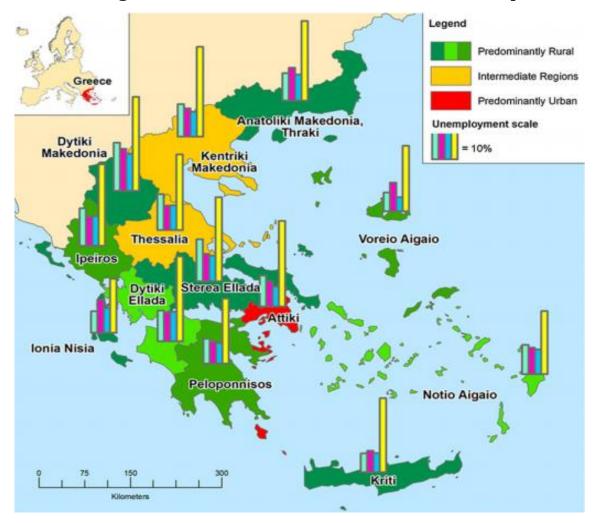


Resituating the Local in Cohesion and Territorial Development



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Abbreviations

AIZ Alexander Innovation Zone EC European Commission

EFRD European Fund for Regional Development EGTC European Grouping of Territorial Cooperation

ESF European Social Fund EU European Union

GDP Gross Domestic Product

KEC Karditsa Ecosystem of Collaboration

LAU Local Administrative Unit

NUTS Nomenclature of Territorial Units for Statistics
OFG Overcoming fragmentation in territorial governance

PMS The Post-Mining Regional Strategy
RCM Region of Central Macedonia
R&D Research and Development
SGI Services of General Interest

SME Small and Medium-Sized Enterprises



Executive Summary

The regional inequalities in Greece persist despite the implementation of development or Cohesion policies for more than 30 years. The general picture is that regional policies have failed to deter forces of further concentration of activities to the advanced areas of the country and to reduce inequalities and spatial injustice.

A number of political and historical factors explain these inequalities. The most important of them are related to the administrative system in Greece, which is (a) highly bureaucratic, (b) highly centralized and (c) never had an active plan to reduce regional inequalities.

In this state of affairs, the report tries to present four Greek Case studies which represent a sample of initiatives that try to mitigate the spatial injustices. They are different in terms of bottom-up or top down approach, different in maturity, initial conditions, scale, geography, and different in the subject matter they are focusing on.

In particular, the first Case study has to do with environmental degradation and the postlignite transition (Western Macedonia). The second Case study has to do with innovation catch-up need, the knowledge economy and the high-value investments attraction (Thessaloniki). The third Case study has to do with the local authority de-fragmentation and the institutional framework (Volos) and the last Case has to do with an ecosystem around the social and solidarity economy and its efforts to tackle the local spatial injustices (Karditsa).

The first Case study confirms that a centre-periphery pattern seems to be dominant in all particular aspects of political, administrative and economic arrangements, associated by large bureaucracy and ineffective central administration.

The second Case study shows that the planning aiming to spatial justice is foremost a political process and choice. This requires a visionary political leadership that adequately comprehends the international, national and local challenges and efficiently responds with certain strategy, priorities and interventions. Should these priorities be politically legitimized, then the planning and implementation will become easier and more substantial.

The third Case study illustrates that the Action under discussion supports clearly distributive and procedural spatial justice when the reference level is the city and the major injustice is related to the imbalances of power, resources and command of development tools between the central and the local government. Also, a big must is the collaboration of the stakeholders in a more synthetic and inclusive way, making in that way the public consultation an essential characteristic of the decision-making process, not just a typicality.

The fourth Case study revealed a very important parameter to be taken into consideration when analyzing the Ecosystem and its benefits: that the effects of the crisis are inversely proportional with the size and depth of the social economy in a region. This means that the more employment and turnover a region has in the Social and Solidarity Economy, the less it will be exposed to economic fluctuations, financial bubbles and crises.

Finally, the evidence has shown that policies are more difficult to be effective in the regions that need them the most, as critical background factors are missing. Persistently



underperforming regions may not be in the same trajectory with advanced ones in terms of institutions and structural characteristics.



1. Introduction

The Greek sample for the RELOCAL research purpose was composed of four Cases studies represented by localities with different aspects of perceived spatial injustice. The first case study has to do with environmental degradation and the post-lignite transition (Western Macedonia). The second case study has to do with innovation catch-up need, the knowledge economy and the high-value investments attraction (Thessaloniki). The third case study has to do with the local authority de-fragmentation and the institutional framework (Volos) and the last case has to do with the social and solidarity economy and its value-added to the local economy (Karditsa). In particular, the four Case studies are as follows:

A. The current **Special Development Programme** (SDP) of the **Western Macedonia Region** 2012-2016 is directed to areas in risk of environmental degradation due to fossil fuel energy production. From 2002 onwards, there has been a gradual reduction noted in the share of lignite in covering Greece's electricity demand. The transition to a new national energy model and the need to transform the model of development of Western Macedonia have been acknowledged and anticipated for years. However, the reluctance of the state, local authorities, local stakeholders and Power Public Corporation (PPC) has prevented the Western Macedonia Region from planning and adapting to a new era in a timely and smooth manner.

B. Alexander Innovation Zone S.A. (A.I.Z. S.A.) is the managing body that has undertaken to organize and promote the Thessaloniki Innovation Zone. A.I.Z.'s role is to empower and promote the innovation activity with emphasis on purposes of common benefit and public interest. A.I.Z. supports the organized innovation ecosystem which includes all Thessaloniki's stakeholders and organisations. The company was established under Law 3489/2006 and is now supervised by the Minister of Interior. A.I.Z.'s goal is to promote the region of Thessaloniki as an Innovation-Friendly Destination, in order to facilitate international knowledge development partnerships and to attract investments that will create high-value jobs and skills. This, in turn is expected to spearhead a change in the economy of the area under responsibility, creating a positive impact on the Hellenic competitiveness.

C. The City of **Volos** is among the places that experienced big changes in the last decades, both in terms of external and internal environments. How does the city deal with the challenges of industrial decline, structural change, unemployment, missing or decaying urban infrastructure and increasing demand for social services? In the years 1999 and in 2010 two important institutional reforms changed the map of local government in Greece and produced larger municipalities in terms of area, population and jurisdictions. The number of municipalities decreased from about 10.000 to about 1.000 in 1998 (Law 2539/97) and from 1.000 to 325 in 2010 (Law 3852/10). The reform intended to eliminate fragmentation and improve the efficiency of the local government, through the creation of stronger local governments that benefit from scale effects in the provision of basic services. In both instances, there was significant resistance in the implementation of the reform and arguments claiming that it will reduce representation and democratic control.



These reforms have expanded significantly the limits and the jurisdiction of the new Municipality of Volos (that now includes 9 former smaller municipalities) and the research question is whether this has helped the city to deal better with the challenges it faces (i.e. unemployment, industrial decline and decaying infrastructure) and provide better services to its citizen.

D. Karditsa is a locality with obvious challenges of spatial justice and coping strategies for improving living conditions and promoting a more balanced development. This regional unit (NUTS3) has a large share of its population involved in the primary sector, an unemployment rate which is above the national and regional averages, and a GDP per capita among the lowest in the country. The Ecosystem is based on a number of activities, procedures, rules and support mechanisms that include also a "cooperative incubator" at regional level. It is unique at national level and it currently comprises 41 collective organizations. The incubator (which is at the heart of the Ecosystem) has until now offered support to many local initiatives transformed already in legal entities like: Civil and Rural Cooperatives, Non-Profit Agencies, Associations, Social Economy Enterprises, SME networks, NGOs and Civil Society Associations, etc. With the support of the Development Agency, all these local collective schemes have formed gradually a local network or "ecosystem" of collaboration and provides co-working spaces, daily guidance, training, seminars and lectures, mentoring, coaching, and international networking.



2. The Case Studies in a National Context

2.1 Unpacking Spatial Justice in a National Context

This section provides a short review of the key elements of the regional structure of Greece and the evolution of regional inequalities. It also provides an account of regional development policy and Cohesion policy and makes a number of remarks about their implementation and effectiveness. The analysis takes into consideration as a critical background factor the evolution of the European spatial economy and the economic crisis that has affected in a dramatic way the Greek economy. Some of the drivers of the European architecture and some of the factors contributing to the Greek crisis are directly related to the performance of regions and the ability of regional policy to affect this performance and reduce inequalities.

Spatial selectivity in growth processes

The European economic space is composed by forces and processes that decisively affect the prospects of regions for growth and development. The available evidence indicates that the main drivers of regional growth in Europe are agglomeration economies, geography, integration, structure and initial conditions with respect to development levels, as well as EU and national policies (Petrakos et al. 2011). A number of papers (Petrakos et al. 2005a; Petrakos et al. 2005b; Petrakos 2008; Petrakos and Artelaris 2009; Artelaris et al. 2010), the reports of international Organizations (OECD (2019), as well as a simple examination of regional data show that inequalities are increasing. In most countries, the spatial patterns of growth have favoured the metropolis, which has increased its dominance. The share of national GDP produced in the metropolis has increased in most EU countries in the same period. Besides the success of the metropolitan regions, the spread in regional performance increases also because of the weak performance of the lower end of the regional distribution. A significant part of regional inequalities is due to the inability of the least advanced regions to close the development gap and converge towards the national average.

Regional inequality in Greece: evidence and drivers

The analysis of the regional structure of the Greek economy reveals serious and persisting imbalances in terms of GDP per capita, population and welfare. The Greek economic space is dominated by the presence of the metropolitan area of Athens, which is part of the Attica Region, but functionally extends beyond that, embracing clusters of significant industrial activity located a short distance beyond its borders, in the neighbouring regions (Petrakos and Psycharis, 2015).

Tables 1A (in the Annex) and 2 and Maps 1-3 provide the most recent information for GDP and GDP per capita of the Greek NUTS II and NUTS III regions. We observe that the Attica region concentrates 48% of the national GDP (more than 50% if one counts also satellite



industrial establishments in the surrounding regions) and has a GDP per capita that is 36% higher compared to the national average.

Kentriki Makedonia, which is the region that includes Thessaloniki, the second metropolitan region of Greece has a significantly lower GDP per capita, equal to 77% of the national average. In general, the regions with higher GDP per capita are the island region of South Aegean and the Ionian and Kriti Islands (111%, 92% and 85% of the national average), the energy supplying region of Dytiki Makedonia (96% of national average) and the region of Sterea Ellada, hosting the satellite industrial areas of Attica (87% of national average. The regions with the lower GDP per capita are the border region of Anatoliki Makedonia and Thraki and the region of Ipeiros (69% and 71% of national average). It is worth noting that has experienced a decline in GDP per capita (-15.7) that is slightly smaller than the national average (-15.86) and smaller than the losses of other less advanced regions like Anatoliki Makedonia and Thraki (-22.18) and Dytiki Ellada (-17.72).

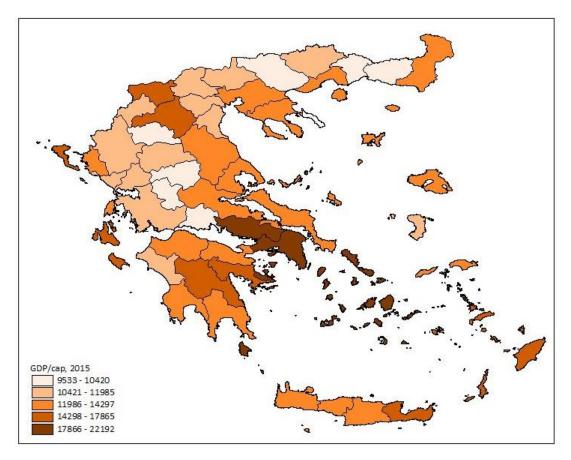
	GDP share in the	GDP per	capita	GDP/cap change (constant	
Geographic area	country	€	EU=100	Greece=100	prices)
	2015	2015	2015	2015	2010-15
EU28		29033	100		
Greece	100.00	16,294	56	100	-15.86
EL30 - Attiki	47.86	22,192	76	136	-15.7
EL52 - Kentriki Makedonia	13.45	12,557	43	77	-16.46
EL61 - Thessalia	5.14	12,393	43	76	-10.29
EL43 - Kriti	4.98	13,912	48	85	-15.95
EL63 - Dytiki Ellada	4.6	12,097	42	74	-17.72
EL64 - Sterea Ellada	4.46	14,117	49	87	-16.12
EL65 - Peloponnisos	4.41	13,358	46	82	-12.43
EL51 - Anatoliki Makedonia, Thraki	3.83	11,164	38	69	-22.18
EL42 - Notio Aigaio	3.45	18,153	63	111	-12.24
EL53 - Dytiki Makedonia	2.44	15,642	54	96	-5.68
EL54 - Ipeiros	2.2	11,500	40	71	-15.24
EL62 - Ionia Nisia	1.76	15,039	52	92	-17.39
EL41 - Voreio Aigaio	1.41	12,582	43	77	-16.86

Table 2. GDP and GDP per capita in the Greek NUTS II regions, 2015

Sources: ELSTAT (2018), Eurostat (2018)

The dominance of Attica in the regional economy of Greece is verified with the examination of other indicators of regional welfare (Table 3A), such as Income per capita, Deposits per capita and Electric energy consumption where Attica has a 24%, 48% and 14% respectively higher figure than the national average and 41%, 101% and 20% respectively higher figures than the second metropolitan region of the country (Kentriki Makedonia). It is interesting to note that the decline in Income and Deposits is dramatic in this period (the later partly due to capital controls), but the change in electricity consumption is a small increase, indicating a strong substitution effect on behalf of the households towards low elasticity services.

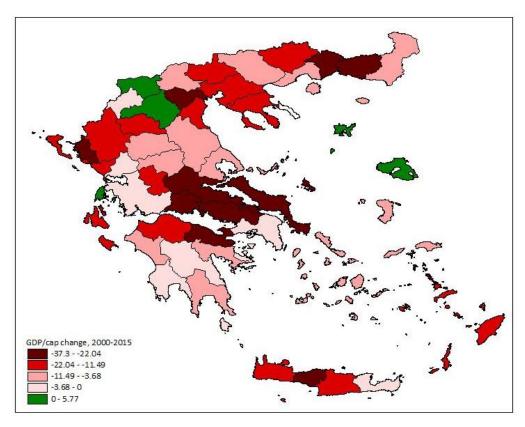




Map 1. GDP per capita in Greek NUTSIII regions, 2015 Source: ELSTAT (2018)

Map 2 depicts the change in GDP per capita in the period of 2000-15 that includes the deepest period of the crisis. The decline is dramatic and includes almost all regions. Although the pattern is not very clear, we can say that the hardest hit regions are areas with significant industrial activity (the satellites of Athens), regions hosting significant urban areas and some touristic islands. Athens, some rural regions in Western Greece and the Peloponnese, as well the energy regions in Western Macedonia experienced the lowest impact.





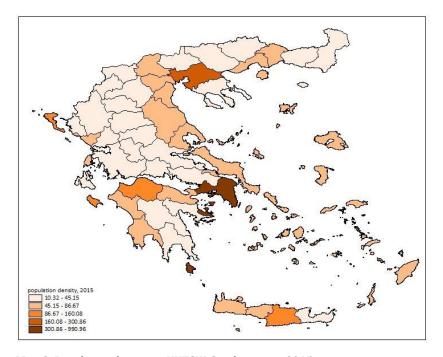
Map 2. GDP per capita change (%) in NUTSIII Greek regions, 2000-2015

Table 4 and Maps 3 and 4 provide information about the demographic structure of the Greek regions at the NUTS II (Table 4) and NUTS III (Maps 3 and 4) level. We observe that the Attica region concentrates 3.7 million inhabitants and 35% of the national population. It is one of the most densely populated cities in Europe with 990 inhabitants per sq. km, a figure that is 12 time higher than the national average. It has increased its population in the period 1961-2017 by 83%, experiencing dramatic migration inflows in the 60s, 70s and 80s that drained the peripheral regions from precious for development human resources and contributed significantly to the congestion, environmental and social problems of the metropolis. Although in the years of the crisis has experienced a higher decline than the average of the country (some return migration and brain drain) it maintains its dominant position in terms of population. As the Maps 3 and 4 show, population dynamics have generated a demographic and development 'S' along the eastern S-N axis of the country that starts from the city of Patras in Western Greece and from Athens to Volos, Larissa, Thessaloniki and the borders. This axis includes the most densely populated and most developed areas in the country. During the last two decades, the S-N development axis is complemented by the island regions of South Aegean, Crete and the Ionian Islands, that have maintained or regained population due to the significant increase of the touristic sector of the economy.



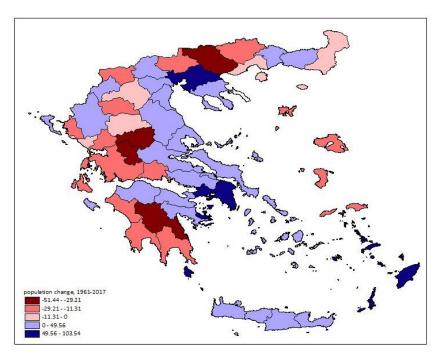
Geographic area	De facto population	Share (%) of population in the country		Population density		Population (%)	n change
	2017	2017		2017		1961-	2010-
						2017	2017
	10,768,193	100.0				28.37	-3.16
Greece		0		81.60			
EL30 - Attiki	3,773,559	35.04	1	990.96	1	83.36	-5.73
EL52 - Kentriki Makedonia	1,880,122	17.46	2	98.19	2	42.09	-2.17
EL61 - Thessalia	725,874	6.74	3	51.71	8	4.38	-2.82
EL63 - Dytiki Ellada	663,970	6.17	4	58.50	6	-0.28	-4.09
EL43 - Kriti	632,674	5.88	5	75.90	4	30.92	1.53
EL51 - Anatoliki Makedonia, Thraki	602,799	5.60	6	42.58	9	-2.51	-1.20
EL65 - Peloponnisos	579,182	5.38	7	37.39	10	-13.34	-1.58
EL64 - Sterea Ellada	555,761	5.16	8	35.74	12	5.27	-0.70
EL42 - Notio Aigaio	338,383	3.14	9	64.01	5	51.75	1.72
EL54 - Ipeiros	335,250	3.11	10	36.43	11	-4.92	-3.10
EL53 - Dytiki Makedonia	271,488	2.52	11	28.73	13	-11.18	-5.22
EL62 - Ionia Nisia	205,431	1.91	12	89.05	3	-3.36	-1.55
EL41 - Voreio Aigaio	203,700	1.89	13	53.10	7	-19.96	1.76

Table 4. Population, population density and growth of the Greek NUTS II regions, 2017 Sources: ELSTAT (2018)



Map 3. Population density in NUTSIII Greek regions, 2015 Source: ELSTAT (2018)





Map 4. Population change (%) in NUTSIII Greek regions, 1961-2015 Source: ELSTAT (2018)

Figures 1 and 2 show the evolution of regional GDP per capita at NUTS III (51 regions) and NUTS II (13 regions) level during the period 2000–15. The first observation is that the Attica region (top black line) maintains its top position and its distance from the national average (bold black line) throughout the period of the crisis. The second observation is that all other regions (grey lines) follow a similar pattern of growth and decline, although the speed of adjustment may vary according to their special characteristics. The third observation is that the lagging behind regions (bottom-10 or bottom-3) at the last year with available data and the beginning of the crisis are the same. The crisis has affected dramatically the size and the structure of the economy, but it does not seem to have affected regional hierarchies. Finally, these Figures show that the vast majority of regions have GDP per capita below the national average throughout the period under study, a feature that is related to a great part with the dominance of Athens in the development map of the country.



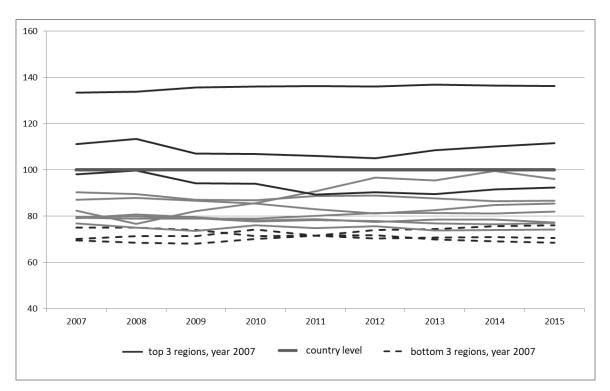


Figure 1. GDP per capita (2010 constant prices) in NUTSII regions, 2007-2015 Source: ELSTAT (2018)

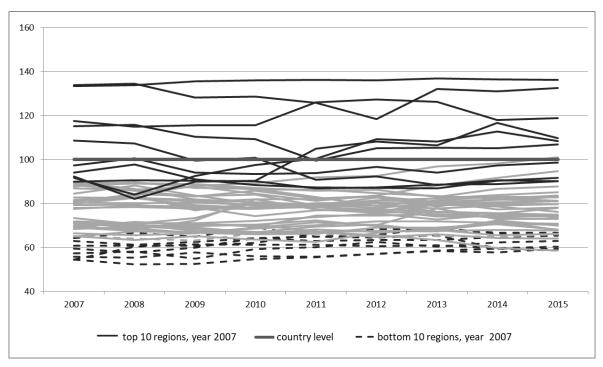


Figure 2. GDP per capita (2010 constant prices) in NUTSIII regions, 2007-2015 Source: ELSTAT (2018)

The evolution of regional inequalities in the NUTS III and NUTS II regions is also depicted in Figure 3. We observe that the weighted coefficient of variation is almost stable during



the crisis in high levels compared to other countries (Petrakos and Artelaris, 2008), after a period of increase in the late 1990s and early 2000s (Petrakos and Psycharis, 2015; 2016).

In general, regions specializing in manufacturing were hit hard due to the difficulties of most industries in maintaining production in the face of reduced demand, severely cut bank credit for running capital, imported supplies, and export guarantees. Among the regions relatively less affected by the crisis are those with a large share of population living in rural areas, where a significant degree of self-consumption and self-sufficiency and a relative dependence on agriculture and subsidies operate as a stabilizer.

Among the more advanced NUTS II and NUTS III regions, the metropolitan region of Attica had the best performance. This is in line with the findings of Capello et al. (2015) and OECD (2011), which provide evidence that large cities and urban agglomerations proved to be more resilient during the crisis. Especially, Capello et al (2015) claim that large cities are proved to be more resilient to the economic downturn, especially when they host diversified high-level functions.

However, the relatively better performance of Athens during the crisis should not hide the serious internal divides within the metropolis, as many inner city areas and a large part of the working class districts and the business center have all suffered from massive lock-outs, employment losses and widespread poverty. The picture is very different in the north and south suburbs of the city, where the high or middle-high class appears to be relatively immune from the crisis, revealing a serious spatial polarization in income levels, poverty and unemployment (Maloutas 2014; Artelaris and Kandylis 2014).

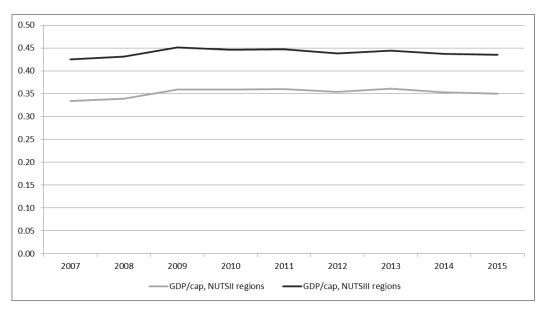


Figure 3. Weighted Coefficient of Variation of GDP per capita in the Greek regions, 2007-2015

Athens has been in a better position to confront the crisis and that the process of regional divergence that has taken place in the country over the last 15 years has not been reversed, neither the crisis has altered the polarized character of the economy.



Petrakos and Psycharis (2016) have shown that regions with a higher level of support by public policy or regions that experienced the lowest cuts in public investment faced a lower decline in their GDP. They also showed that regions hosting a high share of tradable activities or a high share of sheltered activities (like the public sector) experience a lower decline in GDPCAP than otherwise. These seemingly conflicting results indicate that at the regional level two possible growth or survival strategies may take place. On the one hand, some regions still host significant public sector activity like energy plants, universities or military camps, which play an important role in the local economy. On the other hand, and in the absence of a public economic base, some other regions maintain significant tradable activities, like tourism or manufacturing, that help them to deal with the crisis. Against this background, Athens stands alone with its size and variety, combining the effects of scale and openness with a mix of tradable and sheltered activities that have allowed it to maintain its dominant position in the economy.

In this highly diverse pattern of spatial change, where destruction prevails and defensive adjustments are stronger and more visible than policy initiatives, a number of regularities emerge. They indicate that the effects of scale (and perhaps variety), as well as public policies that improve the productive and social capital of the regions, will play an important role (if available). They also indicate that the adjustments in the international and productive environment may also play an important role, but they work better when they go hand-in-hand.

2.2 Capturing Policies Promoting Spatial Justice in a National Context

Development policy in Greece

Regional development policy is mainly implemented and supported financially through the European Structural Funds, the European Agricultural Fund and the Public Investment Program. It includes a wide spectrum of policies, with most prominent the policy of infrastructure development (transportation networks and urban infrastructure, environmental protection), business and investment subsidies (facilitated through various schemes and legal vehicles), human capital development and institutional reform.

Since the late 1980s until today it is estimated that more than 80 billion of EU contribution and 30 billion of national contribution in six consecutive Programs have supported these policies (Table 6A). Their impact is clearly visible in the case of infrastructure, where new transportation networks have reduced dramatically distances and have reshaped the regional map of Greece (with the impact on regional inequalities and regional prospects still being an open question, due to the improving accessibility of the metropolitan region).

Significant was also the impact in terms of infrastructure for education (schools and university buildings) and environmental protection (water and sewage systems, as well as waste management. Less clear is the impact on investment and new firm creation as it is unknown the life span of the new firms, since the crisis has swept away a large part of the productive base of the country. Significant reforms have also taken place during the last two decades in local and regional administrations through the Kapodistrias and Kalikratis programs, aiming to increase the scale of the municipalities through the merging of small



communities into larger administrative units and to provide self-government at the regional level. These reforms, however, were not supported by a drastic deconcentration of public administration, or a more even allocation of fiscal spending and tax revenues at the three levels of governance.

Structural Funds have been designed and supervised by the Ministry of Economy and Development and have been operated by Managing Authorities. They are split into a number of Sectoral and Regional Operational Programs. The share of the budget dedicated in Regional Operational Programs is planned and implemented by Regional Authorities, while the remaining share is planned and implemented by Central Government. Table 7A provides information about the share of Structural Funds in each period that is allocated to Regional Authorities. We observe that in most programming periods this share is small and on average over the period it does not exceed 30% of the Funds. The remaining 70% is managed at the central government level.

It is interesting to also examine the allocation of funds to major policy areas, like infrastructure, human capital development and support to business and the productive environment. Table 8 provides this information for all the programming periods. It is clear that most funds are allocated to all types of infrastructure projects and this tendency is increasing during most of the period. Improving human capital and supporting the productive environment receives a lower share of funds, which is either stable or declining over time.

	1989-1993	1994-99	2000-06	2007-	2014-
				13*	20*
Infrastructure	40.9	45.8	56.5	39.8	47.6
Human Resources	25.6	23.5	19.0 23.4		22.5
Productive environ-	33.5	30.2	21.9	31.8	25.1
ment					
Other	n/a	0.5	2.7	5.00	4.8
TOTAL	100.0	100.0	100.0	100.0	100.0

Table 8. Breakdown of structural funds by category of expenditure in Greece, 1989-2020 Commission of the European Communities (various years)

Although development policies have clearly a positive impact on the Greek economy and society, it is not equally clear if they managed to fulfil the basic objective of regional policy, which is the "overall harmonious development" and in particular "reducing disparities between the levels of development of the various regions and the backwardness of the least favored Regions or islands, including rural areas (Article 158 of the Treaty on European Union the EU).

The literature on the effects of Structural Funds on the EU regions tends to suggest that positive effects on regional convergence are likely but not granted and that policy results depend on planning and implementation. EU funds have a large growth potential but may not deliver in practice, either because they are poorly managed or used for the wrong types of investment. Successful planning is required in order for the policy mix to take into consideration the comparative advantages of the regions. Successful implementation de-

^{*}estimations



pends on the institutional environment and the receptiveness of the regions. Not all forms of investments deliver (long-term) growth effects.

According to the EC, the macroeconomic impact of the consecutive Programs is significant, but overtime does not seem to be much higher than 1% of GDP. This is of course related to the characteristics of the productive systems of Greece and especially the weaker regions, but it is also related to deficiencies in the design and implementation of the policies. Some of these deficiencies will be discussed below.

Policy constraints, difficulties and deficiencies

A number of difficulties, constraints and deficiencies have been reported that affect the delivery and effectiveness of development policy in Greece. First of all, the whole process is to a large extent bureaucratic, discouraging private investment and causing serious delays in public investment. These delays are responsible for the low multiplier effect of the funds and are caused by delays in the design of policies, the complexity of the allocation of responsibilities and in some cases the antagonism between the ministries involved, the bottlenecks in the supporting information systems, the legal framework and the beyond any reason delays in the judicial system, the delays in issuing environmental and archaeological permits, the structure of the procurement system and more. Despite many efforts to simplify, the implementation of development policy remains overloaded with heavy and time/effort consuming procedures, checks and requirements that have little to do with the essence, the quality and the impact of the policy. A large part of this bureaucracy is imported by the EC, but a significant part is domestic. Beyond the issue of delays, this bureaucracy consumes (wastes) significant and well educated human resources in the public sector that could have a real value added in other more productive assignments.

Second, the whole setting of design and delivery of development policy is highly centralized (Table 9A). About 75% of the budget of the Public Investment Program, which includes Structural Funds and domestic funds for development policies is run by the Central Administration, the Ministries and their Organizations. About 12% is run by the Regional Governments and another 13% by the Local Governments. A similar picture is also observed when we look at the total Government budget, where almost 90% is allocated to Central Government. Greece is an outlier in the EU with respect to the allocation of power and resources among the three levels of administration (central, regional, local) and has a long way to go in order to meet the 'place-based' approach in policies that is promoted by the EC and implemented by most countries.

Third, regional convergence and faster growth of the weaker regions was never a clearly declared priority of the development policy. Policy priorities were mostly horizontal (for example infrastructure, environment), while the large scale emblematic projects in Athens (Airport, Attiki Odos, Metro, Hellinikon, etc.) did not always have an equal match in the periphery. In the last programming period the largest share of the Structural Funds (78%) were run at the central level and only 22% was run by the Regional Administrations, although the efficiency of the Central level has not been better. In addition, the regional allocation of the Public Investment Funds does not seem to support the convergence goal. As it shown in Figure 4A, the per capita expenditure of the Program in the decade before the



crisis did not always favor the weaker regions and does not seem to generate convergence, at least in the period under examination.

Forth, diachronically, in the understanding of the political system, but also in the eyes of the ordinary people, development policy was considered to be primarily the infrastructure projects. In the decade before the crisis, almost half of Public Investment Program and the Structural Funds have been directed to infrastructure, with much smaller amounts of the total budget going to new private investment, which for long periods has been a residual policy (Figure 5). This mentality, which is deeply embedded, is changing gradually, as the gap in private investment (some 10% of GDP) and the unemployment rate that is still close to 20% require stronger and more effective support to new private investment activity.

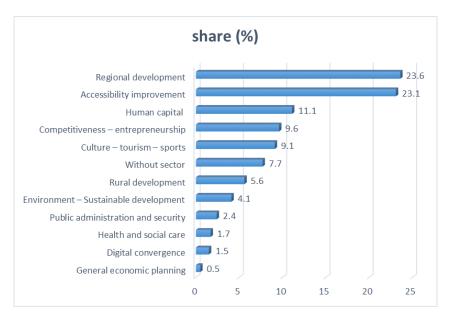
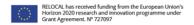


Figure 5. The allocation of the Public Investment Program to main types of expenditure, 2000-10 Source: Ministry of Economy and Development.

Fifth, the effectiveness of State aid policies in support of private investment has been less than required. Over the last 30 years, the Greek State has subsidized through various support schemes (Laws of State) 23,200 business plans with a total budget of 25.2 bn and a total public contribution of 9.4 bn (Table 10). These investment plans have generated 184 thousand employment positions. The average rate of support is relatively high and reaches 37,5%. It is observed that the over time the average amount that needs to be invested in order to create an employment position (I/E) jumps from 24 thousands euro in 1982 to more than 500 thousands euro in the period 2005-10¹. In the same period the average size



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¹ This period includes many wind energy plants that create limited employment positions.



of investment (I/N) has increased more than 20 times, partially indicating the increasing capital intensity and modernization of new investment.

It is worth noting also that the average new employment positions per investment (E/N), remains almost constant over time to a low figure of about 8 positions, indicating the inability of the investment policy to generate larger projects and increase the small size of Greek firms. Overall, it seems that the impact of investment policy on the level of development of Greece has been positive, but small. Over a period of 30 years, 23 thousand new investments in an economy with 1 million firms is not a figure that can make a real difference. Bureaucracy (it takes a long period for an investment between the time of application for the grant and the time of implementation) and a low budget allocated in the Public Investment Program to support private investment policy explain partially the reasons for this low performance of the policy. Even more disappointing is the impact of the investment policy on regional convergence, as 30 years ago Attica accounted for 1/3 of the national GDP, while now its share is close to 50%. This indicates that the regional differentiation of the investment schemes (that is gradually replaced by horizontal measures) has not been enough to direct a significant number of investment to the weaker regions.

Sixth, policy initiatives have been limited by the structural characteristics of the regions and especially their specialization and their ability to generate value chains in their productive systems. The specialization of the regions and the diversity of their productive base is one of the factors affecting their performance and their prospects for growth and convergence. Some regions have limited specialization in tradable and outward looking sectors and are dominated by inward looking sectors primarily serving local demand (Table 11A). These regions will have to develop new specializations or improve existing ones through a painful process of restructuring.

Legal basis	N	I	G	G/I	Е	I/E	E/N	I/N
L.1262/82	12,06	2,28	0,78	34,4	92.799	24.587	7.7	189.161
L.1892/90	4,89	3,73	1,45	39,0	39.676	94.083	8.1	763.209
L.2601/98	2,31	2,55	0,84	33,1	19.239	132.90 6	8.3	1.102.624
L.3299/04*	3,61	15,54	6,13	39,4	31.109	499.64 6	8.6	4.297.346
L.3908/11*	0,31	1,10	0,23	20,9	1.311	839.20 7	4.2	3.515.017
Total	23,20	25,21	9,44	37,5	184.13 4	318.08 6	7,4	1.973.471
* = ex-ante evaluation figures								

* = ex-ante evaluation figures

N = Number of investment projects (in thousands)

= budget of investment (in billion euros)

G = public subsidy (in billion euros)

G/I = average rate of subsidy (%) E = employment positions

I/E = average investment per employment position (in euros)

E/N = average number of new employment position by investment

I/N = average size of investment (in euros)

Table 10. Synoptic figures for the investment incentives Laws and their results in the period 1982-2011.

But even in the case where a region has a strong specialization in a sector of comparative advantage, the increase in demand for this sector in many cases does not result to an in-



crease in demand for other local sectors because local and regional productive systems are fragmented. Critical forwards and backwards linkages are missing at the regional level and as a result the increase in demand for one sector does not lead to an increase in demand (and production) of another local sector, but is directed to other regions or countries. A classic example is tourism. Its dramatic increase in many regions because of the millions of visitors every year has not resulted to an equal increase of the local agro-food sector, but to imports, because the two sectors are not connected locally. This inability to form local and regional value chains affects the size of regional multipliers (Table 12A) and the ability of the regions to take advantage of their comparative advantages, expand and diversify their productive base.

2.3 Framing the Cases

The Case of Western Macedonia: The Post-Mining Regional Strategy

The Western Macedonia is a region that since mid-50s started a coal intensive development pathway, due to its significant lignite reserves. Since then the regional economic growth was based on one-dimensional characteristic, and was focused on the energy sector, with all the traits of pathogenesis established through the years. The pressure and impact on the environment throughout all these years was enormous.

During the last decade the lignite industry in Western Macedonia is in decline, shrinking its share in the energy mix. The current Special Development Programme (SDP) of the Regional Authority is directed to areas within the region with environmental degradation due to fossil fuel energy production. From 2002 onwards, there has been a gradual reduction in fossil fuel energy production, noted in the share of lignite in covering Greece's electricity demand. The transition to a new national energy model and the need to transform the model of development of Western Macedonia have been acknowledged and anticipated for years. However, the reluctance of the state, local authorities, local stakeholders and Power Public Corporation (PPC) has prevented the Western Macedonia Region from planning and adapting to a new era in a timely and smooth manner.

The SDP acknowledges that Western Macedonia is facing high environmental pressures due to industrial, mining, and energy production activities, which produce dangerous waste, deplete natural resources, and threaten quality of life. The programme was launched by the Greek Ministry of Environment and Energy, imposing a special Development Levy which is based upon the energy production at local level.

The particular case study represents an action to improve the spatial and environmental justice. More specifically, the 6th Thematic Objective in the 2014-2020 programming period, addresses issues related to the environment and resource efficiency, linked to achieving sustainable growth and job creation in the forthcoming post fossil fuel energy production era. The "Just Transition Fund" currently initiated by the European Parliament aims to support the transition of particular regions to a post-lignite era.



The Case of Thessaloniki: The Alexander Innovation Zone

The Region of Central Macedonia (RCM) is a traditional gateway for trade between Greece, the Balkans and south-eastern Europe. Between mid-90s and 2008, the time of onset of the current economic crisis, the region experienced high economic growth rates. Despite this fact, unemployment rates remained relatively high compared to the EU and the national average.

The Region of Central Macedonia is considered to be a "European paradox", due to the fact that while there is a high level of research activity and knowledge production by a number of entities and initiatives, the performance of the region in the field of innovation remains low (Georgiou et. al. 2012). In RCM a relatively small proportion (12%) of firms operate in industries characterized by the OECD as medium - intensive technology. RCM and its capital Thessaloniki appear as "consumer" rather than "producer" of innovation.

Taking all this into consideration there was established the Alexander Innovation Zone (A.I.Z.) with the goal is to promote the region of Thessaloniki as an Innovation-Friendly Destination, in order to facilitate international knowledge development partnerships and to attract investments that will create high-value jobs and skills. This, in turn was expected to spearhead a change in the economy of the area under responsibility, creating a positive impact on the Hellenic competitiveness.

The particular case represents an action to deliver/improve spatial justice from the perspective that A.I.Z. tries to to suspend the emigration of the best scientists and if possible to reverse this path. This can be done by: a. generating the conditions for the young people that would allow them "to create in their home country", and b. investing in them, hoping they do not to leave en masse, staffing innovative businesses in Europe and America. One of the main objectives is to attract investment and startups by focusing on knowledge and advanced technologies, that can give new impetus and direction to the Hellenic economy. Based on the above, the case of A.I.Z. was expected to provide answers to the research question: "What are the institutional structures and functioning of territorial governances arrangements fighting spatial injustice?"

The Case of Volos: Overcoming fragmentation in territorial governance

The City of Volos is the 6th largest city of Greece with a population of 144.449 inhabitants in 2011. During the entire 20th century the city developed gradually a strong industrial character with large manufacturing firms locating in the area and making its industrial base resemble more a western, rather than a southern structure of production. From the 1980s and onwards a wave of de-industrialization has hit the city eliminating a significant part of its economic base. In the years 1999 and in 2010 two important institutional reforms changed the map of local government in Greece and produced larger municipalities in terms of area, population and jurisdictions. The number of municipalities decreased from about 10.000 to about 1.000 in 1998 (Law 2539/97) and from 1.000 to 325 in 2010 (Law 3852/10). The reform intended to eliminate fragmentation and improve the efficiency of the local government, through the creation of stronger local governments that benefit from scale effects in the provision of basic services. In both instances, there was significant resistance in the implementation of the reform and arguments claiming that it will reduce



representation and democratic control. These reforms have expanded significantly the limits and the jurisdiction of the new Municipality of Volos (that now includes 9 former smaller municipalities) and the research question is whether this has helped the city to deal better with the challenges it faces (i.e. unemployment, industrial decline and decaying infrastructure) and provide better services to its citizen.

Similar reforms aiming to improve the efficiency of the local government, by merging neighboring municipalities to a larger one, have taken place in a number of EU countries.

Their justification is that the provision of services and their efficiency or quality depends to a large extent on the size of the population served, implying that larger municipalities will be able to provide a better administration, economies of scale in management and the provision of services and deal in a more efficient way with the problems of the cities. The counter argument is that this takes place at the expense of local democracy and that smaller areas merged into a larger municipality may lose their access to decision making and may in fact experience less attention and weaker services.

Although the pros and cons of this type of institutional reforms are clear, the evidence from their implementation is missing. This case is relevant to the basic research questions of the RELOCAL project, as it deals with the institutional arrangements taking place at the local government level, the capacity of local government to implement policies and provide services, the patterns of territorial governance and the perceptions at the local level concerning the characteristics of self-government.

The Case of Karditsa: The Ecosystem of Collaboration

Karditsa is a locality with obvious challenges of spatial justice and coping strategies for improving living conditions and promoting a more balanced development. This regional unit (NUTS3) has a large share of its population involved in the primary sector, an unemployment rate which is above the national and regional averages, and a GDP per capita average - among the lowest in the country.

On these grounds, the Local Development Agency and a number of local actors of the Prefecture have taken the initiative to set up a mechanism that will support the creation of a network of collective actions in the Social and Solidarity Economy in order to promote bottom-up and inclusive development.

The Ecosystem is based on a number of activities, procedures, rules and support mechanisms that include also a "cooperative incubator" at regional level. It is unique at national level and it currently comprises 41 collective organizations. The incubator (which is at the heart of the Ecosystem) has until now offered support to many local initiatives transformed already in legal entities like: Civil and Rural Cooperatives, Non Profit Agencies, Associations, , Social Economy Enterprises, SME networks, NGOs and Civil Society Associations, etc. With the support of the Development Agency, all these local collective schemes have formed gradually a local network or "ecosystem" of collaboration. The ecosystem provides co-working spaces, daily guidance, training, seminars and lectures, mentoring, coaching, and international networking.



The Ecosystem involves directly and indirectly more than 16 thousands local residents. In 2016 the turnover of the Ecosystem was at least 65 million of Euros. In that year it contributed to the local GDP by 6%. These are the biggest numbers one can see in Greece in relation to the Social Economy.

Based to the RELOCAL rationale, the proposed case study represents a place-based approach to deliver/improve spatial justice. The case of the "Ecosystem" as a bottom up initiative based on locality and territorial governance arrangements was expected to provide answers at least to the following RELOCAL research questions: a. What is the functioning of territorial governance arrangements fighting spatial injustice? How do communities/interest groups organize themselves in localities to address spatial injustice and push this issue on policy agendas?



3. The Studied Cases in a Comparative Perspective

3.1 Characterising the Cases

Analytical Dimension 1: Perception of spatial (in-)justice within the locality

Despite the fact that the dominant **perception of injustice** is related to low income and unemployment, the issue of **spatial injustice has an economic, social, cultural and philosophical dimension**. It is widely recognized however, that the most distinctive dimension of inequalities has to do with "**geography**". Access to the sea or to large urban centers and agglomerations, the geographical coordinates and distance, the boundaries, borders and neighboring setting and even the geomorphology, are important geographical variables which create **different starting points** and "initial conditions" in all Greek cases. Likewise, it is now common place that spatial justice concerns the quality of public services, administrative arrangements, infrastructure, the level of poverty, social exclusion or criminality. From the economic point of view, the weak productive base, low level of R&D and the lack of innovation culture, create conditions of low competitiveness that exacerbate inequalities spatial injustice. All these factors shape the framework of **(in)equalities in opportunities** for wealth and personal development.

Seen in this respect, territorial inequalities between urban and rural space strongly influence living conditions. Inhabitants of the mountain settlements for instance, do not have enough access to important health, education, administration and entertainment services. Rural areas are characterized by aging population, problematic access to education and health services, and the low level of infrastructure.

Why inequalities exist? What causes them? In an attempt to **explain inequality in the Greek case studies**, two different viewpoints seem to come to the fore. The first is that inequalities are mainly explained by geographical or historical factors and off course by the type of economic activities that each area has developed. The second argument is that responsible for the inequalities are the central or local government because of their policies were either biased or ineffective.

Seen from the perspective of power imbalance it is noteworthy that spatial injustice in most of the cases, is perceived as the outcome of a 'power game' where several centers struggle to control others. As a result, regional policies lack essential content and are unable to cure injustice. In other words, spatial injustice is a path and place dependent process that evolves over time. Based on the above, spatial (in)justice can also be found at intergenerational and intra-generational level in term of sustainability in the way a locality exploits the natural and non-renewable resources.

In the case of Western Macedonia, this issue is of great interest because of the significant environmental costs of the region's contribution to the country's energy efficiency. Undoubtedly, this model has caused inter-generational injustice because of environmental degradation. At the same time however, it is interesting that during the expansion phase (mid-50 until 2008), this "paradigm" generated high incomes and employment, while during the "de-carbonization" phase (from 2009 until today), unemployment is rising dramat-



ically, and incomes are constantly shrinking. During the "expansion phase", intergenerational injustice based on intensive use of nonrenewable resources, rendered a short-term benefit to the region. On the other hand, intra-generational injustice based mainly on high incomes compared to other areas, triggered spatial inequalities where citizens and places have been affected disproportionately. During the "de-carbonization" phase, inter-generational injustice based mainly on strict EU Regulations for reducing CO2 emissions, caused dramatic depression in the region towards its future perspective. Contrary, intra-generational injustice, seen in terms of unemployment arising and economic stagnation in the region, mitigates spatial inequalities, in comparison to other areas.

Analytical Dimension 2: Tools and policies for development and cohesion

Attempting to evaluate the general understanding of territorial development and related tools and policies, it seems that local and regional level formal and informal stakeholders have not managed to be collectively mobilized based on a common development vision. The formation of any common vision, manifestations or declarations though is temporary and **doesn't go beyond the needs of the election cycles**. Within this framework, **localism** has dominated over time resulting in no major actions, lacking critical size. In other words, there is no mobilization on the basis of a common development vision. Official declarations don't go hand in hand with a well-developed strategy.

In this line of development trajectory, there is a **lag in the implementation of the policies** that have been planned and approved. In many cases the way of approaching and assessing the development/regional problem is "**epidermal**". Usually the policy makers run behind the problems after they have grown, acting rather as firefighters. Additionally, there is resistance to change whereas the problems are addressed **fragmentarily rather than holistically**.

Access to decision-making centers seems to be still significant. However, many problems can be solved remotely due to technology. But the predominant feeling is that "the further away from Athens, the more difficult life is". On the other hand, however, the value of access to decision-making centers has been overstated by many as it is a matter of mentality. The local elite maintained this narrative because it largely covered its own weaknesses and inadequacies.

It is generally agreed that the **European cohesion policies** contributed over time to the country's and each region's development, despite the weaknesses that still exist. Structural Funds have funded many significant projects in Greece. Many infrastructures (e.g. roads, schools, nursery schools, biological waste treatment plants etc.) would not exist today without the European cohesion policies. In this light, the **RIS3 innovation strategy** at the level of at least one official text has made a certain degree of vision in the direction of innovation. However, the question remains whether this strategy has been understood and adopted by policy makers and whether it is feasible.

However, **in difference to this focal point, some stakeholders** do not see an authentic will, in the European cohesion strategy to solve the "North-South" pattern of regional disparities in Europe. To the contrary they believe that the most of interventions financing from the European Structural and Investment Funds favor the most advanced regions.



From this point of view, the dominant way of planning for each region seems to be "one size fits all". In this line, the EC maintained a high degree of supervision, ignoring the many particularities of the regions, and resulting in the logic of using "brought over projects" that were designed and implemented somewhere else. On the other hand, however, it should be noted that it is responsibility of local policy makers to set priorities that fit better to the needs of the local economy. To this end, the majority of local policy makers are considered not to have the ability and the possibilities to influence the national and EU agendas for territorial cohesion and spatial justice.

In designing territorial and cohesion policies, the local and regional authorities organize **consultation processes** with other stakeholders to the extent they are obliged by the funding Programme to do so. Usually however, this kind of dialogue does not offer any meaningful value added, and this lies at the responsibility of both those who organize and those who participate in the consultation. There is no doubt that a new development model and a collaborative planning culture is needed, focusing on the valorization of the comparative advantages, which integrates innovation and enhance the creation of new jobs, the social cohesion and the environmental dimension of the actions.

Analytical Dimension 3: Coordination and implementation of the action in the locality under consideration

The **Regional Governor**, who is also the president of the Monitoring Committee, leads the Action. Beyond the institutional framework, significant role plays the profile of the leader himself. This profile is determined by the modes of leadership and forms of power the leader will select to exercise in practice and the degree to which the leader will pursue to patronize the management system. The main Frictions identified are: (a) the region vs municipalities, (b) energy municipalities vs non-energy municipalities (c) projects focused only on environment vs projects focused on development. Projects are prioritized in the framework of the democratic planning of the municipalities and the region. There is a margin/room to apply political pressure and compose different points of view. The mechanism of representation that was envisaged in the reform is the Local Councils that have the competence and responsibility to discuss the issues that arise in their area and make recommendations to the Municipal Council, which is entitled to make the final decision. The Ecosystem follows the rules and procedures of a social collaborative structure. It is a bunch of non-homogenous structure. Different perspectives and interests are taken into account though the process of consultation and argumentation. The process of decision making is done through virtuously democratic procedures.

AIZ creates channels of communication across fragmented worlds by **playing the role of** 'facilitator'. Nevertheless, this requires appropriate marketing of this strategy and a strong management that will benchmark all this knowledge. AIZ initiative is a **classic top down public intervention**, and the player with the predominant role is primarily the Ministry of Interior. The fact that Alexander Innovation Zone operates under the public umbrella, gives room for external interventions. At the same time the Zone, did not manage to 'get in the local players' shoes" of needs.



There are a few projects that have synergy with other projects and other bodies. On the municipality level, for example, there are no trans-municipal projects, although the institutional framework does not prevent it. Collaboration exists only at the level of some coinvestment projects between the region and the municipalities. The interconnection of research with business activity was problematic and the diffusion of research results deficient.

In terms of what hat is the **impact of the reform on development and efficiency issues?** The reform provides the ground and the potential but does not guarantee the results. Much is left to the actual people that are in power. A good Mayor may promote the city and solve problems; a not so good Mayor may accumulate problems in the whole area.

How successful was the **implementation of the reform**? The majority of the respondents consider that the reform has concentrated resources and improved efficiency in managing the finances of the municipality or implementing projects but has been less successful in providing equally good services to the distanced and remote communities. It seems that geography (in the sense of distance) and heterogeneity (in the sense that different places had different problems) was a real barrier to the speed or quality of services provided and the presence of the administration in these areas. There is a consensus among respondents that the **services provided to the smaller, remote areas or villages** are not of the same quality with those provided in the urban area, at least in the categories related to everyday problems.

Analytical Dimension 4: Autonomy, participation and engagement

The complex and ineffective administrative system at national level determines the degree of autonomy of regional and local authorities and sets a restrictive framework for the impact of the Action.

The **strengthening of autonomy** at the local level was characterized as an important prerequisite for addressing spatial injustice, as the locally elected leader is accountable to the local scale. In addition, the concentration of power and resources in the center works to the detriment of efficiency.

There were serious concerns about whether self-government is mature to adopt a serious fiscal decentralization. This is a characteristic indication that the local political system has not managed to be 'weaned out of the center', thus failing to deal effectively with the issues of regional inequalities. "Exercising of power" can be traced from the Region towards the other institutions, as the Regional Council is responsible for the operating plan. Another form of power (im-)balances can be traced between the energy municipalities, who receive the lion's share in the fund distribution and the non-energy municipalities, who receive very little from the distribution. Another type of power (im-)balance that can be traced is between the municipalities and the region (which has the funds). The new institutional setting provides the ground for expression of all interest groups and stakeholders and for more synthetic approaches in decision making. The consultation committee plays a role, but in general the whole decision-making process is open and democratic.



In terms of **cooperation with national or regional actors**, it seems that "size maters" since a larger Municipality receives more attention in the decision-making centers (in the Ministries in Athens) and has the personnel and the capacity to participate in more programs (for example European Programs) or actions with national or regional organizations and most importantly with the other Municipalities in the region.

An ecosystem of innovation should be born only by the market itself. In practice, however, a **combination of centralized distributive and procedural interventions is necessary** at least in the early stages of an operation such as that of AIZ.

Also, the cooperation culture is occasionally, or more systematically in some periods, undermined by aggressive behavior either on behalf of the political personnel, or on behalf of special interest groups (for example an environmental group that does not want an investment, or opposes a decision).

The participation is facilitated and even encouraged because the nature of the social venture requires a wide participation. The simple citizens haven't embraced it because they have past bad experiences. They saw assets being stolen and resources being lost in the past (when some of the old cooperatives got bankrupt due to mismanagement), and now it is difficult for them to trust again. That's why "selling" this idea to the wider public is still a must according to some respondents. The success of the ecosystem depends on that.

Analytical Dimension 5: Expression and mobilisation of place-based knowledge and adaptability

Spatial scope of intervention is the region of Western Macedonia, but the activities are concentrated in the regional units of Kozani and Florina and in particular on the energy axis where the lignite mines and the power stations, where they are installed and operating, as defined in the legal framework. In this context, place-based knowledge can be identified at all scales of the aforementioned spatial levels, in the form of business plans, studies or political decisions and practices. Place-based knowledge may also address a series of claims and struggles of local society and stakeholders to improve the environment or to claim the imposing of an extra restitution fund against the use of a non-renewable natural resource.

When the question arises, 'what could be the most appropriate governance structure?' the responses diverge. Most interviewees claim that the top down logic of creating an innovative ecosystem to be applied at the local level is wrong by definition. Practices are very often copied without considering the specificities of the place and without ensuring the acceptance of key stakeholders. In addition, top-down and bottom-up approaches, may well co-exist. The legislative framework has not only delayed long before shaping its final form but is also extremely complicated and complex.

The reform will reduce democracy and representation of the smaller areas. Before and after the reform the system operated as a representative democracy. The threat is not the lack of democracy, but the lack of interest to participate. There is concern if the reform implies an unavoidable trade-off where efficiency of the city management increases at the expense of the local autonomy, participation and democracy.



Many forms of "accumulated local knowledge" were utilized such as studies, operating plans, applied methodologies, configured contact networks, experts etc. Especially utilised was the ROP 2014-2020, the Strategic Smart Specialisation Strategy (RIS). The entities of the Ecosystem together with the Cooperative Bank and the Development Agency have incorporated a lot of know-how into the local production system. So, the Ecosystem is considered a lever for the transfer of know-how and knowledge to the local levels.

The stereotype that Athens always sees Thessaloniki through a competitive look is dominant. For this reason, there is often a widespread suspicion of anything planned and implemented by Athens.

What could have been done better in the existing framework of the reform? The answers include basically less bureaucracy, more room to hire personnel, more decentralization of power to Local Councils, more equal representation of small communities in the Municipal Council (a quota that all communities have at least one councilor), more public consultation and more development tools to the Municipal Councils that are now in the hands of Ministries of Regional Governments.

3.2 Findings Synthesising Dimensions A-C

Synthesising Dimension A: Assessment of promoters and inhibitors

Case Study 1-PMS

Inhibitors

The Region of Western Macedonia is the only one landlocked region in Greece. Furthermore, it is bordering with countries with very low salaries and a low tax scale in these countries intensifies the competitiveness problem. The one-dimensional approach (that defines the prosperity level of an area solely through the per capita GDP) does not correspond to the total developmental reality of the region. The region is placed in the phasing out regions of the EU-27 because of PPC, augmenting the regional GDP. As a result, neighboring regions and even the metropolitan area of Thessaloniki has a higher rate of funding. And this is unfair.

In addition, as in the rest of the country, there a huge bureaucratic procedure and long-time frame between planning and implementation. And lastly, maybe the most important problem and inhibitor of the region is the significant environmental degradation, which is not tackled in a proper way and with the appropriate speed of action.

Promoters

The area has cheap heating costs due to district heating based on PPC activities, which saves money from other activities. Plus, the area has good living conditions with low crime rates. In addition, the region has the most surface water in Greece, a lot of natural wealth, and many protected areas, which could be significant assets in regional strategy. Finally, the region is participating as a pilot case in the Coal Platform - the EU 'Coal Regions in Transition Platform' initiative and this platform provides the local stakeholders with an intensified learning by visiting other post-lignite areas and benchmarking. Also, there was established the EU (SRSS) technical support for setting up transition procedures



framework (governance & institutional/financial field). And the launching of National Just Transition Fund for 2018-2020 aims at job creation and entrepreneurship in the particular area.

Case Study 2-AIZ

Inhibitors

In a large sense, the major inhibitors of solving the manifestations of spatial injustice that the actions addressed are rooted in the lack of important incentives to attract business. This issue required intensive and systematic negotiations with the European Union to be resolved. The withdrawal of the Minister from the negotiations indicates that the central state has never supported the issue of incentives systematically and has never raised it high on its agenda and policy priorities. The unreasonably slow implementation of the individual phases of the AIZ from the official announcement in 2004 to the present day, cancels the project in practice, as developments in technology are running at a very fast pace.

Promoters

Regarding the factors that ensured the limited, but positive effects are a) the low-cost human resources compared to other regions in Europe has been seen as one of the strong assets of the metropolitan area of Thessaloniki; b) the city of Thessaloniki has very good air connections, a strategic geographical position, a promising port, low rents, cheap labor, good living conditions and an attractive tourist and cultural product; and c) the lack of clear political vision, strategic plan and governance model with clear roles between the state and the local ecosystem.

Case Study 3-OFG

Inhibitors:

The action was designed in the sense that it didn't take much into consideration the geography of unification and the respect for the different identities of the localities. The geography (in the sense of distance) and heterogeneity (in the sense that different places had different problems) was a real barrier to the speed or quality of services provided and the presence of the administration in these areas. Furthermore, the institutional framework is problematic in a sense that it allows for very limited autonomy to municipal councils and the mayor, as many decisions are dependent on the higher level of administration and especially the central government. The way the Consultation Committee is being implemented in the sense that it doesn't invite the stakeholders to important issues, thus being only ceremonial and not substantial. The non-participation of the stakeholders at the Consultation Committee, due to personal beliefs or disregards to the personality of the Mayor. In several cases the participants that support the opposition to the mayor will criticize any idea regardless of its merits, while the participants that support the mayor will rarely provide any further suggestions, because they do not want to weaken his proposals



Promoters:

The factors that ensured the limited, but positive effects are a) absence of informal relations that would favor specific people and the lack of transparency in the allocation of public resources that was very common in the previous small communities and b) the ability of a city to implement development or social policies is a direct function of its administration to prepare the case and present it in a convincing way to the Ministries or the Regional Council or the Managing Authorities in the case of Structural Funds. So, there are scale effects in preparing and supporting claims and size effects in defending them in the decision makers.

Case Study 4-KEC

Inhibitors

The major inhibitors of solving the manifestations of spatial injustice are observed to be a) the big exposure to the primary sector and the risks and fluctuations associated with it. Also, the existence of a few processing units in the area, makes the supply chain small; b) The endorsement chasm/gap. It is the chasm that lies between the early adopters and the main stream. When technology and ideas fall into the chasm, there is the risk for it to be lost forever; c) The failure and bankruptcy of some cooperatives/social venture is going to bring disappointment and lack of willing to endorse, to participate and to invest in these ventures; and finally, d) The non-existence of the right legal framework can be an inhibitor for any Action. This holds true especially when we talk about the Social organizations which have to be legally perfect in order to operate

Promoters

The cooperative mentality is one of the factors that ensured positive effect. The Region of Thessaly is the place where the first cooperative of the world was established. Hence, there is a long tradition of cooperation and collective structures. Having 5 members of the parliament, Karditsa is considered not very far from the central policy decision making. The success of some social ventures/cooperatives will trigger more enthusiasm and involvement in the Ecosystem by the wide public. This in turn will further ignite the Ecosystem. Further, the existence of the right legislation can be a promoter for the Ecosystem. The last law (Law 4430/2016 on the Social and Solidarity Economy and the development of its agencies) improves a lot the legal environment of the country for the social ventures. Yet, it doesn't preview for the Ecosystem any legal vehicles, and in that was it doesn't help it.

Synthesising Dimension B: Competences and capacities of stakeholders

One of the interpretive factors of producing and reproducing spatial injustice was the so called "**center- periphery**" administrative, political and economic development model. This model, involved mechanisms, procedures and institutional arrangements, which dominated the country and are defined by the lack of autonomous regional planning, problematic administrative structures, overlapping of competences, forms of political depend-



ency and huge bureaucracy. he above-mentioned "center-periphery" setting designates to a great extent the scope and limitations as well as the potentials and opportunities for local stakeholders to shape and implement a place-based agenda. Assessing the capacities of the local and regional political staff it is widely agreed that policy makers didn't manage to adequately respond to the critical development challenges that emerged. Often synergies and complementarities are absent even between two beneficiaries, while overlapping in competencies is pointed out. The Region and the Municipalities in most cases "fortified" themselves behind their budgets and show no positive attitude for genuine coordination. There exists Weak culture of cooperation between the key players in the innovation ecosystem. It seems that the decision taking body at the lowest local level have the capacity to reach to the other local actors (e.g. specific interest groups, members of the local elite, ordinary citizens, communities, etc.) It can do it at least theoretically. The willingness is another big parameter of this equation. The factors hindering the actors at the lowest local level to release their potential for development, social and spatial inclusion seem to be the lack of funding, lack of know-how to valorize the EU & national funding and the lack of cooperation spirit.

Negative impact on the degree of flexibility and effectiveness was the fact that the supervision and operation of the AIZ came under **the strict umbrella of public accounting** in the context of implementing the memorandum's implementing laws, which has created a shock adaptation. The role that **political parties** play in the formation of local and regional agendas is dominant. This parameter reflects "top down" and "paternalistic" practices which strongly influences the dynamics that can be identified between interplays of formal and informal empowerments. There is the feeling that there are no structured mechanisms for the civil society to express its views. But there can be noticed also the claim that the civil society is not very active and participatory when asked to do so.

Synthesising Dimension C: Connecting the action to procedural and distributive justice

Seen in a "top down" respect, the Action could promote under certain conditions, distributive and procedural spatial justice challenges. Redistributive policy may sound attractive to the weaker regions, but in practice it does not bring about balancing because it does not trigger endogenous local mechanisms alone. On the other hand, experience has shown that a completely neo-liberal approach that does not involve redistributive mechanisms can lead to an exacerbation of regional inequalities. Redistributive policy can also concern human resources in the form of education, capacity building or recruitment of key personnel. The mix of 'distributive justice', 'procedural justice' and 'autonomy' depends on the nature of the local issue, which should be tackled at the local level. More autonomy combined with addressing bureaucracy if it works appropriately, ensures equal opportunities for all regardless of the geographic location. In addition, it is considered that the required tools, competences and responsibilities are provided at the local level to develop its own strategy. This means that each area will be able to focus on its own comparative advantages through a 'positive sum game'approach that will not work at the expense of others.



The Action intensified intra-regional inequalities, **favoring the energy axis at expense of other areas**of the region. To this end, the Action should not only be focused on the energy axis but should be extended to the entire region. On the other hand, however, the exact opposite argument has often been stated, on the basis that **those directly affected by lignite activities should be solely those who should be strengthened and supported**. In other words, distributive and procedural justice is perceived through different perspectives within the region itself.

An interesting point of view was that 'bureaucracy does not create regional disparities per se'. What feeds inequalities in practice is the central philosophy and content of bureaucratic processes, which is a deep political choice. There is need to simplify procedures and exploit modern technology which could solve many procedural justice issues in practice. Supporting existing businesses as well as the setting up new ones, is the only strategy that can create new jobs and enable the region to overcome the crisis. Other important factors are the **institutional context** at national and european level, the **administrative arrangements** and **political stability** within the current crisis. For example, taxation on CO_2 emissions imposed by the European Regulations, drastically affects the impact of the Action at the local level as the power plants in the region are no longer competitive.

Furthermore, **Inequality in the opportunities offered is at the core of social injustice and spatial inequality**. From the territorial justice point of view, the crucial political challenge is whether the central state provides the same opportunities to citizens, businesses and institutions established either in the center or in the periphery. The action succeeded in tidying up the finances of the local authorities. The reform forced people to cooperate in order to deal with problems. Especially, the more distant areas have to discuss with the technical services of the municipality of the social services or the waste collection department in order to find a solution. There is a positive unanimity in relation to the position that the spatial injustices would decrease should the policies be more place-based. The "autonomy" was mostly mentioned as the most important concept and parameter in the development of a place, followed by "distributive justice", and lastly the "procedural justice". Yet, for an important number of voices the "procedural justice" is very high on the agenda.



4. Conclusions

The regional inequalities in Greece persist despite the implementation of development or Cohesion policies for more than 30 years. The general picture is that regional policies have failed to deter forces of further concentration of activities to the advanced areas of the country and to reduce inequalities. Attica (the region of Athens) raised its share in GDP in 30 years from 36% to 48% and its GDP per capita from 107% to 136% of the national average. Attica, its satellites and Thessaloniki together (in fact two cities) produced more than 60% of the GDP of the country, indicating the level of polarization of the economy. On the other hand, the less advanced and peripheral regions of Epirus, East Macedonia and Thrace have seen their share in GDP and their GDP per capita to decline in this 30-year period.

Initial conditions (with respect to development levels), geography (in the sense of accessibility to markets and services), stronger market dynamics and weaker policy responses (at the European, national and regional level) have maintained or increased inequalities. One obvious reason is that the strength of policies, in terms of the funds available, but also the allocation and direction of the funds may not be appropriate compared to driving forces and existing problem. In addition, the efficiency of the policies has been undermined by bureaucracy and over-regulation, while the delivery mechanisms remain highly centralized and to a large extend space-blind. Third, an equally serious reason is that the goal of regional convergence has not become explicit in a regional development plan and has not been supported by the necessary policy means. Greece does not have an explicit regional development strategy with clear goals and policies. As a result, regional policy is served indirectly through the Structural Funds objectives and policies that, however, include also many policies (RTD, industrial, competition, education, etc) that tend to favour more advanced regions and increase inequalities.

Moreover, the evidence has shown that policies are more difficult to be effective in the regions that need them the most, as critical background factors are missing. Persistently underperforming regions may not be in the same trajectory with advanced ones in terms of institutions and structural characteristics. Typical (in less advanced regions) drivers of growth may be absent or unable to break them out from the underdevelopment trap due to internal (path dependency) and external (competition) conditions. That is why policy design and implementation need to be also informed from their experience. Learning from failure is critical in order to design appropriate bottom up policies and avoid to copypasting of policy prescriptions from the experience of the advanced regions.

The four Greek case studies seem to have an important relevance for the localities under examination. The actions have been trying to contribute to the mitigation of territorial disparities. The impact however is disputable and triggers a lot of discussion. In particular, the effects and outcomes of the four case studies are summarized below:



CS1 - Post-lignite regional strategy in Western Macedonia

There is no doubt that the launch of the Action by the Ministry of Environment and Energy 20 years ago, constitutes, in terms of the amount of funds, a positive development for the Region of Western Macedonia's perspective. The Action met the region's long-standing and fair demand against the environmental degradation due to the use of a non-renewable energy resource such the lignite. The Action could perfectly tackle under certain conditions, distributive and procedural spatial justice challenges. Assessing however, the overall outcomes, one could claim that the developmental footprint could have been much greater. In reality, there have been many small projects with no clear added value and substantial result. In other words, the Action failed to shape new major projects and to form a long-term strategy aiming to boost the transition process within spatial justice logic.

The findings from the fieldwork show that the institutional and political context as well as the administrative arrangements at national level negatively influences the Action's spatial justice outcomes. More specifically, the major reforms in public administration involving local and regional governments were not accompanied by a precise and modern governance framework for a greater autonomy. A centre-periphery pattern seems to be dominant in all particular aspects of political, administrative and economic arrangements, associated by large bureaucracy and ineffective central administration. Within this frame, the political parties often intervene in the formation of local and regional agendas exercising "paternalistic" and "top down" practices.

CS3 - Volos and the local defragmentation

The same line of thinking accompanied by the equivalent requirements can be seen in the case of Volos. The fieldwork showed that a number of open issues exist in the representation and participation of smaller localities and that alternative and more decentralized structures could have been designed that would increase bottom-up representation and participation (thus procedural justice), without risking the overall efficiency of the system.

The Action supports clearly distributive and procedural spatial justice when the reference level is the city and the major injustice is related to the imbalances of power, resources and command of development tools between the central and the local government. Skepticism is present, but it has mostly to do with the capability of the political personnel to overcome the 'isolation' or 'confrontation' culture of the past and work in a more synthetic and inclusive way, making in that way the public consultation an essential characteristic of the decision-making process, not just a typicality. The reform provides the ground but does not guarantee it.

The analysis reveals that it is critical to define the 'local level' before proceeding with any conclusions. If we define as local the level of the functional urban area, then it becomes clear from the fieldwork that the reform has provided the critical scale in terms of area and population served and the critical size of personnel that allow to provide a wide range of services and design, claim (from the higher levels of government) and implement projects in a more effective way than before. If, however, the reference level is the small locali-



ty or the neighborhood, or a small community that is only a small and perhaps remote place within the city, the experience of the case study in Volos show that the reform has not being the same successful and receives more criticism.

CS2 - Alexander Innovation Zone

One of the key strategic objectives, at least at the level of declarations, was that the Alexander Innovation Zone would create those conditions that would be capable of acting as a preventive to the so-called brain drain that is an acute problem lately.

It is important for a place-based approach to carry out a systematic mapping and evaluation of innovation-producing research entities and businesses, to group them together and to promote them and eventually to prepare joint actions for the attraction of the investments.

The fieldwork showed a convergence of opinions that through visionary leadership and clear vision of "where we want to go" a greater spatial justice could be achieved. In practice however, epidermal approaches, simplistic solutions and lack of realism, absence of impact indicators and "collaborative culture" as well as temporary political benefits in view of the next election cycle, were the dominant spatial justice constraints. As a result, the Action has not been treated by the political staff, as a golden opportunity for the Metropolitan centre to catch up the international trends and challenges in the pitch of innovation.

Finally, it should be noted that planning aiming to spatial justice is foremost a political process and choice. This requires a visionary political leadership that adequately comprehends the international, national and local challenges and efficiently responds with certain strategy, priorities and interventions. Should these priorities be politically legitimized, then the planning and implementation, on an operational and technocratic level, will become easier and more substantial.

CS4 - Karditsa Ecosystem of Collaboration

The fieldwork in Karditsa revealed a strong expression of opinions that the poorer a regional unit is (like the one under discussion), the more acute is the social and economic injustice it faces. The Ecosystem of Collaboration in Karditsa is a bottom-up initiative with the aim to mitigate the social and economic injustices the area is facing though collaborative structures.

The fieldwork revealed that the perception of spatial injustice has to do with the type of stakeholder. That is, the entrepreneurs consider as injustice – the lack of infrastructure, which limits the access to the main markets and marginalizes the development of the area. The farmers consider injustice – the lack of jobs, the beekeepers - the environmental issues, and the local politicians – the seat of the head of the regional unit. But all the groups feel injustice to other areas of Greece that seems to be enjoying more prospect (ex. the islands).

The legal framework is not exactly what is needed for the Ecosystem to succeed. The *Law* 4430/2016 on the Social and Solidarity Economy and the development of its agencies (that is



quite recent) doesn't give the chance to the Ecosystem to acquire a legal form as a second tier management organization of collaborative structures. There was also stated that quite often the rules of the EU don't provide the ability and flexibility to local communities to intervene specifically and focused in order to solve some of their big problems.

Finally, the fieldwork revealed a very important parameter to be taken into consideration when analyzing the Ecosystem and its benefits: that the effects of the crisis are inversely proportional with the size and depth of the social economy in a region. This means that the more employment and turnover a region has in the Social and Solidarity Economy, the less it will be exposed to economic fluctuations, financial bubbles and crises.



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6. Annexes

6.1 List of Indicators

There is no statistical data available at the spatial level of the cases addressed by the RE-LOCAL research in Greece. The table from below provides data for the lowest spatial level at which data is provided by EUROSTAT database and the Hellenic Statistical Authority, accessed in February 2019.

		CS1 – Post-lignite regional strategy in Western Mace- donia NUTS2: Dytiki Makedonia (EL53)	CS2 – Alexander Innovation Zone NUTS2: Kentriki Makedonia (EL52)	CS3 – Volos and the local defragmenta- tion NUTS2: Thessalia (EL61)	CS4 – Karditsa Ecosystem of Collaboration NUTS2: Thessa- lia (EL61)
Indicator 1_1					
Name	Income of households – development regions (NUTS 2), 2018	2,510.48	16,922.98	5,966.11	5,966.11
Indicator 4					
Name	Economic activity rate- GDP as a percentage of the total Greece output (NUTS2), 2017	2.23%	13.85%	5.24%	5.241%
Indicator 5					
Name	Employment rates NUTS 2 – as a percentage of the total employment	2.20%	16.20%	6.46%	6.46%
Indicator 6					
Name	Unemployment rates – development regions (NUTS2), 2018	27%	20.7%	18.4%	18.4%
Indicator 7					
Name	Youth unemployment rates – development regions (NUTS2), 3 rd semester of 2018	62%	35.6%	43.6%	43.6%
Indicator 8					
Name	Long term unemployment rates	NA	NA	NA	NA
Indicator 10_1					
Name	Life expectancy – counties (NUTS2), 2017	82.2 years	81.4 years	81.8 years	81.8 years
Indicator 14					
Name	NEET	NA	NA	NA	NA
Indicator 24_1					
Name	Total population – resident popu-	271,488	1,880,122	725,874	725,874



	lation, counties (NUTS2), 2018				
Indicator 28					
Name	People at risk of poverty or social exclusion – development regions (NUTS2), 2017	33.9	33.9	39.7	39.7



6.2 Additional information

BOX 1. Economic crisis in Greece: Domestic and European market and policy failures

Economic crisis in Greece: Domestic and European market and policy failures Greece was considered to be a success story of convergence in Europe for more than a decade in the late 1990s and early 2000s (in a region with not too many success stories). How did this country turn to be a case of a profound failure in early 2010 and why did the crisis last for so long? Although the attention of the Media has focussed on the qualities of the political system and the (resistance to) imposed reforms, the causes of the crisis are deeply embedded into the structure of the economy and the development model that prevailed during the last 30 years. At the structural level, the productive system in Greece is dominated by inward looking small enterprises (average employment: 4 employees per firm) that cannot easily benefit from scale effects and therefore having with limited competitiveness. This figure, which remains unchanged for decades, is by far the smaller in the EU and does not allow firms and the economy to benefit from economies of scale (Petrakos, 2014; Petrakos et al, 2012).

Manufacturing has shrunk to the very low 8% of GDP and it produces mainly consumer, labor intensive and resource intensive products serving mainly the domestic market, while the tertiary sector is dominated by the public sector. Defensive adjustments lead Non-tradable sectors to dominate in areas that cannot stand competitive pressures and forwards and backwards linkages between critical sectors, such as tourism and food or agricultural sectors are limited. As a result, domestic output multipliers are low even in the sectors of competitive advantages.

The development model of the last 3 decades before the crisis was based on consumption and imports instead of investment, production and exports, on low interest rates that favored public and private borrowing, on State employment instead of new jobs in the private sector, on limited international competitiveness and serious difficulties with exports to the EU markets, on rent seeking activities around the public sector, the stock market and the construction sector and extensive tax evasion that required public borrowing in order to fund public expenditure (Petrakos, 2014).

At the same time, the state mechanism was and continues to be bureaucratic, over-regulating and sluggish and in most cases it discourages investment activity. It is highly centralized, leaving limited funding and jurisdiction at the regional and local level. Over-regulation and control have led to delays in the implementation of the programs of the Structural Funds, although part of the bureaucracy is imported by the EC.

As stated above, the European economic architecture (SEM/EMU and the Treaties) produce more competition than the EU South and East could face and unsustainable trade and FDI imbalances that generated divergence trends among the EU regions and triggered debt-led development policies in the more vulnerable regions. The evidence of Greece and the South indicates that the progress made in the European economic space has been highly selective and that the main drivers of growth, such as agglomeration, human resources, geography, forerunner-friendly integration and initial conditions with respect to market



size and development levels typically favour the larger, central, more advanced and with a better structure areas. Unbalanced integration has combined open markets with increasing trade deficits and public deficits in the periphery, leading to a serious redistribution of income, wealth and resources at the expense of the less attractive or less productive places (Petrakos et al, 2011).

The management of the crisis has been also under scrutiny for its effectiveness. It has been claimed that the crisis would have been milder and shorter, if negative rhetoric in the early period, changing positions and conflicting messages from the EC, IMF, ECB and some governments did not spread uncertainty about the future of Greece in the Eurozone. It would have been milder if part of the political elites in a number of core EU countries were not inclined to resort to punitive policies and actions (...to avoid "irresponsible" behavior in the future...). The early slowness to respond to a mainly systemic problem was followed by an overreaction and unrealistic and hasty rescue programs and a gross misunderstanding of the impact of proposed fiscal policies on the economy (the famous multiplier of public spending that was estimated by the IMF to be equal to 0.5 instead of \sim 1.3). As a result, the fiscal shock caused more problems than it solved (Petrakos, 2014).

Of course, a major contributor to the crisis has been the political system that had in general a short term perspective in public policy and clientele practices that persisted despite some efforts to modernize the public sector. The political system was responsible for being unable to deliver a reform plan for the economy or the public sector in the period before the crisis, maintaining a demagogic political environment where reforms were unpopular and had a high political costs. The political system was also responsible for failing to generate a consensus for the management of the crisis.

The experience of the European South has shown that a persistent core-periphery competitiveness gap within the Eurozone can be transformed to a serious trade deficit and that, in turn, to an unmanageable public deficit. These market imbalances combined with serious policy failures have triggered a serious economic crisis that widened the existing development gap between the EU core and the European periphery. In Greece, but also in other places, the current crisis has eliminated the progress that has taken place over the last 20 years, damaging the credibility of domestic and European institutions and policies (Petrakos, 2014).

The impact of the crisis and the austerity programs was severe and beyond any projection. Greece experienced a deep recession and in a period of five years lost 25% of its GDP and about one million employment positions. Unemployment jumped in 2013 to 27% and youth unemployment reached 50%. The policy mix included the reduction of the Public Investment Program by more than 36% in the 2009–13 period, at the time that private investment declined by more than 42%, despite the serious reductions in labour costs, because of the uncertainty surrounding the future of the economy and the dramatic increase in taxation. With regard to the long-term prospects of the country, an undermining process of brain-drain is taking place during the crisis, where the young and educated Greek population leaves massively the country in search of employment and security, predominantly in the advanced EU economies. The crisis resulted in severe social polarization and poverty, as about a quarter of the population ended up living below the poverty line. It is not clear yet what the long-term effects of the crisis will be on the structure of the econ-



omy. Clearly, the previous model is no longer sustainable. However, several years after the beginning of the crisis, and although signs of recovery are present in all aspects of the economy, it is not clear if this is the early stages of a new model of development, or adjustments that will not last during the upwards phase of the economic cycle.



BOX 2. Composition of Gross Value Added in the Greek NUTS II regions, 2017

Table B2. Composition of Gro	ss Value	Adde	d in th	ie Gree	k N	UTS II	regi	ons, 20	017		
	Total GVA	A P	rimary	sector		Secon	dary s	ector		Terti	ary se
	Share	Sha	re	Share		Share		Share		Share	
	(%) ir	ı (%)	in	(%)	in	(%)	in	(%)	in	(%)	in
Geographic area	country	cou	ntry	region	l	count	ry	region	1	countr	y
	2017	201	.7	2017		2017		2017		2017	
Greece	100.0	100	0.0	4.2		100.0)	15.6		100.0	:
EL30 - Attiki	47.9	4.4		0.4		36.7		12.0		52.3	:
EL41 - Voreio Aigaio	1.4	1.9		5.7		0.9		10.3		1.5	:
EL42 - Notio Aigaio	3.4	2.2	2.2		2.7		2.2		10.0		
EL43 - Kriti	5.0	9.3		7.9		3.8		11.8		5.0	
EL51 – Anat. Makedonia,											
Thraki	3.8	6.9		7.7		4.5		18.5		3.5	1
EL52 - Kentriki Makedonia	13.5	19.	4	6.1		14.7		17.1		12.9	1
EL53 - Dytiki Makedonia	2.4	3.8		6.7		7.5		47.9		1.4	
EL54 - Ipeiros	2.2	4.6		8.8		2.2		15.3		2.1	1
EL61 - Thessalia	5.1	14.	3	12.3		5.8		17.7		4.5	1
EL62 - Ionia Nisia	1.8	1.8		4.2		8.0		6.9		2.0	:
EL63 - Dytiki Ellada	4.6	11.	3	10.9		4.2		14.4		4.3	1
EL64 - Sterea Ellada	4.5	9.0		8.6		10.0		35.2		3.1	
EL65 - Peloponnisos	4.4	10.	1	9.8		6.7		23.6		3.7	

Source: ELSTAT (2018)

Table B2 provides information about the sectoral composition of GVA in the NUTS II regions in 2017. It provides for each sector two figures: the share of the region in the sectoral GVA (1st column) and the share of the sector in the regional GVA (2nd column). In essence, it shows the regional specialization of the sectors of the economy and the sectoral specialization of the regions. We observe that the regions contributing more to the GVA of the Primary sector are Kentriki Makedonia (19.4%), Thessalia (14.8%), Dytiki Makedonia (11.8% and Peloponnisos (10.1%). The regions contributing more to the Secondary GVA are Attici (36.7%), Kentriki Makedonia (14.7%) and Sterea Ellada (10%). Finally, the regions that contribute more to the Tertiary sector are Attiki ((52%), Kentriki Makedonia (12.9%) and Kriti (5.0%). Obviously, the size of the metropolitan region of Athens and (to some extent) the metropolitan area of Thessaloniki make their presence highly feasible in both the secondary and the tertiary sectors. The significant participation of Sterea Ellada in the GVA of the secondary sector is due to the industrial satellite of Athens in the triangle Schimatari-Inofyta-Chalkida (just across the administrative borders of the region of Attica), while the border region of Dytiki Makedonia has a high presence due to the lignite energy plants in Ptolemaida, Kozani and Florina.

As far as the sectoral allocation of activities in the regions, we can see that a general pattern emerges where the tertiary sector dominates the economy with rates that exceed in several cases 80% of the regional GVA. These regions include the two metropolitan regions of the country where the tertiary sector includes a variety of activities like the public sector, banking and finance, trade and retail, leisure, culture, business services, transport, etc and the island regions, where the tertiary sector is dominated by tourism. Some regions continue to have a significant presence of the secondary sector in their GVA, either by hosting major plants and parts of the energy sector of the country (Dytiki Makedonia and partly Peloponnios), or by hosting satellite industrial activities of Athens (Sterea Ellada and partly Peloponnisos – the oil refineries in Korinthos), or by having their own industrial base that has survived to some extent from structural change, competition and the crisis (Kentriki Makedonia, Anatoliki Makedonia, Thessalia).



6.2.1 Additional Tables and Figures

EU28 Greece EL300 - Attiki EL122 - Thessaloniki EL431 - Irakleio EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	in the country 2015 100.00 47.86 8.61 2.37 2.29 2.24	€ 2015 29033 16,294 22,192 13,628 13,460	EU=100 2015 100 56	Greece=100 2015	(constant prices) 2010-15
EU28 Greece EL300 - Attiki EL122 - Thessaloniki EL431 - Irakleio EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	2015 100.00 47.86 8.61 2.37 2.29	2015 29033 16,294 22,192 13,628	2015 100 56	2015	
Greece EL300 - Attiki EL122 - Thessaloniki EL431 - Irakleio EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	100.00 47.86 8.61 2.37 2.29	29033 16,294 22,192 13,628	100 56		2010-15
Greece EL300 - Attiki EL122 - Thessaloniki EL431 - Irakleio EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	47.86 8.61 2.37 2.29	16,294 22,192 13,628	56	100	
EL300 - Attiki EL122 - Thessaloniki EL431 - Irakleio EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	47.86 8.61 2.37 2.29	22,192 13,628			
EL122 - Thessaloniki EL431 - Irakleio EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	8.61 2.37 2.29	13,628		100	-15.86
EL431 - Irakleio EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	2.37 2.29		76	136	-15.70
EL232 - Achaia EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia	2.29	13.460	47	84	-18.29
EL142 - Larisa EL421 - Dodekanisos EL242 - Evvoia		_0,.00	46	83	-19.82
EL421 - Dodekanisos EL242 - Evvoia	2.24	13,175	45	81	-20.68
EL242 - Evvoia		13,860	48	85	-9.50
	1.89	16,057	55	99	-11.22
Et 400 IV 11 3	1.57	12,972	45	80	-16.79
EL422 - Kyklades	1.56	21,578	74	132	-13.40
EL143 - Magnisia	1.48	12,686	44	78	-11.62
EL133 - Kozani	1.45	17,662	61	108	-6.45
EL231 - Aitoloakarnania	1.35	11,526	40	71	-13.28
EL241 - Voiotia	1.32	19,370	67	119	-13.38
EL434 - Chania	1.29	14,297	49	88	-15.10
EL244 - Fthiotida	1.20	13,193	45	81	-16.71
EL255 - Messinia	1.11	12,188	42	75	-12.69
EL213 - Ioannina	1.09	11,442	39	70	-15.89
EL253 - Korinthia	1.08	12,743	44	78	-15.58
EL115 - Kavala	1.03	13,241	46	81	-18.70
EL113 - Kavala EL111 - Evros	1.02	12,072	42	74	-22.42
	0.96		37	66	
EL233 - Ileia		10,750			-16.33
EL126 - Serres	0.94	9,684	33	59	-8.37
EL121 - Imathia	0.89	11,021	38	68	-14.76
EL124 - Pella	0.88	11,115	38	68	-13.01
EL222 - Kerkyra	0.87	14,916	51	92	-12.82
EL144 - Trikala	0.82	11,054	38	68	-10.30
EL251 - Argolida	0.81	14,693	51	90	-15.78
EL127 - Chalkidiki	0.81	12,973	45	80	-14.52
EL125 - Pieria	0.80	10,795	37	66	-15.74
EL252 - Arkadia	0.79	16,442	57	101	-4.88
EL411 - Lesvos	0.75	12,972	45	80	-13.87
EL433 - Rethymni	0.67	13,523	47	83	-12.09
EL432 - Lasithi	0.65	15,426	53	95	-5.54
EL254 - Lakonia	0.62	12,119	42	74	-9.91
EL112 - Xanthi	0.61	9,549	33	59	-28.69
EL113 - Rodopi	0.61	9,533	33	59	-26.62
EL141 - Karditsa	0.60	9,647	33	59	-10.81
EL114 - Drama	0.59	10,635	37	65	-14.34
EL123 - Kilkis	0.52	11,379	39	70	-11.40
EL134 - Florina	0.51	17,865	62	110	2.26
EL211 - Arta	0.41	10,842	37	67	-12.72
EL221 - Zakynthos	0.40	17,425	60	107	-17.57
EL214 - Preveza	0.39	11,888	41	73	-10.89
EL413 - Chios	0.36	11,985	41	74	-20.20
EL223 - Kefallinia	0.33	14,668	51	90	-24.79
EL212 - Thesprotia	0.31	12,185	42	75	-21.61
EL412 - Samos	0.30	12,395	43	76	-19.76
EL132 - Kastoria	0.30	10,726	37	66	-10.60
EL245 - Fokida	0.25	10,720	36	64	-23.35
EL131 - Grevena	0.23	10,420	35	63	-10.72
				75	
EL224 - Lefkada EL243 - Evrytania	0.17 0.11	12,177 9,841	42 34	60	-23.18 -16.79

Table 1A. GDP and GDP per capita in the Greek NUTS III regions, 2015 Sources: ELSTAT (2018), Eurostat (2018)

					Electric consu		
					Electric energ	gy consump-	
	Income p	er capita	Deposits pe	er capita	tion-domestic use		
	Level	Income per capita Level Change		Change	Level	Change	
Geographic area	(€/inh)	(%)	(€)/inh	(%)	(MWh/100	(%)	



					inh)	
	2014	2010-14	2015	2010-15	2012	2010-12
Greece	8,154	-32.5	11,183	-42.7	166	2.06
EL30 - Attiki	10,128	-32.5	16,610	-44.2	189	2.73
EL41 - Voreio Aigaio	7,365	-30.5	9,984	-42.2	167	2.76
EL42 - Notio Aigaio	7,328	-31.5	9,914	-38.8	166	4.99
EL43 - Kriti	7,220	-32.9	8,519	-37.3	148	2.69
EL51 - Anatoliki Makedonia,					138	2.97
Thraki	6,460	-31.4	7,280	-40.8		
EL52 - Kentriki Makedonia	7,170	-31.8	8,255	-43.9	157	0.89
EL53 - Dytiki Makedonia	7,303	-32.0	8,658	-36.6	145	2.53
EL54 - Ipeiros	7,153	-32.4	9,887	-33.1	132	0.58
EL61 - Thessalia	7,070	-31.1	7,641	-36.2	141	1.61
EL62 - Ionia Nisia	6,448	-32.1	9,108	-38.6	177	0.30
EL63 - Dytiki Ellada	6,755	-35.4	6,927	-39.7	151	2.63
EL64 - Sterea Ellada	7,390	-32.1	7,047	-39.8	159	0.71
EL65 - Peloponnisos	6,743	-33.5	9,432	-38.4	182	0.77

Table 3A. Indicators of regional welfare in Greece at the NUTS II level, 2015 or earlier years. Sources: Bank of Greece (2018), ELSTAT (2018), GSIS (2017)

	M.I.P.* (1986- 1989)	1 st period (1989- 1993)	B' period (1994- 1999)	3 rd period (2000- 2006)	4 th period (2007-2013)	5 th period (2014- 2020)	
	Thousands ECU	Thousands ECU	Thousands ECU	Thousands Euros	Thousands Euros	Thousands Euros	
	1986 prices	1989 prices	1994 prices	2000 prices	2007 prices	2014 prices	
Total budget	2.101.933	14.342.054	29.721.300	42.000.000	29.500.000**	25.565.000	
National public contribution	695.740	5.802.196	7.069.900	9.700.000	1.600.000**	5.182.684	
EC contribu-	2.576.000	7.193.241	13.980.000	22.700.000	20.400.000	20.382.316	
Private contribution	210.193	1.346.617	8.671.400	9.600.000	7.500.000	n:a	

Table 6A. The C.S.F in Greece, 1986-2020

^{*} After 1989, MIP was included in the 1st CSF.

**In the 4th period, because of the crisis and the inability of the public funds to respond to initial planning, the national cofinancing was reduced from 11,5 to 1,6 bn euros, which reduced the total budget from 39,6 to 29,5 bn



Period	Share of total budget that is managed by the Regional Administration
1989-1993	40.0%
1994-1999	25.0%
2000-2006	25.0%
2007-2013	39.0%
2014-2020	22.5%

Table 7A. The allocation of the total budget of Structural Funds to Regional Operational Programs Source: Own estimations from EC Programming documents.

Level of Administration	Budget (in million euros)	Share (%)
Central (Ministries)	7,182	75.9%
Regional and Prefectural	670	13.5%
Local	597	10.6%
Total	8,448	100.0%

 $\textbf{Table 9A.} \ \ \textbf{The allocation of responsibility for implementation of the Public Investment Program to Central, Regional and Local Administration, 2010}$

Source: Ministry of Economy and Development

The regional allocation of PIP

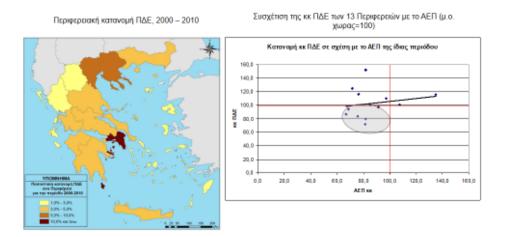


Figure 4. The regional allocation of Public Investment Program (in per capita figures), 2000-10

	АМТ	KM	DM	ТН	IP	IN	DE	SE	PE	AT	VA	NA	KR
Agriculture, Hunting, Forestry and	2.11	1.05	1.51	1.78	1.62	1.44	1.75	1.66	2.65	0.08	1.15	0.56	1.40



Second Chartrying 288 0.13 18327 0.00 1.20 0.14 0.34 0.05 1.56 0.11 0.00 2.15 0.15 0.00 0	Fishing												1	
Manufacture of Food, Beverages and Tobacco		2 20	0.43	15.27	0.00	1 20	0.14	0.34	4.02	1 56	0.11	0.00	235	0.04
Tostice Warning Appared and Leather Industries		2.20	0.13	10.27	0.00	1.20	0.17	0.51	1.02	1.30	0.11	0.00	2.33	0.04
Exertie: Wearing Apparel and Leather Industries 0.66 210 342 0.76 0.28 0.00 0.25 0.21 0.17 1.12 0.00 0.31 0.25 0		1 44	1 30	0.89	1 23	1 20	0.46	1 00	1 56	0.71	0.74	0.62	0.69	1 31
Leather Industries		2	1.00	0.03	1,20	1.20	0.10	1.00	1.00	0.71	0.7 1	0.02	0.03	1.01
Manufacture of Wood and Wood 133	, 0 11	0.66	2.10	3.42	0.76	0.28	0.00	0.25	0.21	0.17	1.12	0.00	0.31	0.25
Manufacture of Paper and Paper Products 0.62 1.08 0.64 0.75 0.04 0.36 0.75 0.04 0.36 0.75 0.04 0.36 0.75 0.04 0.36 0.75 0.04 0.36 0.75 0.04 0.36 0.75 0.04 0.36 0.75 0.04 0.36 0.75 0.04 0.05		0.00						0.1.0		0.1		0.00	0.02	0.20
Products 0.62 1.08 0.64 0.92 0.12 0.00 0.00 3.76 0.85 1.00 0.0	Products	1.33	0.84	0.87	1.04	1.00	1.61	1.55	1.38	1.20	0.77	1.75	2.01	0.64
Printing and Publishing	Manufacture of Paper and Paper													
Manufacture of chemicals and chemical products	Products	0.62	1.08	0.64	0.92	0.12	0.60	0.40	3.76	0.85	1.10	0.00	0.00	0.47
Leum products and nuclear fuel 0.22 1.16 0.00 0.	Printing and Publishing	0.46	0.75	0.04	0.36	0.29	0.18	0.18	0.36	0.22	1.99	0.52	0.27	0.30
Manufacture of chemicals and chemical products														
Definition 1.16 0.47 0.37 0.69 0.00 0.00 0.11 0.12 0.55 1.14 0.77 0.19 0.10 Plasmaceutical products 0.00 0.25 0.00 0.84 0.00 0.00 0.38 0.62 0.15 2.19 0.00 0.00 0.05 Manufacture of rubber and plastics products 0.59 0.81 0.00 0.82 0.00 0.24 0.00 0.24 0.00 0.25 0.00 0.00 0.00 0.00 0.00 Non-metallic mineral products 0.59 0.83 0.72 1.71 2.56 0.30 0.65 0.95 0.65 0.00 0.02 0.00 0.00 0.00 Manufacture of fabricate metals 0.59 0.83 0.72 1.71 2.56 0.30 0.65 0.95 0.10 0.10 0.00 0.	leum products and nuclear fuel	0.22	1.16	0.00	0.00	0.00	0.00	0.46	0.00	2.94	1.61	0.00	0.00	0.00
Pharmaceutical products														
Manufacture of rubber and plastics products 1.00 1.54 0.00 0.62 0.94 0.00 0.24 3.04 0.34 1.03 0.88 0.00 0.88 Non-metallic mineral products 1.00 1.54 0.40 1.80 0.88 0.05 0.05 0.65 0.05		1.16	0.47	0.37	0.69	0.00	0.00	0.11	1.21	0.55	1.84	0.77	0.19	0.10
Products 14.0 15.4 16.1 16.1 16.		0.00	0.25	0.00	0.84	0.00	0.00	0.38	0.62	0.15	2.19	0.00	0.00	0.45
Non-metallic mineral products 1.40 1.54 0.40 1.80 0.83 0.95 0.95 1.63 0.76 0.62 1.17 0.54 0.88 0.88 0.89 0.95 0.95 1.30 0.76 0.66 0.00 0.07														
Manufacture of fabricated metal 0.59 0.33 0.72 1.11 2.56 0.30 0.65 3.94 0.12 1.00 0.06 0.00 0.07 0.07 0.07 0.09 0.30 0.05 0	-	2.63		0.00	0.62	0.94			3.04			0.88	0.00	0.84
Manufacture of fabricated metal 0.74 0.97 0.69 1.32 0.95 0.55 1.08 1.64 0.92 0.99 0.93 0.43 1.04 1.05 1	•		1.54			0.88	0.95	0.95			0.62	1.17		0.88
Products 1.74 1.75 1.7		0.59	0.83	0.72	1.71	2.56	0.30	0.65	3.94	0.12	1.00	0.06	0.00	0.07
Electronic equipment and optical instruments 1.37 1.03 0.00 0.64 0.26 0.95 1.26 0.00 0.81 1.51 0.00 0.														
Instruments	-	0.74	0.97	0.69	1.32	0.95	0.55	1.08	1.64	0.92	0.99	0.93	0.43	1.04
Manufacture of electrical machinery and apparatus 0.54 1.35 0.12 0.53 0.15 0.00 0.06 0.46 0.275 1.24 1.21 0.00 0.11 0.3														
Manufacture of machinery and equipment 0.54 1.35 0.12 0.53 0.15 0.00 0.46 2.75 1.24 1.21 0.00 0.11 0.31		1.37	1.03	0.00	0.64	0.26	0.95	1.26	0.00	0.81	1.51	0.00	0.00	0.00
Manufacture of machinery and equipment 0.13 1.31 0.59 0.90 0.83 0.00 1.39 1.00 0.96 1.10 0.54 0.00 1.16					0.55		0.55		0.53	4.5.	4.5			
Equipment		0.54	1.35	0.12	0.53	0.15	0.00	0.46	2.75	1.24	1.21	0.00	0.11	0.31
Manufacture of motor vehicles, trailers and semi-trailers														
trailers and semi-trailers 0.00	1. 1	0.13	1.31	0.59	0.90	0.83	0.00	1.39	1.00	0.96	1.10	0.54	0.00	1.16
Manufacture of other transport equipment 0.32 0.32 0.17 0.39 0.12 0.00 0.00 0.00 0.05 2.23 0.00 0.71 0.00					0.05				4.05		0.06			
Requipment 0.32 0.25 0.17 0.39 0.12 0.00 0.20 0.90 0.05 2.23 0.00 0.71 0.00		0.00	1.74	0.00	3.85	0.99	0.00	0.00	1.07	0.27	0.96	0.00	0.00	0.00
Manufacture of furniture; manufacturing n.e.c. 0.80	1	0.22	0.25	0.17	0.20	0.12	0.00	0.20	0.00	0.05	2 22	0.00	0.71	0.00
Repair and installation of machines	1 1	0.32	0.25	0.17	0.39	0.12	0.00	0.20	0.90	0.05	2.23	0.00	0.71	0.00
Repair and installation of machines and equipment		0.00	1.70	0.44	1 10	0.60	0.25	0.22	0.60	0.45	1 1 1	1 10	0.64	0.60
Anni		0.60	1.70	0.44	1.19	0.60	0.23	0.55	0.60	0.45	1.11	1.10	0.04	0.00
Energy supply		0.71	1.09	1 25	0.13	0.20	0.00	0.00	0.86	0.88	1.61	0.43	0.72	0.34
Water Works and Supply														
Construction Cons														
Retail trade of motor vehicles and motorcycles 0.90 0.97 0.47 0.67 1.09 1.15 1.11 0.87 0.73 1.13 1.42 0.84 1.02	117													
motorcycles 0.90 0.97 0.47 0.67 1.09 1.15 1.11 0.87 0.73 1.13 1.42 0.84 1.02 Wholesale trade and commission trade, except of motor vehicles and motorcycles 0.72 1.14 0.61 0.71 0.67 0.33 0.63 0.69 0.38 1.37 0.46 0.69 0.96 Retail trade, except of motor vehicles and motorcycles; repair of personal & household goods 0.76 1.11 0.81 0.96 0.80 1.21 1.02 0.86 0.96 1.01 1.07 1.19 0.99 Transport, Storage and Communication 0.66 0.80 0.70 0.53 0.56 0.88 0.93 0.79 0.76 1.35 1.09 1.37 0.84 Hotels and restaurants 0.83 0.80 0.82 0.97 1.09 2.91 0.90 1.07 0.84 0.80 1.03 2.86 1.70 Manufacture of radio, television and communication equipment and apparatus 0.33 0.78 0.15 0.08		0.09	0.90	1.23	1.00	1.30	1.10	1.10	1.17	0.55	0.90	0.93	1.23	1.10
Wholesale trade and commission trade, except of motor vehicles and motorcycles (0.72 1.14 0.61 0.71 0.67 0.33 0.63 0.69 0.38 1.37 0.46 0.69 0.96		0.90	0.97	0.47	0.67	1.09	1 15	1 11	0.87	0.73	1 13	1 4 2	0.84	1.02
trade, except of motor vehicles and motorcycles Retail trade, except of motor vehicles and motorcycles; repair of personal & household goods Transport, Storage and Communication Hotels and restaurants 0.83 0.80 0.82 0.70 0.83 0.80 0.82 0.70 0.83 0.80 0.90 0.80 0.80 0.90 0.80 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.90 0.80 0.80 0.80 0.90 0.80 0.80 0.80 0.90 0.80	,	0.70	0.57	0.47	0.07	1.07	1.13	1.11	0.07	0.73	1.13	1.72	0.04	1.02
Montorcycles 0.72 1.14 0.61 0.71 0.67 0.33 0.63 0.69 0.38 1.37 0.46 0.69 0.96 Retail trade, except of motor vehicles and motorcycles; repair of personal & household goods 0.76 1.11 0.81 0.96 0.80 1.21 1.02 0.86 0.96 0.96 1.01 1.07 1.19 0.99 Transport, Storage and Communication 0.66 0.80 0.70 0.53 0.56 0.88 0.93 0.79 0.76 1.35 1.09 1.37 0.84 Hotels and restaurants 0.83 0.80 0.82 0.97 1.09 2.91 0.90 1.07 0.84 0.80 1.03 2.86 1.70 Manufacture of radio, television and communication equipment and apparatus 0.33 0.78 0.15 0.08 0.29 0.04 0.49 0.51 0.41 1.90 0.68 0.43 0.47 Financial Institutions and Insurance 0.55 0.67 0.44 0.55 0.62 0.23 0.60 0.54 0.38 1.71 0.84 0.47 0.72 Real estate activities 0.62 1.26 0.63 1.08 0.21 1.89 0.52 0.00 0.55 1.41 0.63 0.60 0.92 Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.71 0.78 Weak to Modest Specialization (1.46 1.90 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.94 0.95 0.95 0.94 0.95 0.9														
Retail trade, except of motor vehicles and motorcycles; repair of personal & household goods		0.72	1.14	0.61	0.71	0.67	0.33	0.63	0.69	0.38	1.37	0.46	0.69	0.96
Cles and motorcycles; repair of personal & household goods		0.72	1.11	0.01	017 1	0.07	0.00	0.00	0.07	0.50	1.07	0.10	0.03	0.70
Dersonal & household goods														
Communication 0.66 0.80 0.70 0.53 0.56 0.88 0.93 0.79 0.76 1.35 1.09 1.37 0.84		0.76	1.11	0.81	0.96	0.80	1.21	1.02	0.86	0.96	1.01	1.07	1.19	0.99
Communication 0.66 0.80 0.70 0.53 0.56 0.88 0.93 0.79 0.76 1.35 1.09 1.37 0.84														
Manufacture of radio, television and communication equipment and apparatus 0.33 0.78 0.15 0.08 0.29 0.04 0.49 0.51 0.41 1.90 0.68 0.43 0.47 Financial Institutions and Insurance 0.55 0.67 0.44 0.55 0.62 0.23 0.60 0.54 0.38 1.71 0.84 0.47 0.72 Real estate activities 0.62 1.26 0.63 1.08 0.21 1.89 0.52 0.00 0.37 1.21 0.94 0.79 1.48 Management consulting activities and research and development 0.61 1.05 0.36 0.65 0.65 0.65 0.60 0.75 0.60 0.55 1.41 0.63 0.60 0.92 Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.46-1.99) 0 3 1 3 1 3 1 2 2 2 5 1 7 2 1 2 2 5 1 7 2 1 2 2 5 1 7 2 1 2 2 5 5 1 7 7 2 1 3 2 5 7 7 1 7 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1		0.66	0.80	0.70	0.53	0.56	0.88	0.93	0.79	0.76	1.35	1.09	1.37	0.84
Manufacture of radio, television and communication equipment and apparatus 0.33 0.78 0.15 0.08 0.29 0.04 0.49 0.51 0.41 1.90 0.68 0.43 0.47 Financial Institutions and Insurance 0.55 0.67 0.44 0.55 0.62 0.23 0.60 0.54 0.38 1.71 0.84 0.47 0.72 Real estate activities 0.62 1.26 0.63 1.08 0.21 1.89 0.52 0.00 0.37 1.21 0.94 0.79 1.48 Management consulting activities and research and development 0.61 1.05 0.36 0.65 0.65 0.60 0.75 0.60 0.55 1.41 0.63 0.60 0.92 Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0	Hotels and restaurants													
apparatus 0.33 0.78 0.15 0.08 0.29 0.04 0.49 0.51 0.41 1.90 0.68 0.43 0.47 Financial Institutions and Insurance 0.55 0.67 0.44 0.55 0.62 0.23 0.60 0.54 0.38 1.71 0.84 0.47 0.72 Real estate activities 0.62 1.26 0.63 1.08 0.21 1.89 0.52 0.00 0.37 1.21 0.94 0.79 1.48 Management consulting activities and research and development 0.61 1.05 0.36 0.65 0.65 0.65 0.60 0.75 0.60 0.55 1.41 0.63 0.60 0.92 Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.46-1.99) 0.93 1.94 0.93 0.94 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95														
Financial Institutions and Insurance 0.55 0.67 0.44 0.55 0.62 0.23 0.60 0.54 0.38 1.71 0.84 0.47 0.72 Real estate activities 0.62 1.26 0.63 1.08 0.21 1.89 0.52 0.00 0.37 1.21 0.94 0.79 1.48 Management consulting activities and research and development 0.61 1.05 0.36 0.65 0.65 0.65 0.60 0.75 0.60 0.55 1.41 0.63 0.60 0.92 Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.46-1.99) 0.3 1 3 1 3 1 2 2 2 5 1 7 2 1 2 2 5 1 7 2 1 2 2 5 5 1 7 7 2 1 2 5 5 1 7 7 2 1 2 5 5 1 1 7 2 1 2 5 5 1 7 7 2 1 1 2 5 1 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· ·													
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Management consulting activities and research and development 0.61 1.05 0.36 0.65 0.65 0.60 0.75 0.60 0.55 1.41 0.63 0.60 0.92 Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21	Financial Institutions and Insurance	0.55	0.67	0.44	0.55	0.62	0.23	0.60	0.54	0.38	1.71	0.84	0.47	0.72
and research and development 0.61 1.05 0.36 0.65 0.65 0.60 0.75 0.60 0.55 1.41 0.63 0.60 0.92 Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.46-1.94) 7 1.5 4	Real estate activities	0.62	1.26	0.63	1.08	0.21	1.89	0.52	0.00	0.37	1.21	0.94	0.79	1.48
Renting and security activities 0.97 0.90 0.35 0.51 0.45 1.38 0.65 0.42 0.46 1.43 0.43 1.12 1.04 Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.46-19) 7 1.5 4 7 8 6 8 6 3 17 9 6 7	Management consulting activities													
Public Administration and Defence 1.32 0.77 1.07 1.06 1.05 0.61 0.90 0.96 0.93 1.09 1.97 1.03 0.73 Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.00-1.45) 7 15 4 7 8 6 8 6 3 17 9 6 7 Modest to high Specialization (1.46-1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 2 <	and research and development	0.61	1.05	0.36	0.65	0.65	0.60	0.75	0.60	0.55	1.41	0.63	0.60	0.92
Education 0.92 1.07 1.14 1.26 1.21 0.87 1.27 0.73 0.98 0.94 1.08 0.78 0.91 Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.00-1.45) 7 15 4 7 8 6 8 6 3 17 9 6 7 Modest to high Specialization (1.46-1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 2 5 1 7 2 1 2 2 5 1 7 2 1 2 2 5 1 7 2 1	Renting and security activities	0.97	0.90	0.35	0.51	0.45	1.38	0.65	0.42	0.46	1.43	0.43	1.12	1.04
Health 0.86 1.04 0.75 0.94 1.30 0.47 0.93 0.61 0.73 1.17 0.89 0.71 0.98 Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.00-1.45) 7 15 4 7 8 6 8 6 3 17 9 6 7 Modest to high Specialization (1.46-1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 Strong Specialization (2-) 3 1 3 1 1 1 0 5 2 2 0 3 0	Public Administration and Defence	1.32	0.77	1.07	1.06	1.05	0.61	0.90	0.96	0.93	1.09	1.97	1.03	0.73
Recreational and Cultural Services 0.65 1.00 0.84 0.89 0.97 1.11 0.87 0.72 0.81 1.21 0.83 0.87 0.78 Weak to Modest Specialization (1.00-1.45) 7 15 4 7 8 6 8 6 3 17 9 6 7 Modest to high Specialization (1.46-1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 Strong Specialization (2-) 3 1 3 1 1 1 0 5 2 2 0 3 0		0.92	1.07	1.14	1.26	1.21	0.87	1.27	0.73	0.98	0.94	1.08	0.78	0.91
Weak to Modest Specialization (1.00-1.45) 7 15 4 7 8 6 8 6 3 17 9 6 7 Modest to high Specialization (1.46-1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 Strong Specialization (2-) 3 1 3 1 1 1 0 5 2 2 0 3 0	Health	0.86	1.04	0.75	0.94	1.30	0.47	0.93	0.61	0.73	1.17	0.89	0.71	0.98
(1.00-1.45) 7 15 4 7 8 6 8 6 3 17 9 6 7 Modest to high Specialization (1.46-1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 Strong Specialization (2-) 3 1 3 1 1 1 0 5 2 2 0 3 0	Recreational and Cultural Services	0.65	1.00	0.84	0.89	0.97	1.11	0.87	0.72	0.81	1.21	0.83	0.87	0.78
Modest to high Specialization (1.46- 1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 Strong Specialization (2-) 3 1 3 1 1 1 0 5 2 2 0 3 0	Weak to Modest Specialization													
1.99) 0 3 1 3 1 2 2 5 1 7 2 1 2 Strong Specialization (2-) 3 1 3 1 1 1 0 5 2 2 0 3 0		7	15	4	7	8	6	8	6	3	17	9	6	7
Strong Specialization (2-) 3 1 3 1 1 1 0 5 2 2 0 3 0														
)		3											2
Total 10 19 8 11 10 9 10 16 6 26 11 10 9		3	1	3	1	1	1	0	5	2	2	0	3	0
	Total	10	19	8	11	10	9	10	16	6	26	11	10	9

Table 11A. Coefficients of Revealed Comparative Advantage (RCA) of NUTS II Regions at the NACE II level based on 2014 Employment

Source: Own estimations from Elstat employment data.

	AMT	KM	DM	TH	IP	IN	DE	SE	PE	AT	VA	NA	KR
Agriculture, Hunting, Forestry and Fishing	1.008	0.949	0.931	0.838	0.998	0.447	0.837	0.797	0.745	1.500	0.872	0.598	1.152



Mining and Quarrying	1.073	0.463	0.776	0.908	0.747	0.540	0.698	0.713	1.026	1.623	0.757	0.983	0.901
Manufacture of Food, Beverages and Tobacco	0.361	0.465	0.233	0.391	0.304	0.068	0.190	0.180	0.014	0.812	0.245	0.145	0.438
Textile, Wearing Apparel and Leather Industries	0.272	0.899	0.908	0.217	0.061	0.057	0.134	0.137	0.051	0.951	0.043	0.062	0.158
Manufacture of Wood and Wood Products	1.285	1.202	0.615	0.508	0.822	0.358	0.360	0.482	0.810	0.803	0.440	0.464	0.937
Manufacture of Paper and Paper Products	0.231	0.688	0.214	0.312	0.101	0.052	0.159	0.191	0.204	1.131	0.136	0.109	0.581
Printing and Publishing	1.019	0.771	0.572	0.718	0.505	0.428	0.545	0.427	0.579	1.059	0.576	0.521	0.731
Manufacture of coke, refined petroleum products and nuclear fuel	0.000	0.015	0.000	0.034	0.018	0.000	0.001	0.001	0.025	2.703	0.000	0.000	0.001
Manufacture of chemicals and chemical products	0.319	0.471	0.013	0.078	0.065	0.007	0.081	0.139	0.017	2.107	0.020	0.032	0.218
Pharmaceutical products	0.002	0.002	0.000	0.010	0.000	0.000	0.000	0.000	0.000	1.198	0.000	0.000	0.002
Manufacture of rubber and plastics products	0.446	0.763	0.160	0.225	0.316	0.091	0.336	0.417	0.279	0.762	0.120	0.053	0.446
Non-metallic mineral products	0.335	0.762	0.319	0.403	0.434	0.156	0.243	0.181	0.217	0.532	0.166	0.117	0.455
Manufacture of	0.579	1.153	0.295	0.473	0.012	0.020	0.293	0.465	0.293	2.786	0.168	0.134	0.056
Manufacture of fabricated metal products	0.552	0.964	0.525	0.646	0.643	0.336	0.609	0.579	0.441	1.222	0.422	0.356	0.897
Electronic equip- ment and optical instruments	0.684	0.757	0.246	0.225	0.060	0.052	0.325	0.502	0.253	1.061	0.347	0.063	0.284
Manufacture of electrical machinery and apparatus	0.246	0.538	0.027	0.208	0.398	0.040	0.163	0.313	0.198	1.146	0.002	0.078	0.288
Manufacture of machinery and equipment	0.287	0.805	0.281	0.437	0.223	0.095	0.375	0.280	0.233	0.680	0.139	0.080	0.575
Manufacture of motor vehicles, trailers and semi- trailers	0.162	0.689	0.044	0.093	0.367	0.076	0.301	0.127	0.083	1.017	0.128	0.015	0.124
Manufacture of other transport equipment	0.154	0.434	0.000	0.455	0.074	0.192	0.569	0.121	0.050	0.467	0.089	0.287	0.063
Manufacture of furniture; manu-facturing n.e.c.	0.418	0.771	0.173	0.575	0.261	0.176	0.243	0.201	0.264	0.836	0.214	0.147	0.454
Repair and instal- lation of machines and equipment	0.793	0.800	0.484	0.629	0.465	0.618	0.604	0.615	0.609	0.782	0.501	0.585	0.815
Energy supply	0.120	0.637	0.076	0.574	0.096	0.022	0.033	0.055	0.063	2.267	0.205	0.069	0.273
Water Works and Supply	0.682	0.816	1.002	0.914	0.882	1.101	0.705	0.678	0.524	0.764	0.813	1.052	0.960
Construction	0.853	0.765	0.924	0.491	1.002	0.797	0.906	0.500	0.418	1.009	0.785	0.810	0.966
Retail trade of motor vehicles and motorcycles	0.356	0.586	0.371	0.412	0.304	0.271	0.360	0.354	0.327	1.520	0.260	0.342	0.439
Wholesale trade, except of motor vehicles and motorcycles	0.725	1.000	0.527	0.672	0.725	0.449	0.990	0.535	0.590	3.137	0.536	0.644	0.963
Retail trade, except of vehicles; repair of personal & household goods	0.961	1.439	1.048	0.994	0.879	0.776	0.948	0.762	0.890	1.301	0.841	0.692	1.103
Transport, Storage and Communication	0.858	1.214	1.263	1.148	1.177	1.072	1.209	1.082	1.117	1.593	0.891	1.064	1.330
Hotels and restaurants	0.636	0.723	0.555	0.616	1.060	0.927	0.648	0.495	0.656	1.109	0.761	1.127	0.920



Manufacture of radio, television and communication equipment	0.184	0.391	0.128	0.295	0.238	0.149	0.264	0.123	0.152	2.241	0.151	0.219	0.197
Financial Institutions and Insurance	0.059	0.264	0.030	0.075	0.057	0.018	0.099	0.022	0.053	3.174	0.145	0.033	0.047
Real Estate activities	0.934	0.334	0.749	0.623	1.272	1.176	0.807	0.897	1.139	3.388	0.831	1.276	1.209
Management consulting activi- ties and research and development	0.880	1.142	1.059	0.963	1.290	0.768	0.965	0.697	0.813	2.055	0.814	0.903	1.065
Renting and security activities	0.572	0.644	0.484	0.535	0.575	0.502	0.465	0.291	0.456	2.008	0.548	0.559	0.668
Public Administration and Defence	0.735	0.564	0.915	0.673	0.348	0.183	0.887	0.572	0.746	0.911	0.621	0.757	0.597
Education	0.722	0.870	0.538	0.847	0.650	0.655	0.729	0.649	0.578	0.792	0.503	0.553	0.719
Health	0.914	1.064	0.759	1.017	0.736	0.808	0.969	0.692	0.747	0.611	0.883	0.884	0.954
Recreational and Cultural Services	0.607	0.788	0.770	0.771	1.034	0.607	0.715	0.557	0.635	0.731	0.688	0.748	0.419

Table 12A. Regional Multipliers by NACE2 Sector, 2011 (Measure change of product as a result of demand change by one unit in all sectors in each region)

Source: University of the Peloponnese (2013) Assessment of the impact of implemented policies under the NSRF in the income and the employment of the 13 regions of the country, Ministry of National Economy and Development

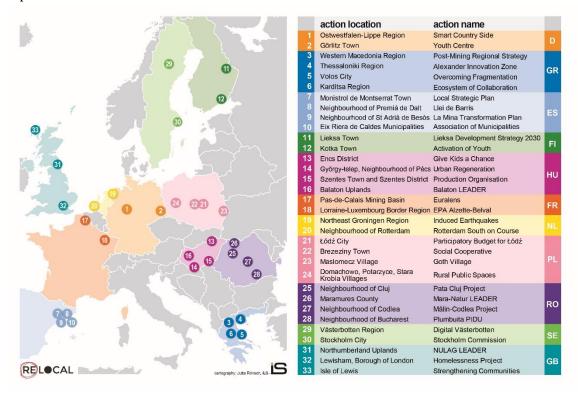


The RELOCAL Project

EU Horizon 2020 research project 'Resituating the local in cohesion and territorial development' –RELOCAL aims to identify factors that condition local accessibility of European policies, local abilities to articulate needs and equality claims and local capacities for exploiting European opportunity structures.

In the past, especially since the economic and financial crisis, the European Social Model has proven to be challenged by the emergence of spatially unjust results. The RELOCAL hypothesis is that **processes of localisation and place-based public policy** can make a positive contribution to spatial justice and democratic empowerment.

The research is based on **33 case studies in 13 different European countries** that exemplify development challenges in terms of spatial justice. The cases were chosen to allow for a balanced representation of different institutional contexts. Based on case study findings, project partners will draw out the factors that influence the impact of place-based approaches or actions from a comparative perspective. The results are intended to facilitate a greater local orientation of cohesion, territorial development and other EU policies.



The RELOCAL project runs from October 2016 until September 2020.

Read more at https://relocal.eu

Project Coordinator:



University of Eastern Finland

Contact: Dr. Petri Kahila (petri.kahila@uef.fi)