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Regional Inequalities in the European Neighbourhood Countries: The Effects of Growth and Integration

George Petrakos, Dimitris Kallioras and Maria Tsiapa

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Regional Inequalities in the European Neighbourhood Countries: The Effects of Growth and Integration [§]

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GEORGE PETRAKOS,* DIMITRIS KALLIORAS * AND MARIA TSIAPA*

** Department of Planning and Regional Development, University of Thessaly, Greece*

Abstract

This paper explores the spatial dynamics in the European Neighbourhood Countries (ENC) in a period of significant transformations in their internal and external economic environment. The analysis reveals a significant increase in regional inequalities and a dramatic increase of polarization in most of these countries. With the use of panel data for five ENC countries we investigate the drivers of spatial inequality taking into consideration the internal and external dynamics of the economies. The results of the model show that the Neoclassical (NC) convergence processes are counterbalanced by Cumulative Causation (CC) divergence dynamics and the spatially unbalancing effects of economic integration with the EU. Regional disparities are reported to be the net outcome of two opposite dynamics: a pro-cyclical pattern on the one hand, with dynamic and developed regions growing faster in periods of expansion and slower in periods of recession, and long-term spread effects on the other hand, partly offsetting the cumulative impact of growth on space after some critical level of development. In this framework, expanding trade relations with the EU advanced countries may be an additional source of spatially unbalanced growth, as the costs and benefits of integration prove to be unevenly allocated in space. To the extent that growth and integration dynamics tend to polarize the ENC economic space, a set of critical policy questions arise for the EU neighbouring policies and the ENC ability to design and implement effective regional policies.

KEY-WORDS: *regional disparities, growth, convergence, integration, European Neighbourhood Countries.*

JEL: *R11, C21, C22, O52.*

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1. Introduction

The European Neighbourhood Countries (ENC) is a diverse group of countries in Europe, Asia and Africa with a common characteristic their common land or sea borders with the European Union (EU). With the exception of Israel, all ENC in the East[1] and the South[2] of the EU are characterized by relatively low levels of development and serious socioeconomic and political transformations.

Certainly, the ENC in the East and the South start from different backgrounds and origins that affect in a number of ways their adjustment in the new era. The legacy of the planned economy during the Soviet period on the one hand and the legacy of colonial past and the authoritarian regimes in the other make reforms and economic, social and institutional change a path-dependent process.

One of the main drivers of change in these countries is their openness to international trade and capital movements, and their partnership with the EU that sets a long-term goal of deeper economic integration and institutional convergence. Indeed, EU-ENC trade relations have expanded significantly over the last decade (Petrakos et al 2013) and the same is true also for FDI (Ascani et al 2013).

The experience in Europe and elsewhere shows that the process of socio-economic transformation and internationalization in countries of medium or medium-low levels of development may have serious implications for the spatial organization of their economy and the spatial balances of population and productive activities. This paper investigates the patterns of spatial inequality in the ENC and the driving forces behind these processes, paying a special attention on the impact of economic growth and deeper integration into the European economy. To our knowledge, this is the first time that such an analysis takes place. Given that the previous experience of regional adjustment in the EU New Member States is not encouraging (Kallioras and Petrakos 2010) and given that in most of these countries a sound regional policy is far from being formulated, the results of the analysis of the paper may have serious policy implications for both the ENC and the EU.

The paper is organized as follows. Section two presents a review of the literature relating spatial imbalances to growth and integration. Section three presents the regional profiles and the patterns of spatial change in ENC countries. Section four presents an empirical model testing for the impact of growth and integration with the EU on the regional balances of ENC. Section five presents the conclusions and policy implications of the paper.

[1] Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine.
[2] Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Syria, and Tunisia.

2. A review of the literature

The last decade has shown that in the EU deeper integration may coincide with increasing imbalances in competitiveness, trade relations and development levels. Especially at the regional level, the evidence in the literature seems to shift progressively from the widespread euphoria of the convergence models in the 1990s (Barro and Sala-i-Martin, 1992; Mankiw et al, 1992) to the uncomfortably repeated divergence (or very slow convergence) findings during the last period (Martin and Sunley, 1998; Dunford and Smith, 2002; Petrakos, 2008). At the theoretical level, these findings come to add their weight to old and new debates concerning the relationship between growth, integration and regional inequality.

2.1 Growth and regional inequality

The economic literature maintains for several decades an old debate about the impact of economic growth to regional inequality. To put it in a simple way, what is expected to happen to spatial balances of emerging or developing economies (like most ENC) as they experience economic growth? Would growth be associated with a higher or a lower level of regional inequality? On the one hand the mainstream Neoclassical School of thought argues that in a competitive environment spatial inequalities are bound to decrease with growth because of diminishing returns to capital (Solow 1956). Under the assumptions of constant returns to scale (CRS), diminishing marginal productivity of capital, substitutability between capital and labor and exogenously determined technological progress, neoclassical (NC) analysis concludes that the further away an economy is from its steady-state, the faster will be the growth of income levels. In the NC setting, intra-national regional convergence may also occur as a result of inter-regional trade (Heckscher 1919, Ohlin 1933, Samuelson 1949) and internal migration (Rybczynski 1955), processes that lead to factor price (and eventually income levels) equalization. These predictions of the NC model are partially in line with the work of Williamson (1965) and Friedmann (1969) proposing an inverse U-shaped relationship between development and regional inequalities. Using different starting points, both agree that eventually inequalities will decrease when the countries experience more advanced levels of development.

On the other hand, critical Schools of thought understand growth as a cumulative process that tends to increase inequalities. The basic idea supported by older and newer theoretical developments in a variety of research strands, is simple: economic growth is usually selective in nature and associated with some short of agglomeration economies. Older theories of development (Rosenstein-Rodan 1943, Fleming 1955, Kaldor 1956, Hirschman 1958, Perroux 1970), theories of urban growth (Segal 1976, Henderson 1983, 1986, 1988, 1999), the New Economic Geography School (Krugman 1991, 1993a, 1993b, Fujita et al 1999, Thisse 2000), or the endogenous growth school (Romer 1986), develop arguments along these lines. Growth is often cumulative in nature, depends critically on 'initial conditions' and requires a minimum scale (or quality) of resources and activities in order to take place.

The empirical evidence related to the impact of growth on regional inequalities is mixed, but not time-symmetric. In the early 1990s most empirical findings were in line with the convergence results of Baumol (1986) and Barro and Sala-i-Martin (1991). Gradually, however, a number of studies using different methodologies and more recent data sets reported either lack of

convergence or outright divergence (Magrini 1999, López-Bazo et al. 1999, Rodríguez-Pose 1999, Cuadrado-Roura 2001, Puga 2002, Petrakos et al 2005). On average, regional inequalities in Europe appear to be consistently high following a mixed core-periphery, east-west and north-south pattern (Barrios and Strobl, 2005; Petrakos, 2008 and 2012). In particular, core, western and northern regions are more advanced than peripheral, eastern and southern regions, respectively.

Focusing on the EU NMS, the evidence suggests that the transition policies of openness, privatization and deregulation, which changed the old internal organization of activities, had a discrete spatial impact. Indeed, regional inequalities have increased significantly in all EU NMS (Niebuhr and Stiller, 2002; Petrakos 1996 and 2001; Römisch, 2003; Niebuhr, 2004; Petrakos et al 2005a and 2005b). In particular, capital and western border regions enjoyed a relatively better performance, especially in the Central European countries, while the corresponding performance of perimetric regions or Eastern border regions had, in general, been worse.

2.2 Trade Integration and Regional Inequality

In a parallel, but highly related literature, a different debate takes place. It is related to the impact of openness and integration (for example: into the European markets) on the regional disparities of emerging, developing or formerly planned economies. The questions here are related to the expansion (or the redirection) of trade relations of formerly closed or planned economies. Would these relations favour more their advanced or their less advanced regions? Do the characteristics of their trade partners matter for their spatial balances? Does closer trade and FDI integration with more advanced areas or Unions have a spatially balancing or unbalancing effect?

The typical NC perspective understands the expansion of trade relations and capital flows as an equilibrating factor leading to international factor price (and income) convergence. This view is based on competitive market assumptions and claims that the market forces released in the process of internationalization are overall beneficial for the least developed countries and lead to convergence. The intra-national allocations of the benefits (or costs) of greater openness or integration have received less attention in this framework of analysis. One could only predict that regions specializing in sectors of national comparative advantage (export sectors) will experience a rise in the price of their intensively used factor of production. On the contrary, regions specializing in sectors of national comparative disadvantage (import sectors) will experience a pressure on the price of the intensively used factor of production (North, 1955; Tiebout, 1956).

Recently, however, the discussion about the spatial effects of trade has been advanced with a new round of theoretical and empirical contributions. On the one hand, a number of studies suggest or find a negative relationship between trade expansion and regional inequalities. Krugman and Livas Elizondo (1996) argue in a theoretical model that trade liberalization reduces spatial inequalities, as international trade provides potential substitutes for domestic suppliers and therefore makes the central market of the country less important. Daumal (2013) finds that trade openness in Brazil contributed to the reduction in regional inequalities, although, he reports the opposite finding for India, while Milanovic (2005) finds no impact of trade openness on regional inequality in India, Brazil, Indonesia, China, and the United States. At the European level, Paluzie et al (2004) report that,

economic integration in European and international markets have led to a reduction of industrial agglomeration and regional inequality in Spain.

On the other hand, a number of empirical studies indicate that international trade liberalization tends to increase regional inequalities within the liberalizing country (Montfort and Nicolini, 2000; Paluzie, 2001; Monfort and van Ypersele, 2003; Crozet and Koenig Soubeyran, 2004; Tirado et al., 2002). Recent studies by Gonzales Rivas (2007) in Mexico, Aghion et al (2004) in India and Ge (2006) in China indicate that trade liberalization tends to be associated with increasing regional inequalities.

Some authors suggest that the positive impact of trade liberalization on regional inequality may depend on the quality of local transport infrastructure (Behrens, 2011), the specific geography of each country (Brülhart, 2011), the reduced importance of primary sector goods trade (Rodríguez-Pose and Gill 2006), as well as a number of country-specific conditions (Rodríguez-Pose 2012). They also suggest that spatially unbalancing and polarizing effects of trade are more likely to occur in low- and middle-income countries, because of their structural characteristics (Rodríguez-Pose 2012) and their poor level of infrastructure (Behrens 2011).

In the EU, this discussion took a more specific form. A number of reports and theoretical or empirical studies during the last two decades have claimed that the process of integration may be associated with winners and losers, as it exposes regions with unequal endowments in resources and technology and different economic structures to international competition (Amin et al 1992, Camagni 1992, Giannetti 2002, Petrakos et al. 2011).

Similar arguments have been made for transition countries in Europe. It has been claimed that in their case the costs and benefits of internationalization, trade reorientation and economic integration are unlikely to be spread out uniformly in space. On the contrary, more advanced regions are expected to benefit more, while lagging-behind regions are more likely to benefit less, or even fall further behind. The resulting increase of inequalities is regulated by internal and external economies of scale, the locational behavior of capital, the importance of geographical factors such as market accessibility and proximity, the variations in productive structures as well as the differences in the quality of infrastructure and the levels of technological and human capital development. These dynamics will favor the more advanced and core regions and generate a disproportionate mix of threats and opportunities for the less advanced and peripheral regions (Bachtler and Downes, 1999; Petrakos, 1996; Petrakos, 2001; Topaloglou et al, 2005; Monastiriotis et al, 2010).

2.3 FDI and regional Inequality

The mobility of capital and its spatial implications for the recipient countries has long ago received the attention of specialized research. The neoclassical theory would expect capital movements and in particular Foreign Direct Investment (FDI) to play a major role in the convergence process through its location in cost-attractive regions, technology transfer and diffusion of knowledge. However, earlier or more recent reports suggest that this may not be the case. Hymer (1975) considered that transnational activities could increase rather than decrease inequalities, mainly due to their selective character with respect to location. This suggestion has been confirmed more recently by a number of studies for emerging economies (Bailey and Driffield,

2002; Daumal, 2013; Ge 2006). At the European scale, Rosenbalt and Pumain (1993) have shown that FDI tend to favour a few advanced metropolitan regions. Similarly, Resmini (2000, 2003) investigating the case of transition economies concluded that FDI is a spatially selective process tending to increase inequalities. Zvirgzde et al (2013a and 2013b) and Kokko and Kravtsova (2012) tend to confirm these findings for the case of Ukraine. One of the reasons is, that, capital regions in recipient countries are more open to forces of international competition and learning, comparing to their national hinterlands. As a result, they will have a greater capacity to internalize any spillovers that may be generated and to withstand the additional competition from the foreign investors (Monastiriotis and Borrell 2013). Therefore, FDI has been considered in the literature to be a major driver affecting spatial balances in many transition or emerging economies.

3. Spatial structure and change in ENC

There is very little discussion in the accessible literature about the spatial patterns of change in ENC during their recent period of openness and socio-economic transformation. This situation is in sharp contrast with the intense and expanding discussions about the evolution of regional inequalities and the spatial patterns of adjustment in the former planned economies in Central and Eastern Europe (CEE) that have recently joined the EU (Petrakos, 1996; Petrakos, 2001; Artelaris et al, 2010; Heidenreich, 2003; Bachtler and Downes, 1999; Monastiriotis, 2013; Ezcurra et al, 2007; Heidenreich, 2003; Davoudi, 2003; Kunzmann, 2006). Although there are variations in methodological approaches, time-periods and the number of countries under examination, a general conclusion of most research is that the spatial adjustments in most CEE countries under transition favor mainly metropolitan and also western regions in countries sharing common borders with the European Union (EU-15) and being a short distance from the European core markets. During the two decades of transition, disparities have increased at various rates and degrees in CEE countries to levels that are higher than most of the EU countries.

Despite the fact that the ENC-East economies have been experiencing similar processes of transition, marketization and internationalization, very limited research on regional inequalities has become available. Recent studies report a west-east spatial dichotomy of Ukraine (Kokko and Kravtsova 2012) and an increasing gap between the capital and all the regions since 2001 (Demchuck and Zelenyuk 2009). More evidence is available for Israel (Beenstock and Felsenstein 2008, Portnov 2005, Portnov and Erell 2004, Lipshitz and Raveh 1998), although for ENC-South economies, reports on their spatial structure and change are largely unavailable.

In this section we utilize a regional data base compiled within the framework of the FP7 SEARCH Project in order to analyse the regional structure and the evolution of regional inequalities in a number of ENC for which statistical information at regional level (which is comparable to the EU NUTSII regions) has become available. Our intension is to explore the regional structure of the ENC economies and detect patterns of spatial change. The critical question is whether ENC economies are characterized by a relatively balanced or unbalanced spatial structure and whether regional inequalities tend over time to increase or decrease.

We observe in Table 1 and Map 1 that the ENC area is a large and highly diverse macro-region with a population of nearly 280 million and an area similar to that of the EU. ENC-South has clearly the largest population, area and economy among the two

subgroups, including countries with very large populations (like Egypt, Algeria and Morocco) and very large area (like Algeria, Libya and Egypt). At the same time, the ENC-South is very diverse in terms of population density, urbanization rates and development levels. Israel, which is the smallest in area country, has the highest density, the highest urbanization rate, the bigger economy and the highest development level. All countries have high or very high by EU standards population and GDP per capita growth rates, although the GDP per capita of most of them is considered to be low or very low. It is worth noting that most of the population and economic activity of the ENC-South region is concentrated in the coastal areas, where densities are especially high, while the interior of the countries (especially in Africa) is very sparsely populated.

Looking at Map 1 we cannot avoid but notice the great potential for the creation of a horizontal West-East coastal "development axis" connecting Rabat with Algiers, Tunis, Tripolis and Cairo in the Southern Mediterranean rim with densities and linkages that vary considerably and political realities that do not presently allow for the realization of this potential. This "development axis", under certain conditions, can be transformed to a ring of growth, trade and factor mobility hosting more than 100 million of urban residents in the external European periphery and the possibility for (future) extensions to the Middle East and the Caucasus region.

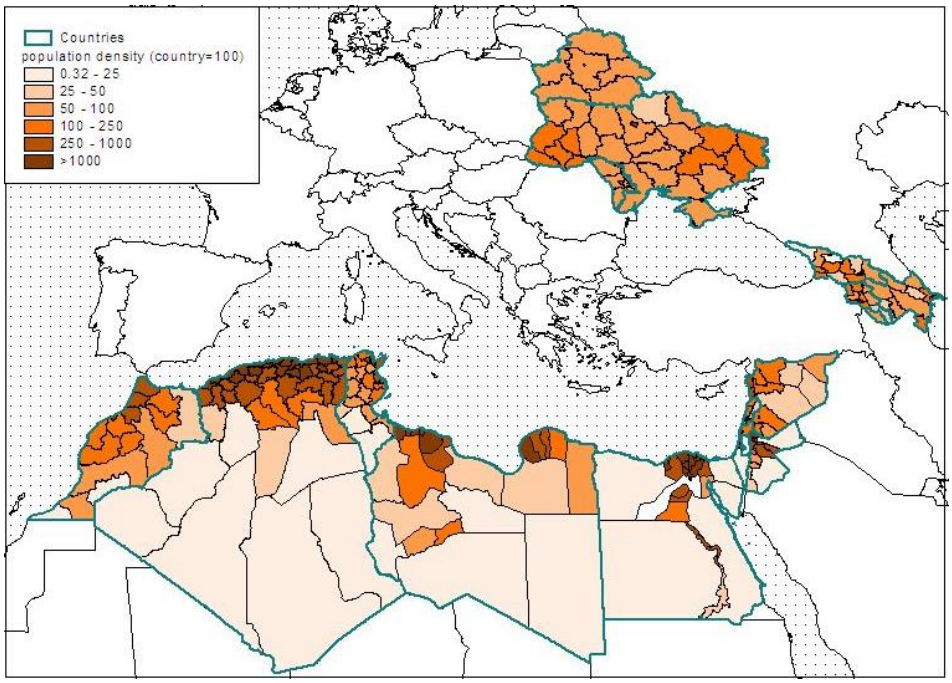
On the other hand, the ENC-East is also a diverse area in terms of population, economic activity and development levels. Ukraine stands out as the largest country with 60% of the population and 65% of the GDP of the region, while Belarus appears to be the country with the highest development level. Urbanization rates are in general (and with the exception of Belarus) low and population growth (with the exception of Azerbaijan) weak or negative. Although the development gap compared to the EU is very large, the ENC-East countries have grown significantly during the last decade.

Table 1 Basic indicators for the ENC

	population	population growth (%)	population density (inh/sq. km)	urban population share (%)	GDP (mil.USD, constant 2005 prices)	GDP/cap (USD, constant 2005 prices)	GDP/cap growth (%, constant 2005 prices)
	2010	2000-10	2010	2010	2010	2010	2000-10
East ENPs	75,393,390	-3.79	73.12	65.45	179,499	2,381	92.37
Armenia	2,963,496	-3.66	104.1	64.1	5,912	1,995	122.76
Azerbaijan	9,054,332	12.50	109.5	53.4	28,328	3,129	257.93
Belarus	9,490,000	-5.15	46.8	74.6	42,939	4,525	115.23
Georgia	4,452,800	0.78	77.9	52.7	8,241	1,851	81.67
Moldova	3,562,062	-2.13	124.0	46.9	3,501	983	68.55
Ukraine	45,870,700	-6.72	79.2	68.7	90,577	1,975	63.10
South ENPs	202,913,936	17.97	33.48	58.11	653,632	2,963	17.02
Algeria	37,062,820	16.85	15.6	72.0	116,799	3,151	24.02
Egypt	78,075,705	18.05	78.4	43.4	121,036	1,550	35.97
Israel	7,623,600	21.22	352.3	91.8	164,125	21,529	11.98
Jordan	6,046,000	26.04	68.1	82.5	17,037	2,818	46.21
Lebanon	4,341,092	34.18	424.3	87.1	29,992	6,909	23.14
Libya	6,040,612	16.70	3.4	77.6	52,345	8,776	26.44
Morocco	31,642,360	10.21	70.9	56.7	75,523	2,349	45.97
Syria	21,532,647	31.53	117.3	55.7	36,614	1,700	22.73
Tunisia	10,549,100	10.31	67.9	66.1	40,161	3,807	40.32
ENPs	278,307,326	11.16	39.25	60.10	833,132	2,994	56.45
EU	506,707,706	3.81	119.6	73.6	14,460,356	28,538	10.80

Source: World Bank (2013)

Map 1. Regional population density in the ENC area



Source: Own estimates based on the SEARCH Regional Database

The benefits of growth, however, are not evenly distributed in the ENC economies. As Table 2 and Figures 1-2 show, regional inequalities in the ENC economies are relatively high and have increased in the 2000-10 period in most of the cases. The weighted coefficient of variation[3] of regional GDP per capita is by EU standards relatively high in Armenia and the Ukraine in 2000 and extremely high in Georgia and Azerbaijan. For comparison purposes, in 2007 the weighted coefficient of variation in Germany and France was 0.236 and 0.367 respectively (Petrakos and Artelaris 2009). Israel and Belarus appear to be the only countries with low levels of regional inequality.

In the period 2000-2010 inequalities increased significantly in all the countries for which we have comparable data, except Israel. As Table 2 and Figure 1 show, the weighted coefficient of variation has increased significantly in Armenia, Georgia and Ukraine and remained in disproportionately high levels for Azerbaijan. Similar increases in regional inequality appear to take place when we examine the evolution of the max/min ratio[4]. All countries with comparable data experience an increase of the distance between their richest and their poorest region in the 2000-2010 period. In the case of Azerbaijan, the max/min ratio receives an

[3] The coefficient of variation (CV) is a dimension-less index that allows cross-country, cross-variable and over time comparisons of the level of regional disparities. The value of the coefficient is basically determined by the value of standard deviation of a variable and, as a result, it is affected by all observations. In principle, the greater its value, the greater is the level of regional disparities.

[4] The max/min ratio is also a dimension-less index of disparities, but its value is affected only by the two extreme observations of the variable under consideration. In principle again, the greater its value, the greater is the spread of the observations and the greater the level of disparities.

extremely high value as the GDP per capita in Baku, which is the richest region (€ 16,833) is 145 times the GDP per capita of Kalbajar-Lachin, which is the poorest region (€ 115).

Finally, Table 2 and Figure 2 provide a measure of metropolitan dominance in the regional systems of the ENC economies. We observe that the GDP per capita of the capital region in all countries, with the exception of Israel[5], has increased significantly between the two periods. Some countries (Azerbaijan, Georgia and Ukraine) tend to develop a strong metropolitan or core-periphery pattern of development. The region of Baku had in 2000 (2010) a GDP per capita figure that was 223 (236) percent higher than the national average, the region of Kiev had in 2000 (2010) a GDP per capita figure that was 115 (210) percent higher than the national average, while the region of Tbilisi had in 2000 (2010) a GDP per capita figure that was 133 (578) percent higher than the national average! Although other countries (Israel Armenia, Morocco) tend to have a less unbalanced regional distribution, the analysis reveals that the strengthening of the metropolitan regions in the period under examination is one of the factors contributing to increasing regional inequality in the ENC area.

Table 2. Measures of regional inequality in ENC (2000-2010)

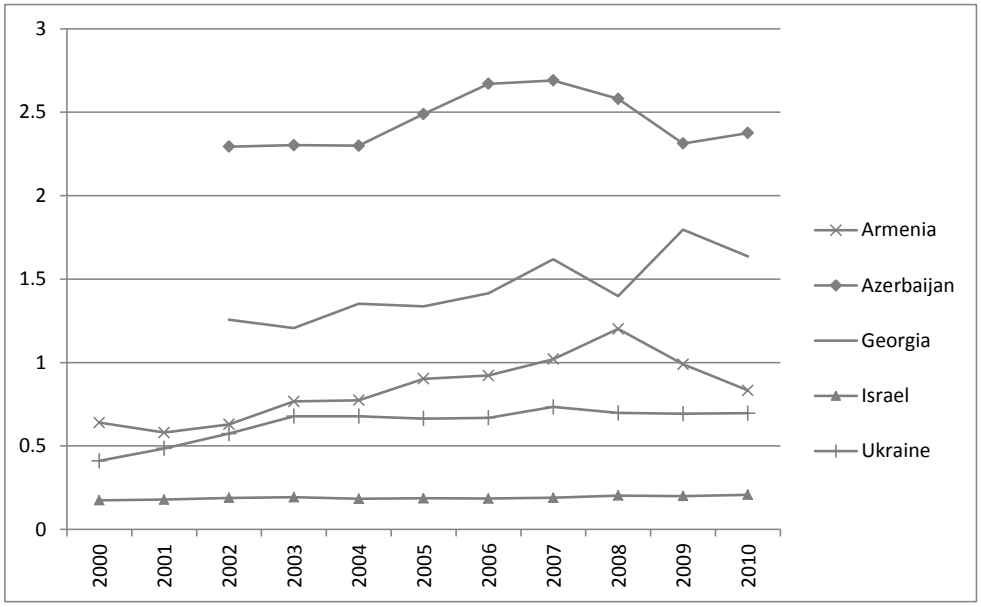
	weighted coefficient variation of regional GDP per capita		max/min ratio for GDP per capita		GDP per capita of the capital region (country=100)	
	2000	2010	2000	2010	2000	2010
Armenia	0.603	0.816	3.12	4.11	107	173
Azerbaijan	2.305	2.230	127.76	145.62	323	336
Belarus		0.252		1.78		145
Georgia	1.257	1.641	11.03	13.48	233	678
Moldova		0.905		6.81		260
Ukraine	0.412	0.689	4.23	6.46	215	310
Israel	0.199	0.179	1.51	1.71	85	73
Morocco		0.364		3.11		153

Source: Own estimates based on the SEARCH Regional Database

Note: in Azerbaijan the max value of GDP per capita is observed in the Baku region (€ 16,833), while the min value is observed in the Kalbajar-Lachin region (€ 115)

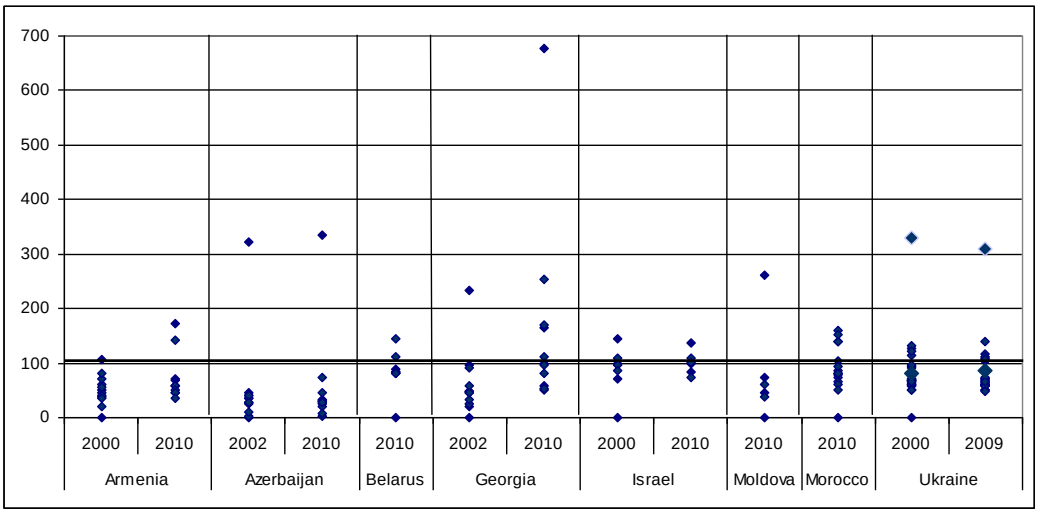
[5] The Capital region of Israel is Jerusalem, which is not the most developed region of the country. If the region of Haifa, which has the highest GDP per capita in the country, was used in the table instead, the figures would have been 144 and 137 respectively.

Figure 1. Weighted coefficient variation of regional GDP per capita in ENC (2000-2010)



Source: Own estimates based on the SEARCH Regional Database

Figure 2. Regional GDP per capita in ENC (national average = 100)



Source: Own estimates based on the SEARCH Regional Database

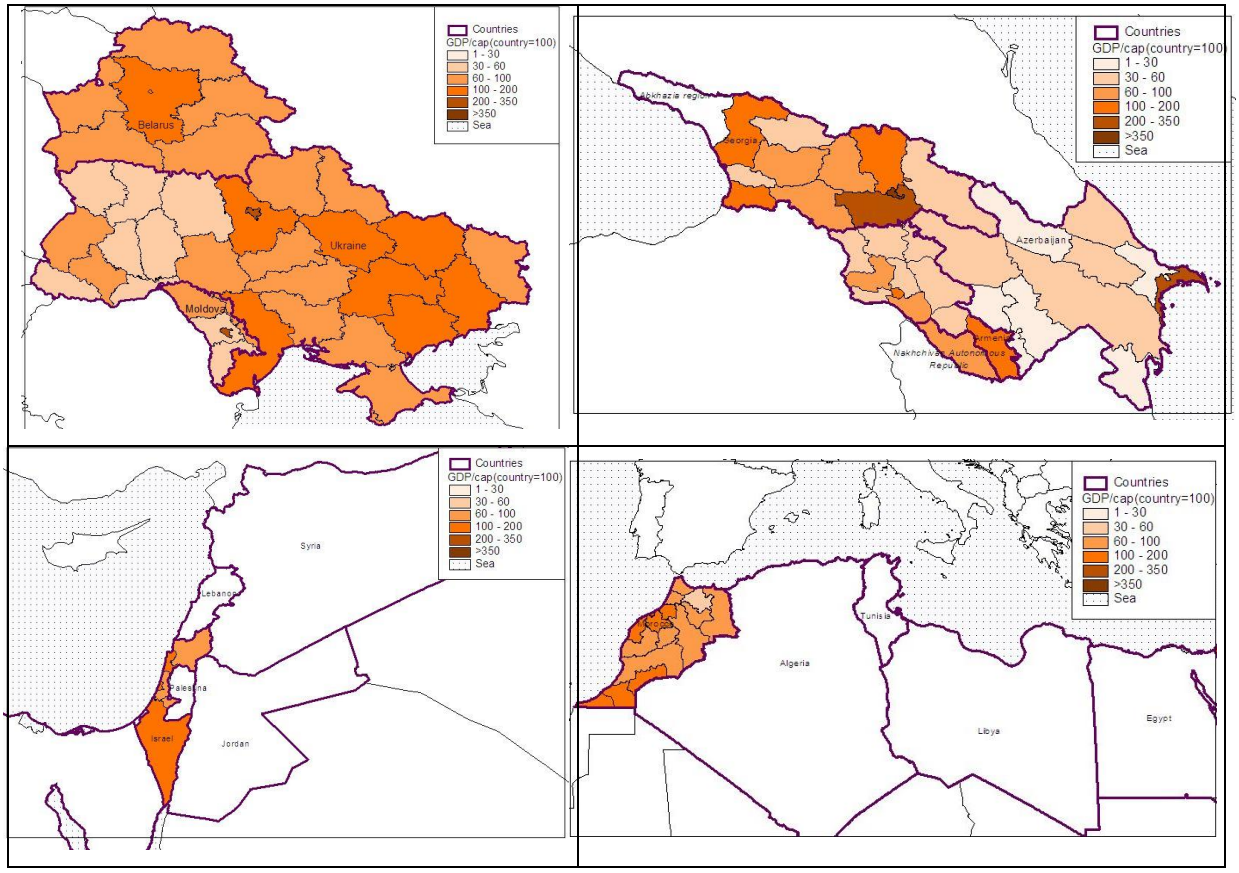
The patterns of metropolitan dominance can also be observed in Map 2, which presents the regional variations of GDP per capita around the national average for all ENC with available information[6]. Clearly, countries like Azerbaijan, Georgia, Moldova and Ukraine, exhibit a more polarized regional structure than Belarus or Israel. An interesting observation for the ENC-East countries

[6] Note that the region of Abkhazia in Georgia is a disputed territory for which there is no available GDP information. Also, the region in the southmost part of Armenia that looks like another country is the Nakhchivan Autonomous Republic, which is a landlocked exclave of the Republic of Azerbaijan. The region covers 5,500 km² and borders Armenia (221 km) to the east and north, Iran (179 km) to the south and west, and Turkey (15 km) to the northwest.

is that their development "centers" or "axes" do not gravitate (yet) towards the West but towards the East. In Ukraine, besides the dominant Kiev metropolitan area, the more advanced regions of the country are found in the Eastern borders with Russia, not in the West. The same is true for the Caucasus economies, where their development centers are found in the Eastern part of their territory. This spatial pattern of development is clearly a legacy of the past and the participation of these Republics into the Soviet planning system and the dominant role played by the Russian economy within that.

The empirical analysis above has shown that the process of transition in the ENP-East has been associated with increasing inequality at the regional level, verifying earlier findings in the literature for CEE transition countries (Petrakos 2001, Heidenreich 2003, Artelaris et al 2010, Monastiriotis 2013). To one degree or another, all countries provide clear signs that the reforms and the transition policies initiated in the early 1990s have had a clear upsetting impact on their spatial balances. In a number of countries, regional inequalities are very serious when measured by European standards, revealing an unbalanced process of development. This may be an issue of serious concern in the immediate future, as these countries are typically characterized by either non-existent or poorly designed and under-funded regional policies (Gorzelak 2000).

Map 2. The regional GDP of ENC, 2010 (national average = 100)



Source: Own estimates based on the SEARCH Regional Database

3. A model of regional disparities, growth and integration

A critical question that arises from the discussion in the previous section is related to the determinants of regional inequalities in ENC economies. What are the drivers behind this significant and in some cases rapid increase in inequalities? Why the process of growth has been so unbalanced in a number of countries, especially in Eastern Europe? How do the discussion and the debates in the literature help to understand the spatial dynamics in the ENC economies? What can we expect in the future? In order to answer these questions we propose in this section a model that capitalizes on earlier work on EU countries and examines empirically the role of growth dynamics and the international environment on regional disparities in the ENC.

Following Petrakos et al (2005) and Anagnostou et al (2008), the model allows for the empirical examination of short-term growth dynamics and long-term development processes in a changing international environment, providing a direct test for the validity of alternative theories of spatial growth. For countries that are in the low-middle levels of development, the long-term convergence process proposed by the NC School is better represented by the inverse U-shaped curve of Williamson (1965), which claims that countries in their early stages of development may be characterized by a positive relationship between development levels and regional disparities, while countries in more advanced stages of development may be characterized by a negative relation. Equation (1) depicts this non-linear relation for regional disparities (r) and GDP per capita (Y), where Y* is the level of development after which this relation turns from positive to negative.

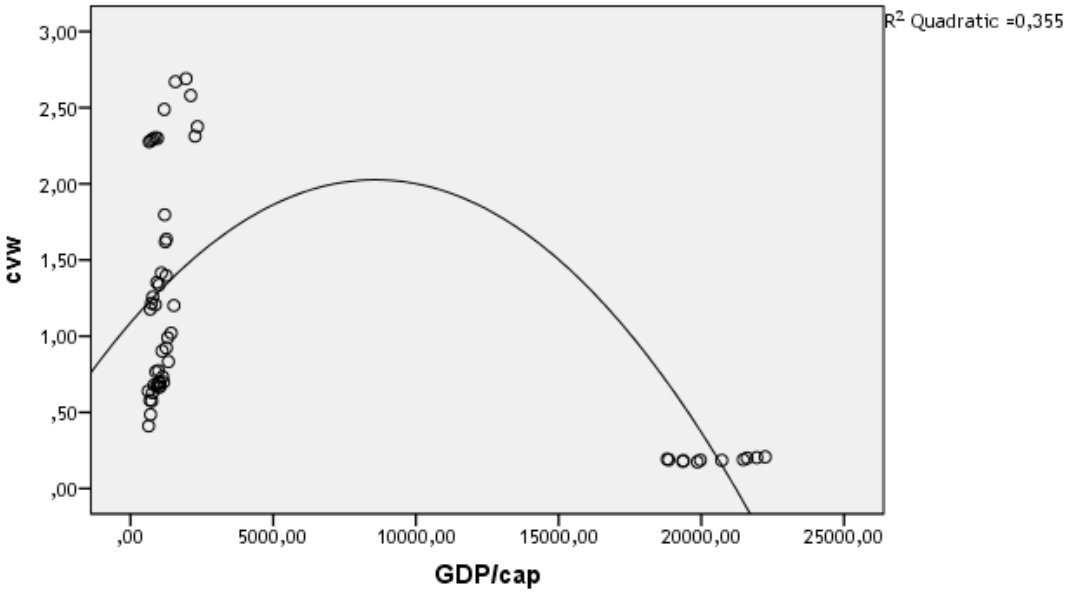
$$r_{it} = \theta(Y_{it}), \qquad t = 1, 2, \ldots, T \qquad i = 1, 2, \ldots, N \qquad (1)$$

$$\partial_Y > 0,\ \partial_{YY} < 0\ \forall\ Y \geq 0,$$

$$Y = Y^* \text{ when } \partial_Y = 0$$

This relation, which depicts long-term processes and acknowledges some scale and agglomeration effects in the early stages of development, is eventually in line with NC postulates as well as explanations related to a more equal spatial allocation of political power (Friedmann 1969), diseconomies of agglomeration prevailing after some level of concentration (Petrakos and Brada 1989), technological diffusion, core-periphery spread effects, the existence of transport infrastructure that increases the locational choice of private capital, etc. In brief, this relationship claims that the combination of market forces and policy factors in advanced economies is likely to yield, in the long-run, lower spatial disparities. Are the realities in the ENC economies in line with this argument? Figure 3 depicts the data and two fitted lines (one linear and one non-linear with a better fit) between the weighted coefficient of variation and the development level of countries with available data in the period 2000-10, showing that empirically this relationship seems plausible.

Figure 3. The relationship between the CVw and GDP per capita in ENC, 2000-10



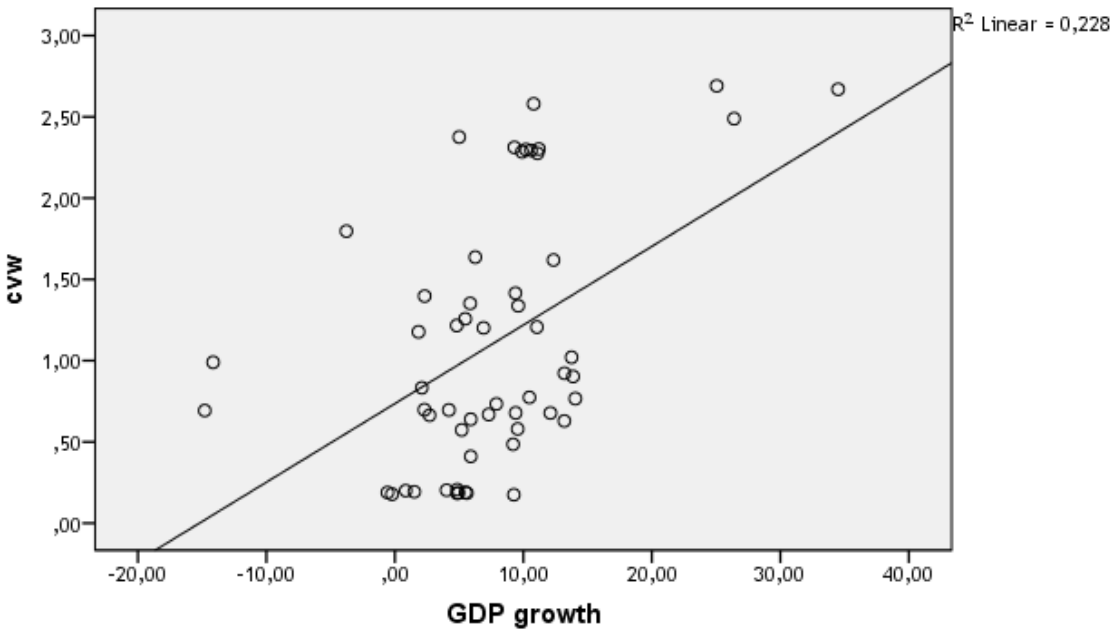
A competing literature has associated the spatial allocation of activities to business cycles. Berry (1988) has claimed that regional imbalances expand or contract during the economic cycle, depending on whether the economy is in an expanding or declining phase. This position, which directly links high rates of economic growth with increasing disparities, is in line with the argument about the spatially cumulative nature of growth made by Myrdal (1957), as well as with the discussion on the impact of agglomeration economies on the regional allocation of resources (Henderson, 1983, 1986, 1988 and 1999; Krugman, 1991 and 1993a; Thisse, 2000). It is also not far from Kaldor's (1956) viewpoint that the increasing returns provoked by the division of labour make economic growth a path-dependent process. The rationale of this claim is that economic cycles typically begin in advanced regional centres, where the interaction of agglomeration effects and market size provides a lead over other regions. These effects may be related to the quality of human resources, the science base of the region and its interaction with industry, the quality of the service sector, the links between economic and political decision-making, or the intra-sectoral or inter-sectoral formal and informal relations among neighbouring firms. The analysis suggests that economic growth tends to be associated, in the short-to-medium term, with increasing spatial disparities, as leading regions are in a better position to take advantage of the opportunities generated by an expanding economy. On the other hand, the leading regions are more likely to be hit harder by the pressures generated in a contracting economy.

Following Petrakos and Saratsis (2000), Petrakos et al (2005) and Anagnostou et al (2008) we model the relation between regional imbalances and economic growth as in equation (2), where *r* is a measure of regional disparities and *g* is the annual growth rate of national GDP.

$$r_{it} = \varphi(g_{it}), \quad \varphi_g > 0, \quad t = 1, \ldots T \quad i = 1,2, \ldots N \qquad (2)$$

The estimated slope coefficient has been found for the EU countries to be positive and statistically significant, providing empirical support to the hypothesis that periods of economic expansion have been followed by an expansion of regional disparities, since growth typically originates in the more advanced regions of the country. Figure 4 depicts the weighted coefficient of variation and the GDP growth of ENC economies with available statistics, showing that the data and the spatial dynamics in these countries can also be interpreted by this relationship.

Figure 4. The relationship between the CVw and GDP growth in ENC, 2000-10



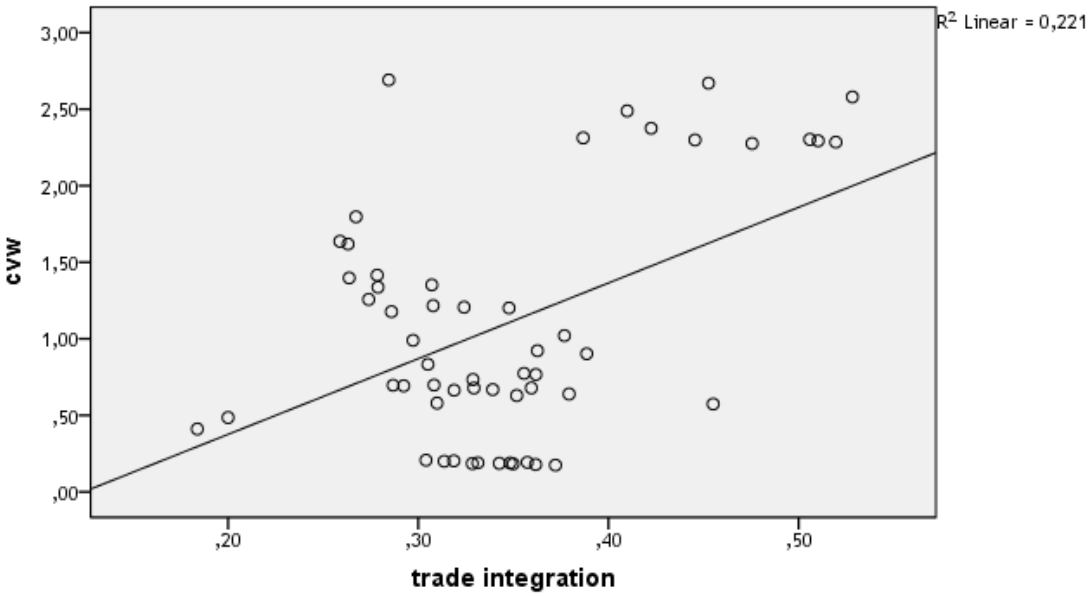
A critical question for the ENC economies is whether the process of integration with the relatively more advanced EU economy is going to have direct or indirect effects on their spatial balances, increasing or decreasing regional inequalities. A recent literature examining the effects of integration on regional inequalities inside the EU indicates that the process of integration seems to favor the more central and advanced regions, hosting a higher share of large, experienced and internationalized firms, a significant science base and a qualified labor force, as a result, being in a better place to compete in the new open European market (Petrakos et al 2011).

A similar argument can be made for the exposition of the ENC regions to the international competition and especially the competition originating from the advanced EU regions: The more advanced ENC regions, with a more diversified productive base will be able to deal in a more successful way with the increased levels of competition, while the less advanced, perhaps peripheral or monostructure regions will have greater difficulties to compete in the new international environment. This argument becomes more relevant to the ENC realities if we take into consideration that their trade with the EU has developed in an unbalanced and asymmetric way (Petrakos et al, 2013; Pinna 2013, Boschma and Capone 2013). As a result, the process of integration with the advanced EU regions can be hypothesized to increase inequalities (equation 3).

$$r_{it} = h(int_{it}), \quad h_{int}>0, \quad t = 1, \ldots N \quad i = 1,2, \ldots, N \qquad (3)$$

Figure 5 shows that the realities of the ENC economies are in line with this hypothesis. It presents the relationship between the weighted coefficient of variation of regional GDP per capita at the regional level and the degree of integration of the ENC economies with the EU, measured as the share of trade with the EU in total ENC trade.

Figure 5. The relationship between the CVw and Trade Integration with the EU in five ENC, 2000-10

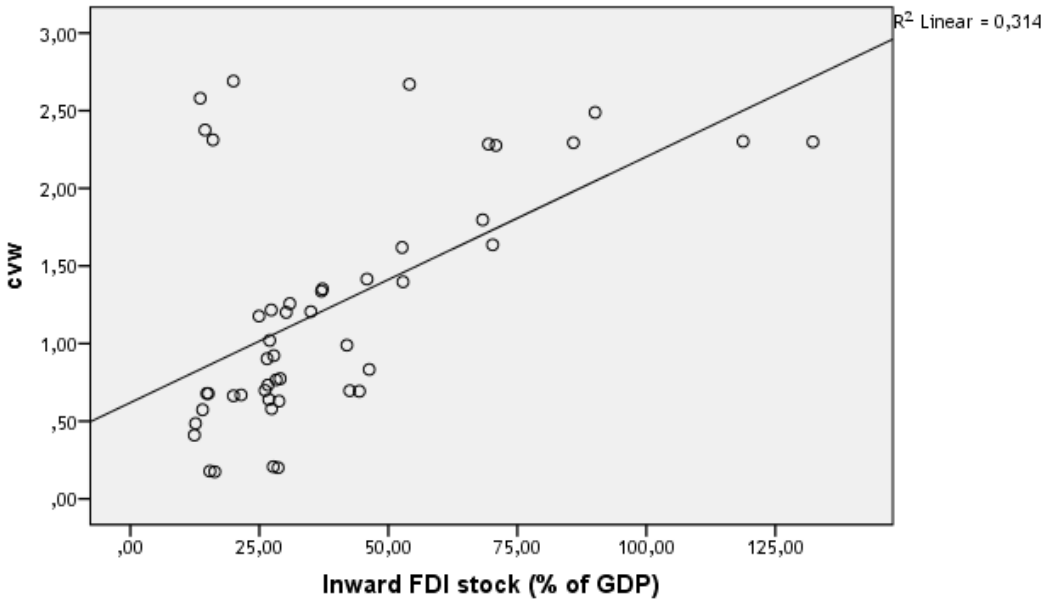


In order to have a more complete picture of the impact of internationalization on the regional inequalities in ENC economies, we include in our model the impact of Foreign Direct Investment (FDI). In general, FDI are more likely to increase (rather than decrease) inequalities, due to their selective character with respect to location (Hymer 1975). This suggestion has been confirmed at the European scale, including the transition countries, where FDI tend to favor mainly advanced or metropolitan regions and increase inequalities (Anagnostou et al 2008, Rosenbalt and Pumain 1993, Resmini 2000, 2003). Although the literature does not provide any direct evidence for ENC, we assume that their experience with FDI would be similar to the other transition countries. Hence, as equation 4 shows, the impact of FDI on regional inequalities is expected to be positive.

$$r_{it} = k(fdi_{it}),\ k_{fdi}>0 \quad t = 1,2,\ldots, T \quad i = 1,2, \ldots, N \qquad (4)$$

Figure 6 shows that this relationship is in line with the available data and the experiences of the ENC economies.

Figure 6. The relationship between the CVw and Inward FDI stock as a share of GDP in ENC, 2000-10

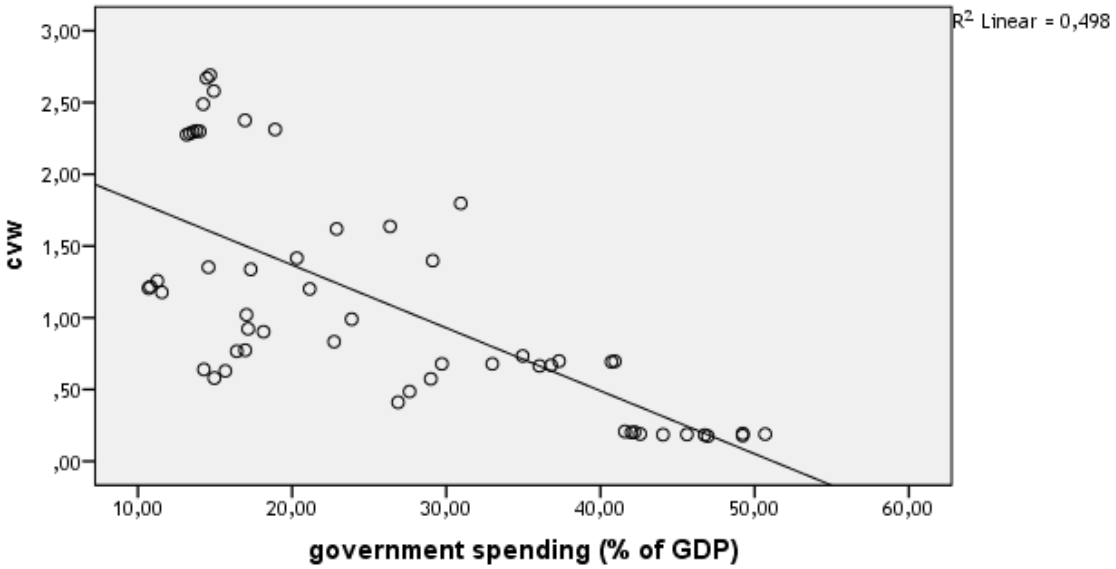


Finally, we include in our model the share of public sector in GDP, in order to examine the impact of public policies on regional inequalities. Public policies in the form of public spending for infrastructure, SMEs support programs, human capital development or other similar type of government interventions are considered to be the main instruments for reducing regional inequalities, to the extent that they are designed and implemented in a spatially balancing way. On the other hand, sectoral type of public policy, such as, R&D, higher education, or industrial policy may have a more selective spatial pattern and often promote the efficiency of the economy at the expense of the less advanced regions. Recent evidence in the EU has shown that the existing public policy mix tends to decrease regional imbalances (Anagnostou et al 2008). On this basis, we expect that in functional democracies and in countries with very high regional inequalities, the public sector cannot ignore the problems and needs of the weaker regions. As a result, our hypothesis is that a larger public sector will tend to lead to a more balanced spatial economic structure (equation 5).

$$r_{it} = z(pub_{it}),\ z_{pub}>0 \quad t = 1,2,\ldots, T \quad i = 1,2, \ldots, N \qquad (5)$$

Figure 7 shows that in ENC economies higher shares of public spending in GDP are clearly associated with lower levels of regional inequalities.

Figure 7. The relationship between the CVw and Government spending as a share of GDP in ENC, 2000-10



In order to test for the impact of short-term growth dynamics and long-term development processes on regional inequalities in the ENC economies, taking into consideration their internationalization experience and the role of the public sector, we estimate the model in equation 6.

This model reconciles the competing views of the convergence and divergence schools in the regional literature, allowing for the possibility to have a simultaneous (and after some point opposite) impact on regional balances in ENC economies. It tests for the possibility that more advanced economies are bound to experience eventually a decrease in their regional inequalities, while at the same time inequalities will to tend to follow closely the economic cycles. It also tests for the possibility that the exposition of ENC economies to a highly competitive international environment will eventually increase internal spatial imbalances. The proposed setting of the model implies that in principle both short-term and long-term processes are in operation at the same time, with forces exerting conflicting influences on internal regional structures. This specification allows for the possibility that both processes have a significant temporal impact, the magnitude of which can be estimated empirically and separately. Taking into consideration the discussion above about the direction of the impact of the independent variables, we specify the model as following:

$$r_{it} = \beta_0 + \beta_1 g_{it} + \beta_2 y_{it} + \beta_3 y^2_{it} + \beta_4 int_{it} + \beta_5 fdi_{it} + \beta_6 pub_{it} + \varepsilon_{it} \qquad (6)$$

$\beta_1>0$, $\beta_2>0$, $\beta_3<0$, $\beta_4>0$, $\beta_5>0$ and $\beta_6<0$

$i = 1, \ldots, 5$ *(countries: Azerbaijan, Armenia, Georgia, Israel, Ukraine)*

$t = 1, \ldots, 11$ *(time period: 2000-2010)*

TxN = 55 (Number of observations)

with i, $(i = 1,...,N)$ denoting countries, and t, $(t = 1,...,T)$ denoting time periods. Data limitations restrict our analysis in only five countries (Azerbaijan, Armenia, Georgia, Israel and Ukraine) and a period of 11 years (2000-10). Under the null hypothesis, the disturbance of the model ε_{it} is assumed to be independent and identically distributed over time and across units (Greene 2012). We use a panel data model because of the limited number of available information, because of its wide use in the literature during the last two decades (Hsaio 1985, 1986, Klevmarken 1989, Solon 1989) and because of its advantages[7] over OLS models. They are more informative compared to purely time series or cross-sectional data; they present more variability and less collinearity among variables; they have more degrees of freedom; and0 finally, they produce more efficient estimators.

The dependent variable of the model r_{it} is the population-weighted coefficient of variation estimated for each country on the basis of regional data provided at the regional level for the period under consideration:

$$r_{it} = \sqrt{\sum\left[\left(y_{ijt} - \bar{y}_{it}\right)^2 * \left(p_{ijt} / p_{it}\right)\right]} / \bar{y}_{it} \qquad (7)$$

Independent variables g_{it} and y_{it} are measured respectively by real GDP growth rates and real GDP per capita in the period 2000-2010 in 2000 prices (World Bank 2013). Finally, independent variable $int^{eu}{}_{it,,}$ which measures integration with the EU, is estimated for each country by the ratio of its intra-EU trade:

$$int^{eu}{}_{it} = (X^{eu}{}_{it} + M^{eu}{}_{it}) / (X_{it} + M_{it}) \qquad (8)$$

where the assumption is that higher ratios of EU-ENC trade imply a higher ratio of integration among the two areas Exports and imports data are derived from the UN COMTRADE database (UN 2013). In order to examine the impact of alternative types of ENC trade integration on regional inequalities, we also construct the indices:

$$int^{eu>100}{}_{it} = (X^{eu>100}{}_{it} + M^{eu>100}{}_{it}) / (X_{it} + M_{it}) \qquad (9)$$

$$int^{eu<100}{}_{it} = (X^{eu<100}{}_{it} + M^{eu<100}{}_{it}) / (X_{it} + M_{it}) \qquad (10)$$

$$int^{non\text{-}eu}{}_{it} = (X^{non\text{-}eu}{}_{it} + M^{non\text{-}eu}{}_{it}) / (X_{it} + M_{it}) \qquad (11)$$

$$int^{bric}{}_{it} = (X^{bric}{}_{it} + M^{bric}{}_{it}) / (X_{it} + M_{it}) \qquad (12)$$

where $int^{eu>100}$ measures trade integration with the advanced EU countries with GDP per capita above the EU average (EU average = 100) and $int^{eu<100}$ measures trade integration with the EU countries with a GDP per capita below the EU average. *On the other hand,* $int^{non\text{-}EU}$ measures trade integration with the rest of the world, while int^{bric} measures trade integration with the

[7] A detailed analysis with the advantages and disadvantages of panel data models is presented by De la Fuente (2000) and Baltagi (2001).

emerging BRIC economies (Brazil, Russia, India, China). The variable fdi_{it} is measured in terms of FDI Stock per capita (UNCTAD 2013), while the variable pub_{it} is measured as a share of Public Spending in national GDP (World Bank 2013). The results of the estimation of Equation (6) are reported in Table 3.

In general, the results of the estimation confirm the hypotheses presented in equation (6), while the overall explanatory power of the models, given by the adjusted R^2 is very high (93-97%).

We observe that in all models the coefficients of growth (β_1) is positive and statistically significant at the 1% confidence interval, indicating that, *ceteris paribus,* economies with a faster (slower) rate of GDP growth will tend to experience a higher (lower) level of regional inequalities. This finding indicates that in periods of faster growth the contrast between the dynamism of advanced regions and the sluggishness of lagging regions will be greater than in periods of slow growth or economic decline. In other words, a 'fast growth' environment unfolds more easily the potential and the advantages of developed regions, while a 'slow growth' environment affects less lagging regions that are more likely to be sheltered from the downturn because of their greater reliance on non-market or non-tradable sectors. This pro-cyclical process of divergence in periods of higher growth and convergence in periods of lower growth is likely to be more evident in countries with relatively large internal imbalances.

Table 3. The results of the econometric model

Independent variables	*Dependent variable: weighted coefficient variation of regional GDP per capita*				
	(1)	*(2)*	*(3)*	*(4)*	*(5)*
constant	*0.365***	*2.495****	*1.663****	*0.140*	*1.476****
	(2.03)	*(9.03)*	*(13.19)*	*(0.87)*	*(11.37)*
g	*0.009***	*0.009***	*0.007**	*0.005**	*0.011****
	(2.10)	*(2.10)*	*(1.92)*	*(1.79)*	*(3.64)*
y	*0.0004****	*0.0004****	*0.0004****	*0.0004****	*0.0003****
	(8.92)	*(8.92)*	*(7.67)*	*(8.49)*	*(7.15)*
y^2	$-2.78\cdot10^{-8}$****	$-2.78\cdot10^{-8}$****	$-2.43\cdot10^{-8}$****	$-2.72\cdot10^{-8}$****	$-2.37\cdot10^{-8}$****
	(-9.92)	*(-9.92)*	*(-9.41)*	*(-10.55)*	*(-8.63)*
Int^{eu}	*2.130****				
	(5.60)				
$Int^{eu>100}$				*2.912****	
				(7.35)	
$Int^{eu<100}$					*-5.279****
					(-4.20)
int^{non-eu}		*-2.130****			
		(-5.60)			
Int^{bric}			*-2.265****		
			(-4.90)		
fdi	*410.856****	*410.856****	*353.810****	*409.829****	*324.942****
	(8.88)	*(8.88)*	*(8.91)*	*(12.97)*	*(7.44)*
pub	*-0.030****	*-0.030****	*-0.027****	*-0.019****	*-0.020****
	(-9.59)	*(-9.59)*	*(-5.70)*	*(-6.23)*	*(-4.05)*
y* (turning point)	*$ 8776.98*	*$ 8776.98*	*$ 8333.33*	*$ 8363.97*	*$ 8312.24*
R^2_{adj}	*0.93*	*0.93*	*0.97*	*0.93*	*0.97*
N	*55*	*55*	*55*	*55*	*55*

We also observe that in all models the coefficients of the development level (y) have the expected signs ($\beta_1>0$, $\beta_2<0$) and are significant in the 1% confidence interval. Setting the first derivative of the estimated equation equal to zero ($\partial r/\partial y = 0$) and solving for y, we find that, *ceteris paribus*, inequalities are expected to increase until the ENC economies reach a level of development (y*) in the range of $8,300 – $8,700 (measured in 2000 constant prices), while after that NO level of development inequalities will eventually decline. This indicates that long-term development processes driven by neoclassical type of forces will

eventually force inequalities to decline in ENC countries that have exceeded this medium level of development. However, with the exception of Israel, which has a much higher level of development, all other countries are away or far away from this figure[8]. Therefore, it becomes clear that, in the countries and the period under examination, both short-term cumulative growth dynamics and long-term neoclassical type of processes are increasing regional inequalities. It will take a while before long-term spread effects will start exerting their influence on regional differences in the opposite direction.

The model presents some interesting findings for the impact of ENC trade integration on regional inequalities. First, the coefficient of int^{eu} in column (1) is positive and statistically significant at the 1% confidence interval, indicating that deeper integration of ENC economies with the EU will tend, *ceteris paribus*, to increase internal imbalances. This effect, however, is mainly due to the positive impact of deeper trade integration with the advanced EU countries. As we see in columns (4) and (5) in the table, the coefficient of the variable $int^{eu>100}$ is positive and statistically significant, while the coefficient of the variable $int^{eu<100}$ is negative and also statistically significant. Moreover, the coefficients of the variables $int^{non\text{-}eu}$ and int^{bric} in columns (2) and (3) are negative and statistically significant at the 1% confidence interval. The evidence provided in the model indicates that trade integration with the advanced EU countries tends to increase regional inequalities in ENC, while trade integration with the less advanced EU countries, the BRIC or the rest of the world tends to reduce regional inequalities. Trade integration with non-EU countries may reduce regional inequalities in ENC because it implies a lower and less abrupt trade reorientation (and as a result a less aggressive restructuring) in some eastern regions that have been historically gravitating towards relations with Russia.

Obviously, the results suggest that in the ENC process of openness and internationalization, the selection of trade partners is crucial for a spatially balanced type of development. The results verify earlier findings that the process of integration among unequal partners may be associated with an unequal distribution of costs and benefits from interaction. Excessive reliance on trade with advanced economies may generate important welfare gains to the ENC economies, but at the same time it is likely to amplify differences in internal regional trajectories in countries with serious inequalities. On the one hand, the expansion of relations in high-skill sectors may increase the competitiveness and the attractiveness of the advanced regions, while on the other, a possible sectoral and geographic reorientation in national trade may put serious pressure on weaker, more vulnerable, or traditional regional productive bases that may lead to a defensive type of structural adjustment and a contraction of their economy.

On the contrary, trade with countries in similar levels of development may be associated with lower welfare gains from the point of view of aggregate national efficiency, but, at the same time it may provide more opportunities to less advanced regions to participate in the constantly changing international division of labor. Therefore, a plausible way to interpret these results is, that, emerging economies that are in middle or middle-low levels of development and already face serious regional inequalities, should opt for a relatively balanced mix of trade relations between developed and less developed, neighboring and distant partners, hopping that this type of arrangement in trade relations will not upset further its regional balances.

[8] Libya and Lebanon with USD 8,700 and 6,900 GDP per capita figures for 2010 are relatively closer to reach this turning point. However, the recent unrest, especially in Libya may affect their growth prospects, at least in the short term.

We also observe in the table that the coefficient of FDI is positive and statistically significant at the 1% confidence interval in all the estimated models. This implies that *ceteris paribus* foreign capital located in emerging economies of medium or medium-low level of development is more likely to increase spatial imbalances due to its selective behaviour.

Finally, we observe in the table that the coefficient of public spending *pub* has a negative and statistically significant at the 1% confidence interval impact on regional inequalities. Interestingly, all the estimated models indicate that public policy, through the increase in public spending in GDP appears to be the only factor that can reduce regional inequalities. Given that many ENC combine significant inequalities with a relatively small public sector (which is on average equally to 30% of GDP, compared to a 39% average figure in the EU (World Bank 2013)), it becomes apparent that the aggressive privatization schemes that have been implemented in the previous decades and have reduced drastically the size of the public sector in most transition countries had an inverse impact on spatial balances, as the withdrawal of the State from the economy had a greater negative impact on the more sheltered and weaker regions.

Overall, in a number of alternative estimations our results remain robust and the estimated coefficients maintain a noticeable stability. To the extent that these models capture the main drivers of inequality in ENC economies the results are discouraging: With the exception of public policy, all other market driven determinants (with the exception of development levels in Israel) have a positive impact on regional inequality for the countries under consideration.

As long as these countries remain at levels of development lower than the threshold of $ 8,500, market forces are likely to increase regional inequalities over time. One option for ENC is to achieve a better mix of trade relations. This however is easy to think, but difficult to implement in an international environment regulated by bilateral or multilateral trade agreements. The other option is to use public policy as a means to counterbalance the effects of internationalization and reduce inequalities.

Is this a feasible assignment for the realities of the ENC economies? In order to examine that, we estimated in Table 4 the elasticities of the weighted coefficient of variation with respect to each one of the independent variables[9]. We observe that, with the exception of Israel, elasticities for all variables remain below 1. Although there are differences between countries, no clear geographical pattern appears. However, the figures in Table 4 have some important information related to policy making. They show that the (negative) impact of public policy on regional inequalities is strong enough to be able to counterbalance the (positive) impact of either integration or FDI. Indeed, the elasticity of the coefficient of variation with respect to public policy is higher in absolute terms than the elasticity with respect to integration in 9 out of 13 countries (shaded figures). Similar is the score from the comparison of the elasticities of public policy and FDI. This means that in most countries, a 1% increase in public spending is enough to offset the spatial effects of a similar increase in the degree of integration or the inflow if FDI.

[9] The elasticity is estimated from the formula: $e_x = b_x(x_{2010}/r_{2010})$, where b_x is the estimated coefficient of independent variable x, x_{2010} is the value of the independent variable for 2010 and r_{2010} is the estimation of the Weighted Coefficient of Variation provided by model (1).

Table 4. Estimated elasticities of the CVw with respect to the independent variables for ENC with available data

Countries	e_g	e_y	e_{int}	e_{fdi}	e_{pub}
ENC-East					
Armenia	0.01	0.42	0.36	0.34	-0.39
Azerbaijan	0.02	0.41	0.38	0.14	-0.22
Belarus	0.03	0.51	0.26	0.21	-0.46
Georgia	0.03	0.41	0.32	0.44	-0.47
Moldova	0.06	0.39	0.87	0.30	-0.97
Ukraine	0.03	0.66	0.54	0.46	-1.10
ENC-South					
Algeria	0.02	0.45	0.48	0.10	-0.34
Egypt	0.04	0.49	0.53	0.30	-0.69
Israel	0.07	-23.81	1.01	5.06	-1.98
Jordan	0.01	0.37	0.12	0.59	-0.33
Lebanon	0.01	0.12	0.12	0.60	-0.15
Morocco	0.02	0.39	0.52	0.27	-0.43
Tunisia	0.01	0.29	0.39	0.34	-0.24

Source: Own estimates on the basis of the results of model in column (1)

The message of our findings is that public policy can counterbalance the adverse effects of internationalization, under the condition that it has the right mix and the required strength. This task will not face the same difficulties in all countries. In some of them, like Belarus or Ukraine, the elasticity of public policy is relatively high compared to the elasticity of integration or FDI. In these countries, the effectiveness of regional policy should be higher, if correctly designed and implemented. In other countries, like Azerbaijan, Lebanon, or Tunisia, the elasticity of public policy is relatively lower compared to those of integration and FDI. In these countries, the efforts to reduce inequalities may require more resources in order to have a significant effect.

5. Conclusions and policy implications

In this paper we examined the pattern and evolution of regional inequalities in the ENC economies using a unique (yet incomplete) data set compiled for this purpose within the framework of the SEARCH FP7 project. The ENC in the East and the South comprise a heterogeneous group of countries in the external land or sea borders of the EU with common characteristic their relatively low level of development compared to the EU, their intense socioeconomic transformations and their opening to the international economy. Israel stands out in this region as a unique country with a relatively advanced economy and a relatively balanced regional system.

The results of the analysis indicate that regional dynamics in the external EU Periphery are characterized by spatial selectivity and an overall unfavorable environment for lagging-behind regions. In the period under examination regional inequalities have

increased significantly in most countries to levels that are unusually high by European standards. Some countries have experienced a core-periphery pattern of development with metropolitan regions dominating the national economy and lagging behind regions being in a great difficulty to catch up.

With the use of an empirical model we show that disparities at the national level exhibit a pro-cyclical behaviour, increasing in periods of expansion and decreasing in periods of slow growth or recession. We also show that long-term processes embodied in the level of development tend to favour a more equal allocation of activities and resources over space. However, this balancing effect will take place after a level of development that most ENC will not attain in the immediate future.

The model employed indicates that, with the exception of public policy, all other drivers of regional growth tend to favor the more advanced and the metropolitan regions. The peripheral, structurally weak and lagging regions are expected to experience an inferior growth performance and a pressure in their productive base arising from integration and competition from the more advanced European partners.

These findings have implications for theory and policy. On theoretical grounds, our paper has provided evidence that concentration forces currently dominate the operation of most economies, while dispersion processes are expected to appear at higher or much higher levels of development. Although earlier evidence for European countries (Petrakos et al, 2005; Anagnostou et al, 2008) shows that concentration and dispersion forces are concurrently in operation, validating the arguments of both the mainstream NC and the critical schools of thought, this is not the case with ENC. Due to the lower level of economic (and socio-political) development, most of these countries experience currently a cumulative and path-dependent process of growth, while the celebrated NC space-balancing effects can only be hopped to take place in the distant future.

Our findings set a number of uncomfortable dilemmas for the mainstream policy perspective. They challenge the widely held belief that economic growth is the main medicine for the reduction of regional imbalances. This hands-free and policy-free understanding of the spatial economy irrespective of the level of development, the macro-geographical coordinates and the response plan of the country under consideration is not supported by our findings. The evidence that disparities have a pro-cyclical character and that economic growth will always generate new imbalances, while long-term development favours cumulative processes, set a new framework for the discussion of regional policy in low-middle level of development countries.

Our findings also challenge the mainstream (almost axiomatic) belief that international trade is always and for all beneficial, no matter who the trade partners are, no matter what mix of products are traded and no matter if trade is balanced or not. The evidence that trade partners matter for the spatial balances of largely unbalanced spatial economic systems requires a new framework for the discussion of the EU-ENC trade relations and the EU policies towards its external periphery. The idea that the EU can integrate to its core productive system successive homocentric rounds of geographically more and more dispersed and economically less and less developed areas without altering the basic model of integration and without incurring any costs for anyone, needs to be re-examined.

The EU policy towards ENC needs to obtain a deeper level of understanding of the interactions between the international and the regional dynamics in these countries. A further upsetting of spatial balances in these countries may be the ground for either political unrest or a population exodus from poor rural areas where currently reside over 100 million people. A migration leak (or tide) to the relatively more advanced urban centers or the West is more likely to fuel further internal and external imbalances, than operate as a safety valve to the pressures exerted.

A deeper level of understanding of trade relations will include the monitoring of the geographical orientation, the balance and mix of ENC-EU relations as well as the allocation of the costs and benefits of integration in relatively advanced and less advanced regions inside and outside the EU. Moving one step away from the current policy doctrine, one may ask what trade arrangements may be able to improve the productive base of the lagging behind ENC regions in order to help them keep their vast population at home. The answer is not easy, especially when (as we suspect) it eventually may be in conflict with a number of EU policies and especially the Common Agricultural Policy. On the other hand, choosing not to answer the question has also a potentially high cost. Searching for second-best solutions requires creativity and some thinking outside the box. The concept of balanced integration (both in terms of geography and development) introduced in this paper, or perhaps the concepts of gradual or guided integration may provide some intuition for the formulation of better policy options in the future.

Finally, the paper provides evidence in support of public policy in the confrontation of regional inequalities and regional problems in the ENC area. Given that in most ENC the public sector is limited in size compared to EU, the active involvement of the State in pursuing a more balanced economy should be one of the policy priorities in most of these countries. However, with the exception of Israel, ENC national or regional administrations do not appear to have the required experience in setting up and implementing an effective regional (in the EU jargon 'cohesion') policy. The policy options for the EU here are more straight forward and less dilemmatic. The Commission can upgrade its technical and financial support and transmit its know-how but also sufficient funding for the design and implementation of regional development programs that will (at least partially) ameliorate the impact of internationalization on the spatial balances of the ENC economies.

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