsibility in Romania by Level of Government.. . . .	273
Table 9.12	Sources of Local Budgetary Revenues in Romania (2010–2015) (%). . . . .	274
Table 9.13	The Main Indicators of Fiscal Decentralisation in Romania (2010–2015) (%). . . . .	275
Table 9.14	Distribution of Government Responsibility in Poland, by Level of Government.. . . .	281
Table 9.15	The Main Indicators of Local Revenues and Expenditures in Poland, by Local Government Level (2015). . . . .	282
Table 9.16	Distribution of Local Expenditures in Poland by Function (2015). . . . .	284

**Chapter 10**

Table 10.1	Distribution of funds among different categories of regions. . . . .	301
Table 10.2	Main area of intervention of the EU Cohesion Policy by broad policy area between 1989 and 2013. . . .	302
Table 10.3	Correlation between the 11 TOs, ESFI and Europe 2020 Strategy. . . . .	304
Table 10.4	Comparative analysis between the EFSI and ESIF. . . .	309
Table 10.5	Evolution of the GDP/cap in the CEECs. . . . .	314
Table 10.6	Stage of development of non-euro countries from CEE according to the rank in the GCR 2014–2015. . . .	317
Table 10.7	RCI 2013 ranks in the CEE non-euro countries. . . . .	319
Table 10.8	Regional real GDP per capita in Romania in 2004, 2008, 2012 and 2013. . . . .	320
Table 10.9	The level of RCI and appropriate development stage for the Romanian regions. . . . .	321
Table 10.10	General information on the use of the EU Cohesion Funds in the CEEC during the 2007–2013 period. . . .	322
Table 10.11	Absorption rate per each 2007–2013 Cohesion Policy’s Operational Programme. . . . .	324
Table 10.12	Financial Allocation of CP and EAFRD allocations in the CEEC for the period 2014–2020. . . . .	326
Table 10.13	Allocation to the different national operational programmes (OPs) in Romania. . . . .	327
Table 10.14	The structure of the thematic objectives in the period 2014–2020. . . . .	328

**Chapter 11**

Table 11.1	Lessons from three interpretations of space. . . . .	348
------------	--	-----

# List of Appendices

## Chapter 2

Table A1	Variables used in the analysis of peripherality index (PI). . . . .	83
Figure A1	Maps of economic and spatial peripherality and the topographic representation of peripherality index 2003 vs. 2014. . . . .	84
Figure A2	Correlations matrix for the two types of peripheralities . . . . .	85

## Chapter 7

Table A1	Descriptive statistics of the variables used in analysis .	232
----------	--	-----

## Acknowledgments

The contributions included in this book represent the results of various research activities conducted within the framework of two joint projects (European Project Ad-personam Jean Monnet Chair “EU sustainable development, regional cohesion and European policies/EUReP” within the Centre for European Studies of Alexandru Ioan Cuza University of Iași and the project “The Welfare State, Globalisation and Economic Performance: a Comparative Analysis” of GEMF, University of Coimbra).

Moreover, these contributions are also the results of joint efforts and cooperation between colleagues from Romania, Portugal, Poland, Greece, and Germany. The editors would like to thank all the colleagues from the two research centers (Center for European Studies, Alexandru Ioan Cuza University of Iași – Romania and GEMF and the newly created Centre for Business and Economics Research, University of Coimbra – Portugal) for all their valuable opinions and constructive criticism offered throughout time, within the various scientific events (conferences and workshops) that they have taken part in and which have ultimately led to the shaping and refining of some of the ideas developed and encompassed in this book.

Adelaide Duarte, the Coimbra co-editor, would also like to express her deepest gratitude to Claude Berthomieu and Jean-Paul Guichard who decisively contributed to her interest in eastern economies.

We would also like to thank the authors for their valuable contributions, as well as for the patience and responsibility with which they have always answered our requirements and reviewers’ requests for editing and improving their chapters; very special thanks goes to all the reviewers, whose efforts and scientific contributions provided a genuine and valuable support.

Finally, the authors and the editors would like to thank Daniel Mereuta, Ciprian Alupului, Lucian Dumitru Dirdala, Olesia Mihai, and Andrada Timofte for the professionalism with which they have contributed to the editing and proofreading of the text in an appropriate and suitable format as required by the publisher. Without their effort, dedication, and unconditional availability, the elaboration of this book, in a timely manner and in excellent editing conditions, would not have been possible.

# 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*