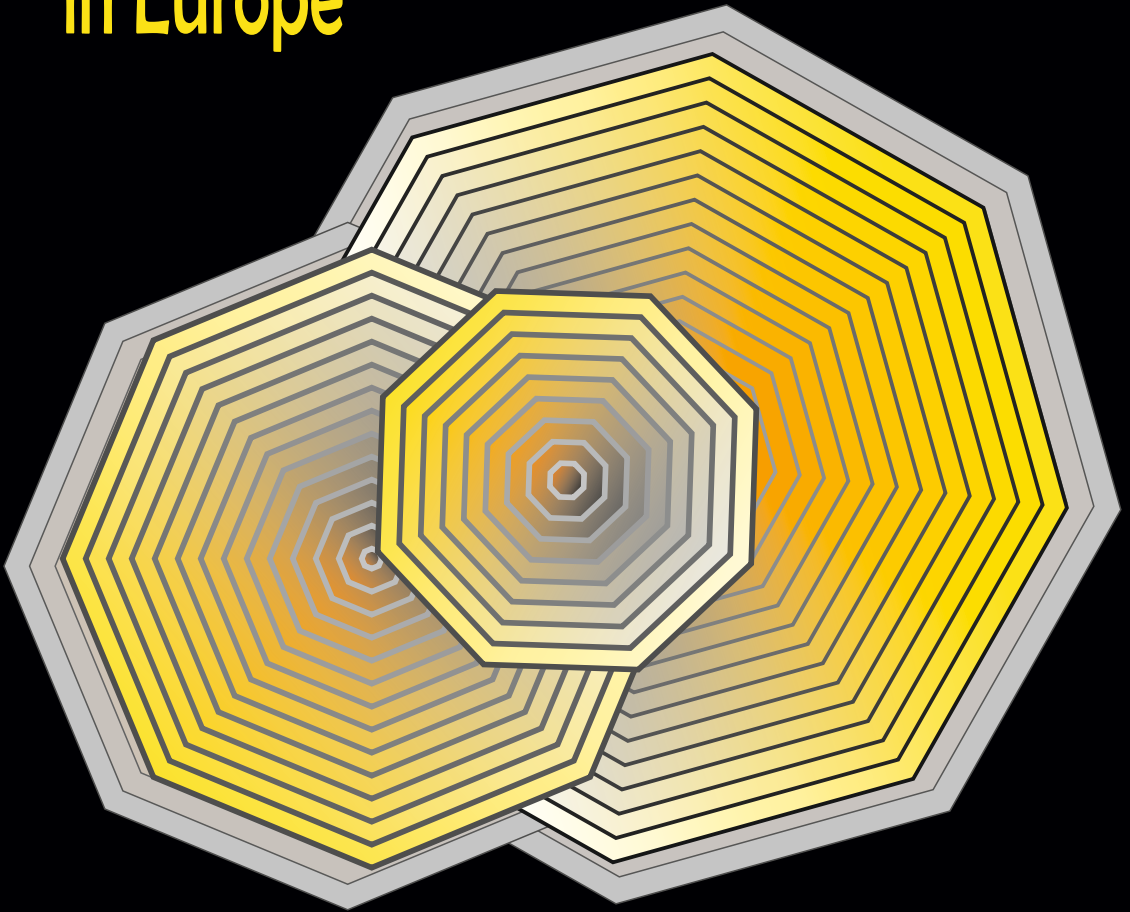


Cohesion and Development Policy in Europe



Ákos Bodor – Zoltán Grünhut (eds.)

Cohesion and Development Policy in Europe

Editors

Ákos Bodor
Zoltán Grünhut

Institute for Regional Studies
Centre for Economic and Regional Studies
Hungarian Academy of Sciences

Pécs, 2015

ISBN 978 963 9899 87 2

© Institute for Regional Studies,
Centre for Economic and Regional Studies,
Hungarian Academy of Sciences

Revised by: Péter Tamási
Technical editor: Ilona Strasserné Csapó
Figures: Valéria Fonyódi

CONTENTS

Has the Economic and Financial Crisis Reversed Regional Convergence in the European Union? An Analysis of the New Data <i>Robert Leonardi</i>	5
Regional Development in the Course of Economic Integration: The Case of German Unification, Development Path and Policy Experiences <i>Gerhard Heimpold</i>	33
Spatial Structure and Spillover Effects <i>Gábor Balás – Klára Major</i>	42
Building Institutions for the Structural Funds in the Visegrad Countries <i>Cecilia Mezei</i>	60
A Study of Rural Development Sustainability in Harghita County, Romania <i>Andrea Csata</i>	72
Territorial Processes and their Implementation in the Practice of Regional Planning – on the Example of Hajdú–Bihar County <i>Zsolt Radics – Ernő Molnár – János Péntzes</i>	87
Social Responsibility and Territorial Development <i>Adrienn Reisinger</i>	99
The spatial Structure of Financial Services in the South Pannonian Region <i>Sándor Zsolt Kovács</i>	109
Theoretical Comments on the Concept of Territorial Capital <i>Ákos Bodor – Zoltán Grünhut</i>	119
LIST OF AUTHORS	133

HAS THE ECONOMIC AND FINANCIAL CRISIS REVERSED REGIONAL CONVERGENCE IN THE EUROPEAN UNION? AN ANALYSIS OF THE NEW DATA

Robert Leonardi

Introduction

One of the most significant trends of the past thirty years in regional development has been the reduction in socioeconomic disparities between the developed and the less developed regions of the European Union (EU). At the beginning of 1989 when the Cohesion Policy was launched and the first cycle of Structural Funds resources allocated (1989–1993) to pursue the aim of bridging regional disparities, vast sections of the European ‘periphery’ that included the regions in southern Europe but also Ireland and the north and west of the UK, were below the EU mean of 75% in terms of the average GDP per capita as measured by PPS (Purchasing Power Standard). Yet, by the end of the third programmatic cycle (2000–2006) of the Structural Funds most of the less developed regions had moved beyond that 75% threshold. Ireland existed completely from Objective 1 or the Convergence objective in 2000; Spain’s original thirteen less developed regions were cut to one for the new planning cycle of 2014–2020; Portugal’s original seven regions requiring special assistance have been reduced to three; in 1989 Italy had eight regions in Objective 1 and now that number has been whittled down to four; Greece began participating in the Cohesion Policy with the entire country (i.e., thirteen regions) eligible for socioeconomic assistance and in the 2014–2020 cycle the total of eligible regions will have been cut by nine leaving four with special assistance; and in the UK only western part of Wales continues to receive special consideration by the Cohesion Policy. A similar trend emerged in the eastern part of Germany and in the new Member States in Central and Eastern Europe during and immediately after their accession to the EU in 2004.

However, after 2008 the socioeconomic crisis that has hit most of Europe places into question this convergence trend in Southern Europe and in many of the new Member States in Eastern Europe. As Member States struggle to balance budgets; re-establish confidence in the viability of their economies; and return their economies to a process of growth – the prospect on the horizon for the near future seems to be the opposite of what we have seen up to 2007 – that is, divergence – and

the emergence of a new centre-periphery dynamics in which the growth rates registered in the periphery have difficulty in keeping up with the growth trends in the core areas of Europe.

This paper investigates the theoretical issues and empirical trends that emerged with the creation of the Single Market and the associated Cohesion Policy. What in effect happened after 1989 when the Cohesion Policy was initiated and when the Single Market programme was implemented? In addition, we will look at the impact of the Single Currency during the period 2000–2007.

These results will be contrasted with what has happened after 2008 to the prospects for growth following the financial and economic crisis and how the crisis has or has not been taken into account in the formulation of the next cycle of Cohesion Policy for 2014–2020. The three research questions which are addressed here deal with: (1) what were the expectations in the creation of the Single Market and Single Currency and have these expectations been supported by the empirical results; (2) how has the new Cohesion Policy taken into account the economic and financial crisis of 2009–2013; and (3) what needs to be done to make the new Cohesion Policy more respondent to the crisis?

The Literature on the Impact of the Single Market on Peripheral Economies

Most of the literature before 1993 when the Single Market came into effect, dealt primarily with the ‘projected’ results (e.g. Padoa-Schioppa Report 1987, Cecchini Report 1988, Baldwin 1989) or the impact of the Single Market based on a set of contradictory assumptions. Few empirical studies existed on the overall impact of market liberalisation and integration in Europe as a result of European integration under the Common Market programme or the general post-WWII trend of opening up European markets. The major exception was the work of Molle et al. (1980) and Barrow and Sala-i-Martin (1991).

It was only after 1993 that the focus of attention changed to take into account what had actually happened in response to the creation of the Single Market. After 1993 more focused empirical studies emerged on how the Single Market was impacting growth, employment, competition and regional disparities. The question posed by most observers was whether the Single Market represented a further stage in the opening of markets in Europe after what had happened in the post-war period and the beginning of European integration with the European Coal and Steel Community (1951) and European Common Market (1957) or whether the Single Market represented a radical departure from what had happened before.

Though the thinking behind the creation of the Single Market broke new ground in terms of European politics and policies, for many of the leading figures in the

European Community it represented instead the logical next step in building on the achievements of the Common Market and the Customs Union. The Single Market proposed to go beyond the elimination of customs duties and tariffs on goods and to move on to the elimination of all of the 'non-tariff' barriers to the free flow of the factors of production: capital, labour and technology. Thus, in his introduction to the Cecchini Report, Jacques Delors stated that the objective of creating a large and truly unified economic area in Europe by 1992 was formidable but it promised to provide substantial benefits:

"This large market without frontiers, because of its size and because of the possibilities that it offers for scientific, technical and commercial cooperation, gives a unique opportunity to our industry to improve its competitiveness. It will also increase growth and employment and contribute to a better balance in the world economy" (1988: xi).

Aside from the economic objectives, Delors argued that attention also had to be placed on improving the Community's economic and social 'dimension' in providing an increase in resources to combat long-term and youth unemployment, spur rural development, help underdeveloped regional economies, and ameliorate industrial restructuring problems. Concern for economic and social cohesion had been a constant feature in the process of European integration, but with the creation of the Single Market it was transformed into a vital issue of concern for the political, economic and social stability of the post 1992 period. While the formation of the Single Market offered the promise of a significant increase in the output of the Community as a whole, the political viability of the project also required that the distribution of its benefits be perceived as fair by the constituent states and regions (Leonardi 1993a, De la Fuente and Vives 1995).

In 1989 the Delors Report on economic and monetary union provided the theoretical and political underpinning of the Single Market and Single Currency programmes. The Report pointed out both the positive as well as negative impacts of the Single Market on core versus peripheral areas.

"Historical experience suggests... that in the absence of countervailing policies, the overall impact on peripheral regions could be negative. Transport costs and economies of scale would tend to favour a shift in economic activity away from less developed regions, especially if they were at the periphery of the Community, to the highly developed areas at its centre. The economic and monetary union would have to encourage and guide structural adjustment which would help poorer regions to catch up with the wealthier ones" (CEC 1989, p. 22).

It is historically significant to note that the Community's initial view on the impact on the less developed areas on the part of the Single Market and Single Currency was not completely optimistic. In fact, the prevailing view in the Commission was

that the impact would be negative in nature. Paul Krugman (1987) in his contribution to the Padoa-Schioppa Report pointed out some of the negative consequences that might emerge from further market integration: increases in unemployment, agglomeration effects in particular industries, national competition/conflict over the rescue of national champions, uneven distribution of the gains from trade, management of migration flows, and lack in coordination of monetary policies. Thus, the expectation was that through market integration there would be a significant divergence of economic performance and wellbeing of the core vis-a-vis the peripheral areas. In other words, the fear was that the convergence of national and regional economies documented by Molle et al. (1980) during the 1950–70 period would be sacrificed to the strengthening of the core areas. It was feared that market integration: economic growth and job creation would take place in the core areas to the detriment of the peripheral ones. According to the Delors Report (1988) the Single Market was not viable from a political and social point of view without a parallel policy capable of absorbing the expected negative shocks of market integration on peripheral underdeveloped areas.

To avoid such an outcome it was felt that a pro-active regional policy could serve to alleviate the negative impact of opening the market on less developed areas and help to restructure regional economies so that the least developed and peripheral regions could participate in the beneficial aspects of economic integration. In this manner, the Community would help to promote the forces of convergence against those pushing toward divergence. This approach to cohesion policy has been consistently reconfirmed from 1989 to the present (e.g. Monti 2010).

Lord Cockfield, the coordinator of the Commission's White Paper on the Single Market (1985) admitted that in 1985 the 1992 Single Market programme represented "an act of faith – confidence in the present and faith in the future – that we – the Community – embarked on this task", but with the publication of the Cecchini Report:

"...we are able for the first time to see the precise measure of what we are going to achieve. Now we have the hard evidence, the confirmation of what those who are engaged in building Europe have always known: that the failure to achieve a single market has been costing European industry millions in unnecessary costs and lost opportunities; that the completion of the Internal Market will provide the economic context for the regeneration of European industry in both goods and services; and that it will give a permanent boost to the prosperity of the people of Europe and indeed of the world as a whole" (Cecchini 1988, xiii).

Aside from the official expressions of optimism on the Commission's 1992 programme, there was not a broad consensus among policy makers or scholars on what would be the concrete benefits for all Member States and regions. As illustrated by

the analyses contained in the Padoa-Schioppa (1987)¹; Cecchini (1988) and Emerson (1990) reports, the expectation was that the realisation of the Single Market would have a negative impact on employment and competition and, especially, on the prospects for development of the less developed and peripheral areas. Much of the optimistic prediction on the overall impact of the Single Market generated by the official reports was based on classical general equilibrium theories, such as those developed by Solow (1956) that foresaw a gradual trickledown effect originating in the core areas and gradually extending itself to the peripheral regions. However, since the mid-1950s there was an expanding body of literature based on centre-periphery theory (e.g. Myrdal 1957, Holland 1976) that produced much more pessimistic scenarios on the impact of integrating markets. The tenants of centre-periphery theory were negative in their predictions of the consequences for less developed areas produced by market integration.

Thus, the expectations associated with core-periphery theory were that the relative position of the periphery would erode over time to the benefit of the core areas. The basic theoretical foundation in predicting what would happen to underdeveloped areas in an integrating market were spelled out by Gunnar Myrdal in 1957 in his widely read *Economic Theory and the Underdeveloped Regions*. The concept of 'backwash effects' was further elaborated by Stuart Holland in 1976 and 1980. Based on this approach, a number of books appearing at the end of the 1970s and beginning of the 1980s – that is, at the time that Greece, Portugal and Spain were preparing to enter into the Community – warned of the dire consequences of further enlargement and greater economic integration for the new members from southern Europe. These scholars argued that further integration would prove to be fundamentally damaging to the growth potentials of the peripheral economies (Seers, Schaffer and Kiljunen 1979, Williams 1984; Hudson – Lewis 1985, Hadjimichalis 1987). Italy's Mezzogiorno regions were also added to the list of 'net losers' in the prospect of further European economic integration (Carello 1989).

The few dissenting voices to this cacophony of pessimism were provided by the authors of two empirical studies of how regional disparities had fared between 1950 and 1970 – that is, by Molle, van Holst and Smit (1980) and by Barrow and Sala-i-Martin (1991). Barro and Sala-i-Martin analyzed the empirical results over the period between 1970 and 1990, and therefore built upon the data previously analyzed by Molle et al. in their 1980 publication. The latter argued that the data for

¹ See Annex E (p. 162–164) that reports an increased divergence of national GDP/p.c. scores in Europe after the impact of the initial 1973 oil crisis: The Report went on to state that "In the 1960s there was relative convergence in real GDP per capita between countries, but since the first energy crisis in 1973, this trend seems to have come to a stop and the gaps have been stabilized or slightly increased" (p. 162).

the first nine Member States – the original six plus Denmark, Ireland and the UK – showed that the gap between rich and poor regions had not increased during the course of the reintegration of the European economies in the post-war period. In fact, the authors found that disparities had instead decreased in a consistent manner at both the national and regional levels:

“We have examined whether regions with similar growth rates also had other characteristics in common, such as their type of location within the EC. From the centre-periphery theory it might have been expected, for example, that integration would have the effect of making regions along the inner borders of the Community of the Six grow faster, and peripheral regions slower than average in the period 1960–70. The outcome of the analysis shows no such thing” (p. 161).²

In a similar manner the Barro and Sala-i-Martin study concerned itself with what happened in large, integrating economies – such as those in the U.S., Japan, and EC – in terms of trends in socio-economic convergence or divergence. Their findings were surprising to both the academic and policy making communities given that they went against the prevailing views on what was happening in terms of the direction taken by regional disparities. The authors concluded in their report to the Brookings Institution that between 1970 and 1990 regions in the EC had converged at a rate of approximately 2% per annum. The conclusions reached by Barro and Sala-i-Martin conflicted significantly with what was being written on the Commission’s behalf in the Periodic Reports on the trend in regional disparities. The Third and Fourth Periodic Reports stated that: “As a result of the first oil shock and the major worldwide disequilibrium of the last fifteen years the process of real convergence was interrupted and partly reversed” (CEC 1987, p. 52) and “During the 1980s disparities in incomes per head in the Community increased slightly up to 1986, since when they have remained at around the same level” (CEC 1991, p. 11).

The implications of the results reported by the Periodic Reports were that the EC needed a regional policy capable of easing the pain of market integration and in slowing down the increase in disparities. Very little consideration was reflected in the Periodic Reports regarding the objective outlined in the Single European Act of reducing regional disparities over time. That shift in expectations had to wait until after 1993 when evidence began to accumulate that regional, socio-economic disparities were not increasing but rather decreasing under the combined impact of the Single Market and Cohesion Policy.³

² In 2007 (p. 90) Molle reiterated his previous conclusion that “since the 1950s a continuous process of long-term convergence between the core and the periphery has taken place”.

³ See the Cohesion Reports produced by the Commission (i.e. 1996, 2001, 2004 and 2010). There is still a lot of debate on how much of the convergence process is fuelled by the Single Market and/or by the Cohesion Policy. With regard to the impact of EMU, Christodoulakis (2009) argues that regional divergences began to grow once again after the introduction of the Single Currency

The Impact of EMU

EMU was the other policy that was supposed to underpin the success of the Single Market. Operating within a common currency, the uncertainties attached to individual national currencies and the free circulation of capital would be eliminated. Dyson (2002, 2006 and 2008) has argued that EMU has set out to institutionalise a paradigm of 'sound money' and finance, the retrenchment of welfare state provisions and the rejection of inflationary wage bargaining regimes. The Commission (1996) argued that EMU would make the Single Market more effective by "constraints which now result from exchange rate risk and by generally increasing transparency and competition" (CEC 1996, p. 6). However, the exact impact of EMU on peripheral and core economies has been debated in the academic literature from the very beginning (Martin 2001). From 1999 to 2007 the main beneficiaries of the policy seemed to be the peripheral areas due to the stabilization effect of the fall of interest rates in the transition from traditionally weak national currencies to the euro (CEC 2008d). A telling example of this change was provided by Greece where the interest rate went from 7.7% for the drachma in 2000 to 4.3% in 2001 when the country entered the euro (Featherstone 2008). The same trend had been witnessed in Spain and Italy during the previous decade (Quaglia – Furlong 2008). For the latter, the lower interest rates generated by membership in the euro significantly benefitted the country's ability to finance its accumulated debt and keep its annual deficit under control (Nanetti 2010). For the four cohesion countries of the EU-15 and Italy the requirements for nominal convergence imposed by the Maastricht criteria had already begun to produce benefits in terms of reduced inflation and management of fiscal matters during the second half of the 1990s.

Aside from the nominal aspects of convergence in terms of inflation, interest rates, and deficit and debt levels, there was a real expectation that EMU would become a powerful instrument in producing real economic convergence. Expectations were that EMU would have a significant impact on levels of economic growth by eliminating the need to use devaluations to regain competitiveness and the introduction of other reforms. Frank Barry (2003) observed that during the run-up to EMU:

"Monetary and fiscal policies were reined in, competition policy strengthened, state ownership reduced and EU aid increased considerably. Substantial improvements in labour market performance were recorded in Ireland and Spain. Wage moderation was promoted in Ireland by the tax-cutting 'social partnership' agreements, and in Spain by the labour-market reforms of the 1994–97 period" (p. 910).

but does not argue that the growth in regional disparities is necessarily due to EMU. We will discuss further the impact of EMU at greater length below.

The association of EMU with the Stability and Growth Pact added increased credence to the new currency in becoming a stabilizing factor for the domestic economy in that national governments would be discouraged in succumbing to the lure of borrowing to pay for social welfare schemes or extensive infrastructure projects (Brunila et al. 2001, Grauwe 2005). Thus, EMU was expected to produce low inflation and low interest rates, exchange stability and sound public finances. Three of the four expected results were achieved, but the fourth – sound public finances – did not materialise as expected.

EMU also worked to encourage increased flows of FDI to countries in the euro zone. The flow of FDI into the EU was initially associated with the creation of the Single Market at the beginning of the 1990s, and a decade later it underwent another significant surge. Little attention was paid during the initial years of EMU to whether the FD flowing into the participating countries was funnelled into productive sectors such as R&D and the construction of new facilities for the production of exportable goods or to finance the consumption of capital goods – e.g., for the purchase of second homes – that remained within the country. Ardy et al. (2003) reported that already in 2001 the deficit in the balance of payments for Ireland was 0.6% of GDP, for Spain 3.0%, for Greece 4.2% and for Portugal 9.6%, and they observed at the time that “whether this is a problem is a matter of argument” (p. 7). At the beginning of the decade the most important considerations in underwriting the stability of the Euro were fiscal stability and capital flows. Oversight of the former was allocated to the procedures foreseen in the Stability and Growth Pact (SGP). In 2004 France and Germany overran the established deficit limits, but it was difficult for the Member States to agree on a common approach to the issue. As a result, the March 2005 reform of the SGP introduced more flexible criteria for its enforcement (Chang 2009, Talani 2009, Farina – Tamborini 2007).

In the CEECs the prospect of adopting the euro has raised a number of considerations. For some the possible adoption of the euro will help the participating countries to reap the benefits of closer integration with other euro Member States in terms of gains from trade, growth, employment, and FDI flows, but it was argued that these gains would be made at the ‘cost’ of giving up the use of monetary policy as a stabilization instrument for the internal economy (Beblavy 2007, Dyson 2006). The evidence cited confirms that the formation of EMU stimulated trade between its member states. Estimates of likely gains for growth of trade and incomes from joining the euro area differ from 85% of increase in trade (Rose 2002) to a more modest trade gain of 6–15% after five years of EMU (Faruqee 2004). Maliszewska (2005) finds that members of EMU trade on average between 6% and 26% more than otherwise would have been the case. Trade increases are presumably caused by lower transaction costs, greater competition and transparency of prices (Schadler 2005). Studies report that the adoption of the euro would add 0.6–0.9%

to average GDP growth in Hungary for 20 years and about half this range for Poland (Schadler et al. 2005).

In addition to gains for trade and growth, the adoption of the euro by the CEECs would eliminate exchange rate risk. Rostowski (2005) points to higher exchange rate risks in CEECs as these countries have built up high current account deficits due to expectations of rapid economic growth.

Joining EMU would pose the challenge of the costs of meeting the Maastricht criteria and giving up the supposed shock-absorbing role of the exchange rate (Zubek 2006 and 2008, Greskovits 2006). Dabrowski (2005) argues that the costs of giving up sovereign monetary policy for small open economies are not large as discretionary currency devaluation aimed at boosting external competitiveness will most likely end with higher internal inflation that will eventually eat up the real effects of the nominal devaluation and, in the end, lower the credibility of the central bank. Empirical work presented in Schadler (2005) concludes that the largest share of shocks in the CEECs has been monetary or financial in origin; thus, losing the exchange rate instrument may not be particularly costly if other more efficient adjustment mechanisms are put into place.

Dabrowski (2005) concludes that EMU entry will likely accelerate the catch-up process for CEECs in the long run and help real convergence or economic cohesion. The IMF study (Schadler et al. 2005, Schadler 2005) also suggests a positive balance in the adoption of the euro for the CEECs, provided that they adopt structural and fiscal policies strongly geared toward minimizing overall economic volatility.

The financial and economic crisis of 2008–2009 helped to expose some of the basic weaknesses of the SGP operating at the European level and the support mechanisms foreseen by the rules of EMU. First of all, the financial crisis emphasized the existing imbalance in two vital areas: (1) fiscal balance of Member States and (2) the balance in current accounts. The first was highlighted recently by the situation in Greece and the second by the most recent Irish crisis. However, an important element in highlighting both crises was the on-going financial difficulties of Member States on the periphery that, on the one hand, called into question the sustainability of their national fiscal policies and, on the other, placed into question their ability to respond to the lack of confidence in financial markets. The sovereign debt crisis affecting a number of EU and non-EU countries has helped to instil a ‘risk avoidance’ strategy among international investors that has already heavily compromised the economic and financial stability of the peripheral countries participating in EMU.

The reform of the SGP in 2005 (Farina – Tamborini 2007) to a certain extent allowed Greece to continue with ignoring the need to balance its budget. By 2010 this approach by the Greek government threatened to bring the country out of EMU and required a countervailing policy on the part of the EU for more stringent measures to monitor and react to fiscal imbalances (CEC 2010c), The EU also had to

put together rescue packages to buttress investor confidence in national government bonds. The first to bring attention to the potential role that could be played by the dual deficits (fiscal as well as current account) were authors, such as Blanchard (2006) and Argyrou and Chortareas (2008), who studied the current account deficits that were afflicting the southern tier of EU Member States. However, the most detailed paper on the topic appeared in 2009 by Nikos Christodoulakis (2009) who reported increasing current account and trade deficits within the Euro area between 'northern' (e.g. Germany, Finland, Austria, etc.) vis-à-vis 'southern' (e.g. France, Italy, Spain, etc.). The author does not argue that the twin deficits originated from EMU, but he notes that the common currency, if anything, encouraged increased differentiation between the two groups of countries. What seems to be important in explaining these trends is the relationship between traded and non-traded goods that are attracting FDI into the country. In the former case, FDI expands traded outputs, increases productivity, and improves competitiveness. In the latter, FDI flows into a non-traded domestic economy (i.e. housing) that reduces traded output and increases domestic demand. It is in this manner that property bubbles arise with a potentially devastating impact when they burst on the viability of banks and confidence in their ability to ensure deposits.

The impact that the Euro crisis has had on the growth prospects of Greece and Ireland (but also Portugal and Spain) has been dramatic. At the present time, both countries need to concentrate more on mending their fiscal policies rather than focussing on policies to promote growth. Greece, Ireland and Spain are expected to still remain in recession in 2013. The financial crisis in Portugal may also have the impact of leaving the country in recession and abandoning any growth-oriented internal macroeconomic policy. In other words, is it possible for the Member States hit by the sovereign debt crisis to keep paying double or triple the rate of interest on Euro bonds in comparison to other EMU countries and maintain a focus on the Lisbon objectives of increased growth and job creation?

The Contribution of Cohesion Policy

The results reported by studies in the abundant literature available on the impact of Cohesion Policy have varied a lot. Some have found evidence of the Cohesion Policy having a positive effect on economic growth; others have found no significant or even a negative impact. The results of the analysis do not necessarily vary with the data selected or the time period to be covered by the policy but rather with how one defines the policy. Does one include under the rubric of 'cohesion policy' [as is the case with Boldrin – Canova (2001)], the 'regional policy' of the EC from the creation of the ERDF in 1975 to the reform of the Structural Funds (1988) or the policy as implemented by the reform of the Structural Funds from 1989 onward? Given the

difference in the operation of the Structural Funds during these two periods (i.e. pre- and post-1989), the emphasis on the pre-1989 analysis cannot be labelled as an evaluation of EU cohesion policy but rather of the early EC regional policy. Such a choice emphasises the fact that the Boldrin and Canova study is not a study of a proactive policy but rather of a quite limited EC financial allocations to Member States for the purpose of financing a regional policy monopolised to a great extent by them, which used a quota system to allocate contributions, which lacked any specific programmatic approach and where no monitoring and evaluation of investments was ever undertaken. A second question is associated with the definition of 'convergence'. The Single European Act that launched the Cohesion Policy spoke of "the convergence of the less developed regions" toward the European average rather than the convergence of all regions (both wealthy and poor) toward a European or a national average. In studies that focus on the latter version of the definition, the analysis of convergence is carried out within Member States rather than within the EU. As we have seen in the literature cited above on convergence and divergence, most studies do conclude that disparities have decreased across Europe but in many cases they have increased within Member States (De la Fuente and Vives 1995, CEC 1999, Midelfart-Knarvik – Overman 2002, Monfort 2008, Farole et al. 2009).

Leonardi (1998: 165–172) was one of the first to point out that it is possible for initially poor countries, such as Ireland, to converge dramatically toward the EU average, while at the same time undergoing a significant intra-state divergence process as one or more regions (e.g. Dublin or Cork) develop dramatically and thereby outstrip the increases made by the other Irish regions vis-à-vis the European average. In other words, the Northern and Western regions in Ireland have not grown as fast as other Irish regions. Therefore, this has produced increased disparities within Ireland. The same has been the case in Portugal and Spain to say nothing of what has happened in the new Member States in the creation of the 'donut' phenomenon where national capitals have outstripped the rest of the country in the rate of growth and prosperity.

If, however, attention is paid to how the poorer regions and major beneficiaries of EU cohesion policy have performed vis-à-vis the European average the empirical evidence is clear: the convergence targeted by the SEA and cohesion policy has, in fact, taken place (Cappelen et al. 2003, Leonardi 2005, CEC 2009 and 2010).

The Sapir Report (2004) noted that one of the expectations associated with the original Single Market programme seems to have been confirmed: "European regions do appear to have become more specialized in the aftermath of economic integration, reflecting both their comparative advantages (especially in terms of the population's skill endowment, a key regional characteristic in a low-mobility environment) and incipient agglomeration effects due to local economies of scale". In

analyzing the six macro regions targeted by the cohesion policy – Greece, Ireland, Portugal, Spain, the Italian Mezzogiorno and the East German Laender – “the six macro-regions displayed annual growth of 3.3% between 1991 and 2000, while the rest of the EU produced annual growth of 1.9%”. Convergence was definitely taking place between member states but not necessarily within member states. The Sapir Report also produced interesting data with regard to the level of inequality across EU countries which fell by one-half between 1970 and 2000. However, inequalities within countries climbed back to where they were in 1970 by the late 1990s. Sapir concluded that “inequalities within countries seem to be directly linked to growth: inequality is reduced during periods of high growth but remains stagnant during periods of sluggish growth.”

Ramajo et al. (2008) analysed the period 1981–1996. Their finding was that regions covered by the Cohesion Policy were converging faster than was the case with the regions in other Member States. Puigcerver-Peñalver (2007) analysed the impact of Structural Funds during two first programming periods (1989–1993 and 1994–1999), and his findings indicated that the positive impact of Structural Funds on growth was more significant during the first programming period than during the second. Beugelsdijk and Eijffinger (2005) investigated the effects of Structural Policy in 1995–2001. Their results suggested that more ‘corrupt’ countries gain as much economic growth from Structural Funds as others, so that countries with looser controls were not more ineffective in the use of funds than others.

According to Cappelenet al. (2003), the effect of EU regional support on economic growth is stronger in more developed regions, which indicates that receiving region’s responsiveness affects the impact of support. The results of Mohl and Hagen (2010) find exactly the opposite results. They suggest that the impact depends on the nature of the operational programmes on whether Structural Funds have had a significant impact on growth or not. They found along with Leonardi (2005) that payments in the Objective 1 regions have improved regional economic growth, but payments in Objective 2 and 3 regions have not had any appreciable effects on growth rates. This finding should not be surprising given the different levels of financing for Objective 1 versus non-Objective 1 regions. Leonardi (2005) found that from 1988 to 1999 the beta convergence rate in Objective 1 regions was 3.9% per annum while in non-Objective 1 regions it was 0.2%. Overall, the convergence rate for the 189 regions studied by Leonardi was 1.4%. In a previous study Armstrong and Taylor (2000) found that the general rate of convergence in Europe had been 1.5%.

Another finding discussed in the literature with regard to Cohesion Policy is that the impact of the policy on growth does not necessarily emerge immediately; it can take more than three years to appear. The expectation of immediate results and the growing economic and financial crisis have placed significant strain on regions and

countries in maintaining the original focus of the policy on growth and employment. According to Mancha-Navarro and Garrido-Yserte (2008), there is a risk that future cohesion policy will begin to diverge from its original objectives of restructuring underdeveloped economies due to the expansion of overall objectives as a result of the emphasis on the Lisbon and Gothenburg strategies. They suggest that since 2007 the main objective has become competitiveness rather than growth, given that the latter seems to be an automatic by-product of joining the EU and participating in the Single Market. According to this view, joining the EU has had the effect of reducing the 'risk factor' associated with doing business in Central and Eastern European countries, thereby increasing the inflow of foreign direct investment and speeding up privatisation that has characterised the CEECs from the mid-1990s to the first part of the decade. As a result, it was felt that the Cohesion Policy in the CEECs could focus on other objectives – the environment and clean energy – given that economic growth and job creation were being delivered 'automatically' by market forces.

Martin and Tyler's (2006) analysis of the impact of Structural Funds in the Objective 1 regions up to 2002 has shown that Structural Funds expenditures accounted for the creation of approximately one million new jobs. According to their analysis the major turnaround in the employment data took place in the 1994–1996 period when the Structural Funds expenditure became steady and sustained. Prior to that period, Objective 1 regions continued to shed employment. To a certain extent the data demonstrate that some of the predictions of job losses attributed to the rationalisation effect of the Single Market (Begg 1992) did take place in the immediate aftermath of the implementation of the policy but that the statistics quickly turned around as European and foreign capital was quickly attracted to the less developed areas and the Cohesion Policy began to make significant strides in the restructuring of the peripheral economies.

Cieřlik and Rokicki (2009) studied the effect of Cohesion Policy programmes between 2004 and 2006 on income and employment in Poland as the country gained gradual access to Structural Funds during the transition. Their finding was that Structural Funds expenditures probably did not impact on economic growth in the most developed regions but did have an impact on the growth potential in less developed regions. The other result was that in the short run Cohesion Policy appears to contribute to production and employment increases in the least developed versus the most developed regions. Cardenete and Lima (2005) investigated the impact of Structural Funds on Andalusia in Spain. Their results indicated that the funds did not significantly change the structure of the regional economy in Andalusia. A completely different result was suggested by the SOCCOH Report (2008 Chapter 3 pp. 55–86) for the Spanish regions of Murcia and Galicia. In a similar manner, Yuill et al. (2009) concluded that Cohesion Policy has improved significantly the relative position of Spain's regions in general when set against other regions in Europe. In the

cases of Portugal and Greece (Konsolas et al. 2002) the results for selected regions were quite positive. After 2005 the national governments began to over-reach what was permissible on the basis of their economic base in terms of providing social support for their citizens.

According to Ederveen et al. (2006), Structural Funds, as such, did not generally enhance economic growth in all Member States, but in countries with the right kind of institutions, rules and conditions Structural Funds did have an impact. Their conclusion is that Cohesion Policy is only conditionally effective in contributing to economic growth. Bradley and Untiedt (2008) do not agree with these results. On the contrary, their analysis indicates the opposite to be the case. They write that the recommendations of Ederveen et al. are unconsidered and off the mark.

Such contrasting conclusions are normal when it comes to the evaluation of Cohesion Policy. What is important to keep in mind in analyzing such studies is, first of all, the period of time that is covered and, second, the regions that are considered. Given the constant expansion of the EU over the last fifteen years it is important that the analysis of disparities not fall prey to the incorporation of increasingly poorer countries and regions in the analysis without controlling for the comparison of the economic performance of the same countries and regions across time. The latest ex-post evaluation of Cohesion Policy Programmes 2000–2006 (CEC 2009 and 2010b) focused on Objective 1 and 2 regions and the ERDF interventions. The results indicate that the Cohesion Policy or Structural Funds interventions have positively influenced the socio-economic development of particularly Objective 1 regions.

Ramajoa et al. (2008) find that regions in the EU cohesion countries (i.e. Ireland, Greece, Portugal and Spain) receiving the largest amount of funding between 1989 and 2006 have converged separately – i.e. more significantly than the rest of the EU regions. Estimates indicate that in 1981–1996, there was a faster conditional convergence in terms of relative income levels of the regions belonging to these countries (5.3%) than in the rest of the regions of the EU (3.3%). They conclude that these results support the idea of a positive effect of the EU cohesion policies in fostering economic growth and convergence in the poorest EU Member States. Similar results seemed to be taking place in the CEECs prior to the onslaught of the 2008–2009 financial and economic crisis that threw national budgets out of balance and dried up FDI flows.

Mohl and Hagen (2010) extend the empirical analysis of the impact of Cohesion Policy to 2000–2006. They find that Objective 1 payments promote regional economic growth, whereas for the other Objectives (i.e. 2 and 3) no positive and significant impact on the EU regional growth is found. The results are robust when controlling for spatial correlation. They also show that the growth impact does not appear immediately, but that it occurs with a time lag of approximately two to three years. The Fifth Cohesion Report (2010c p. 205) also provides empirical evidence of

the higher growth rates among Objective 1 regions vis-à-vis non-Objective 1 regions during the 1995–2006 period.

The advantage of econometric evaluations is that they can be appraised with standard statistical criteria. Their drawback is that they cannot capture the interplay of effects which may be important for massive policy changes such as the Single Market. The net result is that it is not possible to establish conclusively what the relative performance of these regions would have been in the absence of EU cohesion and other EU policies (Sapir 2004). Attempts have however been made, such as Busillo et al. (2009) to test the effect of regional policy compared to a counterfactual situation in order to isolate the effects of the policy from the shadowing effect of other factors. They identify the presence of a, albeit slow, convergence process across EU regions in the last twenty years which they ascribe to the impact of Cohesion Policy.

The use of macroeconomic models allows for more interactions among endogenous variables, but neither the models nor their results can be judged as statistically satisfactory or consistent (Baldwin – Venables 1995). Bradley (2006) writes that the Hermin model demonstrates that the impacts of Structural Funds in isolation are modest due to the fact that their long term benefit depends on a country's ability to respond to external opportunities arising in Europe and the rest of the world. Veld (2007) uses the QUEST II model to evaluate the potential impact of the Cohesion Policy programmes for the 2007–2013 Convergence objective. He finds that transfers have a positive impact on GDP, employment and productivity, but that the magnitude of the effect depends on the productivity assumption of interventions. Further, the ex-ante impact analysis of Structural Funds produced by the Commission (2007) is based on HERMIN2, EcoMod3 and QUEST models. The HERMIN2 model shows cohesion policy as having a significantly positive effect, with absolute GDP being 5 to 10% higher in most of the new Member States than would have been the case in the absence of intervention. EcoMod3 predicts significant positive effects of policy intervention in all 15 Cohesion countries, especially in the new Member States, where funding is relatively high. The boost to demand in the Cohesion countries from spending from the Structural Funds predicted by the QUEST model is relatively modest. Substantial differences in the estimated impact of the Cohesion Policy between the models are due to different assumptions discussed in Bradley and Untiedt (2007).

According to recent estimates (Gakova et al. 2009), European Cohesion Policy is expected to create about 1.9 million additional jobs by 2015 in Cohesion countries, while average GDP gains are expected to range from 1% in Spain to around 3% in Poland, Slovakia and Romania and to more than 5% in the Baltic states. Allard et al. (2008) find that new Member States stand to benefit greatly from the inflow of EU funds. These funds could boost GDP per capita by as much as 5 percentage points

between the years 2010 to 2020. However, the size of the benefits will depend on the right institutional and policy framework. The authors stress that the EU funds need to be directed predominantly to investment purposes rather than distributed evenly over the national territory.

Concern for economic cohesion has been a constant feature of the process of European integration. While the formation of the Single Market offered the promise of a significant increase in the output of the Community as a whole, the political viability of the project also required that the distribution of benefits be perceived as fair by the constituent states and regions (De la Fuente – Vives 1995).

Numerous studies do find both β -convergence and δ -convergence across European countries⁴. However, most studies find a *small* convergence rate across EU countries (Eckey – Turk 2006). It should be noted that the results are not only sensitive on the choice of countries being considered and the level of NUTS regions employed, but convergence estimates are also sensitive to the choice of the additional explanatory variables (Magrini 2004). While the four remaining regions of southern Italy have shown no recent signs of convergence, the other four southern Italian regions have exited from the Objective 1/Convergence objective (Leonardi 2005). Three (Abruzzo, Molise and Sardinia) have exited due to economic growth which has brought their GDP/p.c. scores above the 75% threshold while only one, Basilicata, has exited from the convergence criteria for 2007–2013 due to the statistical effect of the entry of ten new Member States after 2004.⁵ Spain, Portugal and Greece have grown faster than the EU average over a number of years, while Ireland and the East German *länder* have significantly driven the convergence trend in the EU during the last two decades. The impressive performance of Ireland is such that in only 15 years it has moved from the bottom group of the poorest four EU countries to become one of the top four (in terms of GDP *per capita*). For Ireland it will be important to see whether the country will be capable of holding on during the next few years to the development levels it achieved before the collapse of its banking sector.

At the same time that the above cited studies have discussed the ongoing process of convergence of the less developed regions toward the European average, there are still a number of studies (Farole 2009) that report the exact opposite or at least that divergence is taking place at least within Member States. The argument is that Member States with large metropolitan areas – usually the regions containing the national capital – are growing at a faster rate than the more peripheral areas. The argument goes that while the EU is experiencing a process of convergence across

⁴ See e.g. Eckey and Turk (2006), Monfort (2008) for a survey of the literature.

⁵ See Leonardi and Nanetti (2010) for a detailed analysis of the development of Basilicata from 1987–2007.

countries, there is evidence of divergence across regions within individual countries (see e.g. De la Fuente – Vives 1995, Sapir 2004, Monfort 2008). Gianetti (2002) argues that the differences in the pattern of convergence and divergence across EU regions can be explained by the international knowledge spillovers. Stronger knowledge spillovers due to economic integration bring convergence across regions that can competitively produce the high-tech goods. On the other hand, disparities are amplified within countries where there are regions specialized in the traditional sectors that do not benefit from the exchange of knowledge.

What is the role of Cohesion policies in explaining these convergence patterns? On the grounds of limited evidence of convergence the effectiveness of EU Cohesion Policy has been criticized by some (e.g. Eckey – Turk 2006) and supported by others (e.g. Batchler – Mendez 2007). Boldrin and Canova (2001) have argued that European Structural Funds have had no observable impact on regional growth and economic convergence. In contrast to other scholars, they did not find any β -convergence and δ -convergence across NUTS-2 regions attributable to Cohesion Policy. As for convergence across countries (2003), they attribute the observed increases in growth in the CEECs to national policies and not to regional transfers. Here again, we can agree with them due to the fact that they were trying to measure the impact of the policy when the policy did not exist. Prior to 2004 the candidate states had access to limited pre-accession funds rather than the full budgetary allocation provided after accession took place.

Turning to the effects of the various implementation areas of Cohesion Policy, Rodriguez-Pose and Fratesi (2004) assess the effect of the policy axes and find that despite the concentration of development funds on infrastructure and, to a lesser extent, on business support, the returns to commitments on these axes are not significant. Support to agriculture has short-term positive effects on growth, but these wane quickly. According to the authors, only investments in education and human capital – which represent about one-eighth of the total commitments – have medium-term positive and significant returns. Based on the empirical results they argue for the need to rethink the nature of regional policy, prioritise innovative and locally tailored investments, and improving the capabilities of local institutions in managing development strategies. Martin (1998) finds that transfers spent on infrastructure investment may increase aggregate attractiveness of a country but do not lead to convergence between regions in that same country. The strengthening of national infrastructure grids has invariably the tendency to favour the richest and more politically connected regions in the country, and it gives firms the incentive to locate near the largest market/s (the rich region). The proximity to larger markets enables the local firms to reap the benefits of increasing returns to scale in the larger market while facilitating sales to the poor regions. Fagerberg and Verspagen (1996) also find that EU investment support to poor, peripheral regions is inefficient. They

find that EU support for R&D and investment only impacts positively on growth in regions for which the rate of unemployment is below important threshold levels.

Midelfart-Knarvik and Overman (2002), in turn, find evidence of polarization i.e. increased inequality between core and periphery at the regional level, but there is no evidence of polarization at the national level. Therefore, they conclude that structural spending is justifiable only at the regional level. However, their empirical analysis suggests that Structural Fund expenditures during the years 1989–1996 did not prevent regional polarization within Member States from taking place.

In addition to pure economic contributions, Bachtler and Taylor (2003) argue that the concept of *added value* is a key consideration in analyzing the contribution of Cohesion Policy spending. Added value is however a disputed concept, and Bachtler and Taylor suggest that it can be identified in the following areas; ‘cohesion added value’ – enabling additional economic activity to take place and becoming a catalyst for socio-economic regeneration; ‘political added value’ – making the EU more visible and generating greater support among citizens for the EU integration process; ‘policy added value’ – promoting the creation of a strategic dimension in regional development policy making (the existence of Cohesion Policy helps to promote a more integrated regional development process on the basis of a complete multi-sectoral and integrated approach); ‘operational added value’ – the creation of public-private partnerships in the delivery of the policy and the creation of a more transparent and coherent policy process; and finally ‘learning added value’ – learning is an integral part of structural fund programming from the beginning to the end and therefore the continuing policy process that characterizes Cohesion Policy creates the premise for learning new and more efficient approaches to the planning and implementation process.

The Cohesion Policy for 2014–2020

With the June 2013 agreement reached between the European Council and the European Parliament on the Multiannual Financial Framework (MFF) it will be possible to finalize in short order the Regulations providing the legal base for the Partnership Agreements between the Commission and the Member States and in formulating the operational programmes at the national and regional level. Unless it is changed during the subsequent months, the Regulation for the Cohesion Policy (Article 82) foresees the use of the regional level data in GDP/per capita expressed in for the years 2006–2008 to identify the regions qualifying for ‘convergence’ vis-à-vis those that will receive support for the ‘competitiveness/employment’ objectives. However, given that the new cycle of Cohesion Policy begins in 2014 and covers the seven years up to 2020, the economic status of many countries and regions has radically changed from the one reflected in the Commission’s projection

on the basis of the 2006–2008 data. Therefore, is the Cohesion Policy ‘fit for purpose’? In other words, does it provide the basis for responding to the economic crisis, and can it really achieve the objectives outlined for the Policy in the Europe 2020 programme given that the situation has changed so radically in many regions and Member States?

The result of the analysis of the 2006–2008 data is presented in Figure 1. As is evident from the distinctions made in the Figure between ‘convergence’ and ‘non-convergence’ or competitiveness regions there has been a further reduction of regions covered by the convergence objective vis-à-vis those covered during the 2007–2013 period. We need to remember that 2006–2008 represented the culmination and highest level of the convergence process that we have discussed above. What the new data show is that the recession hit Europe hard in 2009 and has continued to hit Member States and regions hard also in 2010, 2011, 2012 and even in 2013.

Table 1 reports the GDP performance among the 27 Member States for from 2009 to 2012. During the first full year of the recession, 2009, there was a severe loss of GDP across the EU in both southern and eastern European countries. Growth returned positive in 2010 but weakened in 2011. In 2012 a number of countries fall back into recession. The most important examples of continued economic downturns were registered in Greece, Spain, Portugal, Italy and Slovenia.

The question that needs to be posed is: whether the simulation carried out by the Commission fits any longer the empirical reality existing at the regional and national level across the EU? Some preliminary indications on the lack of congruence between the simulation carried out by the Commission on the basis of 2006–2008 data vis-à-vis the reality in 2009 and 2010 is already provided by the regional data provided by Eurostat for 2009 and 2010. Of particular concern are the data for all of Greece (Table 2) and for selected regions in Spain, Italy, Portugal and the UK (Table 3).

If we were to factor in the potential regional level data for 2011 we would find that almost all of the regions on our ‘critical list’ will have fallen back below the 75% of the EU average and therefore qualify once again for the ‘convergence’ objective. The issues highlighted by the data in Tables 2 and 3 point out the danger of basing a seven-year development policy on the basis of data that has been superseded by events and in not building into the policy the necessary corrective mechanisms necessary to respond to the current distortions present in the market. Among the major distortions that need to be corrected is the difficulty of accessing the credit market on the part of small and medium sized enterprises (SMEs) and in the attraction of the foreign investment that had flowed out of the peripheral economies during the height of the crisis.

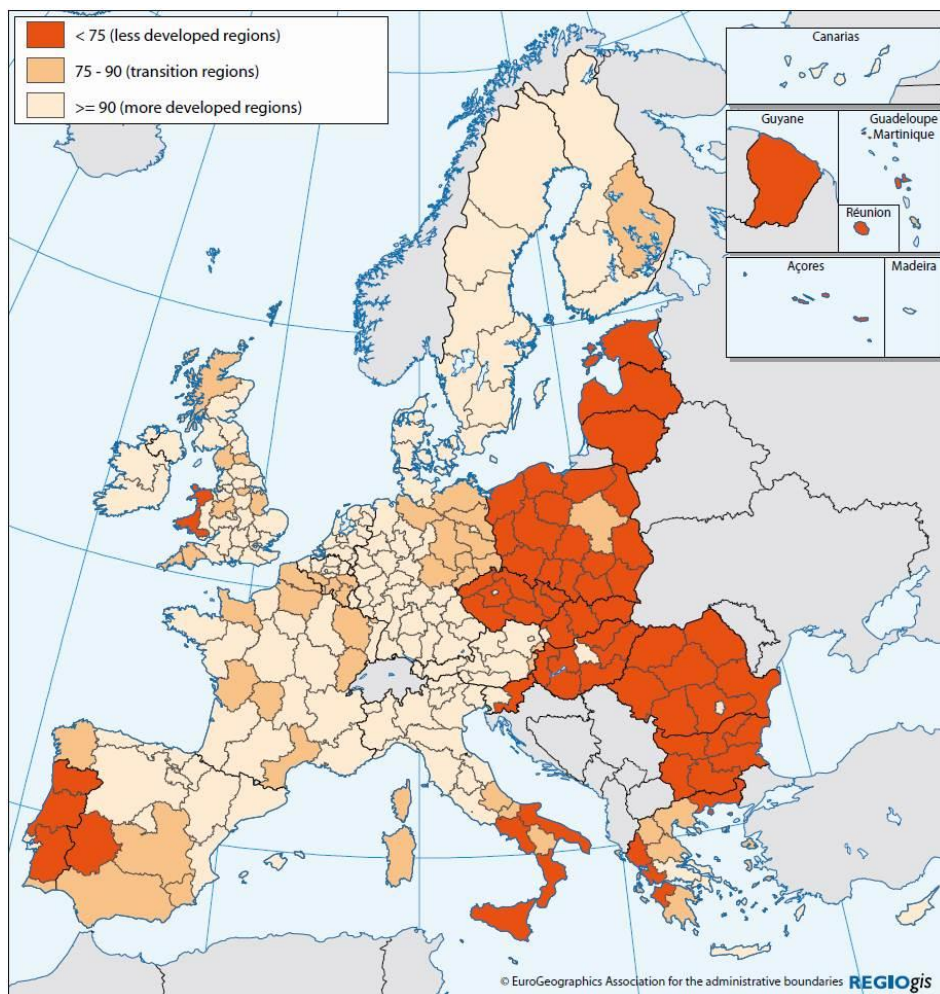


Figure 1. Eligibility simulation 2014–2020 [GDP/head (PPS), index EU27=100]

Source: Cohesion Policy 2014–2020 – Investing in growth and jobs. Luxembourg, Publications Office of the European Union, 2011. doi:10.2776/43732

Table 1. Change in GDP 2009–2012 in EU 27

Contry	2009	2010	2011	2012
EU 27	-4.3	2.1	1.6	-0.3
Belgium	-2.8	2.4	1.8	-0.3
Czech Republic	-4.5	2.5	1.9	-1.3
Denmark	-5.7	1.6	1.1	-0.5
Germany	-5.1	4.2	3.0	0.7
Estonia	-14.1	3.3	8.3	3.2
Ireland	-5.5	-0.8	1.4	0.9
Greece	-3.1	-4.9	-7.1	-6.4
Spain	-3.7	-0.3	0.4	-1.4
France	-3.1	1.7	2.0	0.0
Italy	-5.5	1.7	0.4	-2.4
Cyprus	-1.9	1.3	0.5	-2.4
Latvia	-17.7	-0.9	5.5	5.6
Lithuania	-14.8	1.5	5.9	3.7
Luxembourg	-4.1	2.9	1.7	0.3
Hungary	-6.8	1.3	1.6	1.7
Malta	-2.8	3.2	1.8	1.0
Netherlands	-3.7	1.6	1.0	-1.0
Austria	-2.1	2.1	2.7	0.8
Poland	1.6	3.9	4.5	1.9
Portugal	-2.9	1.9	-1.6	-3.2
Romania	-6.6	-1.1	2.2	0.7
Slovenia	-7.8	1.2	0.6	-2.3
Slovakia	-4.9	4.4	3.2	2.0
Finland	-8.5	3.3	2.8	-0.2
Sweden	-5.0	6.6	3.7	0.7
United Kingdom	-4.0	1.8	1.0	0.3
Bulgaria	-5.5	0.4	1.8	0.8

Source: Eurostat.

Table 2. Greek Regional GDP/PPS 2009–2010

Region	2009	2010	Difference
Anatoliki Mkedonia, Thraki	70	66	-4
Kentriki Makedonia	75	68	-7
Dytiki Makedonia	86	80	-8
Thessalia	72	65	-7
Ipeiros	65	61	-4
Ionia Nisia	85	76	-9
Dikiti Ellada	66	62	-4
Sterea Ellada	84	81	-3
Peloponnisos	76	71	-5
Attiki	124	115	-9
Voreio Aigaio	78	70	-8
Notio Aigaio	118	107	-9
Kriti	86	80	-6
Greece	94	87	-7

Table 3. Regions on the "Critical List" for 2011–2012: Spain, Italy, Portugal and the UK

	2009	2010	2011
Spain	103	99	
Castilla La Mancia	83	79	
Andalucia	79	75	
(Galicia	92	90)	
Italy	104	103	100
Basilicata	74	70	
Sardinia	80	78	
Portugal	80	80	77
Azores	75	75	
United Kingdom	111	111	109
Lincolnshire	78	78	
Tees Valley and Durham	77	77	

Convergence regions: >75%; Transition regions <75->90%

What are the Potential Responses to the Current Impasse?

In the preparation for the initiation of the fifth cycle (2014–2020) of the Cohesion Policy there are a number of decisions that need to be taken and transformed into policy initiatives. The first is to take into considerations the change that have impacted the regional economies since 2008 through either a recalibration of the list of regions eligible for the convergence objective or the setting aside of special funds for those who have entered into crisis – i.e. fallen below the 75% GDP/p.c. barrier as a result of the economic crisis. A step in this direction has already been taken through the creation of a third category of regions – ‘those in transition’ – whose GDP/p.c. falls between 75% and 90% of the EU average. The Cohesion Policy budget has already provided for financial support up to 75% of their 2007–2013 budget. In addition, extra funds should be provided for those regions where the GDP/p.c. falls below the 75% barrier in the three years prior to the initiation of the 2014–2020 Cohesion Policy.

A second need was identified clearly by the President of the Commission, Jose Manuel Baroso, in his speech to the European Parliament on the 12th of June 2013. On that occasion Baroso spoke of the difficulties incurred by investors in the peripheral countries as a result of the differentiated interest rates being applied to loans in the peripheral vis-à-vis the core countries. Baroso stated that: “These spreads seem to relate less to the intrinsic credit quality of the borrower and more to their geographic location! This is an absurd situation in an economic and monetary union. SMEs are particularly affected by these constraints in the credit supply.”

Provisions need to be taken to lower the interest rates incurred by investors in the peripheral economies. Otherwise, the Cohesion Policy will not be in a position to leverage private initiatives in support of the development goals identified by the operational programmes, thereby blocking the generation of a multiplier effect that in the past has expanded the impact of public programmes and investments. Steps in this direction have been proposed through programmes supported by the European Investment Bank through the creation of instruments for the sharing of private equity, risk-sharing, targeted investments, and the supply of credit by the EIB to SMEs undertaking investments as part of the Cohesion Policy.

A third provision that is under discussion is the ‘front-loading’ of the Cohesion Policy expenditures – in other words, taking special provisions to spend a larger proportion of the budget during the first three years – rather than gradually building up expenditures over the seven years as has been the case previously. The result was that the largest expenditures took place at the end of the Policy cycle. This change in orientation would provide a kick-start to the policy process and be in a position to mobilize an important part of the available resources at the beginning of the policy cycle rather than at the end. Accordingly, the implementation of the

Cohesion Policy could be in a position to accelerate the economic upturn that is expected in the post-2013 period.

A final point of concern is to provide a response to the deepening employment problem that has generally affected working people in the EU but especially youth unemployment (Table 4).

Table 4. Unemployment rate for youth under 25 years of age, 2007–2012

GEO/TIME	2012	2011	2010	2009	2008	2007
Austria	8,7	8,3	8,8	10,0	8,0	8,7
Belgium	19,8	18,7	22,4	21,9	18,0	18,8
Bulgaria	28,1	25,0	21,8	15,1	11,9	14,1
Cyprus	27,8	22,4	16,6	13,8	9,0	10,2
Czech Republic	19,5	18,1	18,3	16,6	9,9	10,7
Germany (until 1990 former territory of the FRG)	8,1	8,6	9,9	11,2	10,6	11,9
Denmark	14,1	14,2	14,0	11,8	8,0	7,5
Estonia	20,9	22,3	32,9	27,5	12,1	10,1
Greece	55,3	44,4	32,9	25,8	22,1	22,9
Spain	53,2	46,4	41,6	37,8	24,6	18,2
European Union (27 countries)	22,8	21,4	21,1	20,1	15,8	15,7
Finland	19,0	20,1	21,4	21,5	16,5	16,5
France	24,3	22,8	23,6	24,0	19,3	19,8
Croatia	43,0	36,1	32,6	25,1	21,9	24,0
Hungary	28,1	26,1	26,6	26,5	19,9	18,1
Ireland	30,4	29,1	27,6	24,0	13,3	9,1
Italy	35,3	29,1	27,8	25,4	21,3	20,3
Lithuania	26,4	32,2	35,3	29,0	12,2	6,8
Luxembourg	18,1	16,4	15,8	16,5	17,3	15,6
Latvia	28,4	31,0	37,2	36,2	14,5	11,9
Malta	14,2	13,8	13,1	14,4	12,2	13,9
Netherlands	9,5	7,6	8,7	7,7	6,3	7,0
Poland	26,5	25,8	23,7	20,6	17,2	21,6
Portugal	37,7	30,1	27,7	24,8	20,2	20,4
Romania	22,7	23,7	22,1	20,8	18,6	20,1
Sweden	23,7	22,8	24,8	25,0	20,2	19,2
Slovenia	20,6	15,7	14,7	13,6	10,4	10,1
Slovakia	34,0	33,5	33,9	27,6	19,3	20,6
United Kingdom	21,0	21,1	19,6	19,1	15,0	14,3

Source: Eurostat.

The data on the general fall in employment rates across the EU is of great concern across the EU but especially in many of the peripheral economies. However, what is most alarming is the rise in the level of youth unemployment described in Table 4. Here, the situation has become extremely critical for those attempting to enter the job market for the first time. Therefore, there is an urgent need to use the Cohesion Policy to create new jobs and to fund programmes designed to create job incentives for young people. This has been identified as one of the main objectives of the programmes supported by the European Social Fund.

The four points listed above can provide the European Union with the ability to respond to the interaction between the future Cohesion Policy and the current economic crisis. The Cohesion Policy is one of the few policies available at the European level with the opportunity to pro-actively respond to the problems that have currently impacted on a number of European economies, but to do so it has to coordinate its efforts with national initiatives and with the opportunities that emerge from the flow of productive factors in the private market. Now is the time to create the strong link between the Cohesion Policy and the prospects for growth in the peripheral countries under stress and the European Union as a whole.

References

- Allard, C. – Choueiri, N. – Schadler, S. – Van Elkan, R. (2008): Macroeconomic effects of EU transfers in New Member States. *IMF Country Report* 08/131.
- Ardy, B. et al. (2003): How will EMU affect Cohesion. Working Papers in Economics, Universidade de Aveiro.
- Argyrou, M. – Chortareas, G. (2008): Current Account Imbalances and Real Exchange Rates in the Euro Area. *Review of International Economics*, Vol. 9. No. 5. pp. 747–764.
- Bachtler, J. – Mendez, C. (2007): Who Governs EU Cohesion Policy? Deconstructing the Reforms of the Structural Funds. *Journal of Common Market Studies*, Vol. 45. No. 3. pp. 535–564.
- Bachtler, J. – Taylor, S. (2003): *The Added Value of the Structural Funds: A Regional Perspective*. IQ-Net Special Report, European Policies Research Centre, University of Strathclyde, Glasgow.
- Baldwin, R. (1989): Growth Effects of 1992. *Economic Policy*, No. 9 pp. 1–42.
- Barry, F. (2003): Economic Integration and Convergence Processes in the EU Cohesion Countries. *Journal of Common Market Studies*, Vol. 41. No. 5. pp. 897–921.
- Barro, R. J. – Sala-i-Martin, X. (1991): Convergence across States and Regions. *Brookings Papers on Economic Activity*, No. 1, April.
- Beblavy, M. (2007): *Monetary Policy in Central Europe*. Routledge, Abingdon.
- Begg, I. (1992): The Spatial Impact of Completion of the EC Internal Market for Financial Services. *Regional Studies*, Vol. 26. No. 4. pp. 333–347.
- Beugelsdijk, S. – Van Schaik, T. (2005): Differences in Social Capital between 54 Western European Regions. *Regional Studies*, Vol. 39. No. 8. pp. 1053–1064.
- Blanchard, O. (2006): Current Account Deficits in Rich Countries. IMF Muindell–Fleming Lecture.

- Boldrin, M. – Canova, F. (2001): Inequality and Convergence: Reconsidering European Regional Policies. *Economic Policy*, Vol. 16. No. 32. pp. 205–253.
- Bradley, J. (2006): Impact of EU Cohesion Policy in Less-developed Countries and Regions. *Regional Studies*, Vol. 40. No. 2. pp. 189–199.
- Bradley, J. – Untiedt, G. (2007): Do Economic Models tell us Anything Useful About Cohesion Policy Impact? *GEFRA Working Paper 3*.
- Brunila, A. et al. (2001): *The Stability and Growth Pact*. Palgrave, London.
- Busillo, F. – Muccigrosso, T. – Pellegrini, G. – Tarola, O. – Terribile, F. (2009): Measuring the Impact of European Regional Policy on Economic Growth: A Regression Discontinuity Design Approach. *DTE Working Papers*, Vol. 6. No. 10. Sapienza University of Rome.
- Cappelen, A. – Castellaci, F. – Fagerberg, J. (2003): The impact of EU regional support on growth and convergence in the European Union. *Journal of Common Market Studies*, Vol. 41. No. 4. pp. 621–644.
- Carello, A. N. (1989): *The Northern Question: Italy's Participation in the European Economic Community and the Mezzogiorno's Underdevelopment*. University of Delaware Press, Newark, NJ.
- CEC (2010d): Cohesion Policy: Strategic Report 2010 on the Implementation of the Programmes 2007–2013. Report, 31 March.
- CEC (2009): Sixth Progress Report on Economic and Social Cohesion. SEC (2009) 828 Final.
- CEC (2008d): EMU @10: Success and Challenges after Ten years of European Monetary Union. *European Economy*, No. 2.
- CEC (2001): Unity, Solidarity, Diversity for Europe, its People and its Territory: Second Report on Economic and Social Cohesion. Office for Official Publications of the European Communities, Luxembourg.
- CEC (1999): The Socio-economic Impact of Projects Financed by the Cohesion Fund. Office for Official Publications of the European Communities, Luxembourg.
- CEC (1996): The Impact and Effectiveness of the Single Market. Report, 30 October.
- CEC (1991): Fourth Periodic Report on the Regions. Office for Official Publications of the European Communities, Luxembourg.
- CEC (1987): Third Periodic Report on the Regions. Office for Official Publications of the European Communities, Luxembourg.
- Cecchini, P. (1988): *1992: The Benefits of the Single Market*. Wildwood House Limited, Aldershot.
- Chang, M. (2009): Monetary Integration in the European Union, Palgrave, Basingstoke.
- Christodoulakis, N. (2009): Ten Years of EMU: Convergence, Divergence and the New Policy Priorities. *National Institute Economic Review*, No. 208, pp. 86–100.
- Cieslik, A. – Rokicki, B. (2009): The Ex-post Evaluation of the EU Cohesion Policy Programmes 2004–2006 on Polish Regions: The Impact on Regional Income and Employment. *Regional Studies Association Annual International Conference*.
- De la Fuente, A. – Vives, X. (1995): Infrastructure and Education as Instruments of Regional Policy: Evidence from Spain. *Economic Policy*, Vol. 10. No. 1. pp. 11–54.
- Dabrowski, M. (2005): A Strategy for EMU Enlargement. In Dabrowski, M. – Rostowski, J. (eds.) *The Eastern Enlargement of the Eurozone*. Springer, Dordrecht, pp. 206–232.
- Dyson, K. (ed.) (2008): *The Euro at Ten: Europeanization, Power and Convergence*. Oxford University Press, Oxford.
- Dyson, K. (ed.) (2006): *Enlarging the Euro Area: External empowerment and domestic transformation in East Central Europe*. Routledge, London.
- Dyson, K. (ed.) (2002): *European States and the Euro*. Oxford University Press, Oxford.

- Eckey, H. F. – Türk, M. (2006): Convergence of EU Regions. A literature Report. *University of Kassel Working Paper 80/06*.
- Ederveen, S. – de Groot, H. – Nahuis, R. (2006): Fertile Soil for Structural Funds? A Panel Data Analysis of the Conditional Effectiveness of European Cohesion Policy. *KYKLOS* Vol. 59, No. 1. pp. 17–42.
- Farina, F. – Tamborini, R. (2007): *Macroeconomic Policy in the European Monetary Union: From the Old to the New Stability and Growth Pact*. Routledge, Abingdon.
- Farole, T. – Rodríguez-Pose, A. – Storper, M. (2009): Cohesion Policy in the European Union: Growth, Geography and Institutions. Working paper written for 'An agenda for a reformed Cohesion policy'.
- Faruqee, H. (2004): Measuring the Trade Effects of EMU. *IMF Working Papers*, No. 04/154.
- Featherstone, K. (2008): Greece: A Suitable Accommodation? In K. Dyson (ed.) *The Euro at Ten: Europeanization, Power and Convergence*. Oxford University Press, Oxford, pp. 165–181.
- Áková, Z. – Grigonyte, D. – Monfort, P. (2009): A Cross-country Impact Assessment of EU Cohesion Policy – Applying the Cohesion System of HERMIN Models. *EU Regional Policy Working Papers*, No. 1/2009.
- Giannetti, M. (2002): The Effects of Integration on Regional Disparities: Convergence, Divergence or Both? *European Economic Review*, Vol. 46. No. 3. pp. 539–567.
- Grauwe, P. (2005): *Economics of Monetary Union* (6th edition). Oxford University Press, Oxford.
- Hadjimichalis, C. (1987): *Underdevelopment and Regionalism: State, Territory and Class in Southern Europe*. Croom Helm, London.
- Holland, S. (1976): *Capital Against Regions*. MacMillan, London.
- Hudson, R. – Lewis, J. (eds.) (1985): *Uneven Development in Southern Europe: Studies in Accumulation, Class, Migration and the State*. Methuen, London.
- Konsolas N. et al. (2002): *Regional Development in Greece*. Springer, London.
- Leonardi, R. (2005): *Cohesion Policy in the European Union: The Building of Europe*. Palgrave, New York.
- Magrini, S. (2004): Regional (di)convergence. In Henderson J. V. – Thisse, J. F. (eds.) *Handbook of Regional and Urban Economics*, Volume 4. Elsevier, Hague, pp. 2742–2796.
- Maliszewska M. (2005): EMU Enlargement and Trade Creation. In Dabrowski, M. – Rostowski, J. (eds.) *The Eastern Enlargement of the Eurozone*. Springer, Dordrecht.
- Martin, R. (2001): EMU Versus the Regions? Regional Convergence and Divergence in Euroland. *Journal of Economic Geography*, Vol. 1. No. 1. pp. 51–80.
- Martin, R. – Tyler, P. (2006): Impact of Structural Funds on Objective 1 Regions: An Exploratory Discussion. *Regional Studies*, Vol. 40. No. 2. pp. 201–210.
- Midelfart-Knarvik, K. – Overman, H. (2002): De-location and European Integration: Is Structural Spending Justified? *Economic Policy*, Vol. 17. No. 35. pp. 321–259.
- Monfort, P. (2008): Convergence of EU Regions: Measure and Evolution. *EU Regional Policy Working Paper*, 1/2008.
- Myrdal, G. (1957): *Economic Theory and the Underdeveloped Regions*. Duckworth, London.
- Mohl, P. – Hagen, T. (2010): Do EU Structural Funds Promote Regional Growth? New Evidence from Various Panel Data Approaches. *Regional Science & Urban Economics*, Vol. 40. No. 5. pp. 353–365.
- Molle, W. – van Holst, B. – Smit, H. (1980): *Regional Disparity and Economic Development in the European Community*. Saxon House, Westmead.
- Nanetti, R. Y. (2010): Italy. In Hancock, D. (ed.): *Politics in Europe*. CQ Press, Washington, D.C. pp. 313–434.

- Padoa-Schioppa, T. – Emerson, M. et al. (1987): *Efficiency, Stability, Equity*. Oxford University Press, Oxford.
- Puigcerver–Peñalver, M. (2007): The Impact of Structural Funds Policy on European Regions Growth. A Theoretical and Empirical Approach. *The European Journal of Comparative Economics*, Vol. 4. No. 2. pp. 179–208.
- Quaglia, L. – Furlong, P. (2008): Italy: Creeping Toward Convergence. In Dyson, K. (ed.) *The Euro at Ten: Europeanization, Power and Convergence* Oxford University Press, Oxford, pp. 204–221.
- Sapir, A., et al. (2004): An Agenda for A Growing Europe: The Sapir Report. *ULB Institutional Repository*, No. 2013/8070, Universite Libre de Bruxelles.
- Ramajo, J. – Márquez M. A. – Hewings, G. J. D. – Salinas, M. M. (2008): Spatial Heterogeneity and Interregional Spillovers in the European Union: Do Cohesion Policies Encourage Convergence Across Regions? *European Economic Review*, Vol. 52. No. 3. pp. 551–567.
- Rodríguez–Pose, A. – Fratesi, U. (2004): Between Development and Social Policies: The Impact of European Structural Funds in Objective 1 Regions. *Regional Studies*, Vol. 38. No. 1. pp. 97–113.
- Schadler, S. (2005): *Euro Adoption in Central and Eastern Europe: Opportunities and Challenges*. IMF, Washington, D.C.
- Schadler S. et al. (2005): Adopting the Euro in the Central Europe: Challenges of the Next Step in European Integration. *IMF Occasional Paper*, No. 234.
- Seers, D. – Schaffer, B. – Kiljunen, L. (eds.) (1979): *Underdeveloped Europe: Studies in Core-Periphery Relations*. Humanities Press, Atlantic Highlands, NJ.
- Solow, R. (1956): A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics*, Vol. 70. No. 1. pp. 65–94.
- Talani, L. (2009): *Economic and Monetary Union*. Palgrave, New York.
- Veld, J. (2007): The Potential Impact of the Fiscal Transfers under the EU Cohesion Policy Programme. *European Commission Economic Papers*, No. 283.
- Williams, A. (ed.) (1984): *Southern Europe Transformed: Political and Economic Change in Greece, Italy, Portugal and Spain*. Harper & Row, London.
- Yuill, D. et al. (2009): Cohesion Policy Reform Process: Some Implications for Spain and its Regions. *Presupuesto y Gasto Público*, No. 55/2009, pp. 49–75.
- Zubek, R. (2006): Poland: Unbalanced Domestic Leadership in Negotiating Fit. In Dyson, K. (ed.) *Enlarging the Euro Area: External Empowerment and Domestic Transformation in East Central Europe*. Oxford University Press, Oxford. pp. 197–214.

REGIONAL DEVELOPMENT IN THE COURSE OF ECONOMIC INTEGRATION: THE CASE OF GERMAN UNIFICATION, DEVELOPMENT PATH AND POLICY EXPERIENCES¹

Gerhard Heimpold

This contribution focuses on East Germany's development path after unification. The motivation for this topic stems from the fact that East Germany's catching up in terms of productivity which was rapid in the first half of the 1990s, slowed down in the second half and stagnated in the 2000s (Figure 1). The question comes up what is behind this slow down of convergence? Therefore, the first part of this contribution discusses main driving forces of regional convergence or divergence from the viewpoint of economic theory and existing empirical analysis.

Then, the second part will provide empirical evidence how East Germany and its sub-regions are endowed with factors which can be regarded as important for catching up economically. Finally, the third part briefly discusses some policy conclusions derived from the economic development achieved so far.

Main Driving Forces of Regional Convergence or Divergence from the Viewpoint of Economic Theory and Empirical Analysis

East Germany's rapid convergence in terms of productivity in the first half of the 1990s was in line with neoclassical growth and trade theories. The disappearance of the inner German border represented a case of economic integration and induced mobility of persons, goods, services and capital de facto 'over night'. The increased mobility in mind, the respective theories predict convergence. However, as shown above, the speed of convergence slowed down which became subject to numerous contributions of economists worldwide. In Germany, Sinn and Westermann (2000) published a paper which provides an analogy between East Germany and the Mezzogiorno region in Italy. They point to three shortcomings as explanations of a

¹ Presentation at the International Conference "Territorial Cohesion in Europe" for the 70th Anniversary of the Transdanubian Research Institute, 27–28. June 2013, Pécs/Hungary.

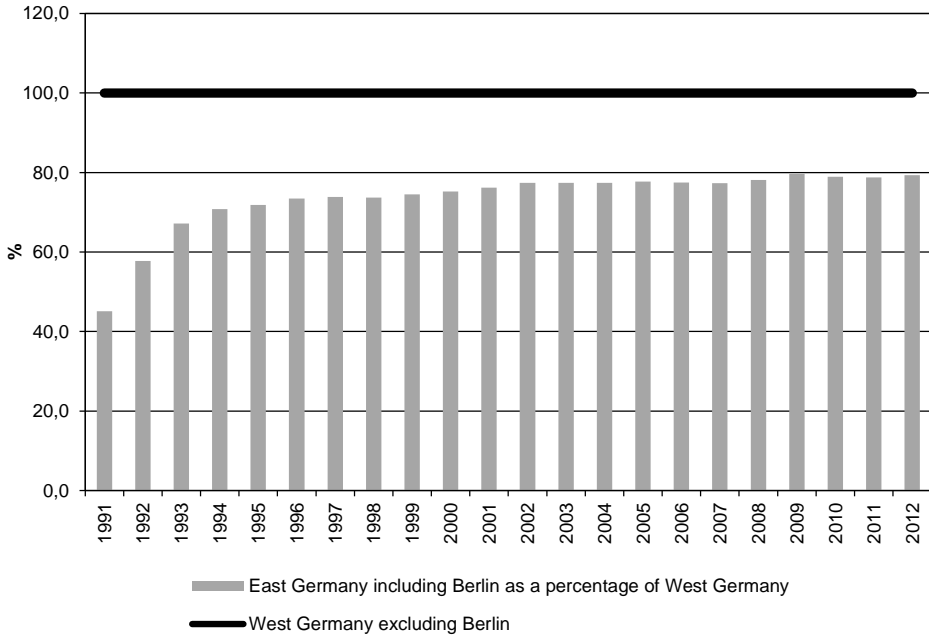


Figure 1. Relative productivity in East Germany (West Germany, Berlin excluded = 100%)
 Productivity = Gross Domestic Product per employee, unadjusted prices
 Source: Regional Accounts VGRdL 2013, calculations and diagram by IWH.

persistent development gap: an infrastructural gap, an exorbitant increase in wages and a 'Dutch Disease' problem induced by massive consumption-oriented fiscal transfers for active labor market policy (ibid.: 12–22). The shortcomings mentioned might have had an explanatory power in the 1990s, later they have lost of importance. Nevertheless, the productivity gap is still persistent. This leads to the question whether there are other factors which provide additional explanations for East Germany's persisting productivity gap?

Indeed, recent regional economic theories do not necessarily predict convergence. Instead, divergence is possible, too. Due to new growth theories, divergence may evolve because regions possess different potentials to explore economies of scale and associated with this, they do not benefit equally from positive externalities (for an overview see Bröcker 1994: 29–50). The thoughts of the New Economic Geography go into the same direction and explain the distribution of places of production across space. If the balance between agglomeration forces and transportation costs undergoes changes, the distribution of economic activities will change either in the favor of economic centers and at the expense of the periphery, or vice versa (see Krugman 1993).

East Germany's Endowment with main Factors of Economic Development

To come back to East Germany's economy: The most obvious shortcoming of the centrally planned economy at the end of the 1980s was the obsolete capital stock, both in the enterprise sector and in infrastructure (Deutscher Bundestag 1998: 67). After German unification, great efforts were made to modernize fixed assets. On average, endowment with fixed assets reached more than four fifth of the West German value (Table 1). In the producing sectors, the capital stock exceeds the West German average. The opposite is the case in agriculture, forestry and fishery and in the service sector.

Regarding human capital, the proportion of workforce possessing a higher formal professional education was and is still higher than in West Germany (Table 1). This does not necessarily mean that all persons with tertiary education are actually employed in a way using this formal education. Regardless persistently higher proportions of employees with tertiary education in East Germany, the rates of change were less favorable in the Eastern part of the country in the 1999–2011 period (Table 1).

The number of employees with tertiary education increased by 11% in East Germany compared to 38% in the western part. Obviously the demand for higher skills shows more dynamism in West Germany because of differences in terms of firm size, industry structures and functional structures.

Indeed, small firm size seems to be a 'Gordian Knot' when it comes to an explanation why East Germany lags behind in terms of productivity. The average firm size is, measured by turnover per unit liable to turnover tax, only half of the West German average (calculations by IWH based on Federal Statistical Office 2013c). The lower firm size is a result of restructuring the enterprise landscape after German unification. The previously centrally planned large industrial trusts (German notion: 'Kombinate') were not competitive after introducing the German monetary union. Hence, the large entities were split up in the course of privatization. In addition, numerous new firms were established which were per se very small at the beginning. As a result, a firm landscape has evolved that mainly consists of small and medium-sized units. Contrary, there is a lack of large enterprises. The fragmented small scale firm landscape has far reaching consequences: the small firm size creates barriers for entering into international markets. To illustrate, the ranking of export shares in manufacturing enterprises by German federal states is in parallel with the average firm size (Figure 2).

But it is not the low proportion of large enterprises as such which forms a barrier for further economic progress in East Germany. The virtual shortcoming is the lack of large enterprises hosting own research and development (R&D) and other headquarters functions. Taking Germany's Top-500 companies (ranking 2011 by DIE

WELT), only 30 out of 500 headquarters are located in East Germany (DIE WELT, no date of publication, calculations by IWH). This has consequences for the regional capability to create value added, offer high income jobs, gain respective tax revenues and control the regional development autonomously instead of being controlled by external economic actors.

Table 1. East Germany's¹ relative economic performance

A) % (West Germany² = 100%); B) difference between East Germany and West Germany in percentage points³

Indicator		Unit	Period 1	Value Period 1	Period 2	Value period 2	
GDP (unadjusted prices) per employee		A)	1991	45.1	2012	79.4	
Fixed assets/ employee	total	A)	1991	44.9	2009	85.2	
	agriculture/forestry/fishery			36.7		89.7	
	producing sectors			58.7		119.0	
	service sectors			43.3		79.1	
Share of employees with tertiary education in total employment (LFS-data)		B)	1999	8.9	2011	5.4	
Change of number of employees with tertiary education (LFS-data)		B)	Not applicable		1999-2011	-27.3	
Share of private sector in R&D expenditures		B)			2010	-32.8	
Patent applications per 100,000 inhabitants		A)	2005	28.9	2011	30.1	
GDP (unadjusted prices)/ employee	core cities	A)	1996	74.9	2009	77.0	
	densely populated hinterland			68.1		80.4	
	rural hinterland					78.4	92.7
	rural regions					75.1	83.4

Key: 1 – East Germany including Berlin; 2 – West Germany, Berlin excluded; 3 – Negative value: East Germany < West Germany.

Sources: Regional Accounts VGRdL 2011a, b, 2013; European Commission > eurostat 2013; Federal Statistical Office 2013b; German Patent and Trade Mark Office 2012; Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) (no date of publication); calculations by IWH.

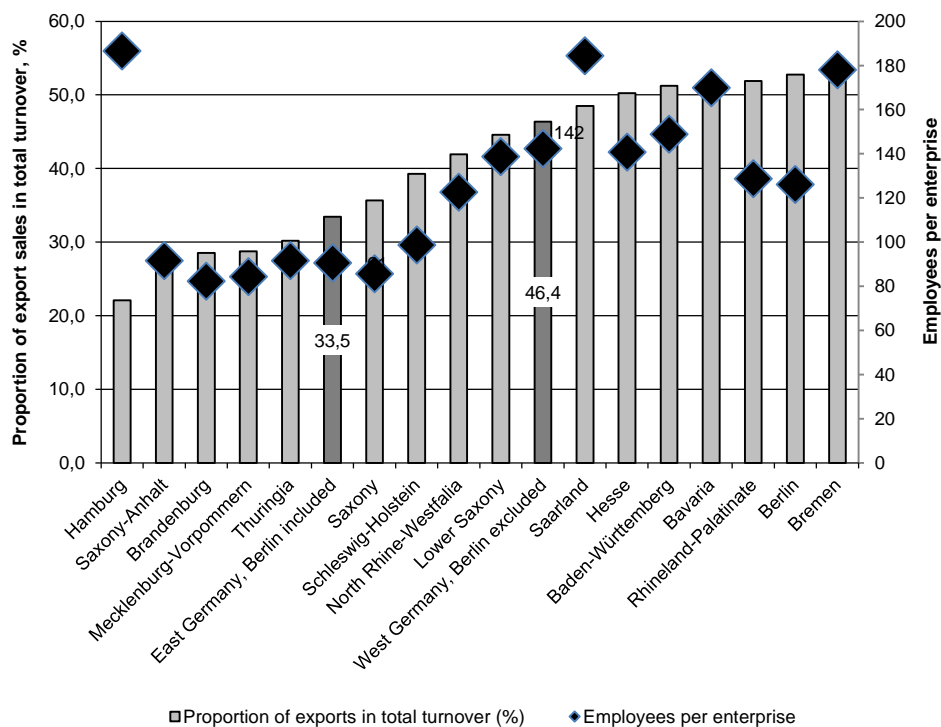


Figure 2. Proportion of export sales in total turnover and average number of employees per enterprise in the manufacturing, mining and quarrying sectors by German federal states, 2012

Source: Federal Statistical Office 2013d, calculations and diagram by IWH.

The lack of headquarters goes along with a lower R&D intensity in East Germany, measured by the share of R&D expenditures in Gross Domestic Product (GDP) (Figure 3). There are only two Federal states in East Germany where this share is above national average: Berlin and Saxony. Berlin's position is not surprising, due to a high concentration of public research institutes in the German capital region. Saxony's high rank stems from relative strengths in the manufacturing sector and well developed public research facilities.

Regardless positive exceptions, the – on average existing – weakness in terms of R&D in East Germany especially in the enterprise sector stems from structural peculiarities: the dominance of small firms, the lack of large companies which host headquarters functions, and the lower proportion of the manufacturing sector in East Germany and in particular the lower proportion of technology-oriented industries (Heimpold 2009: 431 f.).

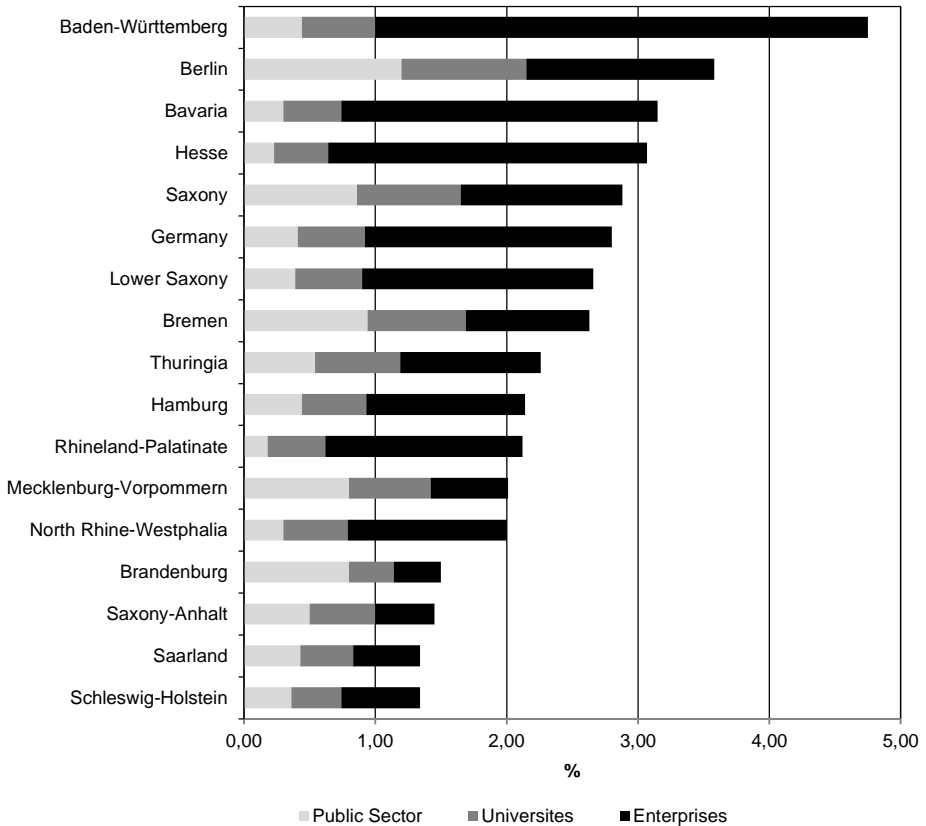


Figure 3: Share of R&D expenditures in GDP by German federal states, 2010

Sources: Federal Statistical Office 2013a; based on data from Stifterverband, Wissenschaftsstatistik, Essen, Regional Accounts VGRdL; calculations and diagram by IWH.

Moreover, the regional innovation system in East Germany is characterized by a large proportion of public institutions, i.e. universities and non-university research institutes, in R&D expenditure. Whereas in the economically more advanced West German federal states more than 50% of R&D is financed by enterprises, the reverse is the case in East Germany, but not only there. This is a feature of structurally weak West German federal states, too (Figure 3). The relative strength of the public sector and universities in R&D can, however, only partly compensate for weak R&D activities in the enterprise sector. Taking patent applications per 100,000 inhabitants as an indicator representing innovation throughput, East Germany has remained persistently far below the West German average (Table 1).

Discussing East Germany's convergence path has to consider the spatial dimension, too. Over a long period, the convergence debate in Germany was heavily focused on the global East West comparison. This global comparison was appropriate in a situation of large differences in economic performance. But East Germany was and is not a homogeneous space. Some regions have shown greater progress, other have lagged behind since unification. Thus, comparing spatial entities which show similar structural characteristics might be more adequate. Comparing core cities, densely populated hinterland, rural hinterland and rural regions in East Germany with their West German counterparts in terms of productivity, the the East West gap is greater between core cities than between rural regions (Table 1). Especially the rural hinterland has undergone considerable progress in terms of productivity. This is due to a massive suburbanization of economic activities since 1990. Numerous cities were not capable to provide industrial sites being free of environmental pollution and free of unclear property rights in the early 1990s. Therefore, numerous firm decided to locate outside cities.

Policy Experiences and Future Challenges

The progress made especially in terms of productivity, modernization of fixed assets in enterprises and infrastructure, establishing an SME sector, and strong public R&D would not have been achieved without public support by European Union, federal and federal states' budgets. Support was strongly concentrated on the modernization of fixed assets both in enterprises and in infrastructure over the first ten years. Special attention was directed to SME. However, the awareness has arisen in the course of time that there is no mono-causality of East Germany's economic backwardness. Instead, a broad bundle of factors hampered and is still hampering economic development. As a consequence, policy introduced a wide range of support schemes to tackle the great variety of regional needs. Nevertheless, a number of shortcomings remain persistent and form important challenges for future economic policy (for the following, see IWH et al. 2011: 86–101):

First, the small firm size which represents obviously a Gordian Knot of economic development requires further *firm growth and a business friendly environment*. This does not only refer to traditional financial support schemes for SME. It goes beyond and includes, for instance, a tax law which is neutral in terms of legal form and firm size.

Second, the lack of *headquarters* cannot be abolished directly. Headquarters change their location very seldom, due to sunk costs and existing networks. Therefore, it seems more realistic to help prospering medium sized-firms further to grow and become "new" headquarters.

Third, *strengthening private R&D* requires, first, to ensure that the science systems will be flexible enough to develop new promising technologies. Second, strengthening private R&D activities means mitigating the structural shortcomings that induce the low R&D intensity. Because the latter takes time and patience, policy can, third, provide direct assistance for R&D projects whereby collaborative projects of public research entities and enterprises and support for industrial clusters seem to be of particular relevance, due to the relative strength of the public research sector.

Fourth, *enhancing economic development in cities* remains an important challenge which does not only require favorable conditions for the development in the cities themselves. In addition, the stakeholders of economic development should try to organize a fruitful inter-municipal cooperation with the surrounding territories to attract investors and share the economic benefits from successful investments.

Fifth, *availability of skilled labor force* will form a crucial challenge for future economic development, due to demographic changes. It requires a broad bundle of efforts which comprises, for instance, family-friendly working and living conditions, attractive conditions for in-migration of skilled labor force, integrating long-term unemployed into the labor market and ensuring life-long learning.

References

- Bröcker, J. (1994): Die Lehren der neuen Wachstumstheorie für die Raumentwicklung und die Regionalpolitik. In: Blien, U. – Herrmann, H. – Koller, M. (Hrsg.): *Regionalentwicklung und regionale Arbeitsmarktpolitik. Konzepte zur Lösung regionaler Arbeitsmarktprobleme?* Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit (= Beiträge zur Arbeitsmarkt- und Berufsforschung, BeitrAB), Nürnberg, pp. 29–50.
- Deutscher Bundestag (1998): 13. Wahrperiode. Schlussbericht der Enquete-Kommission "Überwindung der Folgen der SED-Diktatur im Prozess der deutschen Einheit". Drucksache 13/11000.
- DIE WELT (no exact date of publication) Die größten 500 deutschen Unternehmen 2011 (electronic source).
- European Commission > eurostat (2013): > Regions and cities > Regional statistics > Data > Database. Regional statistics by NUTS classification (reg). Regional labour market statistics. Regional employment – LFS series (lfst_r_lfemp). Employment by sex, age, highest level of education attained and NUTS 2 regions (lfst_r_lfe2eedu).
- Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) (no exact date of publication) / Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) Homepage. Raumbewachung. Downloads. Zusammengefasste Kreistypen.
- Federal Statistical Office (2013a) / Statistisches Bundesamt: Forschung und Entwicklung. Anteil der Ausgaben für Forschung und Entwicklung 2010 am Bruttoinlandsprodukt (BIP) nach Bundesländern und Sektoren in %. Wiesbaden.

- Federal Statistical Office (2013b) / Statistisches Bundesamt: Forschung und Entwicklung. Ausgaben für Forschung und Entwicklung 2010 nach Bundesländern und Sektoren – Millionen Euro-, Wiesbaden.
- Federal Statistical Office (2013c) / Statistisches Bundesamt: Umsatzsteuerstatistik (Vorankündigungen). 2011. Wiesbaden.
- Federal Statistical Office (2013d) / Statistisches Bundesamt: Jahresbericht für Betriebe – Arbeitsunterlage. Betriebe von Unternehmen des Verarbeitenden Gewerbes sowie des Bergbaus und der Gewinnung von Steinen und Erden mit 20 und mehr tätigen Personen. 2012. Wiesbaden.
- German Patent and Trade Mark Office (2012): Annual Report 2011. Munich, Last Update: May 2012.
- Heimpold, G. (2009) Von der De-Industrialisierung zur Re-Industrialisierung: Sind Ostdeutschlands industrielle Strukturen nachhaltig? *Wirtschaft im Wandel*, Vol. 15. No. 10. pp. 425–434.
- IWH – DIW – ifo Dresden – IAB – HoF – RWI (2011): Wirtschaftlicher Stand und Perspektiven für Ostdeutschland. Studie im Auftrag des Bundesministeriums des Innern, IWH-Sonderheft 2/2011. Institut für Wirtschaftsforschung Halle, Halle.
- Krugman, P. (1993): *Geography and Trade* (Fourth Printing). Leuven University Press, Leuven.
- Regional Accounts VGRdL (2011a) / Arbeitskreis “Volkswirtschaftliche Gesamtrechnungen der Länder”: Anlagevermögen in den Ländern und Ost-West-Großraumregionen Deutschlands 1991 bis 2009. Reihe 1, Band 4. Berechnungsstand des Statistischen Bundesamtes: August 2010. Erschienen im Mai 2011. Stuttgart: Statistisches Landesamt Baden-Württemberg.
- Regional Accounts VGRdL (2011b) / Arbeitskreis “Volkswirtschaftliche Gesamtrechnungen der Länder”: Bruttoinlandsprodukt, Bruttowertschöpfung in den kreisfreien Städten und Landkreisen Deutschlands 1992 und 1994 bis 2009. Reihe 2, Band 1. Berechnungsstand des Statistischen Bundesamtes: August 2010. Stuttgart, Statistisches Landesamt Baden-Württemberg.
- Regional Accounts VGRdL (2013) Arbeitskreis “Volkswirtschaftliche Gesamtrechnungen der Länder”: Bruttoinlandsprodukt, Bruttowertschöpfung in den Ländern der Bundesrepublik Deutschland 1991 bis 2012. Reihe 1, Band 1. Berechnungsstand des Statistischen Bundesamtes: August 2012/Februar 2013. Stuttgart, Statistisches Landesamt Baden-Württemberg.
- Sinn, H.-W. – Westermann, F. (2000) Two Mezzogiornos. CESifo Working Paper Series, Working Paper No. 378.

SPATIAL STRUCTURE AND SPILLOVER EFFECTS

Gábor Balás – Klára Major

Introduction

Spatial structure is usually considered as exogenous in spatial analysis and is quantified by a contiguity matrix. Therefore, conclusion from a spatial analysis is always contingent and its validity is constrained by the relation between the relevant spatial structure and the one quantified by the contiguity matrix. When creating a contiguity matrix, researchers have to make important decisions, most of which are often made on a practical ground.

A contiguity matrix gives a discrete description of the otherwise continuous space, therefore the first step is to define the spatial units. The existing solutions very often choose administrative spatial classifications, as data are usually collected for these units only. The next step is to identify the units considered to be influencing each other, that is, where to *presume* the existence of spatial spillover effects. This idea is expressively mirrored in the phrase of “contiguity matrix”, since it is usually presumed that spatial spillover effects only exist between *geographically* close units. The third decision refers to the presumption about the *intensity* of the spillover effects between two units that are in connection with each other. The standard solution is to identify the existence of the connection, and the intensity of the effect is finally reached in the standardising step of the contiguity matrix in which 1 (expressing the fact of the connection) is divided by the number of neighbours. Thus researchers usually assume a priori that a unit having more neighbours influences them less.

These implicit assumptions strongly influence the conclusion and limit the interpretation. In his paper Rincke (2010) addresses a similar question. As he notes, the choice of a spatial matrix is crucial in many empirical applications involving cross sectional dependence. However, the literature offers little guidance on how to choose an appropriate matrix. Rincke suggests the application of a commuting-based refinement of the contiguity matrix. His concept rests on the idea to assign weights according to the degree of substitutability of communities as places of residence.

The motivation of our writing this paper was to find the way of building the right contiguity matrix. We address the first and third aspects of building a contiguity matrix: by varying the presumed spatial spillover effects and their intensity, we embed a different (discretised) spatial structure in our spatial econometric model. It is hard to distinguish the effects of the first and the third aspects since the standardisation step of the matrix automatically changes the intensities for every different presumed spatial structure. Even though in our application the different discretisation schemes lead to only minor differences in the estimation results, we think that the issue we posed so far is of high importance and needs to be answered more deeply in later research. We need to understand the role of the presumed spatial structure (or more generally, the choice of the contiguity matrix) to be able to interpret the results with more confidence.

In our application we shall build a spatial econometric model to estimate the effects of EU funds on territorial cohesion in Hungary. The data of the Hungarian micro-regions (NUTS 4) will be analysed. The reason for choosing micro-regions as the level of measurement is that the number of micro-regions (174) is large enough for a statistical investigation, they may be considered as more-or-less homogenous (in comparison with counties, for example) and data collected by settlements can easily be aggregated at this level.

The EU-funded subsidies influence micro-regions through three different channels. First, there is a direct local effect: EU-funded payments in any form increase local income directly. Secondly, the total amount of the support is limited, therefore any support that is paid in region i will decrease the potential support available for region j . We may observe a *regional* crowding out effect: the exogenous spatial pattern of subsidy distribution itself may lead to spatial spillover effects. Finally, if these subsidies do influence the incomes of the regions where they are paid, they may lead to an endogenous spatial spillover effect through their impact on the spatial pattern of the income distribution: the higher income in region i may generate extra demand for products of neighbouring regions, thus leading to higher income in those regions. In our application we shall study the presence and size of the endogenous and exogenous spatial spillover effects and their relationship with the presumed spatial structure.

The spatial structure of the Hungarian economy is very special. The Central Region surpasses all other regions in Hungary: its population, income and basically all relevant aspects are outstandingly higher than the maximum or average of those of the other regions. While the Central Region's income is close to 75% of the EU average and is close to losing its eligibility for cohesion funds, the other regions are far below this level. Therefore, the question relating to the spatial structure in Hungary basically is how to incorporate the specialities of the Central Region into

our estimation strategy. In the standard approach the contiguity matrix is symmetric: if region i and region j are neighbouring, their impact on each other is more-or-less the same. However, the spatial structure of the Hungarian economy differs from this due to the big differences in development. Therefore, we apply an asymmetric contiguity matrix and compare its results to those of the symmetric one.

In the first section of the study we are introducing the applied Durbin spatial econometric model in general and the questions of model-specification. Here we shall introduce the symmetric contiguity matrix and our data for quantifying it. Then we shall turn to our spatial econometric model applied to describe the income of the Hungarian micro-regions (so-called “TGE” model),¹ the data background and the questions of impact measurement. In this section it will also be shown how to embed the special features of the Hungarian spatial structure into the contiguity matrix. In the section following that we are going to show the estimation results and interpret them. Finally we shall draw our conclusions.

The Spatial Econometric Model

In econometrics models are usually designed to look for relationships between cross-section, time series or panel data. In the spatial context the speciality comes from the fact that spatial units (a special case of cross-section structure) are related to each other and spatial econometric models are designed for controlling this relationship. The usual way is to include spatial lag variables. First we introduce the concept of spatial lag and then summarise the spatial econometric models we use in our application. In our summary we heavily rely upon LeSage – Pace (2009) and Elhorst (2010a, 2010b).

Measuring Spatial Effects

Spatial effects are measured by spatial lag variables. Spatial lag is an analogue of time lag with some differences. While in the case of time lag we control for the effects of two observations being close to each other in time, in the case of spatial lag we do the same for being close in space. However, time is “one dimensional” in the sense that data are easily ordered by time, “before” and “after” are identified without any problem. But space is “two dimensional”, and ordering data according to its spatial location is not a trivial task. In this case the question therefore is whether being close to each other is enough to assume that there is some linkage due to space. The usual way to quantify this idea is by constructing a contiguity matrix.

¹ „TGE” is an abbreviation of Territorial Economic Power („Területi Gazdasági Erő” in Hungarian), which is a proxy for GDP. We use this data for measuring income of NUTS4 regions where GDP data are not available.

Let us denote the number of spatial units with N , the contiguity matrix W is then an $N \times N$ matrix in which cell (i, j) is 0 if region i and region j are not in connection with each other (we will call it “not neighbouring”), otherwise it takes some positive value. There are different ways to construct a contiguity matrix, we are introducing some of them here briefly.

The W contiguity matrix is usually designed for controlling geographical closeness, therefore traditionally its cell (i, j) takes the value of 1 if region i and region j are neighbouring, and 0 otherwise. Another way to define “closeness” is to give cell (i, j) a value of 1 if the distance between region i and region j is less than a given threshold, and 0 otherwise. Let us note that the contiguity matrix is symmetric in each case: the value of cell (i, j) is precisely the same as the value of cell (j, i) .

In our application the spatial units of investigation are the micro-regions of Hungary. The distance between any two regions is measured by the time needed to travel by car from the centre of region i to the centre of region j . It is assumed that there are no traffic jams or speeding, so the time needed for covering a certain distance is calculated using the maximum allowed speed limit. By definition two regions are neighbouring if the distance between them is less than an ex ante defined threshold. In line with our earlier work we chose this threshold to be 60 minutes.

Based on this threshold value we defined a $W1$ matrix, its cell (i, j) takes the value of 1 if region i and region j are neighbouring, and 0 otherwise. To calculate spatial lag variables we still need to “standardise” this matrix, which is reached by dividing each element with the sum of its row. In this way we create a row-normalised W contiguity matrix with the sum of each row equalling 1. Therefore, the elements of this W matrix may be considered as weights when spatial lags are calculated. Let us note that there are only nonzero elements in matrix W in cell (i, j) if region i and region j are “neighbouring”, that is, where distance is smaller than our pre-specified threshold. The elements of the main diagonal are zero.

Spatial spillover effects are measured by the spatial lag variables calculated by the multiplication of the standardised contiguity matrix by the given variable: Wx . In this way the spatial lag of x is simply the average of x in the neighbourhood of the regions. The spatial structure embedded in the matrix W therefore influences which regions are taken into consideration when mutual dependences are examined.

Spatial Spillover Effects in Spatial Econometric Models

Spatial spillover effects in spatial econometric models are measured by the spatial lag variables which we often name as spatial interaction variables. There are three different ways to include spatial spillover effects in our empirical modelling strategy. Spatial spillover effects can be:

- endogenous spatial interaction, if the spatial lag of the dependent variable (y) is included;
- exogenous spatial interaction, if the spatial lag of the independent variable (x) is included;
- spatial lag of the error term.

As is shown by Elhorst (2010a), it is not possible to include all of these spillover effects in the same model because it is not possible to identify the coefficients of all variables. At least one must be excluded which may be up to the decision of the modeller. However, the most often applied version is the Durbin model in which both endogenous and exogenous spatial interactions appear.

In case we have panel dataset, it is still possible to include fixed effects variables which are themselves ready to control for spatial or time fixed factors. In our model we use the panel version of the Durbin model: not only spatial interaction, but also fixed effects are included in a simple regression equation. By including spatial interaction and fixed effects in the same model, we have the following model equation that we aim to estimate:

$$y_{it} = \chi + \rho \sum_{j=1}^N w_{ij} y_{jt} + \sum_{k=1}^K \beta_k x_{itk} + \sum_{k=1}^K \left(\theta_k \sum_{j=1}^N w_{ij} x_{jtk} \right) + \mu_i + \lambda_t + \varepsilon_{it}$$

where ρ is the coefficient of the spatial lag of the dependent variable (endogenous spatial interaction), θ_k is the coefficient of the K independent variables (exogenous spatial interaction), λ denotes the spatial, μ the time fixed effects and ε is a white noise error term.

However, the correctness of the model specification is a difficult question. It is not clear a priori that the above model is right. It is usually checked by some formal test (see next subsection). The basic question in this case is if there are fixed effects in an empirical model beyond which we do need spatial interaction variables or not. Even if we find that the answer to this question is yes, we still need to figure out whether both endogenous and exogenous spatial interactions are relevant. We briefly show these model specification tests in the next subsection.

Model Specification

Fixed effects control for those observed and unobserved factors that are constant in time. Including fixed effects, we are able to filter out much of the variability of the dependent variable. It is not clear a priori that after controlling for fixed effects, we still need to include spatial lag variables. If neighbouring regions are similar, fixed effects of neighbouring regions are similar, too, therefore, fixed effects are just as able to control for the spatial structure (spatial closeness) as spatial interaction

variables are. However, it might happen that time-invariant features of regions cannot capture all effects that space influences on them. It might be the case when non-observable, time-invariant features of two neighbouring regions are very different *and* spatial spillover effects lead to the similarity of the dependent variable. In these cases fixed effects cannot capture the influence of closeness, therefore, spatial interaction variables are relevant. Since it is not clear a priori if we need to embed both in the analysis, we are going to check it by formal tests.

Formal tests of model specification form a two-step procedure (see Elhorst 2010a and 2010b). In the first step we test if the spatial interaction variables are needed after including spatial and (or) time fixed effects. If the test accepts the relevance of the spatial interaction, then the second step focuses on choosing the relevant model specification: which spatial interaction variable to include (endogenous spatial interaction or both). Following Elhorst's (2010a and 2010b) practice, we applied this two-step model specification procedure to test the relevance of our model specification. The results proved to be very robust towards the acceptance of the above-specified fixed effects Durbin model, therefore, in the following we will show the estimation results of this specification only. These tests and the model estimation were both carried out using Elhorst's (2010b) software for MATLAB.

Spatial Econometric Model of TGE

Our model aims to estimate the spatial spillover effects of EU funded subsidies on income. Income is difficult to measure at this very "low" spatial level, since income is usually measured by GDP which is not estimated for micro-regions. Therefore, we use the so-called TGE ("Settlements Economic Power") as a proxy for income. TGE is calculated from county-level GDP data by disaggregation. The method of disaggregation is to calculate shares of each settlement of a given county in GDP, based on the distribution of personal income tax base, number of registered firms and the volume of local taxes. The detailed description of the method for calculating TGE can be found in Csire – Németh (2007).

As TGE measures the income of micro-regions, we estimate its value by controlling for factors of production, namely, the share of labour force in the population of the micro-regions, equities of the firms located in the given micro-regions and the average level of salaries (per head) which measures the level of human capital of the labour force in the given micro-regions. The dependent variable, TGE, measures income and is expressed in terms of Hungarian currency (million HUF per population). The explanatory variables in more detail are:

- Share of labour force (%): the higher the share of the labour force in the total population of a micro-region, the higher the TGE. This leads to exogenous

spatial spillover effects, too: even if the share of labour force is higher in the neighbouring regions, this might lead to higher local income due to easier access to productive labour.

- Average level of salaries (million HUF per head per year). The average salary is calculated from personal income tax data of persons employed full time. We assume that the higher the average salary, the higher the local income. We also assume that the average level of salary is a proxy for the average level of human capital of the given micro-region, therefore, it measures the differences in TGE of two micro-regions with the same amount of labour force.
- Average level of equities (billion HUF / firms): the more capital firms have on average, the higher will be the income of the given micro-regions. We will call this variable as “capital” in the following.
- Number of registered firms as expressed in the ratio of local population (%). We assume that the higher the number of firms, the higher the income of the micro-regions will be.
- Subsidies paid by the government from EU sources. This is also normalised with the population size, and is expressed in Hungarian currency (million HUF per population). We will describe this variable in more detail in the next section.
- Finally, we aim to model the effect of spatial structure on the estimation results. Therefore, we estimate the above model in two different specification forms, one following the standard approach (as is shown in the previous section) in building up the (symmetric) contiguity matrix, and an alternative method aiming to express the asymmetries of the spatial structure of the Hungarian economy. We describe this approach in more detail below.

Cohesion Funds

Disbursement of cohesion funds initiated after 2004 and their volume increased extraordinarily by 2010. The increase reached the order of 2, but not steadily over time or in space. Therefore, we embedded in our model of local income the amount of support that had been paid in the given year in terms of per head support (million HUF per population). We aim to identify the effect of these payments on local income as is done in programme evaluation practice. As it can be seen In Table 1, after 2004 there were no micro-regions without any support, therefore, whether a micro-region had been supported or not is not appropriate to identify the effects of the funds. Three assumptions are necessarily for us to be able to interpret our estimation results as effects. Namely, we assume that

1. it is possible to separate the effects of governmental support on local income from the differences in support intensity,

2. the above-defined contiguity matrix is an adequate description of the spatial structure,
3. data are appropriate for econometric analysis, that is, there is not too much noise and there are not many data errors.

Table 1. Average financial support in micro-regions per population

Year	Supported micro-regions, average			Not supported micro-regions, average	
	Units	TGE per head (HUF/head)	Support per head (HUF/head)	Units	TGE per head (HUF/head)
2004	157	2,061,436	5,661.304	17	1,027,735
2005	174	2,186,299	18,510.072	0	NaN
2006	174	2,360,679	29,015.562	0	NaN
2007	174	2,533,807	51,586.331	0	NaN
2008	174	2,665,419	68,915.431	0	NaN
2009	174	2,599,748	104,458.189	0	NaN
2010	174	2,674,760	125,775.739	0	NaN
Total/average	1201	2,441,696	57,852.738	17	1,027,735

The Central Region

The speciality of the Central Hungary (NUTS2) Region comes from two different sources. On one hand, it is much more developed than the other parts of the country, on average its income is almost double of that of the rest 6 regions. Nonetheless, until 2007 it attracted more cohesion support than the other regions.² On the other hand, this region is rather heterogeneous, the standard deviation of TGE per head is about half of the average value, whereas it is one third in the case of the per head support for 2010. This basically means that the diversity of TGE per head is higher within the region than that of the financial support.

For the rest of the country the picture is just the opposite in both respects. The remaining six NUTS2 regions are less heterogeneous as measured by the coefficient of variation: the standard deviation is approximately one third of the average TGE. On the contrary, the support is much more heterogeneous: at the beginning it is about 100% and later its value is declining. Yet, in 2010 it is about 50%, higher than in the case of the Central Hungary Region (see Table 2). This basically means that in these regions the variation in the support is still higher than the variation of the TGE.

² We define the location of financial support by the official location of the firm that has won the support. Unfortunately, many companies have their official site in the Central Region, while their actual activities are carried out elsewhere (sometimes at different locations).

Table 2. Average and standard deviation of TGE per head and financial support per head in Central Hungary's micro-regions versus in the rest of the country

Year	Micro-regions in the Central Hungary Region (17 units)				Micro-regions outside the Central Region (157 units)			
	TGE (million HUF per head)		Financial support (000 HUF per head)		TGE (million HUF per head)		Financial support (000 HUF per head)	
	average	standard deviation	average	standard deviation	average	standard deviation	average	standard deviation
2004	3.2098	1.25	7.1688	4.80	1.5579	0.60	4.7679	9.53
2005	3.5682	1.43	21.8497	13.85	1.6428	0.65	17.1961	14.85
2006	3.9113	1.66	32.4041	15.73	1.7446	0.68	27.6690	28.55
2007	4.1623	1.72	59.4238	33.27	1.8786	0.71	48.4331	29.10
2008	4.4238	1.86	66.6778	33.72	1.9470	0.65	69.8296	32.55
2009	4.3952	1.95	86.8022	35.74	1.8549	0.61	111.7824	65.21
2010	4.4794	2.04	96.8477	36.12	1.9155	0.62	137.9464	74.32

Average and standard deviations have been weighted with population.

The Central Region's advanced state suggests that the return on any projects (investment, training, etc.) might be different from that of the other regions. Therefore, governmental financial support in this region might have a rate of return different from elsewhere. We control for this fact using interaction variables. In the following, the so-called "subsidy_KMR" variable will measure it. This variable is the interaction of a Central Region dummy and the support variable, therefore, it measures the extra return the support yields in the Central Region in comparison with the other regions. However, as we will see, it is also possible to include the spatial lag of the interaction variable in the regression. In case it is significant, we may interpret it that the support has different returns not only in the Central Region, but also in the neighbouring regions. This is the case of the above-mentioned exogenous spillover effect.

Spatial structure is embedded in the contiguity matrix. As we take into account the role of this matrix in our estimation, we build another contiguity matrix based on asymmetric relations. If it is plausible to assume that the effects of two regions influencing each other are not symmetric, then this matrix is able to capture it. Basically what we assume is that the spatial spillover effects are *directed* relations, therefore, the effect of region i on region j is not necessarily the same as the effect of region j on region i .³ In the case of a symmetric matrix, if region i and region j were identified as neighbouring, then both had an impact on the other. The relevant

³We have to mention that literally this is also the case with the "symmetric" matrix (in general), since due to normalisation, no one can guarantee that the quantitative effect of region i on region j is the same as that of region j on region i .

difference between the two approaches comes when we assume that region i has an impact on region j , but region j has no impact on region i . In our application the outstanding Central Region might have much wider influence on the other regions than vice versa. We wish to capture this by using a different, asymmetric contiguity matrix built on the following procedure.

We use the same starting point: region i has an influence on region j if their distance is smaller than a pre-specified threshold. But now the threshold depends upon the features of region i and therefore it is different for each micro-region. To be more concrete, let us say that region i has an impact on region j if their distance is smaller than bN_i^a , where N_i denotes the population of micro-region i , and a, b are positive parameters. This means that region j has an impact on region i only if their distance is smaller than bN_j^a , which, in general, means a different threshold from that of region i . Basically this concept is close to the idea of the gravity model which emphasises that the impact of any region is proportional to its size. Let us note that if $a=0$ then we have the original idea, since in this case the threshold is the same for all micro-regions. If $a=1$ then the threshold increases proportionally with the population of the regions, if $a<1$ then it is less than proportional, etc.

Definitely, the parameter values have a large impact on the structure of the contiguity matrix and on the estimation results. Therefore, we had to choose their values with great care. Without having any formal test, based on the following reasoning we applied numerical methods to choose the parameter values. The values of the parameters definitely have a strong impact on the spatial structure of the economy (who is neighbouring with whom) and also on the number of the neighbouring relationships. These are two different channels the impacts of which are hard to distinguish. Therefore, it is reasonable to choose the values of a, b to have the same number of neighbouring relationships. In this way our new contiguity matrix will differ from the initial one only as to the structure embedded in it, but not as to the deepness of the relations.

Following this method we found that $b=1$ and $a=0.3773$ will lead to 2021 neighbouring relations in the asymmetric case in contrast to the 2020 neighbouring relations of the symmetric case. We used the average population of the micro-regions between 2000 and 2010 as weights (N_i). With these parameter values the new contiguity matrix reflects gives back the original concept rather well, because the capital, Budapest (a separate micro-region itself) influences all other micro-regions, whereas there are only 28 micro-regions influencing Budapest. From all the neighbouring relations 701 are asymmetric, from which 249, that is 36% of all asymmetric relations, belong to the Central Region. The rest belong to “countryside” micro-regions having a town with relatively big population (usually the administrative centre of the region or county), therefore, their impact might be greater than that of – smaller settlements and micro-regions (Figure 1).

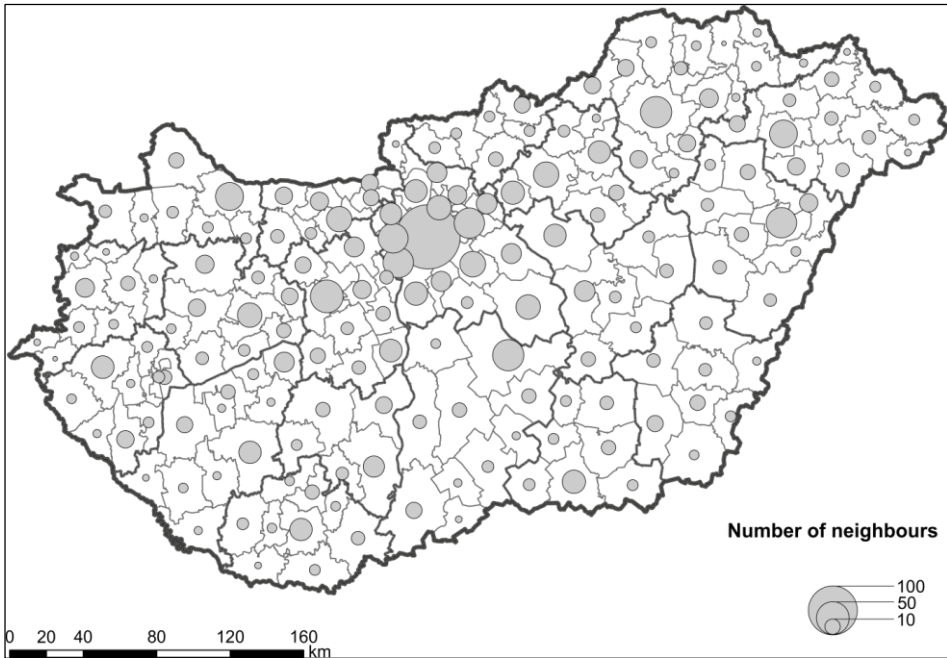


Figure 1. Number of neighbours according to the asymmetric contiguity matrix

Estimation Results

Estimation results using symmetric and asymmetric contiguity matrix are shown in Table 3. Test statistics of our estimated model are very similar in both cases, the log-likelihood is slightly better and R^2 is slightly worse in the case of symmetric contiguity matrix, even though these differences do not seem remarkable. Neither significance nor coefficients changed much, but still, there are some minor changes. The most important differences are that (1) the coefficient of the labour force variable has increased and thus reached significance at 10%, and (2) the coefficients of the subsidy differ in the two models, its importance is examined in detail in the next section. We estimated both models without the subsidy variables, too, and tested the significance of the subsidy variable using likelihood ratio test. In the case of the symmetric contiguity matrix, the log-likelihood of the narrower model is 1275, that is, the likelihood ratio test suggests that the more general model fits better. In the case of the asymmetric contiguity matrix, the log-likelihood of the narrower model is 1259, so the conclusion is the same.

Table 3. Estimation results of the TGE model

Variable	Symmetric contiguity matrix		Asymmetric contiguity matrix	
	coefficient	z-value	coefficient	z-value
Labour force	0.0056	0.1742	0.00794*	0.0574
Number of firms	0.0264***	0.0000	0.02745***	0.0000
Salary	1.6288***	0.0000	1.76252***	0.0000
Equities	0.0444**	0.0206	0.04687**	0.0155
Labour force_KMR	0.0448***	0.0000	0.04163***	0.0002
Subsidy_2	0.94458***	0.0000	0.79112***	0.0001
Subsidy_2_KMR	11.4438***	0.0000	11.8213***	0.0000
W*labour force	0.0234***	0.0093	0.01883**	0.0152
W*number of firms	-0.0282***	0.0000	-0.02899***	0.0000
W*salary	-0.5987***	0.0000	-0.50389***	0.0000
W*equity	0.1322*	0.0600	0.05959**	0.0940
W*labour force_KMR	-0.0518*	0.0532	0.00459	0.8674
W*subsidy_2	-0.4456	0.4616	-0.00956	0.9810
W*subsidy_2_KMR	-17.1008***	0.0000	-17.82839***	0.0000
Rho	0.5520***	0.0000	0.44160***	0.0000
r2	0.9621		0.9615	
Corrr2	0.5301		0.5321	
Log-likelihood	1378.62		1370.74	
N	2610		2610	
Periods	1996–2010		1996–2010	

*indicates significance at 0.1 level, ** at 0.05, *** at 0.01.

Based on our estimation results, the Central Region's interaction variables are significant. In the case of the subsidy variable, this proves the initial hypothesis that the yield of these supports is different in the Central Region, just as it is different in the neighbourhood of the Central Region. It is important to note that only the 2-year lagged values of the subsidy proved to be significant, which was not the case with the subsidy_X_KMR interaction (X=0,1,2) variables. The interaction variables have been constructed by the multiplication of the Central Region dummy and the subsidy variable (and its lagged variables), therefore there was very high correlation between the lagged values of the interaction variable. This high connection made it impossible to identify the exact timing of the interaction effect. Because only one of the subsidy_X_KMR interaction variables was reasonable to be included in the regression, we chose subsidy_2_KMR which is easier to interpret; basically we have no reason to assume that the timing of the Central Region's specific extra effect is different from that of the overall subsidy.

Subsidies generally have no exogenous spillover effect: they increase the local income where they are paid. However, this is not the case with the subsidies paid in the Central Region, it has a strong negative exogenous spillover effect on the surrounding area. The estimated effect of this exogenous spillover seems higher in the model of the asymmetric contiguity matrix.

At the same time, by increasing local income, subsidies generate endogenous spillover effects. This effect is positive: higher subsidies lead to higher local income and higher local income lead to higher (endogenous) spillover, that is, higher income in the neighbouring micro-regions. This channel works for every micro-region, including those located in the Central Region. But the effect of the subsidies in the Central Region increases local income more, therefore, its endogenous spillover effect is stronger here than in other micro-regions. Basically this means that the total spillover effect of the Central Region is the sum of the (negative) exogenous spillover effect and the (positive) endogenous spillover effect. Therefore, using our estimation results, we calculated the net effects as well.

The Central Region's Specific Effects

The estimated model made it possible to calculate the effect of the subsidy on the income of micro-regions. As it is suggested in Elhorst (2010a), the effect of an explanatory variable is not necessarily shown by the estimated coefficients, due to the spillover effects. The net effect of an explanatory variable shows us the changes in the dependent variables after all spillover effects took place. We can reach it by a simple formal rearrangement of the model, and then we can estimate the partial derivative of the dependent variable with respect to the explanatory variables. We followed this path to calculate the effects of the subsidies.

The spatial econometric model can be rearranged to show the total effect of the explanatory variables, including the spillover effects. We introduce this concept with a simpler model in which there is only one explanatory variable (x) and we omit the notation of the fixed effects, too. This simplification makes the notation much simpler and the transformation more transparent. After these simplifications our spatial econometric model can be written in the following way (using matrix arithmetic notations):

$$y = \rho W y + \beta x + \theta W x + \varepsilon$$

where y denotes the vector of the dependent variable, x denotes the vector of the independent variable, W is the contiguity matrix and ρ , β , θ are unknown coefficients, finally ε denotes white noise error term. By rearranging this equation, we get:

$$(I - \rho W)y = \beta x + \theta W x + \varepsilon = (B + \theta W)x + \varepsilon$$

where I indicates the identity matrix and B indicates a diagonal matrix with β in the main diagonal and zero elsewhere. (Basically it is βI .) Therefore, the final rearrangement of this equation shows us the total effect of changes in x to y :

$$y = (I - \rho W)^{-1}(B + \theta W)x + (I - \rho W)^{-1}\varepsilon$$

Let us denote $F = (I - \rho W)^{-1}(B + \theta W)$ matrix, its (i,j) element shows us the total effect of x in region i to the value of y in region j . The total effect of x on y can be calculated by Fx : the financial support of region i has an influence on its own local income and through the endogenous spillover effects also on the neighbours' income, which then spreads further into space through the neighbours of the neighbours, etc. The final sum after taking into account all the spillovers that spread through the economy is shown by Fx .

Let us be even more concrete in our case and divide the total effect of subsidies into exogenous and endogenous spillover effects. As is shown in Table 3, the two-year delays of subsidies (*subsidy_2*) and their Central Region specific values (*subsidy_2_KMR*) play a significant role in explaining TGE of micro-regions. First let us denote *subsidy_2* = x and in order to distinguish the effect of the subsidies paid in the Central Region from that of the subsidies paid outside the Central Region, we partition the *subsidy_2* variable (x) into two parts:

$$x = x_{KMR} + x_{NONKMR}$$

where x_{KMR} is the same, as x for micro-regions belonging to the Central Region and zero otherwise, x_{NONKMR} has been created similarly. Using this notation, our final model can be written in the following form (including only significant subsidy variables):

$$y = \rho W y + \beta_1 x + \beta_2 x_{KMR} + \theta W x_{KMR} + \varepsilon$$

Rearranging this equation, following Elhorst idea, we get that the explained part of y with regard to the subsidies may be expressed as

$$y \approx H(\beta_1 x_{KMR} + \beta_2 x_{KMR} + \theta W x_{KMR}) + H\beta_1 x_{NONKMR} \quad (1)$$

where H denotes $H = (I - \rho W)^{-1}$ matrix and we took into account the fact that x may be partitioned into Central Region specific and non-Central Region specific parts. We calculated the right hand side of (1) and called it as "total effects". However, from the total effects of the subsidies some are going through the endogenous spillover effects, that is, by the spatial autocorrelation of the TGE variable, whereas others may be the results of the spatial pattern of the subsidies. To distinguish these in the case of the subsidies paid in the Central Region, we calculated $H(\beta_1 x_{KMR} + \beta_2 x_{KMR})$ which shows the "local and endogenous spillover effects". Whereas the expression $H\theta W x_{KMR}$ shows us the "exogenous spillover

effects” of the subsidies stemming from the fact that more subsidies paid in the Central Region lead to less available amount for the countryside.

We summarised the average values of the estimated Central-Region specific endogenous and exogenous spillover effects and total effects of the subsidies in Table 4 for the asymmetric contiguity matrix model and in Table 5 for the symmetric contiguity matrix model.

Table 4. Total effect of subsidies and KMR-specific effects of the subsidies, the latter divided between endogenous and exogenous spillover effects as predicted by the asymmetric contiguity matrix model

Year	Hungary, total					Non KMR regions, total				
	Total effects	KMR-specific effects (000 HUF per head)				Total effects	KMR-specific effects (000 HUF per head)			
		local effects + endogenous spillover effects	exogenous spillover effects	sum	ratio of KMR to total (%)		endogenous spillover effects	exogenous spillover effects	sum	ratio of KMR to total (%)
2006	24.1	28.0	-8.2	19.8	82.4	1.5	1.8	-5.6	-3.9	-252.6
2007	75.8	87.7	-29.9	57.7	76.2	8.8	6.2	-20.0	-13.7	-156.5
2008	103.6	138.1	-65.3	72.9	70.3	8.8	13.3	-42.7	-29.3	-333.9
2009	201.3	250.2	-102.2	148.0	73.5	20.4	20.8	-66.7	-45.9	-225.4
2010	229.2	291.8	-140.3	151.5	66.1	36.0	27.8	-88.9	-61.1	-169.9

Table 5. Total effect of subsidies and KMR-specific effects of the subsidies, the latter divided between endogenous and exogenous spillover effects as predicted by the symmetric contiguity matrix model

Year	Hungary, total					Non KMR regions, total				
	Total effects	KMR-specific effects (000 HUF per head)				Total effects	KMR-specific effects (000 HUF per head)			
		local effects + endogenous spillover effects	exogenous spillover effects	sum	ratio of KMR to total (%)		endogenous spillover effects	exogenous spillover effects	sum	ratio of KMR to total (%)
2006	22.8	30.3	-13.2	17.1	74.8	3.8	2.5	-6.2	-3.7	-98.0
2007	73.1	96.8	-49.7	47.1	64.5	19.6	8.9	-22.1	-13.3	-67.9
2008	94.7	159.2	-108.9	50.3	53.1	27.1	19.5	-48.7	-29.2	-107.9
2009	189.6	281.7	-168.4	113.4	59.8	52.3	30.6	-76.5	-45.9	-87.7
2010	214.0	337.8	-235.7	102.1	47.7	84.5	40.4	-101.1	-60.6	-71.8

We find that the overall impact of the subsidies on the incomes of micro-regions is positive on average. However, the subsidies paid in the KMR regions modify this general picture in three respects.

1. The subsidies had a higher return in the Central Region, which led to higher income of the KMR micro-regions.
2. The higher income of the KMR regions led to further endogenous spillover effects on other micro-regions inside and outside the Central Region.
3. The subsidies paid in the Central Region decreases the potential resources of the other regions, through which it leads to negative exogenous spillover effects.

The nationwide average values show that the total effects of the subsidies are positive, the local and endogenous spillover effects had a higher magnitude of positive values than the negative exogenous spillover effects. However, in the case of the non-KMR regions, these negative effects had been larger than the positive endogenous spillover effects of the KMR-specific subsidies, therefore, the subsidies paid in the KMR region had negative overall effects outside the Central Region. Nevertheless, these negative exogenous spillover effects were not as large as to counterweigh the sum of the positive effects (local subsidies and positive endogenous spillover effects). These results seem to be insensitive to the choice of the spatial weight matrix, the only difference appears in the relative size of these effects.

Conclusions

Although our results require further investigation, we still find it important to analyse the role of the spatial weight matrix in the estimation results and conclusions. This methodology is quite new and our understanding its working is still limited. We wish to emphasise that our estimation strategy was based on the following assumptions:

1. it is possible to identify the effects of governmental support on local income from the differences in support intensity,
2. the above-defined contiguity matrix is an adequate description of the spatial structure, and
3. data are appropriate for econometric analysis, that is, there is not too much noise and there are not many data errors.

These assumptions may prove to be very strong in our case, probably each might be questioned. Nonetheless, without these assumptions it is not possible to estimate the effects of subsidies at all. Our results and conclusions from this analysis were

not sensitive to the choice of the spatial contiguity matrix, and its structure (symmetric or asymmetric) did not prove to be relevant. Still, we had some discretionary choices, like the number of neighbouring relations, which may be relevant. These issues should be analysed later.

The results show that subsidies increase the local income of the micro-regions and spatial spillover effects may spread. The net effect is positive, but it is the sum of different components of which not all proved to be positive. The robustness of these results is hard to check, but they are absolutely necessary. The relative size of the positive endogenous spillover effects and the negative spillover effects were only a bit different in the two models using different contiguity matrixes, however, the significance of the difference is not negligible.

The interpretation of the model is weakened by the fact that in another study we investigated the effects of different (homogenous) sub-categories of EU funds and found different results. In that model (see Balás – Németh 2013) we categorised EU funds by their funding goal and investigated the impacts of the different categories on employment and the income of micro-regions as well as on migration. In the final model several categories proved to be significant and the subsidies paid in the KMR region had a positive spillover effect on average (in contrast to the present model where subsidies were not differentiated by funding goals). However, we could not incorporate those results into the present study, as it would have made our analysis more complex and lengthy. Nonetheless, we find it important to further study this issue.

The interpretation of the results is even more difficult because the Central Region is itself heterogeneous. The “central place” is more probably the capital only, not the whole Central Region. However, capital Budapest, with its almost 2 million population, form one micro-region in the present analysis, so the above-described methodology would not apply to Budapest. The spatial fixed effects contain all relevant Budapest-specific effects, but it is not possible to separate the effects of subsidies from the other variables in the model. One of our very important tasks here is to further develop our model to be able to analyse the “Budapest-specific effects” instead of the KMR-specific ones.

In our analysis we took the number of neighbouring relations and also the micro-regions as administrative territorial units as given. Both are important parts of the model, but their different specification may lead to different results and different spillover effects. To understand the role of these factors is key to better understanding spatial econometric models.

References

- Balás, G. – Németh, N. (2013): Értékelési szintézis jelentés: Az EU-s támogatások területi kohézióra gyakorolt hatásainak értékelése (Effects of EU Funding on Territorial Cohesion, Evaluation Report). National Development Agency, Budapest (only in Hungarian).
- Csire, A. – Németh, N. (2007): Az életminőség területi differenciái Magyarországon: a kistérségi szintű HDI becslési lehetőségei (Territorial differences in life quality in Hungary: the conception of estimating HDI for micro-regions), *Budapest Working Papers on The Labour Market*, 2007. Issue 3. (only in Hungarian)
- Elhorst, J. P. (2010a): Spatial Panel Data Models. In: Fischer, M. M. – Getis, A. (eds.): *Handbook of Applied Spatial Analysis*. Springer, Berlin, Heidelberg and New York, pp. 377–407.
- Elhorst, J. P. (2010b): Matlab Software for Spatial Panels. Presented at the IVth World Conference of the Spatial Econometrics Association (SEA), Chicago, June 9–12, 2010. Revised version finished in Spring 2011.
- LeSage, J. – Pace, R. K. (2009): *Introduction to Spatial Econometrics*. Chapman & Hall/CRC, London.
- Rincke, J. (2010): A Commuting-based Refinement of the Contiguity Matrix for Spatial Models, and an Application to Local Police Expenditures. *Regional Science and Urban Economics*, Volume 40. Issue 5. pp. 324–330.

BUILDING INSTITUTIONS FOR THE STRUCTURAL FUNDS IN THE VISEGRAD COUNTRIES*

Cecília Mezei

Introduction

It is almost a commonplace that Structural Funds (SF) have a significant impact on public administration, especially in the Central and Eastern European (CEE) countries where the absorption of EU subsidies is one of the most important policy and political ambitions. However, the governance regime of Structural Funds is a considerable challenge, since traditional government structures and practices in the CEE countries do not typically harmonise with the principles of decentralisation or regionalism, partnership, efficiency, transparency and strategic integrative planning. Therefore, CEE countries have tried to adapt to these challenges in different ways; institutionally by implementing internal structural reforms of public administration (learning) and/or by establishing separate, “unfamiliar” structures and institutions to better fit the SF system (imitating), besides functional changes in the instrumental model and processes. The main question was whether it is better to develop an internal institutional system and integrate it into the national administration in a way corresponding to EU regulations, or to build a new SF institution separated from the national governmental structure, so that the SF institution thus created fully fits the European requirements.

For comparison we have chosen four “Visegrad” countries, the Czech Republic, Hungary, Poland and Slovakia, representing special Central and Eastern European answers to the institutionalisation pressure of the Structural Funds. All of them accessed to the EU at the same time, still they have had different SF managing structures.

Having very few own resources for development, the proper utilisation of EU resources has been one of the most important political objectives in the Visegrad countries. This strong financial dependence greatly influenced the institutional system established for the utilisation of the pre-accession, then the structural and the

* This research is supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences, the OTKA No. 104985 entitled “New driving forces of spatial restructuring and regional development paths in Eastern Europe at the beginning of 21st century” and the ESPON TANGO project.

cohesion funds. Namely, in the course of shaping the institutional system, the EU regulations had to be respected which, however, were changing over time together with the aims and tools of the EU's cohesion policy. From the very beginning the Visegrad countries were "shooting at moving targets" as regards both the objectives to be supported and the national SA managements established to effectively allocate the resources (Figure 1).

In 2004 all four Visegrad countries acceded to the European Union as full members, but in respect of some funds the new members became only partially "equal" to the old ones. Suffice to mention here, for example, the gradual introduction of agricultural direct payments between 2004 and 2013, or the practice of so-called capping. Moreover, the Visegrad co-operation was not an active integration at the time of the accession negotiations, which is clearly reflected in the fact that these four countries managed to achieve different conditions in the course of negotiating

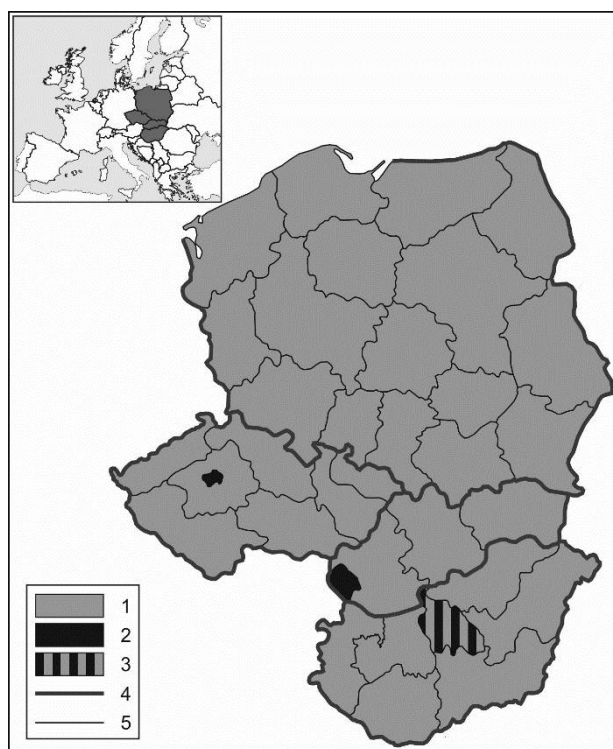


Figure 1. The research areas' categorisation, 2004–2013

Key: 1 – Cohesion Regions and Objective 1 areas; 2 – Competitiveness and Employment Regions and Objective 2 areas; 3 – Competitiveness and Employment Regions and before 2007 Objective 1 areas; 4 – National boundaries; 5 – NUTS 2 boundaries.

with the EU. Thus in 2013 the close co-operation of the four Visegrad countries was a surprise and it led to getting additional sums from the cohesion fund for each country.

Co-operation among the four Visegrad countries has varied in the course of history. There were periods of close co-operation as well as loose relations, sometimes getting to the brink of disintegration, which were obviously influenced by the foreign and minority policies of the political elites in power in these countries.

For a long time the EU dealt with not only these four countries but also the whole Eastern Bloc as a single unit, the so-called eastern issue. The East European policy of the EU also influenced the Visegrad co-operation. Although these countries have very different characteristics in respect of their public administration structure, economic dependence, settlement network and the role of their borders, it was only lately that they ceased to appear as one unit on the EU's map.

The four examined countries also differ in the way they have shaped their SA institutional system, following completely different ideas and having diverse administration structures. The creation of SF management commenced in these countries at a time when EU cohesion policy seemed to prefer regions and was definitely favouring decentralisation. In 2004 the slogan of "Europe of regions" was already waning, but it still held true that the richer countries were federal, whereas the poorer ones were rather centralised. The EU regulations relating to SF management did not require decentralisation and – as it turned out – they contained several elements which could easily be "fulfilled" ostensibly. Some countries chose this easier way, while others launched organic changes with thorough work. The former ones were the so-called imitating countries, while the latter ones undertook to go through a learning process. Let us have a look how it happened.

Public Administration Reforms

While in general the European Union considers the structure and functioning of public administration as a national internal affair, it has established a fairly strong adaptation pressure by regulating the rules of utilisation of the Structural Funds (Pálné Kovács 2009). From the perspective of territorial governance it is an important question, because this pressure on administrative reforms was simultaneous with SF management building in each Central and Eastern European Member State (EU 12). The Structural Fund's relative importance is particularly high in the CEE countries where the SF have virtually replaced the domestic development policy, determining the national contributions and the national development resources. The SF in these countries significantly exceed the volume of national development resources regulated by non-EU rules. Therefore, the role of the SF is much more dominant in these cases than in the old Member States, and thus these

funds serve as an instrument to promote multi-level and participative governance in the new Member States. That is why preparation for the Structural Funds was able to influence the administrative reforms in the CEE countries to such a high degree.

For example, the significant change in the Polish regional policy model was introduced when the comprehensive territorial reform came into force; there we can see a real learning process. On the other hand, Hungary only imitated the institutional reforms by having built separate SF institutions which have not been integrated into the public administration system. While in Poland and in the Czech Republic the public administration reforms have created self-governing regions, the so-called voivodeships at NUTS 2 and krajsat NUTS 3 levels, Slovakia and Hungary have only built planning regions at NUTS 2 level, transferring the administrative adjustment to these scales. The situation is contradictory in the Czech Republic, as instead of the NUTS 3 level institutions having self-governance and regional development tasks, one has to deal with 8 planning-statistical regions in the case of SF management. In contrast to this, the situation in Poland is ideal as everything can be found at the NUTS 2 level (Figure 2).

This diverse set of regional institutions and frameworks demonstrates that the scope for implementing EU Cohesion Policy varies greatly (Bachtler-McMaster, 2008). While the Polish NUTS 2 level forms a rational basis for regional Structural Funds programmes, in the other investigated countries the NUTS 2 regions contain more than one self-governing units.

During the reference years (2004–2013) partnership became one of the key principles of EU support policy. It means multi-tier (sub-national, national, supranational) and multi-actor (local and regional authorities, private and civil organisations) participation of partners in policy-making, planning, implementation, monitoring and evaluation (EP 2008). The system of multilevel governance, the degree of decentralisation and participation in decision-making and power, however, varies among the analysed countries and also among regions within a country. The legacy of centralism, the lack of traditions of working in partnership, and the weakly institutionalised sub-national authorities in the CEE countries raise questions about the transferability of the partnership approach to the new member states, the main recipients of cohesion funding (Dąbrowski, 2011).

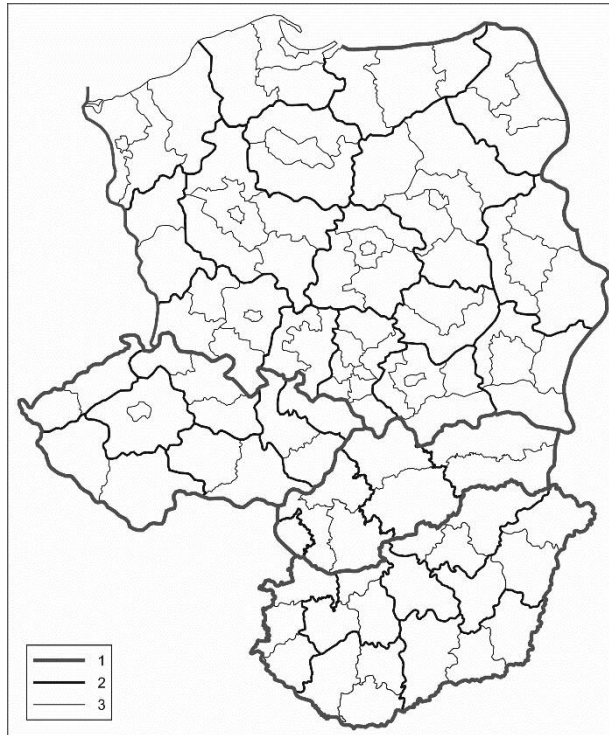


Figure 2: The Visegrad countries' public administration systems and their relationship with the NUTS 2 regions

Key: 1 - Country boundary; 2 - Boundary of NUTS 2 (planning or self-governing - regions; 3 - Boundary of NUTS 3 self-governing regions.

Policy Co-ordination

Domestic Regional Policy

In the 2007–2013 period each Visegrad country prepared a national development plan, called National Strategic Reference Framework (NSRF), agreed on by the Member States and the Commission, setting the investment priorities for the regional and sectoral programmes to be supported by the European Union in the given programming period. The *SF management institutions are responsible* for ensuring compliance with the objectives of the national development plan, which should be consistent with the *EU's balanced development requirement*. That is why the *planning* section of the *national development plans* and the *implementation* of the national programmes are both important in the CEE countries.

There are two main forms in the CEE countries' practice of supporting the balanced development of a territory through *domestic regional development management* and implementation. In the first model the special regional development "sectoral institution" (ministry) is responsible for regional development tasks, while another, a supra-ministerial institution is responsible for inter-sectoral coordination, that is, for the "horizontal" enforcement of the territorial approach. In this case the central administration of regional development is divided between two institutions. In the second model there is a top ministry which performs the management and planning of development policy as a whole, including domestic regional and inter-sectoral development.

These models varied over time and from country to country. For example, in Hungary the first model was built between 2008 and 2010, but before and after that Hungary can be considered a sample country of the second (divided) solution, as the tasks of planning and implementing regional development had been and have again become separated into two ministries. In Slovakia a top ministry of regional development (the Ministry of Construction and Regional Development) has been functioning since 1999, although from 2010 to 2012 the tasks of the ministry were divided (mostly) between two ministries and the Prime Minister's Office. Since 1996 the Czech and since 2005 the Polish practice can be classified as the second, integrated type, where regional development ministries have been responsible for regional development.

Integration of SF Management

As regards the compliance of *SF institutions* with the domestic public administration systems, two models can be identified. In the *integrated* model the planning, implementing, monitoring and evaluating institutions and procedures are not distinct from the domestic development institutions and procedures. On the other hand, in the *separated* model there are parallel SF and public administration institutions. This model includes varying degrees of administrative integration (using existing administrative bodies), namely, the integration of programming (the EU programmes are integrated partly into domestic development policy implementation), and financial integration (using funds according to the national accounting rules). It may appear therefore as a mixed model, like the Hungarian one (Perger 2009).

From 2004 to 2006 the Polish SF management system was an integrated one. The managing authorities were located at different Operational Programmes (OPs) in different ministries. At the Integrated Regional Operational Programme (IROP) the Ministry of Economy, Labour and Social Policy of Poland (which was the central body of SF management until 2005) was responsible for co-operation with the self-governments of 16 voivodeships, and voivodeship offices were the intermediate

bodies. Since 2005, and of course during the new programming period, the Polish regional development top ministry has been responsible for both domestic regional policy and SF programme implementation. The managing, intermediate, certifying and auditing bodies are integral parts of the national public administration system. In the new programming period regional self-governments have become the managing authorities of the 16 new Regional Operational Programmes (ROPs) in Poland. These voivodeships are responsible for the domestic regional development tasks, too, so it is an integrated model also at a regional level.

In the period between 2004 and 2006 Slovakia, the Czech Republic and Hungary also had an integrated system for SF management. Usually the sectoral ministries were the managing authorities, and they made decisions about support. While the Slovakian and Czech systems remained integrated, the *Hungarian* SF institutional system became separated in the new programming period (2007–2013). SF planning, implementation and management became the tasks of the National Development Agency (NDA) which is now subordinated to the National Development Ministry, separated from the traditional public administration organisations. However, this system is rather a sample of the *mixed* model, characterised by the integration of the SF institutions' programming and financing, but with administrative separation. The NDA, in co-operation with the ministries concerned, is responsible for the planning and implementation of the entire NSRF as well as for the managing authority functions with respect to all operational programmes, including the regional ones. However, from 2014 on, SF management will again be the task of the ministries involved, thus becoming integrated once more.

Involvement of Self-governing Regions

Here we are going to analyse the centralised and the decentralised public administration bodies' role in programming and implementation. In the *decentralised* model the regional actors have an important role in the process of planning, programming and implementing ROPs. They make decisions about the allocation of the ROPs. In contrast, in the classical form of the *centralised* model the central state administration bodies are responsible for planning, implementing and managing the whole SF programme, including the ROPs. Though these central bodies may involve regional partners in the planning process, it still remains centralised, as are the managing authorities (Perger 2009). The centralised SF managing system can increase the efficiency of co-ordinating the implementation of OPs and improve transparency, but from the point of view of territorial governance, this solution provides fewer opportunities for the regional actors.

The scope of action in financing is one of the most significant elements among the conditions of territorial governance. Authorisation in itself is not sufficient to

guarantee effective scope of action, *financial autonomy* is also required which, however, is deficient among the CEE countries' actors at regional level.

During the first programming period (2004–2006) the Polish SF management system was the most decentralised model in the Visegrad countries, since Poland has a decentralised state administration system with self-governing NUTS 2 regions. The new three-level territorial structure with large voivodeships was introduced in 1999. The regional is an administrative level with the government's local representatives, but there are also elected self-governments of the voivodeships, with their own budget and competencies. This new regional self-governmental framework corresponds to the NUTS 2 level which served as a basis for preparing the required institutional system of European Cohesion Policy in Poland. The territorial structural changes carried out made the management of regional development possible at the regional level from 2007. Essentially, due to the IROP (2004–2006), regional institutional capacity was successfully set up at the voivodeships. Thus, in the new programming period, the decentralisation of SF management could become deeper, as the 16 ROPs and their management by the regional self-governments justify it (MRD 2011). The Polish practice shows that *development policy can be transferred from the state administration to the self-governments*, which has increased the policy's legitimacy and integration.

From the point of view of territorial governance, it is a problem that public finances for regional development have remained centralised in Poland despite the so-called regional contracts signed by the regional self-governments and the Ministry. As an evaluation study explains, the impact of European Cohesion policy on the Polish multi-level governance system goes far beyond financing. The system needs the further enhancement of co-operation across levels among government, municipalities and public and private actors. There are also other challenges, like capacity-building at local-governmental level (competent and efficient public officials), and performance monitoring and policy impact assessment at both local and central levels (Kramer – Kołodziejcki 2011).

The Czech SF management system was centralised in the first programming period, as the Ministry of Regional Development managed the IROP programme. For the new programming period, 9 regional OPs were created, 2 for Prague and 7 for the cohesion regions. At the cohesion regions the Regional Councils, funded directly for the ROPs management in 2006, were the Managing Authorities, while in Prague a department of the City Hall had the same function. The Regional Councils (Boards), consisting of representatives from all regional assemblies (NUTS 3) within the NUTS 2 regions, have their own offices for the management and implementation of ROPs.

The Hungarian and Slovakian SF managements were centralised in the period between 2004 and 2006. The reason for this was their centralised state administration system, and it was an EU expectation that programme structure should be

single, transparent and centralised (Perger, 2009). The new Slovakian territorial governments had no role in NSRF planning (Buček, 2011); by contrast, the Hungarian Regional Development Councils, established by the Regional Development Act and operating from 1999, were able to prepare regional development strategies. Finally, due to pressure from the EU, Hungary made one single ROP, which relied only partially on regional plans. Slovakia, however, had no regional programme at all, only a sectoral OP with regional elements.

After 2007 the Hungarian model, with 7 separated ROPs but with a centralised managing authority (NDA), became more centralised, though the RDAs were the intermediate bodies of the ROPs. However, the Slovakian system is even more centralised. Except for the City of Bratislava, the regional self-governments (krajs) are partly involved in the implementation of SF, since each one is an intermediate organisation in the Integrated Regional Operational Programme. In the Bratislava OP the city self-government is the intermediate body (Buček 2011).

Hungarian regionalists hoped that top-down regionalisation could be implemented, first when the Regional Development Act was born, then at the time of elaborating the national development plans in the early 2000s (these had regional dimensions, too, and there were multi-level discussions about the plans). But RDCs and RDAs had a negligible role in the allocation of the national development resources from the beginning (1996) to 2008. It was negligible because the amount of decentralised domestic regional development funds was very small. From 2012, when RDCs were abolished, the county governments remained the only spatial development and planning actors; they had been involved in elaborating regional development strategies, but they were not experienced in co-ordination. Since that time the local self-governments have lost many of their functions which have been transferred to the county level “deconcentrated” state administration. Besides this recentralisation, the RDAs, as SF institutional and regional development actors, have also become centralised organs.

Challenges for the Visegrad Countries

One of the biggest challenges of adaptation was the so-called *Europeanisation pressure*, especially regionalisation. The extensive effect of the SF on national administrations in the CEE countries can be explained by their strong motivation to acquire development resources eligible for less developed regions. The CEE countries were preparing for accession at that time and they believed that regions mattered. The main argumentation for the necessity of regionalisation stemmed from SF regulations, although the criteria of “good governance” formulated and controlled yearly by the European Commission implied the indirect message to decentralise and develop the “regional administrative capacities” (Pálné Kovács 2011).

The CEE countries tried to adapt to the tasks deriving from the Europeanisation process. The motivation to gain access to SF played the most significant role in this, but there were no strict regulations for the establishment of administrative regions. The necessary elements of SF-driven adaptation were (1) the delimitation of the NUTS 2 regions; (2) the establishment of regional consultative bodies based on the principles of partnership, and also (3) that of the managing authorities of SF (Pálné Kovács, 2011). Poland was the “eminent student” among the Visegrad countries, while the others used the freedom of adaptation not for real, but for imitated regionalisation.

The *system of objectives of regional policy; the requirements concerning the institutional system* of the SF as well as the national programming and planning prescriptions created for fund absorption have all been *frequently modified*. Accordingly, national and regional practices of adjustment and plan elaboration procedures have also changed, and the success of adaptation has varied, too. In principle, EU member states have enjoyed greater liberty and have had wider responsibilities since 2007. Poland has exploited the opportunity of decentralisation, which the rest of the investigated countries have failed to achieve. The institutional changes in the system of public administration or regional policy further decreased the chances of preserving and transmitting organisational knowledge, the network of relations and also the already established other networks. For instance, the Hungarian regional level deprived of functions will not be able to co-ordinate the joint preparations for the period starting from 2014; the new method based on the collaboration of county municipalities is an utterly new practice rendering access to functioning methods and reliable partners difficult. County municipalities are not prepared for this task.

The *partnership principle* is a general EU requirement for all of the institutional bodies in the SF management system during the whole implementation process. However, due to the CEE countries’ traditional, bureaucratic state administration system and to their limited experiences in this field, partnership building has been a great challenge and it would need a new form of management. There are two ways to involve stakeholders in the SF allocation process; the first is when they are members of the Monitoring Committees and they monitor the implementation of SF funds, and the second, when they can comment on and/or create the sectoral and regional programmes of NSRFs. It was common that the biggest, umbrella organisations were able to exploit the opportunity of the SF consultation processes. The involvement of smaller NGOs poses some technical problems when it comes to expanding civil society partnerships in cohesion policy. Local or ad-hoc NGOs often lack the resources in terms of personnel and infrastructure to analyse and process documentation, and even to have continuous representation in case they participate (e.g. voluntary representatives attending meetings) (EP 2008).

The biggest challenge and the most difficult task of SF management is to *empower the final beneficiaries* and to give them enough time to learn the processes. The constantly changing conditions, institutions, rules and staff make it practically impossible for the stakeholders involved in the project to accumulate knowledge. The elaboration of project proposals has been transferred to the private sector, since the institutional system of SF is lacking the necessary capacities. This may be one of the underlying reasons why the poorest are the least successful in getting into projects. Organisations having insufficient own funds (enterprises, self-governments, civil stakeholders) cannot avail themselves of the services of project proposal writing companies.

The effects of political elections and the impacts of the *hectically changing public administrative system* have to be investigated separately. These have affected the functioning of the entire institutional system, the internal and external relations as well as the communication of regional policy and SF management. For example, in Hungary continual personal and institutional changes at the ministries, in addition to the *unclear division of labour* between them, inhibited the operation of bureaucratic automatism, despite the existence of unchanged institutions, such as NDA (KPMG 2011). The changing intermediate bodies caused problems in communication with the stakeholders and beneficiaries, similarly to the effect of erratic communication caused by the fluctuating staff in the SF management organisations. The latter can also hinder the accumulation of organisational knowledge, even in a centralised system like the Hungarian one. The impacts of the governmental change in 2010 resulted in disrupting sectoral portfolios and the NDA exactly at the time when they should have taken part in strategic planning (preparation for the new programming period, rethinking the rules of spending the money under the circumstances of the financial crisis and in the light of the mid-term evaluation reports).

The *global financial crisis* meant a challenge for all CEE member countries. This was manifest, among others, in central budget restrictions which have postponed setting significant social, territorial and often economic development priorities, have blocked development projects, and reduced the funds owned by local/territorial public administrative units (self-governments). The crisis has placed several potential project participants in a hopeless situation, regardless whether they were actors financed from public or private funds. From the aspect of SF, it is important to note that the exhaustion of national development resources has considerably increased the importance of SF, thus the regulation (in certain cases overregulation) of SF may further hinder the success of allocation. Overregulation excludes several good ideas and potential projects, so that they do not even reach the phase of preparing proposals or they fall out in the first round. The last aspect to be considered is that the financial crisis has raised the risk of accomplishing projects successfully in the case of several beneficiaries.

Conclusions

The Visegrad countries have often been treated as a uniform block by EU policies, albeit they chose dissimilar paths already in their political-economic transition period despite their common historical roots. The individual countries applied varying degrees of decentralisation, provided different opportunities for FDI and – as analysed in this paper – were differently affected by the Europeanisation pressure.

From among the four examined countries Poland chose a unique path, it has accomplished administrative-institutional reforms including decentralisation as their integral part. On the contrary, Hungary followed another road, that of recentralisation. The Czech Republic and Slovakia took some steps towards decentralisation, but the institutional system established to deal with EU funds did not properly involve the regional/local participants.

References

- Bachtler, J. – McMaster, I. (2008): EU Cohesion Policy and the Role of the Regions: Investigating the Influence of Structural Funds in the New Member States. *Environment and Planning C: Government and Policy*, Volume 26. Issue 2. pp. 398–427.
- Buček, J. (2011): Building of Regional Self-government in Slovakia: The First Decade. *Geographical Journal*, Volume 63. Issue 1. pp. 3–27.
- Dąbrowski, M. (2011): *Partnership in Implementation of the Structural Funds in Poland: 'Shallow' Adjustment or Internalization of the European Mode of Co-operative Governance?* Vienna, Institute for European Integration Research. (Working Paper No. 05).
- European Parliament (2008): Governance and Partnership in Regional Policy. Ad-hoc note. Policy Department Structural and Cohesion Policies.
- KPMG (2011): Az operatív programok félidei értékeléseinek szintézise [Syntheses of the mid-term evaluations of Operational Programs]. Budapest, KPMG.
- Kramer, E. – Kołodziejcki, M. (2011): *Economic, Social and Territorial Situation of Poland. Note. Policy Department B: Structural and Cohesion Policies*. Brussels, European Parliament.
- MRD (2011): *Regional Policy in Poland*. Warszawa, Ministry of Regional Development.
- Pálné Kovács, I. (2009): Europeanisation of Territorial Governance in Three Eastern/Central European countries. *Halduskultuur*, Volume 10. pp. 40–57.
- Pálné Kovács, I. (2011): Top-down Regionalism – EU Adaptation and Legitimacy in Hungary. In: Lütgenau, S. A. (ed.): *Regionalization and Minority Policies in Central Europe: Case Studies from Poland, Slovakia, Hungary and Romania*. Innsbruck, Studien Verlag. pp. 113–127.
- Perger, É. (2009): *EU kohéziós támogatások felhasználásának intézményrendszere és a forrásfelhasználás hatékonysága, eredményessége* [The institutional system of EU cohesion funds, and the effectiveness and efficiency of its allocation]. Budapest, ECOSTAT Kormányzati Gazdaság- és Társadalom-stratégiai Kutató Intézet.

A STUDY OF RURAL DEVELOPMENT SUSTAINABILITY IN HARGHITA COUNTY, ROMANIA

Andrea Csata

Introduction

In this paper the impacts of European Union funds on rural areas, more specifically, on Harghita County, Romania will be studied. In Romania there are major differences among the various parts of the country in attracting European Union funds. These differences can be found, on the one hand, in the type of programmes, on the other hand, regionally, at the level of development regions and also at county level. If we take a look only at the Regional Operational Programme, we can see that its operation has not strengthened cohesion so far, especially not in the long-term. Thus, in what follows, the local economic impact of several programmes on Harghita County will be analysed.

The main aspect of analysis will be the allocation of rural development funds, but I shall also compare the allocation of these funds and the operation of the Regional Operational Programme as well as the attraction of agricultural subsidies. The study focuses mainly on the economic impact of these funds and on their role in sustaining the local economy.

Rural Areas and European Union Funds

The development of rural areas cannot be separated from rural activities due to their territorial facilities and rural character. In this way, agricultural subsidies play an important role in sustainable rural development. Sonnino et al. (2008) have highlighted the importance of the sustainable rural development paradigm, as it has the potential for a reconstituted agricultural and multi-functional land-based rural sector.

Marsden's study (2003) is also important, as it emphasises that sustainable rural development is territorially based and thus it redefines nature by re-emphasising food production and agro-ecology, which re-asserts the socio-environmental role of agriculture. Marsden also calls our attention to the fact that agriculture is a major agent in sustaining rural economies and cultures.

Concerning the analysis of the rural development funds' impacts, I would like to mention two major studies that have investigated them.

In the first one, studying the rural development funding of four development regions in the same county, Szócs et al. (2012) concluded that the economic dimension had greater effect, while the environmental one was totally neglected. Since there are no size limits nor needs set for the territories applying for these funds, effectiveness depends on the mayors' personal and administrative capacity, and most of the projects are not really sustainable.

In the second one, applying the method of input–output analysis, Bíró (2012) examined the impact of supports by the Common Agricultural Policy. The results show that the Romanian agriculture forestry and fishing sector has an average impact on the overall economy, namely increasing the agricultural production with 1 RON (Romanian currency) means an input demand increase with 1.8089 and an output rise with 1.7485.

The final increase in agricultural demand by 1 RON leads only to 0.2344 RON income growth in the total economy.

The appreciation of sustainable development is reflected in the Europe 2020 strategy, the principle aim of which is to be a strategy of smart, sustainable and inclusive growth. The next planning and budget cycle in rural development also tries to operationalise these main strategic aims: promoting transfer of innovation, enhancing competitiveness, preserving the ecosystem, emphasising the importance of green energy, strengthening social inclusion and reducing poverty. Innovation, closer co-operation among agriculture, rural activities and research, and the support of young farmers have come into prominence. The ways of co-operation (product sales, improving rural services), the LEADER-approach, urban–rural co-operation, and renewable energy have all become re-evaluated.

Research Frameworks

Our paper analyses the impacts of European Union funds from the perspectives of the economy and of development sustainability. The core analysis deals with the distribution and impacts of rural development funds, but in order to provide a comparative analysis, other two major funding opportunities – the Regional Operational Programme funds and the European Union agricultural subsidies – will also be included.

An attempt will be made to answer the following questions: How efficiently are the above-mentioned EU funds utilised at county level, especially in Harghita County? How are these funds used? What do they mean for the local economy? What do they mean from the perspective of sustainability? How much do they help the

convergence and cohesion of the counties included in general, and in the case of Harghita County in particular.

For the purpose of the research basically the data available on the relevant agencies' official websites were used, but additional data from these agencies were also requested, namely, from The Payments Agency for Rural Development and Fishing (PARDF), the Regional Development Agency and the Agency for Payments and Intervention in Agriculture. The data analysed relate to the funds allocated for the period 2007 – 1st March 2013.

Our research focuses on Harghita County, since it is a good subject for analysis in respect of rural areas, as more than half of the county's population live in rural areas and according to the National Institute of Statistics this rural population tends to increase: (1990: 52.3%, 2010: 56.1%). Population density also shows the characteristics of a rural area: the average for the entire county is 48.9 inhabitants/square kilometre, for the rural areas 32.1 and for the urban areas 149.4.

In 2012 unemployment rate was 5.6% at a national level, 6.4% in the Centre Region, while it was 7.5% in Harghita County. Furthermore, the GDP per capita in 2012 was 4640 EUR in Harghita County, 6018 EUR in the Centre Region, and 6924 EUR at a national level. Harghita County is an area with low income where the annual average take-home pay was 1114 RON in 2012, a sum that is smaller than that in the Centre Region (1333 RON) and the national average (1512 RON). The county can be characterised as a mainly mountainous region with 59.7% agricultural land – out of which 39.6% meadows and 37.1% pastures – and 35.7% woods. Although most of Harghita county's localities are considered to be developed and highly developed, according to a statement issued by the Centre Development Region, only Brasov County precedes Harghita County in development. In Harghita County only 16% of the localities can be considered very poor and poor, and more than half of them are developed.

All in all, we can state that Harghita County is highly developed and has a good infrastructure in spite of its low income rate.

Research Results – The Analysis of Rural Development Funds

When analysing rural development funds, only the funds tendered exclusively by the Rural Development Agency (PARDF) were taken into consideration, since the 211, 212 and 214 actions of the Rural Development Programme belonged to the responsibility of another institution, the Romanian Agency for Payments and Intervention in Agriculture (APIA). The data of the latter will be analysed later, when presenting the direct agricultural payments.

Twelve out of the 20 successful measures were envisaged for competition (outside the LEADER axis). Regarding sectorial involvement, the majority was agricultural: 8 agricultural, 2 in tourism, 2 multi-sectorial. As to the beneficiaries, these actions were targeted mostly at entrepreneurs dealing with agriculture, tourism, other businesses, as well as at local governments, forestry, and joint tenancy. Considering the objectives and the impacts of these actions, the economic objectives are prevalent, then come the environmental ones, while the social objectives are the least or only indirectly taken into account.

Harghita County had an average share from the funds as regards the amounts utilised. Surprisingly the counties which performed better were the more developed counties from Transylvania (Timis, Cluj, Bihor), and Bistrița Nasăud and Suceava, which are less developed (Figure 1).

Regarding the amount of funding per capita, the seaside county Tulcea, and Sălaj proved to be the best performers, whereas Harghita County shows an average performance (Figure 2).

Considering the number of projects, Harghita County has an average rating, the best performers in this case being Alba County and Bistrița Năsăud (Figure 3).

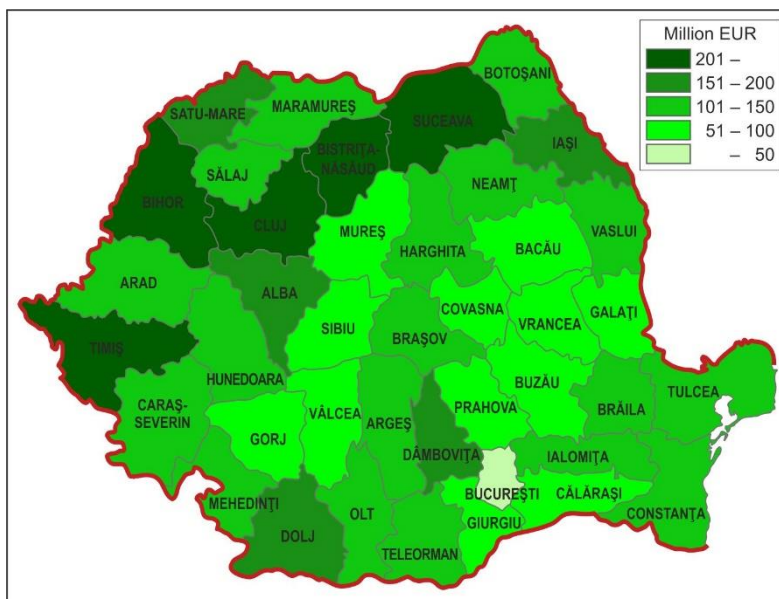


Figure 1. Share of subsidy per capita of project funds at county level until March 2013

Source: Based on National Rural Development Programme of Romania.

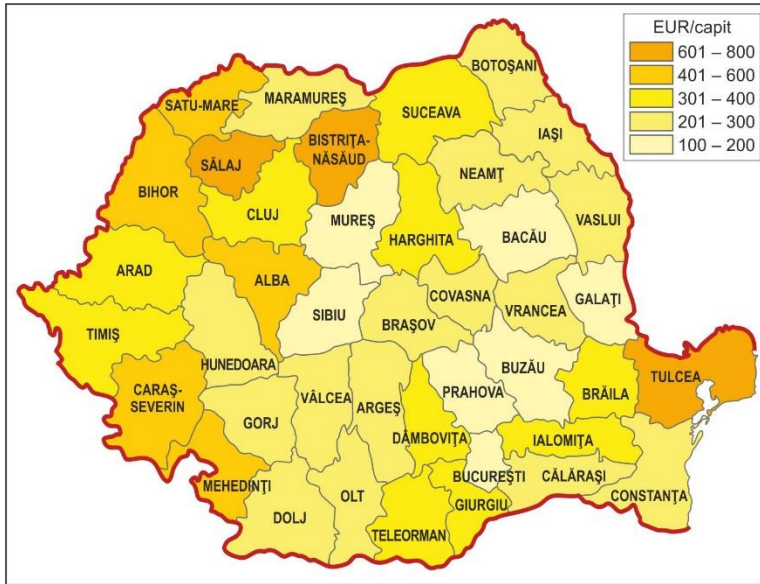


Figure 2. Share of subsidy per capita of project funds at county level until March 2013

Source: Based on National Rural Development Programme of Romania.

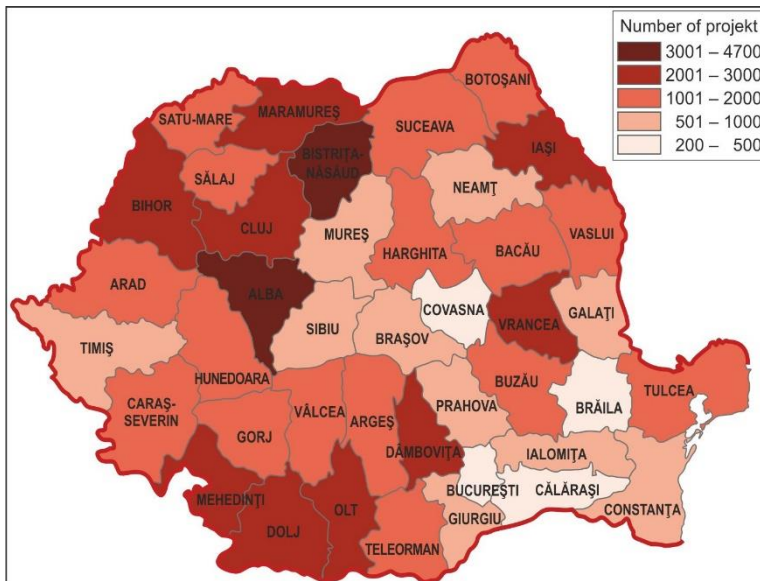


Figure 3. Share of number of projects at county level until March 2013

Source: Based on National Rural Development Programme of Romania.

Since most of the funds are agricultural or related to agriculture, the amount of fund per hectare of agricultural land was also calculated. Here Bistrița Năsăud County was the best performer, but Dambovită County is also among the top counties. Harghita is below average in this respect (Figure 4).

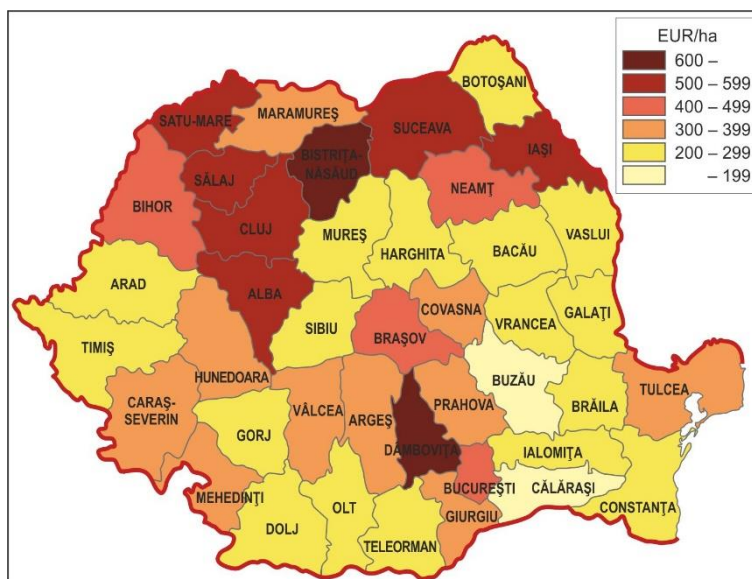


Figure 4. Share of project value per one hectare of agricultural land at county level until March 2013

Source: Based on National Rural Development Programme of Romania.

All in all, it can be said for the analysed period that in the case of the National Rural Development Programme, Bistrița Năsăud County performed the best, Harghita County can get an average rating, while Bucharest received the least money – naturally, due to the type of funding (Figure 5).

As regards the localities in Harghita County, all of them had rural development projects except three. The majority of localities had 1–5 projects on average; 7 localities had over 10 projects. In the case of both project number and the amount of funding, the best performing localities were Joseni, Remetea and Zetea. Regarding the number of projects, in addition to these three localities there are also Ciumani and Pauleni-Ciuc (Figure 6).

From the county level projects those localities could gain a higher proportion of funding which possessed adequate administrative capacity. The projects that had the greatest impact, and were the most important, were the infrastructural investments. However, a signed project contract does not necessarily mean that the

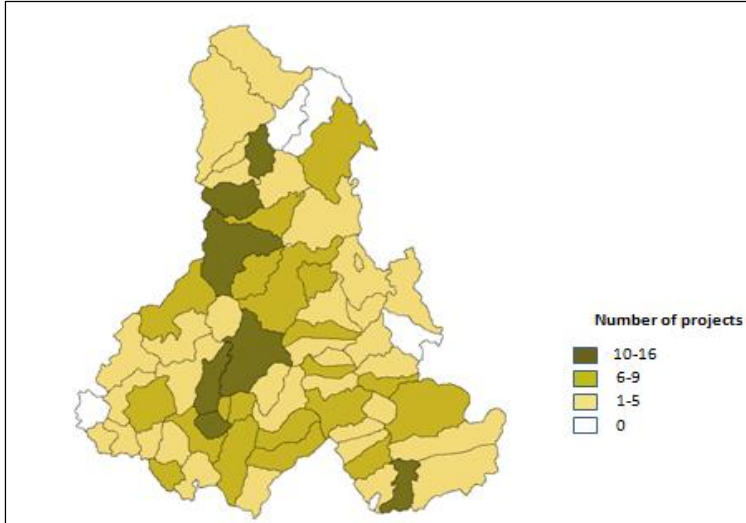


Figure 5. Share of number of projects at Harghita County level until March 2013

Source: Based on National Rural Development Programme of Romania

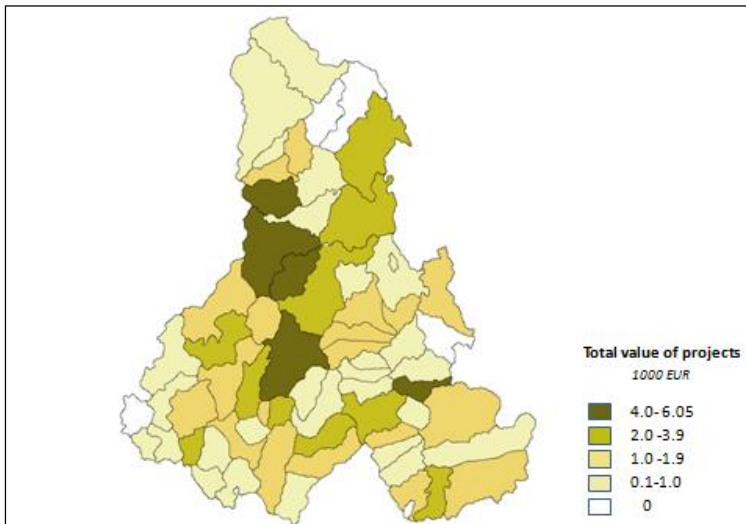


Figure 6. Share from the total value of projects at Harghita County's settlement level until March 2013

Source: Author's elaboration based on the official site of the Payment Agency for Rural Development and Fishing [1 March 2013].

project has actually been carried out. There are two main obstacles in carrying out a project: public procurement procedures and the ban on employment in the public sector (namely, according to the IMF negotiations, from January 2009 it has been prohibited to employ new workforce in the public sector, except some officially approved positions).

For example, Ciumani has not been able to begin the implementation phase for two years now, as during the procurement procedures the results have always been appealed. In the case of local government projects, political affinity and political “colours” played a considerable role.

As most of the rural development funds remained in the local economy, it benefited much from these projects which targeted local economic operators such as small and medium-sized businesses, farms and local governments. The funds obtained by these operators remained in the local economy as the money was spent locally. In the case of bigger infrastructural investments, because of the public procurement procedures, non-local, well capitalised companies (from Bucharest, Oradea, Cluj-Napoca, etc.) took some of the money, but as their contractors in implementation were mainly local sub-contractors, a substantial part of these sums went back to the local economy (Figure 7). Besides money, employment is also an important factor, as it contributes to local stability. In order to provide an accurate mapping of these processes, there is another ongoing research project.

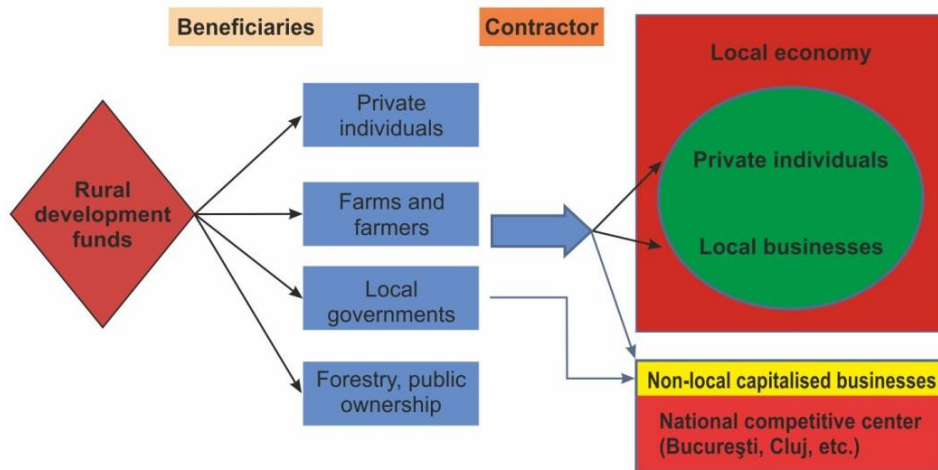


Figure 7. The economic utilisation of rural development funds, the use of rural development in the economy, illustration of the stakeholders

Source: Author’s elaboration.

Research Results – Analysis of the Regional Operational Programme

The overall objective of the Regional Operational Programme (ROP) is to support and promote sustainable local development in Romania's regions, both economically and socially, by improving the infrastructure conditions and the business environment which in turn support economic growth. This means that the ROP's aim is to reduce economic and social development disparities between the more developed regions and the less developed ones, focusing on the unique needs and resources of the supported regions.

The priority axes of the ROP are:

1. supporting the sustainable development of towns – urban growth poles;
2. improving regional and local transport infrastructure;
3. improving the social infrastructure;
4. supporting the development of the regional and local business environment;
5. promoting sustainable development and tourism;
6. providing technical assistance.

Taking a look at the distribution of the Regional Operational Programme funds we can see that a great amount was spent on education, training, urban and social development, and on road upgrading. At the same time, the development of business environment, tourism and enterprises received a much smaller sum (Figure 8).

Harghita County is around the average as regards both the number and the value of the projects at the Regional Operative Programmes level as well.

Among the successful projects, the welfare-enhancing projects were in majority, while there were only a few projects that helped to increase long-term competitiveness, for example, business development. The maintenance costs of these investments are later paid by the community, thus the public sector has to face a subsequent cost increase. If public welfare investments and their costs grow asymmetrically, and meanwhile they do not enhance the local income and economy, this may lead to problems in sustainability. The welfare effects of these ROP projects can be felt at the localities, but they also have to provide the maintenance costs, while the profits of implementation are enjoyed by the more developed regions through the big companies (Figure 9).

Summing up, although the effects of welfare investments are noticeable at the local level, a substantial amount of the funds for the implementation of the projects goes to other regions and localities, while the maintenance costs remain at the local level. Some of the projects are still under implementation, but there can already be observed spectacular changes in infrastructure and space planning. The follow-up phase of the projects is an important topic for further research.

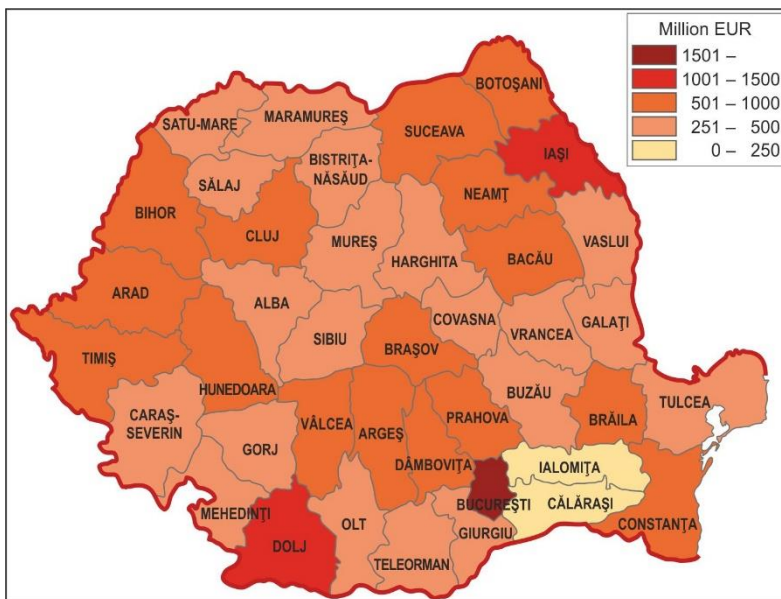


Figure 8. Regional Operative Programme of Romania, share from the total value of contracted projects at county level

Source: Author’s elaboration based on the official site of the Regional Operative Programme, <http://www.inforegio.ro/node/22> [1 March 2013].

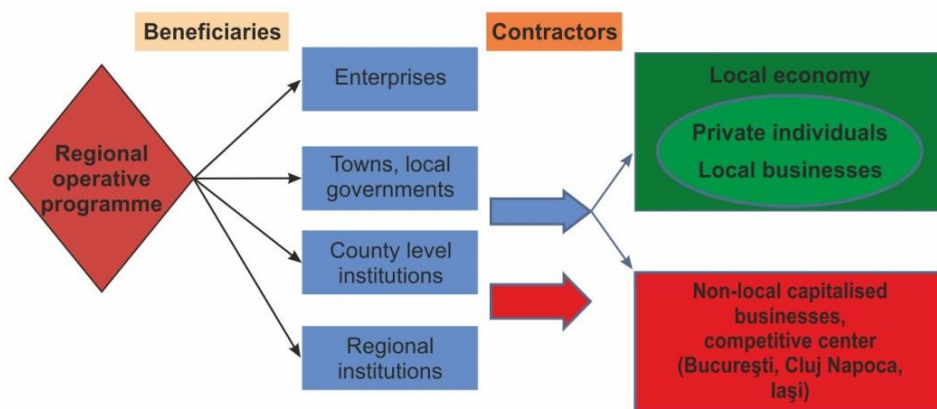


Figure 9. Utilisation of the Regional Operative Programme funds in the economy, flow chart of the stakeholders

Source: Author’s elaboration.

Research Results – Analysing the Effects of European Union Agricultural Subsidies

The present section studies the agricultural subsidies having come from EAGF and EAFRD funds and disbursed by APIA. They include area-based grants (SAPS), other direct payments (sheep and cattle subsidies, etc.) and direct payments from the rural development fund paid out by APIA.

It is a great advantage of European Union agricultural subsidies that their application system is easier and the number of targeted people is much larger, so it provides direct support to a wider public. The large number of targeted people can be explained by the fragmented land structure.

With respect to agricultural subsidies applications, Harghita County was second at a national level after Constanta County, due to the grants for disadvantaged mountainous regions.

On the basis of the distribution of farm support at county level according to the size of agricultural land, there is a growing number of requests for agricultural subsidies in general. The largest increase occurred in the case of farms of 20–50 ha, and at the same time, in the case of farms of over 500 ha a significant drop can be noticed (Table 1).

Table 1. The amount of agricultural subsidies – according to the size of agricultural land

Land size (ha)	Number of beneficiaries				Increase in 2011 compared to 2008 (%)
	2008	2009	2010	2011	
1 – 2	7,801	7,890	8,301	8,421	7.95
2 – 5	13,473	13,185	13,717	13,924	3.35
5 – 10	4,770	4 733	4,953	5,040	5.66
10 – 20	1,219	1 261	1,315	1,393	14.27
20 – 50	394	427	454	505	28.17
50 – 100	129	121	132	130	0.78
100 – 500	138	134	136	148	7.25
500 – 1,000	23	18	17	15	-34.78
1,000 –	12	6	7	6	-50.00
Total	27,959	27,775	29,032	29,582	
County-wide total grant value – million RON	129	158	200	233	80.02

Source: Author's elaboration based on data from APIA Harghita.

It turns out from the interviews we made that the beneficiaries of small subventions use it to supplement their daily expenses and reinvest it in agriculture. Beneficiaries of medium subventions also reinvest in agriculture but they also buy lands. Finally, the beneficiaries of great subventions reinvest it by buying lands and equipment, and they can also save money.

Due to the relatively simple application procedures, many people submit their applications. The value of these grants has continuously increased as has done the number of applicants, thus there has been continuous growth in the amount of successfully won grants. While the value of these grants disbursed by APIA Harghita in 2007 was 60.36 million RON, by the year of 2012 this value had reached 281.22 million RON.

A one-year area-based grant sum per farm in Harghita County was 566 EUR on average. In this county, the average grant value per household (including not only agriculture-related farms) was 2179 EUR for a period of six years, which means 363 EUR annually, more than an average monthly take-home wage. So, it is an important source of funding in local, capital deficient areas.

A Comparison of the Funds

Naturally, each type of grant has its own logic and targeted public. By examining the performance of the counties in the Centre Region with respect to the above-mentioned funds and their position within this region, we find that the Regional Operative Programme has not enhanced cohesion. However, the rural development funds and agricultural subsidies have helped the poor counties to get access to extra income.

Comparing GDPs in the Centre Region counties we find that Brasov County takes the first place, followed by Sibiu, while Harghita County has only the fourth position with its GDP being only 53% of that of Brasov. Taking into account the grants won too, as a benchmark, the county with the highest GDP and the highest amount of grants was taken as 100. The GDP and the grant amount of the other counties were related to this number.

The best performing county regarding effectiveness in using rural development funds was Alba County, Harghita County being the third. During the examined period, unfortunately, Harghita County failed to call about half of the sum accessed by Brasov County from the Regional Operative Programme which was meant to directly serve cohesion policy. Thus, we can state that this fund has not enhanced cohesion, it has not helped the county to catch up, instead, it has strengthened the segregation of Harghita County and its lagging behind.

At the same time, with respect to agricultural subsidies paid through APIA, Harghita County took second place in 2012 (*Table 2*).

Table 2. A comparison of the counties in the Central Development Region of Romania by GDP, and the utilised Regional Operative Programme and Rural Development Programme funds

GDP		Regional Operative Programme			Rural Development Funds		
County	The best performing county (%)	County	Total – million EUR	The best performing county (%)	County	Total – million EUR	The best performing county (%)
Brasov	100.00	Brasov	737.80	100	Alba	184.3	100
Sibiu	82.83	Mures	491.60	67	Brasov	115.7	63
Alba	78.19	Alba	469.28	64	Harghita	113.3	61
Mures	57.61	Sibiu	436.30	59	Mures	93.2	51
Harghita	53.06	Covasna	364.30	49	Sibiu	710.9	39
Covasna	48.97	Harghita	329.96	45	Covasna	593.9	32

Source: Author's elaboration.

On examining the importance of these funds in the county's local economy, we can see that the most concentrated fund distribution and the highest value projects were implemented through the Regional Operational Programme, while the grants awarded to the largest targeted public were those disbursed through the direct agricultural payments. These two factors – the concentration of fund distribution and the targeted public – show that agricultural and rural development funds helped in stabilising local economies and maintaining purchasing power, while the Regional Operative Programme although served competitiveness, it, unfortunately, also had significant drawbacks.

It can be observed that the grants helping the development of rural areas (rural development and agricultural funds) were similar in value to the amount allocated from the Regional Operative Programme.

The total grants received by Harghita County from the three programmes amounted to 42.83% of the county's yearly GDP in 2012, which was an important factor in the county's economic life. The grants' value if projected per one year, in other words, the one-year average grant, means 7.40% of the GDP in 2012 (Table 3).

Conclusion and Future Challenges

As a conclusion, we can say that the funds Harghita County managed to get represent an important resource in maintaining the county's local economy. The money disbursed to private entrepreneurs and small local businesses greatly contributed to their sustainability; the ROP funds had their positive effects on enhancing welfare, but not on increasing competitiveness.

Table 3. Comparison of different funds received by Harghita County

	Total amount of subsidy (2007–2012) million RON	GDP in 2012 compared to the total amount of subsidy (%)	GDP 2012 compared to yearly average subsidy (%)	Number of projects
Regional Operational Programme	1,451	21.70	3.62	62
Rural development programmes	498	7.45	1.24	1930
Single Area Payment Scheme Agricultural payments 2007–2012	1,019	13.68	2.54	173,046
Total	2,969	42.83	7.40	

Source: Author's elaboration.

Agricultural subsidies, due to their large scattering, mainly contributed to the stability of the local economy and the maintenance of local purchasing power. In the case of the Regional Operational Programmes, most applications were submitted by the public sector for welfare-enhancing project grants which do not necessarily improve long-term competitiveness. The results achieved by these funds in maintaining the local economy, increasing the competitiveness of local enterprises, and in improving business environment all fall behind those of the more competitive counties, and this might cause long-term fallback.

The disadvantages of funds the public sector applied for were, on the one hand, that it was hard to implement them because of the problematic public procurement procedures, and, on the other hand, that the positive effects were hindered by the ban on recruiting new employees in the public sector. The system should respond to the question: how can funding be inclusive and sustainable if recruitment of new employees is not allowed?

Our research raises some further issues that need to be investigated in the future: how grant applications will change in the future, the follow-up phase of successful projects, the projects' economic burden (maintenance costs, possible indebtedness, social burden etc.). Further research might also be carried out on the effects of economic changes caused by the grants, or in what direction the economy's structural deficiencies change, etc. How can greener and more sustainable projects be realised without causing social conflicts? How could the Regional Operative Programmes be changed in order to favour the less developed counties with weaker capital, without the help of big cities or the central economic region? How can innovation be created and then developed at the level of rural areas? And finally, how can grants ensure all these?

According to the current framework agreements, the next payment structures and plans naturally build on the experiences of the previous period which, as it was shown in this paper, was not quite innovative and inclusive, nor even environment friendly.

References

- Bíró, B-J. (2012): *Impact Study on the Reform of The Common Agricultural Policy on Romania's Rural Economy*. Doctoral Thesis, Cluj-Napoca. Available at the link: http://doctorat.ubbcluj.ro/sustinerea_publica/sustineri_teze/?let=B (accessed on 22. 05. 2013).
- European Commission – EC (2010): *The CAP towards 2020: Meeting the Food, Natural Resources and Territorial Challenges of the Future*. European Commission, Brussels.
- European Commission – EC (2013): *Consultative Document in Order to Develop the Partnership Agreement for Romania, 2014–2020*. European Commission, Brussels.
- Marsden, T. (2003): *The Condition of Rural Sustainability*. Royal van Gorcum, Assen.
- Sonino, R. – Kanemasu, Y. – Marsden, T. (2008): Sustainability and Rural Development. In: van der Ploeg, J. D. – Marsden, T. (eds.): *Unfolding Webs: The Dynamics of Regional Rural Development*. Van Gorcum, Assen, pp. 29–52.
- Szócs, E. – Vincze, M. – Marton, Gy. (2012): Vidékfejlesztési támogatások a fenntarthatóság szolgálatában? (Rural Development Subsidies in the Assistance of Sustainability?) In: Fejér-Király, G. – Lázár, E. (eds.): *Vállalkozói és gazdasági trendek a Kárpát-medencében* (Business and Economic Trends in Carpathian basin). Sapientia, Miercurea Ciuc, pp. 239–261.
- Regional Operative Programmes of Romania – ROP (2013): Available on the official site: <http://www.inforegio.ro/node/22> (accessed on 1. 03. 2013)
- Payment Agency for Rural Development and Fishing (2013): Available on the official site: <http://www.apdrp.ro/> (accessed on 1. 03. 2013)

List of abbreviations

- APIA – Agency for Payments and Intervention in Agriculture
EAGF – European Agricultural Guarantee Fund
EAFRD – European Agricultural Fund for Rural Development
PARDF – Payments Agency for Rural Development and Fishing
SAPS – Single Area Payment Schem

TERRITORIAL PROCESSES AND THEIR IMPLEMENTATION IN THE PRACTICE OF REGIONAL PLANNING – ON THE EXAMPLE OF HAJDÚ-BIHAR COUNTY¹

Zsolt Radics – Ernő Molnár – János Péntzes

Introduction: Spatial Aspects in Regional (Development) Planning

The frequent *preponderance of sectoral thinking* is a basic problem of development planning, although handling spatial problems as well as EU and Hungarian directives call for *integrating spatial aspects into the planning process*. Spatial thinking means mostly developments based on specific local conditions, aiming to moderate territorial differences and/or intensify spatial connections. It could be integrated into regional planning by the spatial weighting of general sectoral development objectives or by including spatial categories having specific/independent sectoral objectives.

Both of these cases of spatial thinking need *ideas about the space of the development area*. In the last programming period of 2007–2013 – when the NUTS 2 regions played an important role in the development planning process in Hungary – the strategy of the North Great Plain region made an attempt to *define region-specific spatial planning categories* based on complex indices (ÉARFÜ 2008). The aim of the initiative was to create settings for defining development mixes suiting the characteristics of the different spatial units. In the spatial development categories (regional development pole, subcentres and their agglomerations, dynamic and potentially dynamic micro-regional centres, micro-regional subcentres, rural areas) firstly the hierarchic, secondly the geographic aspects of the typology were reflected (Figure 1). It is worth mentioning that these spatial categories *were incorporated into the development strategy of Hajdú-Bihar County* for the above-mentioned period, but unfortunately (in the end) they played no role in the realisation of the regional development objectives (TÉRPORT 2006).

¹This research was supported by the *European Union* and the *State of Hungary, co-financed by the European Social Fund* in the framework of TÁMOP-4.2.4.A/2-11/1-2012-0001 ‘National Excellence Program’.

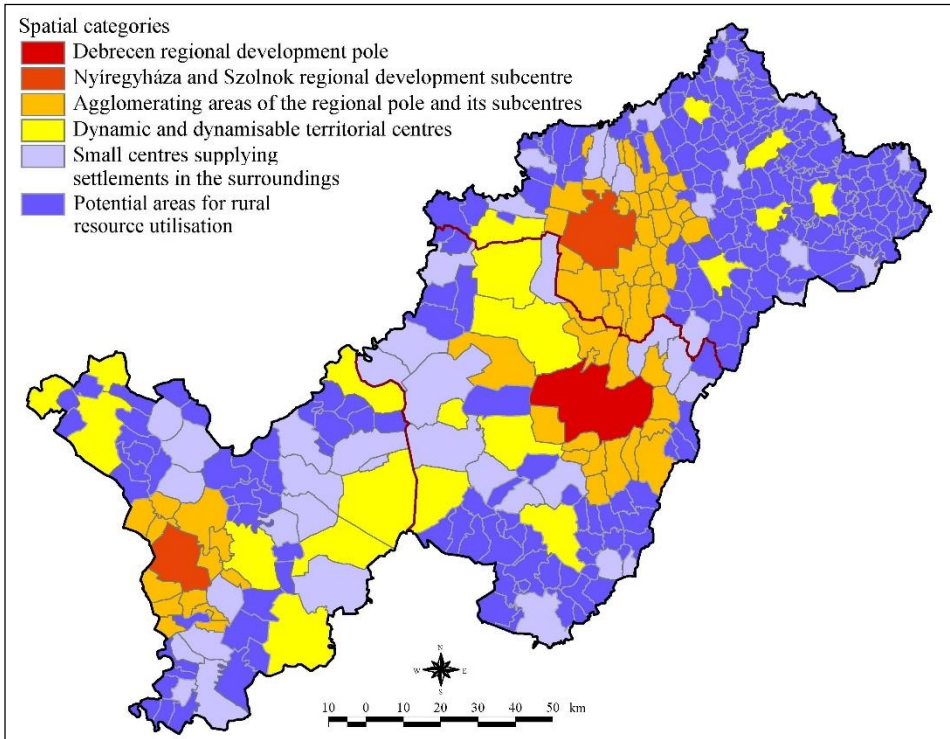


Figure 1. Spatial development categories of the North Great Plain region
Source: ÉARFÜ 2008.

It does not mean that there was no spatial differentiation in the development practice. However, the *micro-regions as tools used for this purpose* were not always functional units and their social, economic and infrastructural development levels were only compared to the national average. This meant that almost every micro-region belonged to the beneficiary category, making it difficult to differentiate the spatial units from each other within the North Great Plain region.

The objective of our study is to point out the characteristic national territorial processes – with special regard to rural areas – and the practice of regional planning after the change of the political regime in 1990 on the example of Hajdú-Bihar County. This NUTS 3 unit is located in the eastern part of Hungary, near the Hungarian–Romanian border; its county centre is Debrecen, the second largest city in the country after Budapest.

The social-economic problems and the challenges of regional development planning are investigated by a comparative analysis of the demographic, infra-

structural and economic processes in respect of the positioning of the county and intra-regional inequalities.

We will also present the targets (and the dilemmas of planning due to the manifold character of the county) based on a complex situation analysis that fits both the national and the European development objectives for the period 2014–2020. The effective exploitation of spatial characteristics and the appropriate allocation of development resources might contribute to easing territorial problems in the county and to its catching up which might also serve European level cohesion.

Our paper relies on the situation analysis subchapters of the currently shaping regional development concept of the county (HBMO 2012).

Geography of Hajdú-Bihar County

The area of Hajdú-Bihar County is divided into eleven micro-regions fitting in the landscape characteristics. The most important areas are:

Hortobágy: the salt affected soils and the relatively dry climate make this area really characteristic. The fluvial shaped surface is almost completely flat, however, the extreme conditions are not appropriate for agricultural cultivation. The natural vegetation consists of different grass associations that can be exploited by cattle and sheep breeding (besides the production of wheat and potatoes).

Hajdúság: it is covered by loess that makes the central part of the county expressively fertile. This area provides the most intensively cultivated agricultural land-use. Wheat, maize, sugar beet and autumn barley are the often planted agricultural crops. The Pannonian strata in the depth comprise a significant part of the Hungarian natural gas reserves and a dominant part of the thermal water reservoirs.

South-Nyírség: it is typical due to the aeolian and fluvial forms with sand and sandy soils that do not provide appropriate conditions for agricultural production. The north-eastern part of the county is characterised by extended forests and areas focusing on rye, autumn barley, potatoes and tobacco cultivation.

Sárrét: the southern part of the county is covered by hydromorphic soils due to extended water and swamp surfaces. The river Berettyó and the branches of the river Körös formed this territory where different forest associations appear as a result of the humid conditions. Besides grasslands, wheat, medick, sunflower and red clover fields are the most typical.

The hydrological conditions of the county are relatively poor (Figure 2). The most important river is the Tisza in the western part of the county, the rivers Berettyó and Sebes-Körös are in the southern part. The rivers Hortobágy, Köselly and the system of Kálló brooks should also be mentioned, but they have modest flow rates. Complex utilisation – water management, communal and industrial water supply, irrigation, recreation – occurs in the case of the great canals (Western and

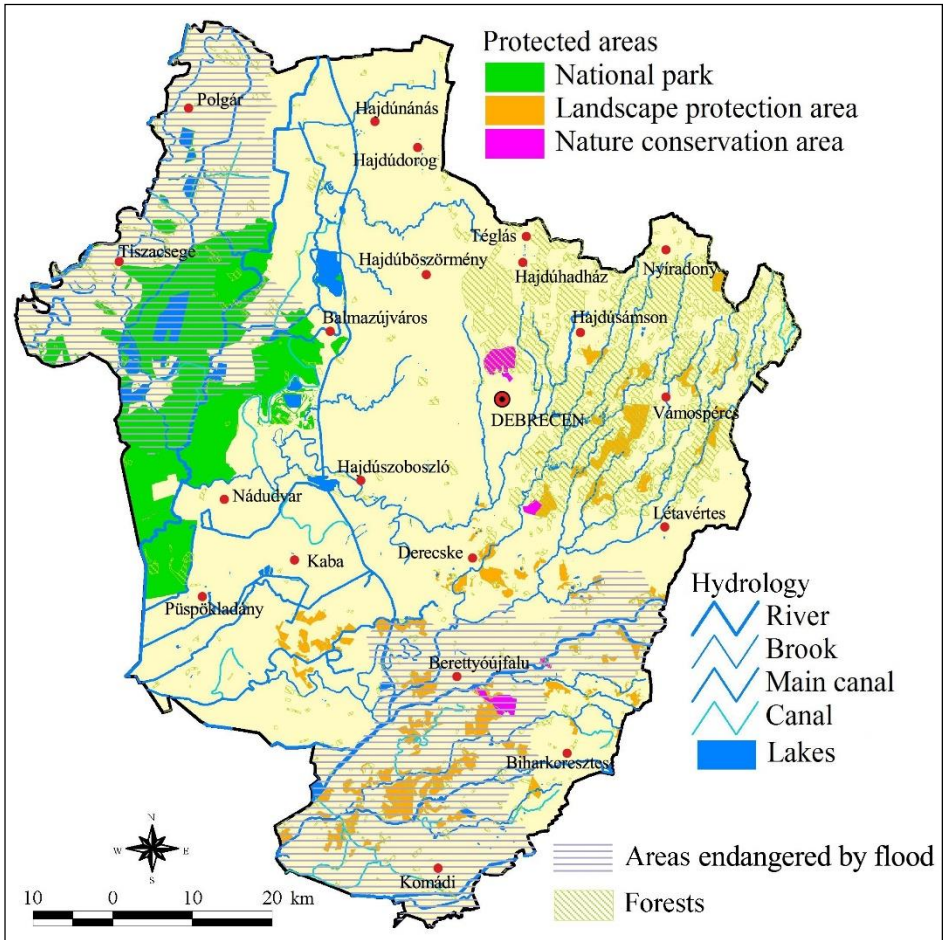


Figure 2. The natural characteristics of Hajdú-Bihar County

Source: Authors' own compilation.

Eastern Main Canals). The lakes here are mostly artificial (besides the former riverbeds and low areas with periodical water cover) and are used for fish-breeding or recreation. The western and extended southern parts of the county are endangered by floods, and besides this, the largest part of Hajdú-Bihar County might be affected by high ground water causing damage in agriculture and even in the inner areas of settlements.

The largest part of the Hortobágy territory is protected as the Hortobágy National Park which is listed among the world heritage sites by UNESCO. This special environment with folk traditions creates one of the most emblematic landscapes

of Hungary with important domestic and international tourism. The Hajdúság and Bihar landscape protection areas include various valuable natural areas in the county.

Demographic Processes and Human Resources

Hajdú-Bihar County was fourth in the rank of counties regarding their population with its over 538,000 inhabitants in 2012 (it equals 5.4% of the total population of Hungary). The general decreasing trend of the population here (-2%) has been more moderate than the Hungarian average (-3.8%) since the change of regime in 1990. The number of live births is higher, the death rate is lower than the national or the "rural"² average in Hungary. Life expectancy at birth is higher than the rural average, but with regard to males it is lower than the national average. The county has a negative migration balance resulting in a moderate but unambiguous outmigration. The consequences of these demographic trends include the young age structure in Hungarian context, lower population density than the national value: only 87 people per km² compared to the Hungarian average of 107 people per km².

The demographic processes represent considerable spatial disparities within Hajdú-Bihar County (Figure 3). Decreasing population number has been typical except for the settlements in the surroundings of Debrecen. The peripheral areas of the county – the southern territory and the western part of the county close to the river Tisza (usually called inner periphery) – have faced a significant fall in population after the millennium (in the case of some settlements the loss has exceeded 20% of the population since 2000). This spatial trend is the result of the suburbanisation process which has increased the concentration of population and resulted in a natural decrease and a migration loss at the same time. However, there is a group of settlements showing spectacular natural increase accompanied by an ethnic change as a result of the rapidly growing rate of the Roma population (e.g. Hencida, Pocsaj, Told). The increasing number of Roma population is characteristic in several settlements, the largest communities living in the largest towns of the county (e.g. Debrecen, Hajdúhadház, Püspökladány, Balmazújváros, Hajdúböszörmény). The rate of increase of Roma population calculated on the basis of the 2011 census data showed similar values for the whole of Hungary (3.4 versus 3.1%). However, according to the referred expectation, the number of Roma inhabitants was 44,000 (Pásztor – Péntes 2012) in 2010, equally approximately 8% of the population (while 18,546 people declared themselves as Roma during the census in 2011).

² "Rural" means here the average value of the counties except Budapest and Pest County.

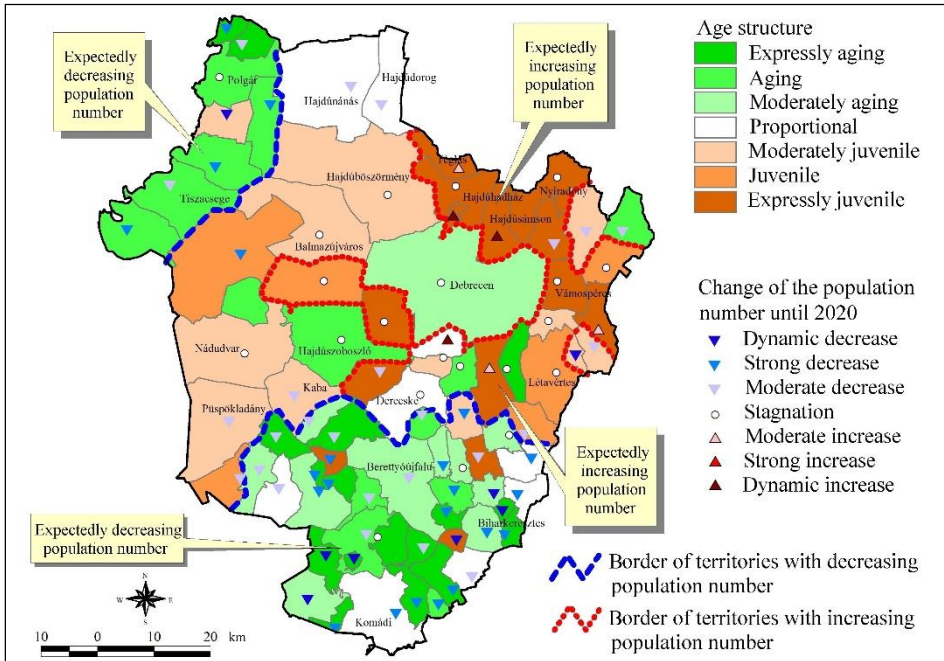


Figure 3. The age structure and demographic expectations in Hajdú-Bihar County
 Source: Authors' own compilation.

Settlements with the youngest age pyramid are concentrated to the east and north of Debrecen; at the same time the rapidly aging population of some villages on the western and southern territories predicts the depopulation of the smallest settlements.

A specific suburbanisation process can be observed among settlements close to Oradea (Romania), but on the Hungarian side of the Romanian border. This phenomenon gives additional importance to the cross-border effect of Oradea on the peripheral settlements in the southern part of Hajdú-Bihar County.

The illustrated territorial disparities of the county can serve as a basis for predicting the demographic trends: the surroundings of Debrecen might expect an increasing number of population, Debrecen and the largest towns of the Hajdúság area might be characterised by stagnation, while the southern and western peripheries might face a considerable population decrease.

The level of education in the county is lower than the national average and the difference did not decrease between the last two censuses (the position of Hajdú-Bihar, however, is not poor compared to other counties). Human resources are concentrated in the county: Debrecen and its immediate surroundings (and the largest

towns) have much higher values than the other settlements (the dominance of Debrecen has decreased since 2001). The border area is the most backward from this aspect, the low level of education is characteristic here in most of the settlements. Selective migration makes the conditions even worse and conserves this problem of human resources.

The University of Debrecen is one of the largest universities in Hungary with a wide spectrum of education. It is an accelerator of human resources development and it is responsible for the relationship between education and certain segments of the economic sector.

Explaining Economic Conditions in Hajdú-Bihar County

Debrecen plays a dominant role in the economy of the county: about two thirds of the enterprises and of the gross added value are concentrated in the county centre. Hajdúszoboszló and Hajdúböszörmény (close to Debrecen) are the most powerful towns in the county, but the role of Balmazújváros, Berettyóújfalú, Hajdúnánás, Nádudvar and Püspökladány is also significant (Figure 4).

The majority of the economic nodes are located in the *central region of the county* (Hajdúság and Hortobágy) which are more developed economically and, accordingly, the outward flow of commuters from this region is relatively smaller. On the other hand, there are two *peripheries characterised by underdeveloped economic bases*, a lack of local economic centres and – being close to the employment centres – by significant flows of commuters. The majority of the commuters in the outer periphery are working in Debrecen and a smaller group in Berettyóújfalú. For the inner periphery, the neighbouring industrial and township centre Tiszaújváros and partly Tiszafüred – the touristic and township centre on the lake Tisza – offer employment opportunities.

The differences in the economic structure of the settlements within the county are also remarkable. In the majority of settlements agriculture is overrepresented in the employment structure, while in some greater settlements and in the northern part of the county industry provides employment. The tertiary sector is overrepresented in Debrecen, Berettyóújfalú (central functions), Hajdúszoboszló (tourism sector) and in Püspökladány (railway junction). The dominance of agriculture in Nádudvar and the strong industrial profile of Téglás are also worth noting. The first settlement was a major agricultural production and innovation centre in the socialist era and its role has been preserved also after the change of regime. The second town became an industrial location in the 1950s when the Hajdúság Industrial Works was established, originally for producing armaments.

The figure also has some information about the *potential for future economic development*: first of all industrial parks and thermal baths play important roles in

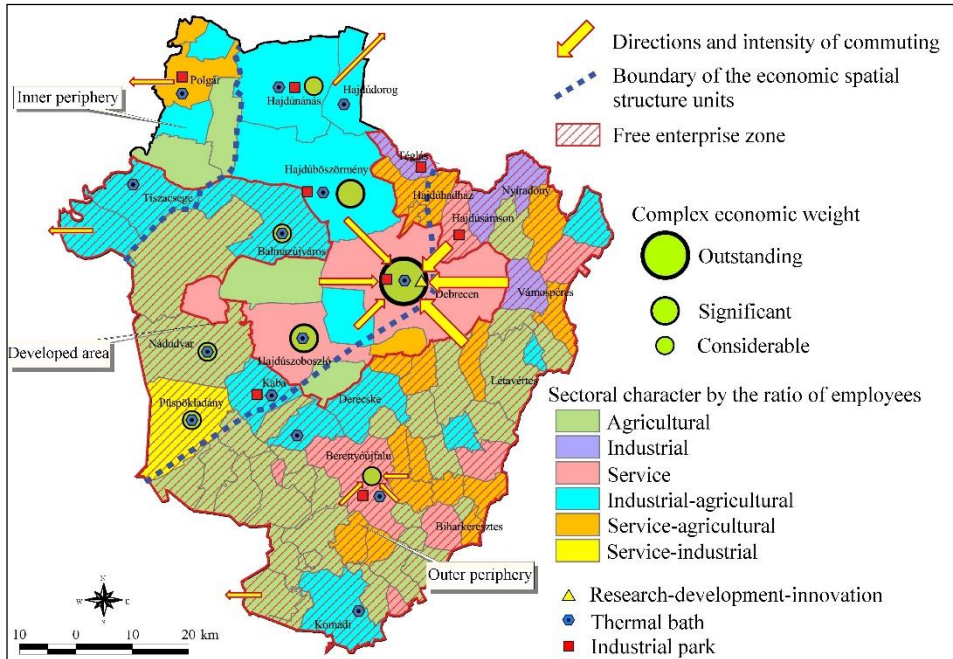


Figure 4. The economic spatial structure of Hajdú-Bihar County
 Source: Authors' own compilation.

restructuring the local economies. Industrial parks are mostly located in the northern part of the county (they were established after the construction of motorways M3 and M35). The industrial park of the largest area is located in Kaba on the premises of the former sugar factory, while industrial parks with the highest economic performance are found in Debrecen. The thermal baths can be divided into a northern and a southern group: the baths of Hajdúszoboszló and Debrecen are of national and international importance, others are mostly regional or local. In addition to these, the county centre, Debrecen, also has significant research, development and innovation facilities. The last component in the figure consists of the so-called “free enterprise zones” created by the government in underdeveloped areas offering preferential economic conditions.

Infrastructure

The main road and railway lines provide good connections to Budapest and also within the North Great Plain Region (by motorways M3 and M35; and by the main railway line number 100). Airport Debrecen is the second Hungarian international

airport having flights to London, Eindhoven and (lately) to Dortmund. The current (the reconstruction of the Szajol–Püspökladány section of the Budapest–Debrecen–Záhony main railway line and its continual maintenance) and future developments (extending motorway M35, constructing M47 and M4) will make the connection between Debrecen (as well as the southern part of Hajdú-Bihar) and Budapest and Oradea faster. However, secondary lines and smaller intraregional infrastructure would require developments as well.

The institutional background of the settlements represents significant disparities, but most of the towns have the basic institutions to provide various services to their inhabitants and the hinterlands (Figure 5). In the territory of the inner periphery (in the surroundings of Tiszacsege) and of the southern part of the county (besides the north-eastern part of Hajdú-Bihar), public transport to the local centres has an outstanding role in supplying the smaller settlements.

The development level of communal infrastructure (calculated by ten indicators with the Bennett method) represents disparities similar to the other previously

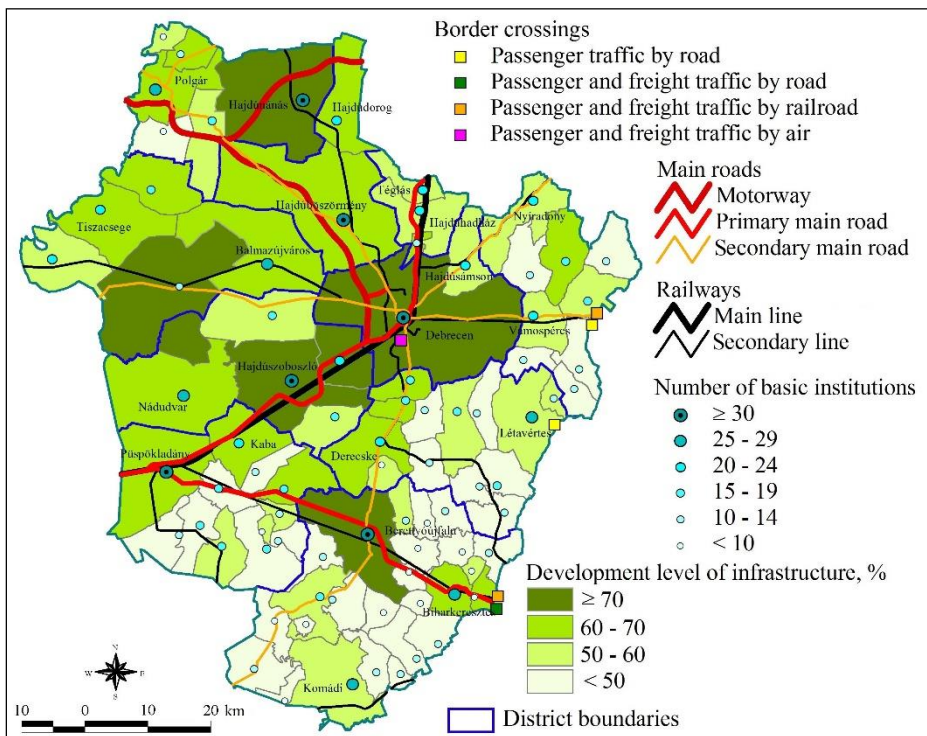


Figure 5. The elements and development of infrastructure in Hajdú-Bihar County

Source: Authors' own compilation.

illustrated factors. Towns – mainly the largest ones – have better and more developed infrastructure (regarding public utilities), while some of the villages especially in the Bihar area and along the state border can be regarded as underdeveloped in this respect.

Possible Spatial Categories (Synthesis)

In defining spatial categories, territorially coherent units were detected and simultaneously these units were also separated based on their geographical, social-economic-infrastructure features, their characteristics in the network of settlements and their relations in the spatial pattern. The inwardness of integrated territorial interventions requires this kind approach in the future. The administrative district boundaries were also taken into consideration during the delimitation of town-village relations (Figure 6).

Debrecen and its Agglomeration Area

It overlaps the primarily forest-covered area of South-Nyírség. This is a central area from the point of view of population and economic geography and is the most important junction of the road and railways networks. Debrecen is in its centre, being a regional pole as well, with numerous development possibilities that will be decisive in the future. However, in the case of several developments Debrecen cannot be treated alone as its influence on and various intensive relations with the surrounding settlements necessitate a territorially integrated approach. Most of the neighbouring settlements are characterised by increasing population and they require economic and infrastructural developments. Many of the small towns in the surroundings of Debrecen are strongly influenced by the centre.

Traditional Agricultural and Small Towns: Hajdúság-Hortobágy

This spatial category appears on the territory of Hajdúság and Hortobágy. Its network of settlements is characterised by middle-small-sized and small towns as well as villages (evolved from numerous former farms, concentrating their population in one place) without hinterland, with great spatial extent, and with limited relations with each other. This part of the county has relatively favourable social, economic and infrastructural indicators. Though agriculture has a key role in their development, their economic structure is diverse (the role of industry is significant in most of these towns and also tourism in some cases). It is important from the aspect of environmental management that several settlements are surrounded by the Hortobágy National Park.

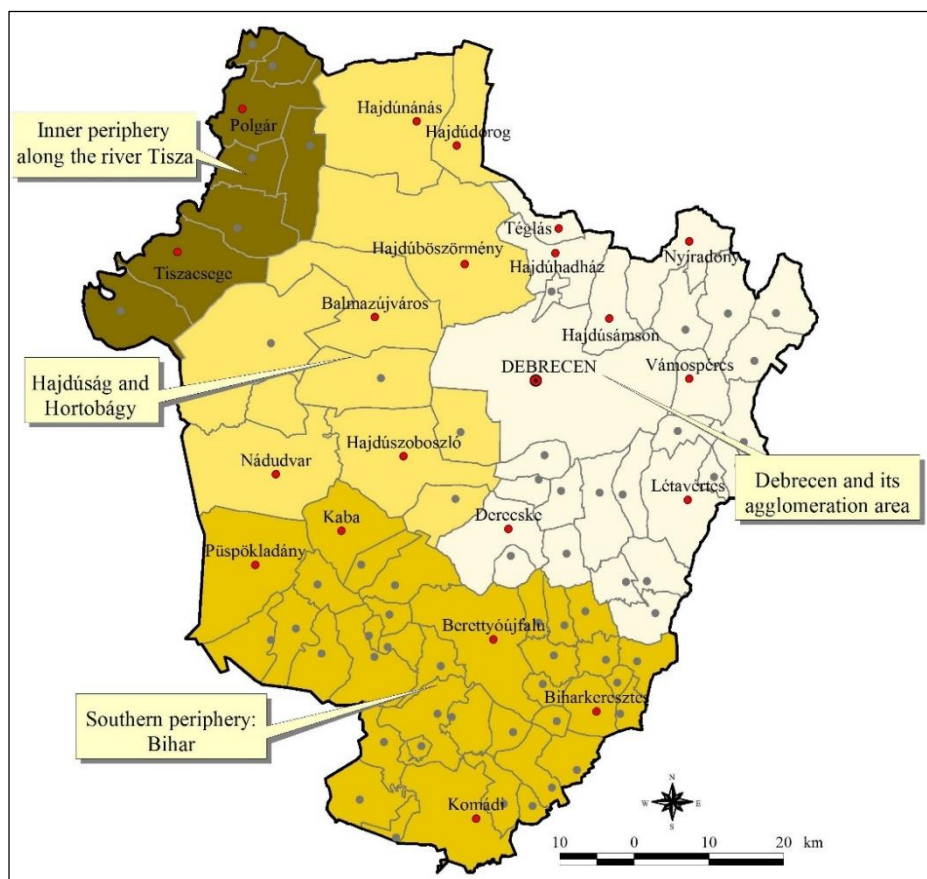


Figure 6. Spatial categories in Hajdú-Bihar County

Source: Authors' own compilation.

The Southern Periphery: Bihar

This traditional network of settlements includes most of the area of the Sárrét micro-region which consists of small towns with extended hinterlands and of middle-sized and small villages. Its peripheral situation is due to its geographical location and social-economic-infrastructural backwardness. The centres – Berettyóújfal and Püspökladány – distinguish themselves from the dominantly agricultural territory by their development indicators: their relative economic importance and infrastructural development are accompanied by their favourable geographical transport situation. This territory is connected to the peripheral areas of Békés County, the possible development of which can be accelerated by Oradea on the other side of the Hungarian–Romanian border.

The Inner Periphery along the river Tisza

This area extending to the flood plains of the Hortobágy and the river Tisza is clearly separate from the neighbouring territory of the Hajdúság and Hortobágy by its network of settlements and its disadvantageous social, economic and infrastructural indicators. Considering its economic role, the central town (Polgár) is not a dominant centre. The spatial connections of the territory attach it to the neighbouring counties (to the commuters' zone of Tiszaújváros and Tiszafüred). Its development basis is different due to the great touristic potential of the environs of the river Tisza and to the location of Polgár being close to the junction of important transport corridors (motorway M3, M30, M35).

The core message of our present study is that the issues of regional development and the effects of territorial investments (partly financed from European resources) are relevant. However, these topics would be far-reaching and this is the reason why territorial planning was in the focus of our present study. We would refer to a former analysis we carried out in these topics (Radics – Péntzes – Molnár 2011, to be published).

References

- ÉARFÜ (2008): Az Észak-alföldi régió Stratégiai Programja 2007–2013 [Regional Development Strategy of the North Great Plain Region 2007–2013]. Available on: http://www.eszakalfold.hu/userfiles/hun/fejlesztési_dokumentumok/strategia/EAR_Stategia_0804.pdf_20080421_092113.pdf (accessed on 5. 03. 2013).
- HBMO (2012): Hajdú-Bihar megye területfejlesztési koncepcióját megalapozó feltáró-értékelő vizsgálat [Exploring-evaluating analysis for the spatial development concept of Hajdú-Bihar county]. Available on the official website: http://www.hbmo.hu/upload/68/1328/HBM_helyzetfeltaras.pdf (accessed on 5. 03. 2013).
- Pásztor, I. Z. – Péntzes, J. (2012): Investigation of Peripherization in Northeastern-Hungary by Spatial Demographic and Income Tendencies with Special Attention to the Roma Population. *Eurolimes*, Volume 13. pp. 149–165.
- Radics, Zs. – Péntzes, J. – Molnár, E. (2011): The Spatial Aspects of the Resource-allocation of the Regional Operational Programmes' Development Resources. In: Kozma, G. (ed.): *New Results of Cross-border Co-operation*. Debrecen, Didakt Kft. pp. 119–126.
- Radics, Zs. – Péntzes, J. – Molnár, E.: Európai fejlesztési források felhasználásának területi szempontú vizsgálata az Észak-alföldi régióban [Territorial aspects of the utilization of European development resources in the North Great Plain region] – in press.
- TÉRPORT 2006: Hajdú-Bihar megye területfejlesztési koncepciója és stratégiai programja 2007–2013 [Regional Development Concept and Strategic Program of Hajdú-Bihar county 2007–2013]. Available on: http://www.terport.hu/webfm_send/715 (accessed on 5. 03. 2013).

SOCIAL RESPONSIBILITY AND TERRITORIAL DEVELOPMENT

Adrienn Reisinger

Introduction

Nowadays on hearing the word 'responsibility' we often associate it with corporate social responsibility (CSR) and there is no shortage of literature on this topic. According to literature, citizens, organisations and also the state can take responsibility. Citizens and organisations (firms, civil organisations, etc.) can also accept responsibility for their own lives and actions and also for the events in their surroundings, namely social and economic processes. The state can take responsibility for the latter as well.

In accordance with these ideas, there is individual responsibility and social/economic responsibility. Personal interests and personal opinions are the most important when speaking of individual responsibility. Social responsibility is a little more than that: social interests and goals are the most relevant here.

In our opinion all concerned players are responsible for shaping their environment, namely it can be stated that all social and economic players and the decision-makers are jointly responsible for the development of a region. We suggest that social responsibility is the base for territorial development.

In our paper first we would like to show the theoretical background to this topic, after which, based on a citizen survey (2012–2013), we will show how people can contribute to the development of their settlement and region, thus taking responsibility for their lives and their society.

Social Responsibility

Definitions

First we would like to show what we mean by responsibility and who can take responsibility for whom.

Responsibility means that a person or other social and economic players are consciously aware of the consequences of their actions. So taking responsibility means that the players are aware of the positive and negative consequences of their deci-

sions and they do not shift these onto other players (Gaskó 2010). Who can take responsibility?

- Citizens.
- Organisations, institutions [firms e.g, financial institutions (Borzán et al. 2011), banks (Lentner et al. 2011), civil/non-profit organisations, health and education institutions, other public institutions, etc.].
- State.

Both citizens and organisations can take responsibility for their own lives and actions and also for their environment, namely for the society in which they live and operate. Based on these thoughts we will separate responsibility into two types:

- individual responsibility: only the individual interest counts;
- social/economic responsibility (social issues are in the focus of our paper): the goal of the players is to care about social happenings, so the way of thinking is at a community level, not at an individual one.

We believe that these two types can be used for all of the actors, so we can speak about the following categories of responsibility:

- self personal responsibility;
- individual social responsibility – ISR;
- corporate responsibility;
- corporate social responsibility – CSR;
- civil/non-profit responsibility;
- civil/non-profit social responsibility;
- institutional responsibility;
- institutional social responsibility.

Individual Responsibility

When we speak about individual responsibility, we can distinguish between self personal and individual social responsibility (ISR). Self personal responsibility means that people take responsibility for their own lives in the following four contexts:

1. The citizens' basic responsibility is to live their life as is good for them: both their physiological and intellectual needs should be satisfied. By this it is meant that people have to live healthily and be balanced emotionally.
2. The second level is when people care about their environment if they are asked to do so (external intentions).
3. At this level people care about their environment because of internal intentions.
4. The highest level is when people also take responsibility for their close surroundings, for example: taking care of siblings or animals, etc.

In these four cases responsibility refers only to the citizens' own and family lives. We believe that persons who have no serious psychological problems can take responsibility for their lives, and sum up the consequences of their actions.

If a citizen cares about both his/her close and wider environment, we can speak about individual social responsibility. This means that citizens are involved in the life of the community where they live. That is, people solve problems together, look after the environment (for example, they do not litter, etc.) and care about not just their own lives, but also about the community.

We think that citizens can take responsibility in the following ways:

- for other people: caring about other people (for example, behaving in a way that causes no negative consequences for others), helping poor people, donating for charity, helping people suffering from the negative effects of disasters, etc;
- for local public issues (public services);
- for the development of the settlement or a region: participation in the development process;
- for the environment: people are aware of the environmental issues;
- for civil/non-profit organisations in the following ways: establish an organisation, membership in an organisation, donations, one per cent donation of personal income tax, as an employment, as a volunteer.

With these actions citizens can assume responsibility for all members of society in the following two ways:

- at an individual level;
- at an organisational level, when citizens join a civil/non-profit organisation and help other people through their activity in the organisation.

It is very important to mention that citizens will only be able to take responsibility for each other if they are able to do this in their private life. And even the other social and economic players will only be able to do this if the members and leaders of their organisations are aware of it and practise it in their private life. So we think that every activity at a social level depends on how the people can accept responsibility for each other.

Responsibility of the Civil/Non-profit Organisations

At an individual level organisations have to operate in a balanced way; in that case they can take responsibility for their environment. What do we mean by balanced operation? Effective operation of organisations depends on internal and external factors. The external factors are determined by the state and by the economic situation of a country. These factors are as follows: laws, political environment, economic

aspects, etc. Organisations have to accept these factors, and have to adjust to the situation of a country. Contrarily, internal factors are dependent on the organisations: proper income structure, effective leadership, motivated employees, wide-spread relationships, clear view about the future, flexibility, etc.

If the organisations face financial and leadership problems, they cannot concentrate on their goals and tasks, so they are not able to take responsibility for their own actions. In this case they cannot assume responsibility for their environment and society either. So we think that being socially responsible requires effective actions. If organisations cannot satisfy the needs of their members and the actors affected by their activity, they are not able to take responsibility for society.¹ But it would be just the basic role of a civil/non-profit organisation. Vidal et al. (2005) note that assuming responsibility for society by firms is a voluntary task, but in the case of civil/non-profit organisations it is an integral part of their existence.

In everyday life civil/non-profit organisations can take responsibility for society in the following ways:

- organising programmes for the members and for other players;
- publishing leaflets, books;
- being involved in the decision-making process of the local government → civil control;
- activity in public issues;
- offering special services;
- maintaining institutions;
- employing well-trained people;
- participating actively in settlement development.

2. Social Participation

If citizens and other players take responsibility for society, it means that they participate in the everyday life of a settlement or in the development of a territorial unit. If we speak only about the participation of citizens and civil/non-profit organisations, it is called ‘social participation’.² Social participation means (Reisinger 2009) that citizens and civil/non-profit organisations have the opportunity to communicate their ideas and opinions about what is going on in their settlement, region or country. This is the form of appearance of social responsibility. If these players assume responsibility for their environment, they will participate in those forums,

¹ This idea has a lot of similarity with the responsibility at individual level.

² In the international literature it is often mentioned as ‘public participation’ or ‘citizen/community participation’.

etc. where they can express their willingness to care for other people. In our opinion, there are two main aspects of this participation:

1. With local or regional decision-makers (co-operating with local or regional decision-makers): mainly participating in the development of a settlement or a region; making laws.
2. Citizens themselves through individual or civil/non-profit organisation actions: issues which do not need local authorities are mainly local affairs affecting people living in a certain settlement or village (e.g.: collecting litters, having trouble with noisy neighbours, etc.).

Both decision-makers and citizens as well as civil/non-profit organisations must be aware that the society in which they are living and operating will be more effective if the players show their willingness to give their opinions on social and economic issues and on development.

All these things can only come true if the (local) government gives the people the opportunity to express their opinions about their lives and their settlement. To do this, the (local) governments, too, have to change their way of thinking about managing a settlement and its development. The tasks of the local governments in this case are to ensure not only local services, but also opportunities for the local players to participate. This kind of approach is the new way of operation of local governments. The Table 1. shows the old and the new tasks of local governments. The new way is called local governance, where the citizens and the civil/non-profit organisations play the main role in a settlement. The local decision-makers provide only the framework for social participation, and if needed they co-ordinate the process.

Table 1. The old and the new tasks of local governments

Old view (20th century model)	New view (21st century model)
Local governments are in focus	citizens and their organisations are in focus
Local governments are responsible to the central government	local governments are responsible to citizens
Closed and slow model	opened and flexible model
Try to avoid risk	innovative and risk taker
Totally dependent from the central government	has the right to decide on everything
Bureaucratic	has participatory approach
Centralised	glocalised

Source: Shah 2006.

We believe that the base of the development of a settlement or a region is social responsibility and participation. The question is why? When people are asked what they would like to develop in their settlement, this has a positive effect on the settlement budget and people feel better because their opinions are taken into consideration. In such a situation, projects – supported by the local players – are likely to be successful not only in the short, but also in the long term, and can serve not only the interests of politicians but also those of other players. Furthermore, the results of the development are accepted also by the local players, so protests against the development processes will not occur. This type of development can save a lot of money for the settlement and also for the country, because the development plans are thus harmonised, and projects with no future will not be carried out.

If citizens are aware of their important role in the development processes, and they really take part in them, they will realise that the use of the local and national funds are effective, and also trust in local and state players can deepen, which in turn can strengthen democracy in the country. In such a case all of the tasks of the state administration can be fulfilled more effectively; and people can live in a better society.

Based on a national research carried out in 2012–2013, we try to answer here the question what kind of opportunities citizens have for expressing their opinions.

3. Questionnaire Research

Methodology

The goal of the survey³ was to get information from citizens about their opinions and actions regarding social responsibility. In this paper we use only those data from this questionnaire which relate to the methods of social responsibility/participation:

- The main question is whether the local government has ever asked people about settlement development. If yes, in what way?
- We also wanted to know what kind of local forums, etc. the citizens have ever participated in.
- Our last question was how people felt about the effect they had on the life of their settlement.

Our hypothesis was that less than half of the citizens had had a voice in the development of their settlement and the citizens having expressed their opinion would feel that they had some effect on the life of their settlement.

³ The survey was made together with my colleague Márta Nárai, PhD, Széchenyi István University.

We carried out our paper based and on-line national survey between April 2012 and March 2013. It must be noted that with 1071 people having filled in the questionnaires, our sample is not represent the Hungarian citizens, so we can draw our conclusions only about those who participated.

About half of the sample is under the age of 30, so there are a lot of students (35%). The ratio of women to men is 65%. The ratio of people who have a higher education degree is about 37%, much higher than the average in our society. About three-quarters of our sample live in a town or city.

3.2. Are People Asked for their Opinions by the Local Governments?

Only 28.2% of the sample said that they had been asked by the local government about the development or local issues in their settlement. About 55.7% of them said that they had filled in a questionnaire in settlement issues, also forums were mentioned quite often (39.2%). Other methods (for example: interviews, telephone or personal surveys) were rarely mentioned. It is very good that 81.8% of these people said they took the opportunity and gave their opinions on a certain issue. 12.5% of people asked were uninterested and 5.7% of them rejected the opportunity. These ratios are not very high, but show that people can be uninterested in these issues even if asked.

Although there are no strong connections, we can say that the following demographic characteristics significantly determined the positive answer:

- above the age of 30;
- high qualifications;
- living in a village;
- working as an employee or retired;
- married;
- high income.

Based on these results, we can conclude that people have more opportunities to voice their opinions in small settlements. Some former research also had the same results (e.g. Nárai 2008, Reisinger 2010). People with higher income and qualifications said in greater number that they had been asked, which is not surprising as they are more interested in local issues, so local governments find them more easily.

Types of Citizen Participation

We were interested in how people took part in the activities of their settlements. 90.1% of the sample said they participated at least on one occasion. It sounds good, but as we can see in Figure 1, most of the sample marked only the election and the referendum which political decisions and not to everyday issues. Besides these, only

local forums were mentioned relatively often (29.5%), which is a citizen participatory opportunity provided by the local governments regulated by law. The participants are mainly employed citizens with higher qualifications having a net income above 120,000 Ft (about 400 euros). Public hearing is a similar practice, but it was mentioned only by 9.5% of the sample. Other methods very rarely occur as these are seldom practised in Hungary, if at all.

Of course participation also depends on the local governments, mainly because they organise most of these forums, etc. So if there are no opportunities for the citizens provided by the local governments, there is not much left for them to take part in.

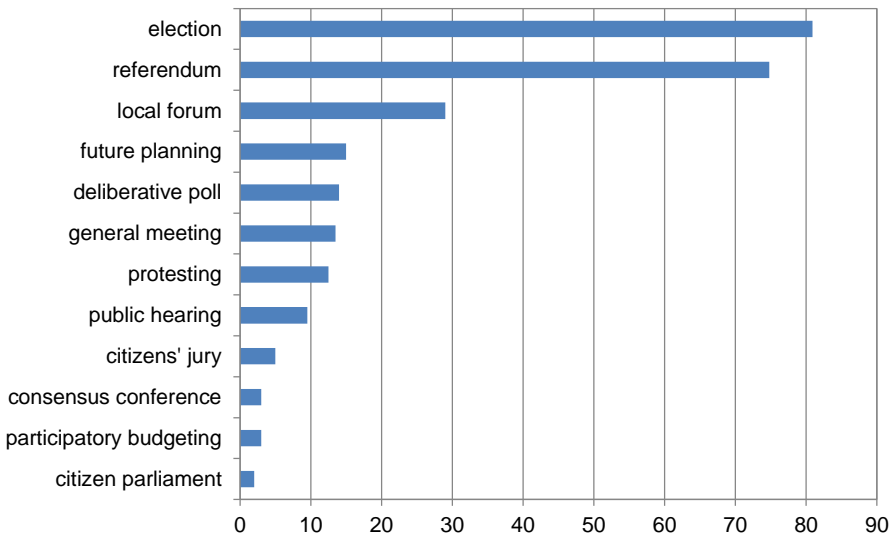


Figure 1. Types of citizen participation in percentages (n=1053)

Source: Based on the authors' questionnaire research

3.4. Attitude towards the Effect of their Contribution towards the Settlement

We asked people to rank their feelings about the success of their contribution to the development of their settlement. Figure 2 shows the results. 84.3% of the sample said that their contribution had some effect or no effect at all on the life of their settlement. There is significant relationship between the feeling of contribution and the opportunities given by the local government to citizens to give their opinions. When people have the opportunity, they usually feel that they have some effect on the affairs of their settlement.

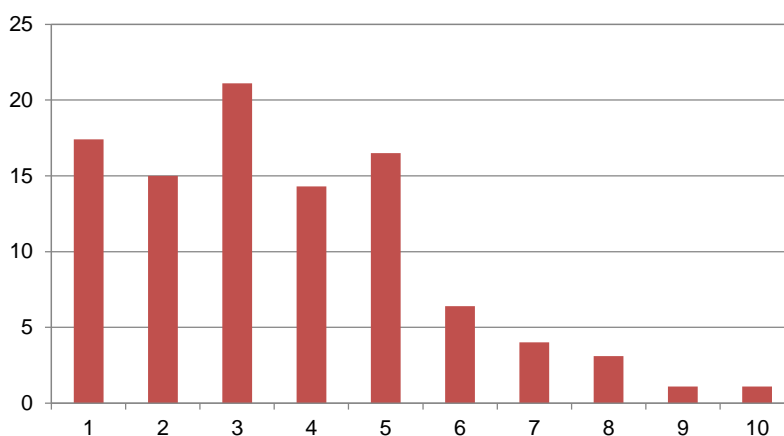


Figure 2. Opinions about the effect of citizen contribution on the life of the settlement given by citizens on a 1 to 10 scale, in percentages ($n=1027$)

Source: Based on the authors' questionnaire research.

Summary

In the theoretical part of our paper we suggested that social responsibility is the base of settlement or regional development. If citizens and other local players can take responsibility for their own lives, they will be able to do the same for society, too. It means that players feel that they have to do something for the local society by voicing their opinions about the settlement. It is very important that local governments be open to this type of development, namely they have to give citizens the opportunity to speak about their goals, ideas and express their opinions about community affairs. We believe when citizens and other players have this opportunity, it benefits the settlement, because thus every action realised will be accepted by them, resulting in a higher level of satisfaction among people.

In our research we tried to find out what kind of participatory opportunities citizens have at their settlements. We carried out a questionnaire research which was completed by 1071 people. Our hypothesis was that less than half of the citizens had had a voice in the development of their settlement and those citizens who had participated felt that they had some effect on the life of their settlement. Our hypothesis was partly correct. Only 28.2% of the sample said that they had been asked by the local government about the settlement's development and other local issues. This is much lower than expected. On the one hand, it is likely that people are not particularly motivated regarding these issues, but on the other hand, we do not know what the local governments think about this. Maybe local governments are

neither particularly active, or on the contrary, they are, but people are not very interested. We only know from these results that people in our sample are not very active. That is why it is no surprise that more than three quarters of these citizens feel they have no effect on the affairs of their settlement. We think that this is not good in the long term, because people will not enjoy living in a community where they cannot give their opinions and ideas as nobody is interested in them. The results support the second part of our hypothesis.

What is the solution? We believe that politicians as well as citizens and other players have to be open to take the opportunities to speak about the future of their settlement. It is true that by this decision-making processes will take longer, but the settlements will be more successful and ultimately such communal processes will benefit both society and the economy in the long run.

References

- Borzán, A. – Lentner, Cs. – Szigeti, C. (2011): Economic and Social Responsibility of Financial Audit – In New Dimension. *Studia Universitatis "Vasile Goldiș" Arad Seria Științe Economice Anul, No. 21*. pp. 22–27.
- Gaskó, K. (2010): *Autonómia és felelősségvállalás* [Autonomy and responsibility]. Budapest, Oktatáskutató és Fejlesztő Intézet.
- Lentner, Cs. – Szigeti, C. – Borzán, A. (2011): New Dimension of Banks Social Responsibility. In: Szente, V. – Szendrő, K. – Varga, Á. – Barna, R. (eds.): *Abstracts of the 3rd International Conference of Economic Sciences: Sustainable Economics – Community Strategies*. Kaposvár, Kaposvári Egyetem.
- Nárai, M. (2008): *A nonprofit szervezetek helye és szerepe a helyi társadalmak életében – A nyugat-dunántúli nonprofit szektor helyzetfeltárása* [The role of the non-profit organisations in local societies – characteristics of the non-profit organisations in West-Transdanubia]. Győr–Budapest, ELTE Társadalomtudományi Kar, Szociológiai Doktori Iskola. (Doktori disszertáció).
- Reisinger, A. (2009): Részvételi demokrácia és társadalmi részvétel – elméleti megközelítések [Participatory democracy and social participation – theoretical background]. *Civil Szemle*, No. 4. pp. 5–23.
- Reisinger, A. (2010): *Társadalmi részvétel a helyi fejlesztéspolitikában – különös tekintettel a civil/nonprofit szervezetek szerepére* (Social participation in local development policy – with special regard to civil/non-profit organisations). Győr, Széchenyi István Egyetem. (Doktori disszertáció).
- Shah, A. (2006): A Comparative Institutional Framework for Responsive, Responsible and Accountable Local Governance. In: Shah, A. (ed.): *Local Governance in Industrial Countries*. The World Bank, Washington D. C. pp. 1–40.
- Vidal, P. – Torres, D. – Guix, B. – Rodríguez, M. P. (2005): *The Social Responsibility of Non-Profit Organisations*. Observatori del Tercer Sector, Barcelona. Available on: www.observatoritersector.org (accessed on 2. 17. 2013).

THE SPATIAL STRUCTURE OF FINANCIAL SERVICES IN THE SOUTH PANNONIAN REGION*

Sándor Zsolt Kovács

Analysing banking, insurance and other financial, investment services at regional level, some essential conclusions can be drawn, since these services dynamically adapt to and predict the growth potentials of regions. The extent of banking activity, the volume of individual savings and loans, the rate of progress in insurances and financial investments are all indicators monitored constantly by both companies and international institutions (Juhász 2009). This important subject has not been researched yet, therefore, when studying businesses regionally, researchers often face the problem of lacking data. Although Croatian and Slovenian datasets, statistics are available, lower than national level analyses of the financial field are rare.

Similarly to their administrative structure, countries also have their own financial institutions which can vary from a centralised one-tier banking system to multi-tier systems including local-regional elements. Due also to their diversity, when the financial structure of a territorial unit smaller than the national level is studied, distortions can inevitably be observed. The characteristics of the territorial unit we are studying are not negligible, neither are the efficiency of the examined region and whether its country belongs to the centre or the periphery. In this respect it is a complex situation, because as a result of border changes in the Balkan, the examined territory can now be found in two countries, including the central counties of Croatia and two peripheral counties in Slovenia. Thus the mentioned distortions will be significant in the Slovenian data where nothing counterpoises the “overweight” of the capital city which is located in the Croatian territory examined.

Structural Changes in the Banking, Financial Servicing Sector in Croatia and Slovenia after the Dissolution of Yugoslavia

The 1990s were a period of changing political systems in Central and Eastern Europe, accompanied by the long-lasting transition of the West Balkan (the dissolution of Yugoslavia) involving several crisis situations. In the course of this, the finan-

* Research for this publication has been supported under OTKA – Hungarian Scientific Research Fund grant No. 104985 (New driving forces of spatial restructuring and regional development paths in Eastern Europe at the beginning of 21st century).

cial system of this territory also disintegrated. Following the collapse of the integrated Yugoslav financial system, the newly formed nation states established their own monetary institutional systems (central banks, supervisory bodies, etc.) rather quickly. The economies of these countries are characterised by a strong dominance of the banking sector in financial transactions and capital allocation (Gál 2010a), so our South Pannonian study will also concentrate on this field.

It was not deficiency in the system of monetary institutions that caused the prolonged financial crisis, but rather that reforms of the financial system were postponed in most of the countries in the region (except Slovenia) and that the banks were not privatised on a large scale until the end of the 1990s. The first phase of the bank reform in the early 1990s consisted in establishing a two-tier system and approaching the international standards of risk management. During this time the banking systems of these new countries were characterised by quantitative rather than qualitative changes.

Then a surge in the number of private banks led to having too many banks in all countries of the region. Croatia ranked first with its 54 banks in 1995, of which there was only one in foreign ownership (Golubovic–Golubovic 2005). Towards the end of the 1990s the following factors urged the bank reforms to be speeded up:

- financial institutions worked under unregulated and not properly controlled business conditions;
- the expansion of banks was accompanied by scandals;
- the discredited financial institutions found it difficult to attract clients and their money, and thus to increase their loan portfolio and clientele;
- banks in state ownership remained burdened with the toxic loans of big firms having been financed by the state irresponsibly (Gál 2010a).

In addition to examining the general trends in the former Yugoslavia, we shall deal briefly with the bank reforms in these two countries as well.

The fastest bank reform was carried out in Slovenia where the bank sector became well developed in the 1990s. The main elements of this reform were: (1) state guarantee for deposits in the central bank in Belgrade; (2) increased role of the state in the early phase of the reform; and (3) nationalisation of the biggest banks. As a result of consolidation, the number of banks decreased by 36% between 1995 and 2012 (Table 1).

As Croatia had a two-tier banking system already before gaining independence, it was adaptation to market conditions and international standards that played the prime role in the initial period of transition and restructuring. The 26 banks having operated in Croatia in 1990 became gradually privatised. As compensation for the deposits “trapped” in Belgrade, the Croatian state issued bonds, then consolidated the banks in two steps (first with a sum equal to 23%, then to 6%, of the GDP), which

Table 1. The number of banks in Croatia and Slovenia

Year	Croatia	Slovenia
1995	54	39
2000	43	28
2005	37	25
2010	33	25
2012	32	25

Source: Compiled by the author on the basis of data from the central banks (1996–2012).

was followed by bank privatisation. As a result of the bank consolidations and fusions, the number of banks decreased by 41% by 2012 compared to 1995 (see Table 1).

The Slovenian bank reform was characterised by the strengthening of local banks, and it was only after this that foreign investors were cautiously allowed to enter the banking market. The ratio of banks in foreign ownership was only 12% in 2000, then it started to grow, but it has remained far below the average of this area. According to recent data, the ratio of foreign banks is the smallest in Slovenia (39%), compared not only to the Balkan, but also to the whole of Central and Eastern Europe (Banka Slovenije 2012). Almost three quarters of the Slovenian banking market belong to Slovenian private or state owned banks (the ratio owned by the state was 22.7% in 2011). Croatia followed a different path. The first foreign owned bank in Croatia was the Raiffeisen Zentralbank which opened its branches in 1995, then came the German and Italian banks from 1998, when bank privatisation started. In 2000 out of the 43 banks 20 were in foreign majority ownership and only three remained state owned. Between 1996 and 2012 the ratio of foreign banks in banking assets grew from 1% to 90.6% (Table 2) (Hrvatska Narodna Banka 2013).

Table 2. Ownership structure in the Croatian and Slovenian banking systems (%)

Year	Croatia			Slovenia		
	state ownership	other domestic ownership	foreign ownership	state ownership	other domestic ownership	foreign ownership
2000	5.7	10.2	84.1	36.8	51.2	12.0
2005	3.4	5.3	91.3	18.2	46.9	34.9
2010	4.3	5.4	90.3	20.1	42.9	37.1
2011	4.5	4.8	90.7	22.7	38.3	39.0

Source: Compiled by the author on the basis of data from the central banks (2001–2012).

The Structure of Banking Services in the South Pannonian Region

From a historical point of view, the first credit unions already existed in the territory of Banat at the time of the Austro–Hungarian Monarchy (1867–1918). At that time here was the highest network density of local financial institutions based on the co-operative principle. However, in the early 1900s there were very few commercial banks in this area, namely, there was only one branch, in the town of Eszék (now Osijek), of the remarkable Hungarian Commercial Bank of Pest (Gál 2010b).

As already mentioned, following the transition in this area, banks had strong dominance within the financial sector over the other financial services (stock exchange, institutional investors).

As regards the assets of the banking sector, they are equal to 86% of the GDP calculated at purchasing power parity in Croatia, while it is 137% in Slovenia. The former value supports our statement, whereas that of Slovenia is approaching the western ones (200–300%).

The territorial structure of the banking systems in these two countries is centralised in terms of assets, but in respect of branches and headquarters there are also some elements of decentralisation. This is more characteristic of Croatia due to its geographical location. Out of the 32 banks in South Pannonia 22 have their headquarters on Croatian territory, while only 4 of the 22 banks in Slovenia have their headquarters on Slovenian territory, namely in Maribor (Podravska). Furthermore, out of the 10 biggest banks 9 are registered on the Croatian side and 1 on the Slovenian side of the South Pannonian region. The much higher Croatian numbers are due to territorial characteristics. As we have already mentioned, the Croatian side of the examined territory includes the capital city and its surroundings (altogether 12 counties), whereas the Slovenian one consists of two peripheral counties (Kovács 2013).

It is also a distorting factor that while 55% of the Croatian branch network can be found on South Pannonian territory, only less than 21% of all of the Slovenian branches are located here (Table 3). It is worth examining the data in Table 3 in detail. Following the European consolidation trends, the number of banks in Croatia started to decrease after the turn of the millennium, then there was a slow increase in the network of branches until 2009, which was followed by another decrease (Gál 2010a). Finally, there were 1266 branches in Croatia in 2011. The latter decline was the result of the crisis, during which the number of branches was reduced by 2.4% on a national scale compared to 2009, while in respect of South Pannonia this figure was 0.6%. The reason for this more favourable South Pannonian datum is that the liquidation and relocation of branches affected the central counties much less than the coastal and the remote ones. Moreover, in the County of Zagreb the network even grew by 13 new branches. There was a reverse trend in the number of ATMs

Table 3. Territorial distribution of bank branches and ATMs in South Pannonia

Counties/Regions/Countries	Number of bank branches, pcs	Ratio of bank branches in the whole country, %	Number of ATMs, pcs	Ratio of ATMs in the whole country, %
Zagreb city and county	301	23.8	1,136	28.6
Krapina-Zagorje	30	2.4	93	2.3
Varaždin	44	3.5	133	3.3
Koprivnica-Križevci	33	2.6	69	1.7
Medimurje	27	2.1	82	2.1
Sisak-Moslavina	37	2.9	111	2.8
Bjelovar-Bilogora	27	2.1	72	1.8
Vitrovitica-Podravina	27	2.1	41	1.0
Požega-Slavonia	25	2.0	50	1.3
Slavonski Brod-Posavina	30	2.4	71	1.8
Osijek-Baranja	85	6.7	200	5.0
Vukovar-Srijem	30	2.4	107	2.7
Croatian South Pannonia	696	55.0	2165	54.5
Croatia	1,266	–	3975	–
Podravina	95	14.1	281	15.2
Pomurska	41	6.1	104	5.6
Slovenian South Pannonia	136	20.2	385	20.9
Slovenia	675	–	1,845	–

Source: Compiled by the author on the basis of 2012 data from Hrvatska Narodna Banka and Banka Slovenija.

in recent years. The constant rise continued after 2009 and until the end of the first half of 2012 450 new machines started to operate in the country, which means 12.5% increase, and more than half of them were put into operation in 12 counties under study (Hrvatska Narodna Banka 2012).

As regards the network density of branches, the situation is clearly more favourable in the more urbanised counties. 23.8% of the branches are concentrated in Zagreb County, while the coastal areas rank second. Osijek-Baranja might also be mentioned with its 6.7%. The effects of the crisis can naturally be found in the county data as well. After 2008 new branches were opened in only three Croatian counties (Zagreb, Osijek-Baranja, Medimurje), which altered the above ratio a little. It was a positive development that there was no big wave of closing branches in this region, only four of them finished operation in the first half of 2009, 1-1 in Krapina-Zagorje and Varaždin and 2 in Vukovar-Srijem counties. Overall, in longer term, there was a decrease in the number of branches until 2012, which is partly due to the bankruptcy of Obrtnička Banka d.d. As a result of all these changes between 2009

and 2012, there was a significant rise in the number of branches in Zagreb County, Vukovar-Srijem County got two more, while the rest of the South Pannonian counties suffered losses to various degrees (Hrvatska Narodna Banka 2001; 2012).

The largest number of ATMs can also be found in the capital city and in Zagreb County, albeit their 33.7% share at the turn of the millennium was decreasing till 2003; since then they have kept their 28–29% share. They are followed in rank by Osijek-Baranja County where its 3% share in 2000 grew to 5% by the end of 2012 (Hrvatska Narodna Banka 2001; 2012).

As regards the two examined Slovenian counties, they possess 20.1% of the branches and 20.9% of the ATMs in Slovenia. Here, too, the larger settlements (especially Maribor) are overrepresented. There are only two settlements without a bank. Beside Maribor, Murska Sobota and Pluj have more than ten branches, while at the other settlements of the Mura and Drava Regions one or two branches or offices can be found. The presence of the headquarters of four big banks, namely, Nova Kreditna Banka Maribor, Postna Banka, Probanka and Raiffeisen Banka also contributes to the “overweight” of Maribor. Nova Kreditna Banka Maribor is the second largest bank in Slovenia.

The two studied counties are similar with regard to their networks of both branches and ATMs. At the same time, while Podravska region is above the national average, Pomurska region is below it in both respects. In the longer run, the 95 branches and 281 ATMs in 2012 in Drava district are the result of continual growth: the number of branches started to grow from 76 in 1997, then following the 2008 decline it grew again. Developments in Mura district were similar: the 36 branches in 1997 grew to 46 by 2007, then there was a decline to 40 as a consequence of the crisis, to become 41 in 2012 (Banka Slovenija 2012).

In addition to the composition of the networks of branches, their accessibility is also important. It is a generally accepted view that services should be concentrated and so they cannot be accessed at every settlement. This greatly contributes to the inter-settlement relations in societies of our time (Beluszky–Gyóri 2004). It might be suitable to study the network density of the territorial units in question in the case of branch networks (Table 4).

First let us compare the data at country level. Both the Croatian (3385) and the Slovenian (3045) values are similar to the Hungarian (3220) one, however, all of them are lagging behind the West European data (Austria 850, Switzerland 1200, Germany 1600) (Kovács 2011). The high values indicate that branch networks should be developed in both countries. This holds true even if one can recently witness shrinking networks everywhere as a consequence of the crisis.

First let us compare the data at country level. Both the Croatian (3385) and the Slovenian (3045) values are similar to the Hungarian (3220) one, however, all of them are lagging behind the West European data (Austria 850, Switzerland 1200,

Table 4. Density of bank branches and ATMs in South Pannonia

	Branch network density (population per branch)	ATM density (population per ATM)
Zagreb city and county	1,055	280
Krapina-Zagorje	4,430	1,429
Varaždin	3,999	1,323
Koprivnica-Križevci	3,503	1,675
Medimurje	4,215	1,388
Sisak-Moslavina	4,661	1,554
Bjelovar-Bilogora	4,436	1,663
Vitrovitica-Podravina	3,142	2,069
Požega-Slavonia	3,121	1,561
Slavonski Brod-Posavina	5,286	2,233
Osijek-Baranja	3,589	1,525
Vukovar-Srijem	5,984	1,678
Croatian South Pannonia	2,808	903
Croatia	3,385	1,078
Podravina	3,404	1,151
Pomurska	2,916	1,150
Slovenian South Pannonia	3,257	1,150
Slovenia	3,045	1,114

Source: Compiled by the author on the basis of 2012 data from Hrvatska Narodna Banka and Banka Slovenija.

Germany 1600) (Kovács 2011). The high values indicate that branch networks should be developed in both countries. This holds true even if one can recently witness shrinking networks everywhere as a consequence of the crisis.

First let us compare the data at country level. Both the Croatian (3385) and the Slovenian (3045) values are similar to the Hungarian (3220) one, however, all of them are lagging behind the West European data (Austria 850, Switzerland 1200, Germany 1600) (Kovács 2011). The high values indicate that branch networks should be developed in both countries. This holds true even if one can recently witness shrinking networks everywhere as a consequence of the crisis.

In Slovenia the average value of the two studied counties is similar to the national average in respect of branch density. The higher value of Drava district which has more branches, compared to that of Mura district, is due to its about three times as high population with twice as big network of branches. The network density value in Slovenian South Pannonia is higher than the national average.

As regards ATM density, the two countries have similar national values. At county level, the degree of difference in the case of Zagreb and its environs is salient (280), while the deviation among the other Croatian counties is only one third of

that in the case of branch network. The two counties are similar in respect of ATM density and are close to the national average (Kovács 2013).

In addition to analysing the branch network, it is also worth studying the ratio of employment in the examined territorial units within the financial services sector (Figure 1). Some trends are discernible in the Figure. On the Croatian side employment level is lower in the counties surrounding the capital city of Zagreb, which is presumably due to the high number of people commuting to the capital. We can find medium level employment in the Croatian counties near the Hungarian border because of the significant towns there (Osijek, Vukovar, Čakovec) (Kovács 2014). On the Slovenian side employment in these two regions is affected both by the number of branches in Drava district, which is greater than in Mura district, and also by the fact that four commercial banks have their headquarters in Maribor.

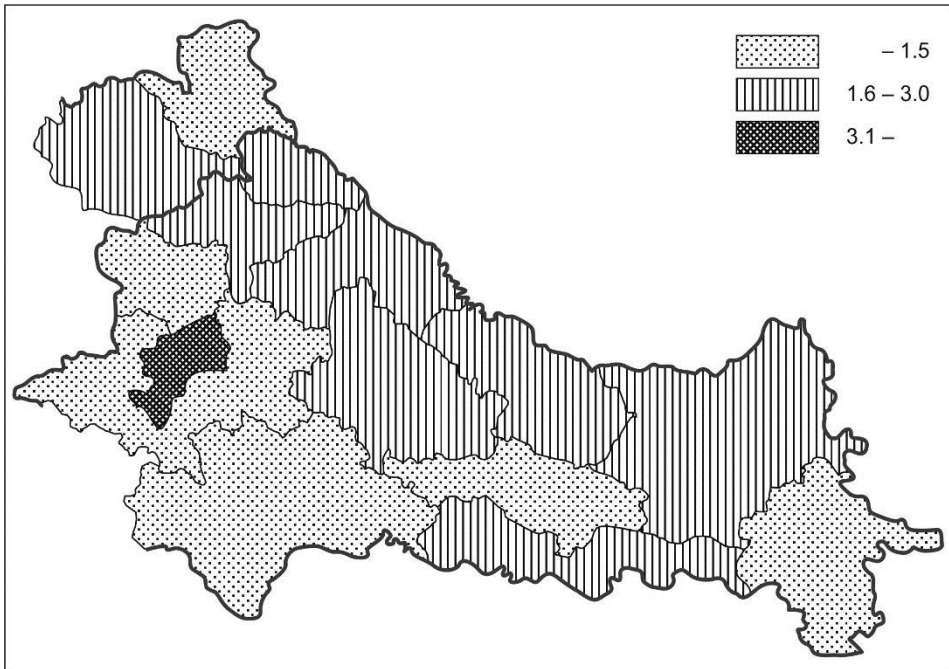


Figure 1. Employment in financial services in the examined regions in 2011 (%)

Source: Based on the author's own calculations.

Some Features of the Insurance Sector in South Pannonia

In Croatia the insurance sector is even more concentrated than the banking system. All of the insurance companies active in Croatia have their headquarters in Zagreb. It goes without saying that the branch network is extensive here too, the 38 insurance (17 life, 20 “other”, and 1 reinsurance) companies have a network of 218 branches. The insurance market is much smaller than the banking one, the assets of the life insurance segment, for example, were 155.5 million, those of the “other” segment 496.5 million euros in the first half of 2012 (HANFA 2012a).

On the Slovenian part of South Pannonia we can find the headquarters of two universal insurance companies, both of them in Maribor. From among the 21 companies in Slovenia, Zavarovalnica Maribor d.d. ranked third in life insurance and fourth in other than life insurances, while GRAWE Insurance ranked seventh and ninth, respectively, in 2012. Market concentration is high, the share of the five biggest insurance companies is 76.75%, and the biggest Zavarovalnica Maribor has 12.84% (Agencija za zavarovalni nadzor 2012).

Summary

There is sharp contrast in South Pannonia between its two territories belonging to Croatia and Slovenia, respectively, as regards their financial markets. The big differences can be discerned in the extension of the banking network, the location of the bank headquarters, and in network density. The central counties in Croatia have higher indicator values, that is, they are in a better position, than the two examined Slovenian areas.

The contrast is similar in their centralised insurance markets, as all the headquarters of the insurance companies in Croatia can be found in South Pannonia, while in Slovenia only two insurance headquarters are located in South Pannonian territory.

References

- Agencija za zavarovalni nadzor (2012): *Annual Report 2011*. Ljubljana, www.a-zn.si/
- Banka Slovenije (1997): *Monthly Bulletin*. Volume 6. No. 11. November, 1997. Ljubljana.
- Banka Slovenije (2001): *Monthly Bulletin*. Volume 10. No. 12. December, 2001. Ljubljana.
- Banka Slovenije (2006): *Monthly Bulletin*. Volume 15. No. 12. November, 2006. Ljubljana.
- Banka Slovenije (2012): *Financial Stability Review*. May, 2012. Ljubljana.
- Banka Slovenije (2013): *Monthly Bulletin*. Vol. 22. No. 2. February, 2013. Ljubljana.
- Beluszky, P. – Győri, R. (2006): A magyar városhálózat funkcionális versenyképessége. In: Horváth, Gy. (ed.): *Régiók és települések versenyképessége*. MTA Regionális Kutatások Központja, Pécs, pp. 236–293.
- Filipović D. – Podrug N. – Bujanović H. (2011): *Mergers and Acquisitions: The Case of Croatia*. Conference paper, the International Scientific Conference “Entrepreneurship and

- Macroeconomic Management: Reflections on the World in Turmoil”, March 24–26, 2011, Pula.
- Gál, Z. (2010): The banking sector of the West Balkans. In: Horváth, Gy. – Hajdú, Z. (eds.): *Regional transformation processes in the Western Balkan countries*. HAS Centre for Regional Studies, Pécs, pp. 470–487.
- Golubović, S. – Golubović, N. (2005): *Financial Sector Reform in the Balkan Countries in Transition*. Facta Universitatis, Series: Economics and Organisation, Vol. 2, No. 3, pp. 229–236.
- HANFA (2012): *Monthly Report*. December, 2012. Zagreb, www.hanfa.hr
- HANFA (2012b): *Annual Report 2011*. Zagreb, www.hanfa.hr
- Hrvatska Narodna Banka (2001a): *Bank Bulletin* No. 3. December, 2001. Zagreb.
- Hrvatska Narodna Banka (2001b): *Bank Bulletin* No. 1. March, 2001. Zagreb.
- Hrvatska Narodna Banka (2006): *Bank Bulletin* No. 13. December, 2006. Zagreb.
- Hrvatska Narodna Banka (2012): *Bank Bulletin* No. 25. December, 2012. Zagreb.
- Hrvatska Narodna Banka (2013): *Bulletin* No. 189. February, 2013. Zagreb.
- Juhász, J. A. (2009): Pénzügyi-banki szolgáltatások. In: Horváth Gy. (ed.): *Dél-Erdély és Bánság*. MTA Regionális Kutatások Központja – Dialóg Campus Kiadó, Pécs – Budapest, pp. 352–364.
- Kovács, S. Zs. (2011): A pénzügyi szolgáltatások területi dilemmái Magyarországon. In: Pálvölgyi, K. – Reisinger, A. – Szabados, E. – Tóth, T. (eds.) *Fiatal Regionalisták VII. Konferenciája*. Győr, Széchenyi István Egyetem Regionális- és Gazdaságtudományi Doktori Iskola. pp. 199–206.
- Kovács, S. Zs. (2013): Szolgáltatások. In: HAJDÚ, Z. – NAGY, I. (eds.), *Dél-Pannónia*. Pécs–Budapest, MTA Közgazdaság- és Regionális Tudományi Kutatóközpont – Dialóg Campus Kiadó. pp. 320–336.
- Kovács, S. Zs. (2014): Pénzügyi szolgáltatások jelenléte Dráván innen és túl. *DETUROPE – The Central European Journal of Regional Development and Tourism*. Volume 6. Issue 1. pp. 80–94.
- Zagrabčanka Burzawebsite: www.zse.hr

THEORETICAL COMMENTS ON THE CONCEPT OF TERRITORIAL CAPITAL

Ákos Bodor – Zoltán Grünhut*

Introduction

Although the model of territorial capital elaborated by Roberto Camagni, professor at Politecnico di Milano, was published just a few years ago in a volume edited by Capello et al. (2008), nowadays his concept seems to become a theoretical milestone of regional studies.¹ Moreover, it outgrows the character of a scientific theory, it is an applied model for conceptualising the development policy of the European Union (EU), in order to help planners and strategy-makers. The model of territorial capital is a methodological approach which is useful in analysing more scientifically the goals and directives of the EU policies on territorial competitiveness, territorial cohesion, local and regional sustainable economic growth as well as on innovation-capacity building. At the same time, the concept is in harmony with the theoretical pillars of the EU's development policy, such as "endogeny-based" progression, the favouring of place-based approaches and the facilitation of bottom-up capability strengthening. Thus, it is unable to keep appropriate distance from the mainstream policy directions.

Besides the model having a growing role in EU development policy practices, there are an increasing number of empirical studies based on this concept, and not just with the aim to aggregate local-regional resources generally in accordance with the facilitation of economic growth, prosperity and well-being, but also with more specific goals. For instance, Casi and Resmini (2012) used the theory of Camagni to measure the capacity of different regions to attract foreign direct investments; Capello, Caragliu and Nijkamp (2009) analysed the relation between knowledge-building and territorial resources; Brasili et al. (2012) and Mazzola et al. (2012) fo-

* Ákos Bodor's research was supported by the European Union and the State of Hungary, co-financed by the European Social Fund in the framework of TÁMOP 4.2.4. A/1-11-1-2012-0001 'National Excellence Program'.

¹ Our paper focuses solely on Camagni's concept because, on the one hand, the other related territorial capital theories are based on his model and just try to improve its side aspects, while on the other hand, they are undoubtedly less comprehensive and systematic.

cused on the interactions between regional capabilities and the ability to compensate the negative impacts of the economic recession, while Kyvelou et al. (2012) compared the level of territorial capital and the number of green power, cleantech investments. In Hungary, Tóth (2011) measured the specificities of the middle-sized cities by this model, while Jóna (2013a) analysed territorial resources at the NUTS 4 level. Camagni's concept had an important role in two ESPON projects as well [EDORA – European Development Opportunities for Rural Areas (2010); and ATTREG – The Attractiveness of European Regions and Cities for Residents and Visitors (2013)].

Despite the ever-growing interest in the territorial capital approach, until now there has been no comprehensive, theoretic-centric critical analysis of Camagni's model, just some additional remarks, mainly on methodological aspects. In the course of reviewing the empirical studies we also realised some methodological challenges, like e.g. the excessive quantitative orientation of the model and the problem of missing qualitative validation, a control mechanism which could be useful in connection with specific resources and goods (such as social capital), or the lack of dynamism that makes data processing very static without taking into account tenders. Of course, the questions of measurability, adequacy and actuality, as well as the always problematic use of indicators deserve special discussion in each case.

This paper does not intend to test the practical applicability of the model, rather it concentrates on theoretical comments and their significance. First Camagni's concept is presented, then the main remarks according to the two basic components, the "traditional square" and the "innovative cross", are specified. Following this, the relations between these matrix components are analysed, and a partly revised, "re-dimensioned" illustration of the model is proposed. Finally, the paper makes comments on the embeddedness of this concept into EU development policy.

Camagni's Territorial Capital Concept

Camagni (2009) created a three-by-three matrix in order to aggregate the elements of territorial capital figuring in his conception (*Figure 1*). According to his idea, the nine cells of the model encompass all potential and relevant resources of a territory. In this huge challenge the author invokes the help of two traditional aspects of economic literature – *rivalry* and *materiality* – in order to classify the collected elements.

Following the common interpretation of rivalry, Camagni distinguishes *public goods* from *private goods*. Between the "pure" public and private categories are located the *impure public goods* and the *club goods* as a third intermediate category in the rivalry dimension. The characteristics of public goods are that individuals

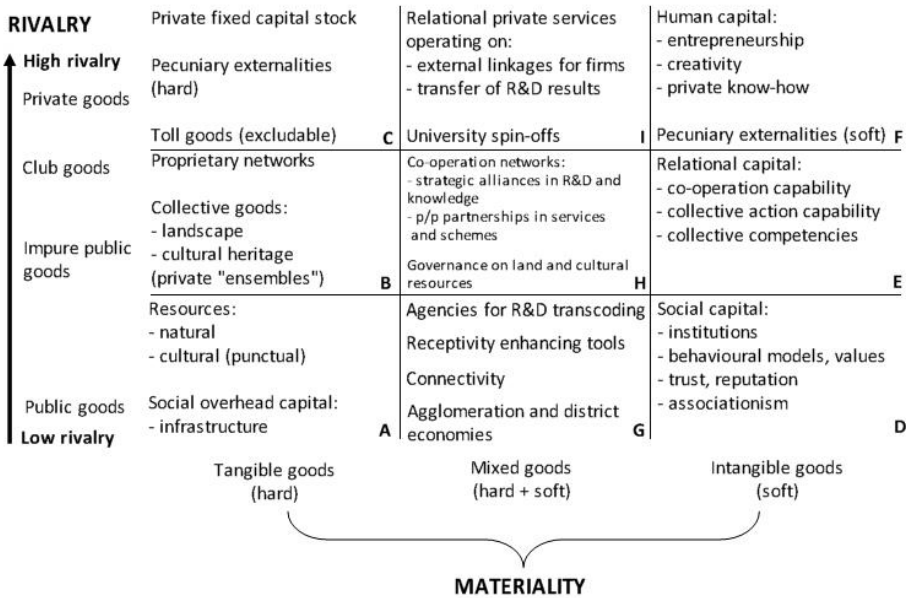


Figure 1. The theoretical taxonomy of the elements of territorial capital
 Source: Camagni 2009, 123.

cannot be excluded from their use, as their use by one individual does not reduce availability to others. In the case of intermediate goods, one of these premises is not satisfied. Cells at the bottom of Figure 1 are the pure public goods and going up vertically we can find increasingly rivalry goods.

Materiality, which is the other arranging dimension of the model, changes in the horizontal direction. We can find the so-called *tangible (hard)* goods in the left cells. The left lower corner consists of the elements of *infrastructure, natural and cultural resources* as well as material public goods (A). In Camagni's view these goods form the basis of the general attractiveness of a local territory, and they can produce externalities which enhance the profitability of local activities. One step up along the rivalry axis, the tangible goods with impure characteristics are located (B). These are *proprietary networks* in transport, communication and energy; and collective goods made up of a mix of public and privately owned goods like urban and rural *landscape*, or the complementary assets defining a *cultural heritage* system. Private fixed capital stock and its *pecuniary externalities* as well as *toll goods* are listed among tangible private goods (C).

Public goods with mixed (hard and soft) features are the following (G):

Agencies for R&D transcoding - Transfer organisations, operating in the field of knowledge accumulation and diffusion, mainly in the form of public agencies facilitating interaction among actors. Camagni sees the importance of these agencies in their “mission to create a common language and shared understanding” among the different players.

Receptivity enhancing tools – According to the short description of this category, *receptivity* is an ability to extract the highest benefit from access to places, services or information.²

Connectivity – This notion refers to the “conscious” exploitation of geographical proximity which allows the actors to collect information and to organise transactions effectively.

Agglomeration and district economies – Cities and industrial districts play a key role in Camagni’s concept. He conceives them on the basis of their important similarities in theoretical terms in spite of their geographical and economic differences. Such common features are proximity and high density of activities, concentration of social overhead capital, density of interaction, high cohesion and a sense of belonging. According to Camagni, these similarities reinforce different economic advantages like the reduction in transaction costs and cross-externalities.³

The cell in the centre of the matrix (H) contains mixed goods of both dimensions. One of them is *co-operation networks*, which category has two additional subcategories:

1. strategic alliances in R&D and knowledge, and
2. p/p partnerships in services and schemes.

The other component of this cell is *governance on land and cultural resources*. Camagni describes the new forms of governance as “a field characterized by both market failures and government failures, but also by huge risks of contradictory strategies and undesirable outcomes if individual, piecemeal, non-cooperative private decisions are not controlled” (Camagni 2009, 128). *Relational private goods* (I) are private goods and mixed goods in the dimension of materiality. They are “crucial services with a relational nature and supplied entirely by the market: for example, when firms search for external partners and suppliers (through financial institutions or specialized consultancy agencies), or in the cases of technological transfer,

²It should be noted that there is inconsistency between the category name and its short description, as “tools” and “abilities” are two totally different things.

³It is not easy to find any differences between the subjects of the last two categories (connectivity and agglomeration/district).

partnership and diffusion” (Camagni 2009, 128). *University spin-offs* also belong to this cell.

On the right side of the matrix we can find intangible (soft) components. In the lowermost cell *social capital* (D) as a pure public good is located. The author created an extra figure in order to explain this notion (Figure 2). In this figure, there are also two dimensions one of which differentiates the *micro* and *macro* aspects of social capital. The function of micro-macro dichotomy is to distinguish “elements directly involving single individuals from those of the system”. The other dimension separates the *formal* and *informal* components of social capital.

Intermediate goods from rivalry aspects are named as *relational capital* (E) and include the following elements: *capability of co-operation and collective action*, as well as *collective competencies*.

According to Camagni’s argument, the difference between social capital and relational capital is the following: “While it may be argued that a social capital exists wherever a society exists, ‘relational’ capital may be interpreted as the set of bilateral and multilateral linkages that local actors have developed, both inside and outside that local territory, facilitated by an atmosphere of easy interaction, trust, shared behavioural models and values.” (Camagni 2009, 127).

Pure private and intangible goods are *human capital* (*entrepreneurship, creativity, private know-how*) and *pecuniary externalities* in terms of advanced private services (F).

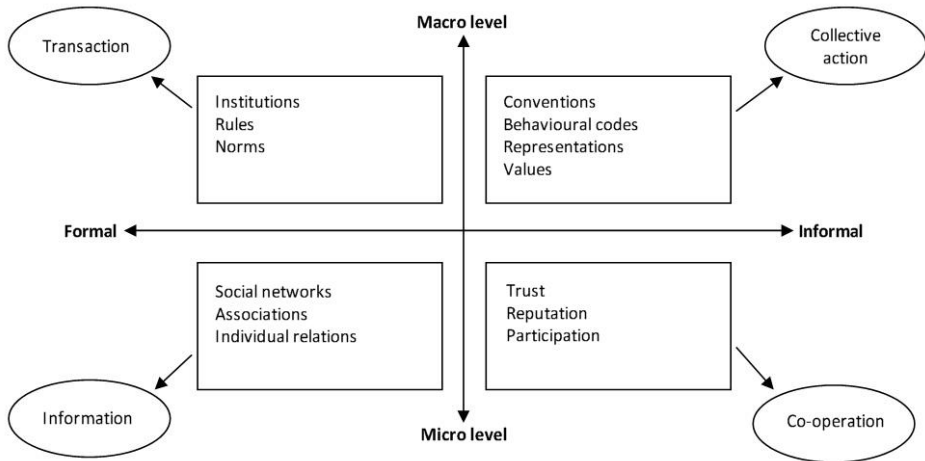


Figure 2. Dimensions, forms and functions of social capital

Source: Camagni 2009, 126.

“Traditional Square”– The Problem of Social Capital

Camagni evaluates the four corner-classes of the matrix – high and low rivalry, tangible and intangible goods – as traditional, often cited sources with moderate novelty for scientific interest. They are called, therefore, “traditional square” (Figure 3). Indeed, the contents of these cells refer to the classic material capital explanations (A and C) on the one hand, and on the other, they aggregate relatively accepted types of capital, such as human (F) or social (D) capital.

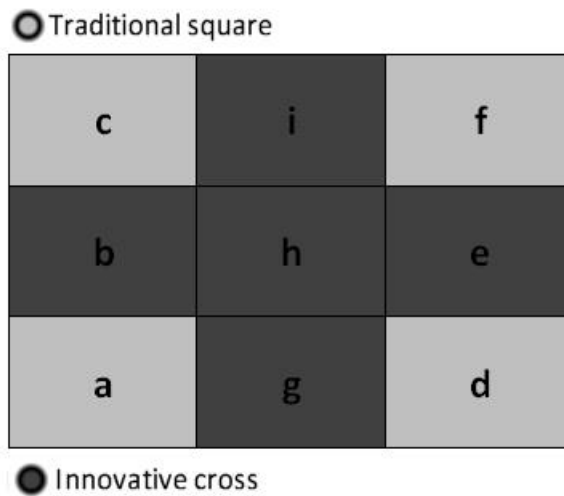


Figure 3. The position of “traditional square” and “innovative cross” in the matrix
Source: Authors’ own elaboration based on Camagni 2009.

However, social capital is not a generally accepted concept. Its definition, elements, function and operationalisation have been highly debated up to this day. Questions and doubts have been raised relatively early in connection with the theoretical and empirical application of the concept (e.g. Portes 1998, Sabatini 2005). Nevertheless, there is consensus among different authors in the most important fundamentals, namely, that social capital is of a “relational nature” and works through individual/social relations and their networks. Its essential contribution to democratic political systems and market economies is also not disputed (Orbán – Szántó 2005).

The significant differences in conceptualising social capital become clear by overviewing the statements of three classical authors (Bourdieu, Coleman and Putnam).

According to Bourdieu (1998) social capital means efforts made by individuals in order to form social networks. Social capital is a private asset which allows its owner to reach his/her own personal goals. Bourdieu considers social capital as the basis of social reproduction. It refers to both the material and the symbolic resources which individuals and groups use in the process of reproduction. Economic, cultural and social capitals are the three main ways in which resources can be accumulated, and the positions of the individuals in society are actually determined by them. The ability of families and different groups is crucial in transferring symbolic goods of cultural and social capital into economic capital. The way in which this transfer happens is socially and historically determined.

Coleman (1998) also emphasises the beneficial effects of social capital for the individual, however, he shows its *public good* nature too. Coleman claims that social relations characterise the social structure within which individuals act. He was convinced that the analysis of the formation of social capital provided a middle way between the rational choice and the social-norm perspective.

Neither Bourdieu's theory nor Coleman's established social capital firmly in the academic and public discourse. The rapid diffusion of the concept was due to Putnam's works (1993, 2000). In his view, social capital is a collective asset, a cultural phenomenon in contrast with the traditional types of capital. It includes both the ability to act collectively and trust in public institutions, which are features of big communities (nations or regions).

The above-mentioned classical approaches give a picture about the most important conceptual differences in the interpretations of social capital, the basis of which is the dichotomy between the *individual* versus the *collective*.

Despite the ambiguity concerning social capital, Camagni uses this theory as a cornerstone in his territorial capital model. He clearly follows Putnam's interpretation, but in his territorial capital model the whole spectrum of the elements of social capital can be found. The elements originating from the collective aspect are often "hidden" and renamed, and located beyond the border of the "traditional square".

The "Innovative Cross"

The intermediate classes of the matrix represent "more interesting and innovative elements on which new attention should be focused", as Camagni compares these cells with the "traditional square". The resources of the "innovative cross" typically merge hard and soft, material and service elements "which indicate a capacity to translate virtual and intangible elements into effective action, cooperation, public-private partnership, supply of services; a capacity, that is, to convert potential relationality into effective relationality and linkages among economic agents" (Camagni 2009, 121). This definition is rather ambiguous and raises the question: which are

the relevant resources according to Camagni? Are they the more or less material elements (*tools, methods*), or the immaterial resources (*capacity*) – behind the “half-material” goods – that govern their operation?

This duality is traceable when we look at cell “B” which contains “the most tangible” goods of the innovative matrix. Here – in the case of urban/rural landscape and cultural heritage – Camagni draws attention to the danger of the free-rider problem and the short-term, opportunistic behaviour of some users or property owners. In this context he remarks that “the long-term advantage of cooperative behaviour is clear; but awareness of this fact depends on the cultural and economic homogeneity of the property owners” (Camagni 2009, 124). For the sustainable exploitation of local resources “a strong sense of belonging and territorial loyalty coupled with a far-sighted business perspective and the social stigmatization of opportunistic behaviour” are necessary (Camagni 2009, 124). The further argument refers back to his own earlier work (Camagni 2004) in which the concept of “milieu effect” was elaborated. The “milieu effect” may result in favourable collective action, easy public-private agreements and fruitful local synergies. Here Camagni uses “milieu effect” as a synonym of the above-mentioned desirable social attitudes (sense of belonging and loyalty). Finally he claims that in this case “the milieu itself may be the true territorial capital” and puts the following remark in brackets: “(see typology *e* in the taxonomy)” (Camagni 2009, 124). Typology “*e*” means relational capital in his taxonomy.

Based on these arguments, social resources (in the form of public goods) seem to be required for the right exploitation of tangible goods. These resources are called relational capital in Camagni’s model. The complex phenomenon of relational capital appears in all cells of the horizontal and vertical central axes, that is, relational capital has a crucial effect on all aspects of the “innovative cross”.

Nevertheless, it is impossible to separate relational capital from social capital in Camagni’s concept. Despite the different names and cells, the elements used are the same: trust, shared values and behavioural patterns on the one hand, and relations, co-operation and collective action (developed on the basis of the previous group of elements) on the other hand. The use of the term *relational capital*, its formal separation from social capital, and its location among the impure public goods could be a possibility of taking into account the private aspects of these phenomena. However, this remains an illusion.

The question is: what could be the aim of this “re-labelling”? Why does Camagni put relational capital into the “innovative cross”, while social capital into the “traditional square” in the case of the same phenomena? One of the possible reasons could be the strong policy orientation of his territorial capital concept. In the “innovative cross” there are several “policy-close” tools and methods requiring scientific verification so that they could be used universally. Probably, this is the main aim of

Camagni. Relational capital, a more neutral and less embedded term, may suggest that creating its components can be a rapid and easy process. But, unfortunately, this is not so easy. The interdisciplinary results and experiences in social capital research cannot confirm this optimistic view, therefore, Camagni's decision about re-labelling is understandable.

At the same time, we have to stress that social capital can contribute to both "public good" and "public bad". The negative aspect is included in all theoretical approaches, but not with the same importance. The following definition is worth noting: "I define social capital as producing positive returns to individuals within social networks, even though those outside these networks may be subject to negative externalities" (Warren 2008, 126). In this sense, bad social capital belongs to those social relations which produce negative externalities. Of course, this may occur anywhere, but in certain situations a stable system of negative externalities may also evolve. In these cases the social capital based on trust, reciprocity and networks produces corruption, expensive and biased development policy practices, resulting in low performance in the public and non-profit sectors, and usually also in serious democratic deficit. Consequently, social relations are not "good" or "bad" in themselves, their nature always depends on the broader context.

Relations between "Traditional Square" and "Innovative Cross"

In Camagni's model low and high rivalry, tangible and intangible goods at the four corner cells all represent factors which are classical resources according to the traditional economic view. By analysing these elements of territorial capital, we can learn more about the population and the prosperity chances of a given area, the living conditions and standards, as well as the individual and the community aspects of social development; in other words, about the features of welfare and well-being. The resources of the "traditional square" are pillars of the theory primarily because of these attributions, as without measuring them accurately, the goods of the "innovative cross" cannot be evaluated realistically. The number of networks and cooperation, the rate of collective actions, the existence of knowledge- and technology-transfer channels and programmes, the flow of information, the functioning of proximity relations, as well the p/p-partnerships and the different kinds of governance mechanisms are in themselves not enough to objectively assess the real resources of a territory and its population. The factors mentioned above are mostly development policy practices, many of them can be created through external interventions even without existing and organically improving local-regional potentials, capacities and capabilities. That is why these indicators are not accountable without the goods of the "traditional square". But if we accept this criterion, we also have to

recognise that the resources of the “innovative cross” are only relative, while the goods of the four corner cells are absolute elements of territorial capital.

To develop exclusively the resources of the “traditional square” may also be logically appropriate by improving the goods of the “innovative cross”, however, the intention to strengthen just the latter is misleading, and may even be dangerous. The simple reason for this is that the factors in the horizontal and vertical central axes are mostly practices, methods, mechanisms and organisational structures which can only function properly if an innovative, cohesive, collaborative and adaptive local-regional milieu with strong identity and fruitful relational culture built on trust endogenously promotes this. However, if these resources are almost exclusively development policy instruments, furthermore, many of them – as already mentioned – can be created through external interventions based on the support of the local (political, business and social) elite, it is a mistake to think that the improvement of these goods necessarily contributes to the elements of territorial capital at the four corner cells which represent the potentials of the whole area and its population.

That is why we find it justifiable to rethink Camagni’s model, and propose to include a third dimension which is able to involve the horizontal and vertical separation of the resources according to their absolute and relative character (Figure 4). This recommendation could be particularly important from a methodological point of view, as it would introduce a kind of scaling between the matrix elements, between the indicators of the “traditional square” and the “innovative cross”.

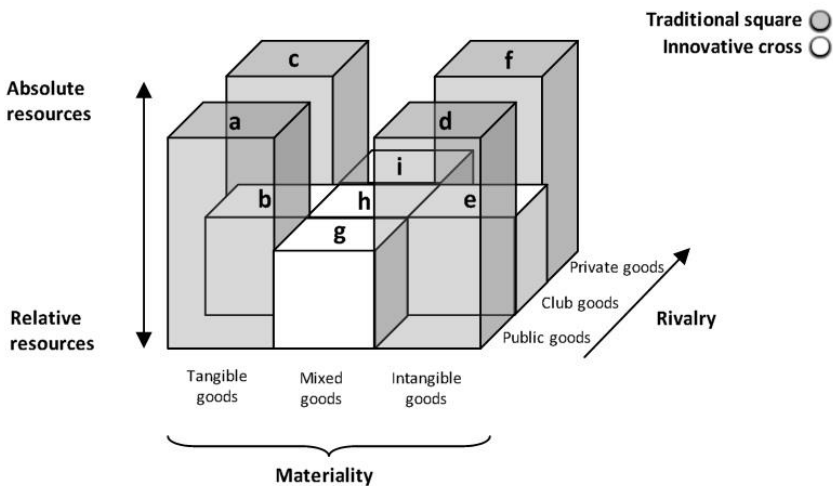


Figure 4. The “re-dimensioned” matrix of territorial capital

Source: Authors’ own elaboration.

Impacts of Embeddedness into EU Development Policy

Camagni's model has a clear development policy approach which is quite evident if we think over the evolutionary process of his theory. The concept of territorial capital was a methodological instrument as interpreted in both the OECD's and the EU's development policy practices. Although Camagni's reconceptualised, undoubtedly more scientific and more systematised model has deservedly become an important approach of regional studies, its roots are still strong. This explains the dual character of his theory: it is applicable to scientific research and development policy planning as well as to strategy-making. However, because of the adaptation benefits, it has an irresolvable normative-descriptive dichotomy.

This can clearly be observed when we inspect the categories of resources in the matrix. Many of the goods in the "innovative cross" are not neutral factors, as the model exactly determines what type of partnerships, networks, collective actions, knowledge- and technology-transfer channels, proximity relations, etc. should emerge and evolve. At the same time, in the case of the "traditional square", the indicators are less detailed. There is no orientation point in the matrix as to what kind of infrastructural, human, social or private fixed capital would be more favourable for territorial development, cohesion and competitiveness. Only the elements in the horizontal and vertical central axes have this normative character, obviously because many of them are development policy instruments.

The norms, objectives and directives of EU regional policy are – sometimes more, sometimes less – committed to the harmonisation of exogenous and endogenous growth strategies, with preference to the latter type of capacity- and capability-building. This approach definitely requires the acceptance of the principle that every territory has its own potential to improve. Camagni's model cannot break away from this development policy framework, and therefore its objective character is questionable in several respects.

First, according to his theory, if we can measure any kind of resources in relation to the matrix categories, we have to consider them as goods, potentials for improvement. As the elements of the four corner cells are infrastructural, environmental, cultural, human, social and private fixed capital factors, thus every territory has such resources. For an efficient measurement it is necessary to aggregate the local-regional specialities. The real challenge is that the model does not correlate these factors, so from the data of a given area alone we cannot assess its territorial capital.

According to the methodological approach of the concept, we have to compare selected areas and their resources; thus a quasi factor-ranking shows us the local-regional potentials for improvement. Therefore, Camagni's theory aims to find endogenous possibilities of growing and developing, but it determines territorial capital by comparing internal resources to external ones, and totally ignores the

positive or negative impacts among the internal factors. Of course, these local-regional potentials could be real ones, but the model is surely unable to measure them in a given territorial context.

The ignorance of “goods” of a negative nature is another important issue concerning the inaccuracies of the concept. Of course, many of the matrix categories are undoubtedly auspicious resources, but the literature of social capital is rich in research results about the negative impacts. And if we recall the comment above that the concept does not really distinguish social and relational capital, and furthermore, the latter one is related to the resources of the “innovative cross” in different forms, it is obvious that this model of territorial capital cannot be applied in complex scientific approaches.

Conclusion

Despite the continuously increasing interest of both scientific and development policy approaches in the concept of territorial capital, the theoretical foundations of its model are questionable. Although the intentions and aims behind this model, like the aggregation, classification and systematisation of the local-regional resources as well the endeavour to precisely define endogenous potentials for improvement are absolutely correct, more scientific discourses should be carried out on the model and its applicability. The present form of the territorial capital concept is unable to provide a stable theoretical basis for either scientific analyses or policy interventions. The main reasons for this problem are in the individual elements of the matrix as well as in the relations of these elements to each other. These are the main issues which have motivated us to write this paper, and our comments on the necessity of “re-dimensioning” the model, of making distinction between the absolute and the relative resources, as well as of reinterpreting social capital in the matrix.

References

- ATTREG (2013): The Attractiveness of European Regions and Cities for Residents and Visitors. Scientific Report. Luxembourg, ESPON.
- Bourdieu, P. (1998): Gazdasági tőke, kulturális tőke, társadalmi tőke. In: Lengyel Gy. – Szántó Z. (szerk.): *Tőkefajták: A társadalmi és kulturális erőforrások szociológiája*. Budapest, Aula Kiadó. pp. 431–445.
- Brasili, C. – Saguatti, A. – Benni, F. – Marchese, A. – Gandolfo, D. (2012): *The Impact of the Economic Crisis on the Territorial Capital of Italian Regions*. Paper presented at the European Regional Science Association (ERSA) 2012 Annual Conference, 21–25 August 2012, Bratislava.

- Camagni, R. (2004): Uncertainty, Social Capital and Community Governance: The City as a Milieu. In: Capello, R. – Nijkamp, P. (eds.): *Urban Dynamics and Growth: Advances in Urban Economics*. Amsterdam, Elsevier. pp. 121–152.
- Camagni, R. (2008): Regional Competitiveness. Towards a Concept of Territorial Capital. In: Capello, R. – Camagni, R. – Chizzolini, B. – Fratesi, U. (eds.): *Modelling Regional Scenarios for the Enlarged Europe*. Heidelberg, Springer. pp. 33–46.
- Camagni, R. (2009): Territorial Capital and Regional Development. In: Capello, R. – Nijkamp, P. (eds.): *Handbook of Regional Growth and Development Theories*. Northampton, Edward Elgar, Cheltenham. pp. 118–132.
- Capello, R. – Camagni, R. – Chizzolini, B. – Fratesi, U. (eds.) (2008): *Modelling Regional Scenarios for the Enlarged Europe*. Springer, Heidelberg.
- Capello, R. – Caragliu, A. – Nijkamp, P. (2009): *Territorial Capital and Regional Growth: Increasing Returns in Cognitive Knowledge Use*. Tinburgen Institute Discussion Papers, 2009–059/3. Amsterdam.
- Casi, L. – Resmini, L. (2012): *Foreign Direct Investment and Growth: The Role of Regional Territorial Capital*. Paper presented at the European Trade Study Group (ETSG) 2012 Annual Conference, 13–15 September 2012. Leuven.
- Coleman, J. S. (1998): A társadalmi tőke az emberi tőke termelésében. In: Lengyel Gy. – Szántó Z. (szerk.) *Tőkefajták: A társadalmi és kulturális erőforrások szociológiája*. Budapest, Aula Kiadó. pp. 11–44.
- Courtney, P. – Talbot, H. – Skuras, D. (2010): *Establishing the Potential for Territorial Cooperation*. Working Paper 27 of the EDORA – European Development Opportunities for Rural Areas ESPON project.
- European Commission (2005): Territorial State and Perspectives of the European Union. Scoping Document and Summary of Political Messages. European Commission, Brussels.
- Jóna, Gy (2013a): *A területi tőke kistérségi jellegzetességei*. Gödöllő, Enyedi György Regionális Tudományok Doktori Iskola. (Doktori disszertáció).
- Jóna, Gy. (2013b): A területi tőke fogalmi megközelítései. *Tér és Társadalom*, Volume 27. No. 1. pp. 30–51.
- Kyvelou, S. – Sinou, M. – Baer, I. – Papadopoulos, T. (2012): Developing a South–European Eco–Quarter Design and Assessment Tool Based on the Concept of Territorial Capital. In: Curkovic, S. (ed.): *Sustainable Development – Authoritative and Leading Edge Content for Environmental Management*. Rijeka, InTech. pp. 561–587.
- Lengyel I. (2012): Regionális növekedés, fejlődés, területi tőke és versenyképesség. In: Bajmócy Z. – Lengyel, I. – Málóvics Gy. (szerk.): *Regionális innovációs képesség, versenyképesség és fenntarthatóság*. Szeged, JATE Press. pp. 151–174.
- Mazzola, F. – Di Giacomo, G. – Epifanio, R. – Lo Cascio, I. (2012): *Territorial Capital and the Great Recession: A Nuts–3 Analysis for Central and Southern Italy*. Paper presented at the European Regional Science Association (ERSA) 2012 Annual Conference, 21–25 August 2012, Bratislava.
- OECD (2001): *Territorial Outlook*. OECD, Paris.
- Orbán, A. – Szántó, Z. (2005): Társadalmi tőke. *Erdélyi Társadalom*, 3. évfolyam, 2. szám, pp. 55–70.
- Portes, A. (1998): Social Capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*, Volume 24. pp. 1–24.
- Putnam, R. D. (1993): *Making Democracy Work*. Princeton University Press, Princeton.
- Putnam, R. D. (2000): *Bowling Alone: The Collapse and Revival of American Community*. New York, Simon & Schuster.

-
- Sabatini, F. (2005): The Empirics of Social Capital and Economic Development: A Critical Perspective. *Munich University Papers*, 2366.
- Tóth, B. I. (2010): Az immateriális és a területi tőke összefüggései. *Tér és Társadalom*, Volume 24. No. 1. pp. 65–81.
- Tóth, B. I. (2011): A magyar középvárosok teljesítménye a területi tőke tükrében. *Területi Statisztika*, Volume 51. No. 5. pp. 530–544.
- Warren, M. (2008): The Nature and Logic of Bad Social Capital. In: Castiglione, D. – Van Deth, J. W. – Wolleb, G. (eds.): *The Handbook of Social Capital*. Oxford, Oxford University Press. pp. 122–149.

LIST OF AUTHORS

BALÁS, GÁBOR – director, public policy expert, Hétfa Kutatóintézet és Elemző Központ (HÉTFA Research Institute and Center for Economic and Social Analysis)

BODOR, ÁKOS – research fellow, Institute for Regional Studies, Centre for Economic and Regional Studies, Hungarian Academy of Sciences

CSATA, ANDREA – assistant lecturer, Faculty of Economic and Human Sciences, Sapientia Hungarian University of Transylvania

GRÜNHUT, ZOLTÁN – research fellow, Institute for Regional Studies, Centre for Economic and Regional Studies, Hungarian Academy of Sciences

HEIMPOLD, GERHARD – deputy head, Department of Structural Change and Productivity, Halle Institute for Economic Research

KOVÁCS, SÁNDOR ZSOLT – junior research fellow, Institute for Regional Studies, Centre for Economic and Regional Studies, Hungarian Academy of Sciences

LEONARDI, ROBERT – professor, European Institute, London School of Economics

MAJOR, KLÁRA – research director, HÉTFA Research Institute and Center for Economic and Social Analysis

MEZEI, CECÍLIA – research fellow, Institute for Regional Studies, Centre for Economic and Regional Studies, Hungarian Academy of Sciences

MOLNÁR, ERNŐ – senior lecturer, Department of Social Geographic and Territorial Development, University of Debrecen

PÉNZES, JÁNOS – senior lecturer, Department of Social Geographic and Territorial Development, University of Debrecen

RADICS, ZSOLT – senior lecturer, Department of Social Geographic and Territorial Development, University of Debrecen

REISINGER, ADRIENN – senior lecturer, Department of Economic Analysis, Széchenyi István University