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AND REGIONAL GROWTH IN POLAND**

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CHANGING MARKET POTENTIALS AND REGIONAL GROWTH IN POLAND

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Abstract

In the first part of this paper we compute Harris (1954) market potential values for the Polish regions for the period 2000-2008 based on the spatial distribution of incomes (measures by GDP) and its accessibility. In the second part of the paper we analyze to which extent the changes in market potentials in Poland have been the cause of the increasing income disparities observed across Polish regions from 1995 to 2008. To do so we derive and estimate a New Economy Geography model which relates per capita GDP growth rates with changes in market potential. The results of the cross-section estimations of the model for the period 1995-2008 point to a positive and significant effect of changing market potentials in per capita GDP growth rates and in widening the gap between poor and rich regions in the country under the period of analysis.

Keywords: Market Potential, Regional Differences, Poland, Growth Rates

JEL classification: R11, R12, R13, R14, F12, F23

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1. Introduction

The idea that market potential is important in determining regional incomes dates back at least to Harris (1954) who approximates a market potential function, which expresses the potential demand for goods produced in a location as the sum of the purchasing power in all surrounding locations, weighted by transport costs. The market-potential function has a long history in urban economics, Clark et al. (1969), Dicken and Lloyd (1977), Keeble et al. (1982) focusing instead on the implication for the location of production.

The seminal contributions of Krugman in the early nineties (Krugman, 1991a, 1991b, 1992) within the new field of spatial economics labeled as New Economic Geography (NEG henceforth) has given a revival to this traditional concept in the urban and regional economics literature providing the micro-foundations for Harris (1954) market potential concept. Empirical research within the NEG literature has shown the significance of market potential for the spatial distribution of incomes (Breinlich (2006), López-Rodríguez et al. (2011), Hanson (2005), Redding and Venables (2004)), educational attainment levels (López-Rodríguez et al. (2007), Redding and Schott (2003)) and for industrial location decisions (Midelfart-Knarvik et al., 2002).

Given a set of locations, for instance the sample of NUTS2¹ regions in a country, the market potential of each location depends on the levels of GDP in the home region and the levels of GDP in the surrounding locations within the given set adjusted for their proximity to the home region. Proximity depends on the bilateral distance between the locations that form the set. Relatively low regional market potential can be thought of as that region/s is (are) far from the main consumer markets and therefore in the *center-periphery* or *core-periphery* dichotomy of NEG models can be referred to as “economic-periphery”. On the contrary relatively high regional market potential is associated with proximity to main consumer markets and therefore regions enjoying it are often equated with “centrality” and can be referred to as “economic-center” or “core-economic” regions. Changes over the course of the years in market potentials can be the

¹ ‘NUTS’ (Nomenclature of Territorial Units for Statistics) is a geographical classification system used by Eurostat, dividing each country into a number of regions at different levels of aggregation. This paper works at the NUTS3-level of aggregation which consists of 66 Polish NUTS3 regions

result of the difference performance of the regions in terms of economic growth or differences in transport costs over time. However, changes in transport costs should not play a big role in market potential values when short periods of time are considered in the analysis. Only long time spans can make differences in transport costs over time to significantly influence the relative economic-centrality or economic-peripherality enjoyed by the regions. For instance over the course of the last century we attended to a very important change in the mode goods are transported from rail and steamships (at the start of the twentieth century) to ferries and trucks (a hundred years later).

The first part of this paper provides estimates of market potential for the 16 NUTS2 Polish regions from the period 2000-2008 in order to analyze the changes occurred in market potential values and how the center-periphery pattern has evolved over the period. The results show a substantial movement in relative regional market potential values over time. During 2000-2004 total average growth in market potential across Polish regions reached and average of 24,2% while in the following period 2004-2008 this figure rose to 37,9% which means an increase of 56% with regard to the previous figure. This important increase in market potential growth during 2004-2008 has not been evenly distributed across all Polish regions², being the core-economic regions of the period 2000-2004 the ones which rip the benefits of this increase and therefore this fact has being one of the major factors behind the widening of income disparities across Polish regions. However, the results show a well-defined core-periphery structure in the spatial configuration of market potentials in both periods. These results point out to a clear change in regional market potentials in Poland pre 2004 and after 2004, year in which Poland become a member of the European Union. However, claiming a causal relationship between our findings and Poland EU membership is far beyond the scope of this paper.

In the second part of the paper we analyze to which extent the changes in market potentials in Poland have been behind the increasing in income disparities observed across Polish regions from 1995 to 2008. To do so we

² The acceleration in market potential growth rates in 2004-2008 has allowed the extension of the so called core regions towards the North-Eastern parts of the country

follow Ottaviano and Pinelli's (2006) paper and we derive and estimate a New Economy Geography model which relates per capita GDP growth rates with changes in market potential. The results of the estimations of cross-section growth-type regressions for the period 1995-2008 including the changing in market potentials as our key variable show a positive and significant effect of this variable in per capita GDP growth rates. Taking into account the fact that core-economic regions have been the most benefited in terms of market potential growth during 1995-2008, this result therefore confirms the important role played by the changing in market potentials across Polish regions in widening the gap between poor and rich regions in the country under the period of analysis. This investigation complements the works carried out by Crafts (2005), Martinez Galarraga (2010) Niebuhr and Schlitte (2008) and Ottaviano and Pinelli's (2006) in the literature dealing with the significance of market potential in the growth processes of regions within countries adding new empirical evidence for a country belonging to the block of the so called Central and Eastern European Countries as is the case of Poland.

The remaining part of the paper is structured as follows. Section 2 introduces the Harris (1954) market potential concept and described the data we use in our computations. Section 3 contains a preliminary analysis and some descriptive statistics of market potentials in Poland. Section 4 analyzes the relationship between the changing market potential in Poland and per capita GDP growth over the period 1995-2008. Finally in section 6 we present the main conclusions.

2. Harris (1954) Market Potential Function

Harris's (1954) market-potential function relates the potential demand for goods and services produced in a location $j = 1, 2, \dots, \phi$ to that location's proximity to consumer's markets: Mathematically, the market potential function in its simplest formulation obeys to the following expression:

$$MP_i = \sum_{j=1}^{\phi} Y_j g(d_{ij})$$

where MPI is the market potential of location i , Y_j is an index of purchasing capacity of location j (usually gross value added, gross domestic product or population), d_{ij} is the distance between two generic locations i and j and $g(\cdot)$ is a decreasing function. The market potential function can be understood as a measure of how far a location is from its consumer markets and therefore it can be used as a proxy for the demand potential that the whole population exerts over every location in the space. Therefore the higher is the market potential index of a location; the higher is its attraction power on production activities.

Therefore, the market potential function according to Harris (1954) is a distance-weighted sum of the volume of economic activity in the surrounding regions. In our case we will compute two measures of market potentials according with the way we proxying the volume of economic activity. Our first measure of market potential takes as a proxy for the volume of economic activities the total gross domestic product in each Polish NUTS 2 region measured in local currency units and therefore market potential computed in this way would be termed as nominal market potential. Our second measure of market potential takes as a proxy for the volume of economic activities the total gross domestic product in each Polish NUTS 2 region measured in purchasing power parities (PPS) and therefore could be termed as real market potential. Regarding the calculation of bilateral distances in the market potential function it is made on the basis of the road distances expressed in kilometres between the capital cities of each NUTS 2 region in which Poland is divided. For the calculation of the internal distance within each NUTS 2 region, it is approximated by a function that is proportional to the square root of each

regions' area. The expression used is $0.66\sqrt{\frac{Area}{\pi}}$ where Area is each region area expressed in squared kilometres (km^2). This expression gives the average distance between two points on a circular location (see Crozet 2004, Head and Mayer, 2000 and Nitsch 2000) for a discussion of this measure of internal distance).

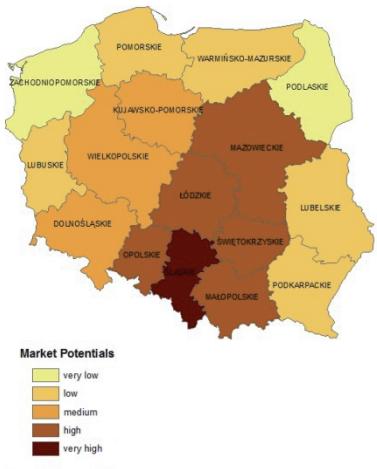
All the data was obtained from the website www.odleglosci.pl and from the Europe institute for official statistics (EUROSTAT) and Cambridge Econometrics regional data bank.

3. Market Potentials in Poland: A Core-Periphery Pattern

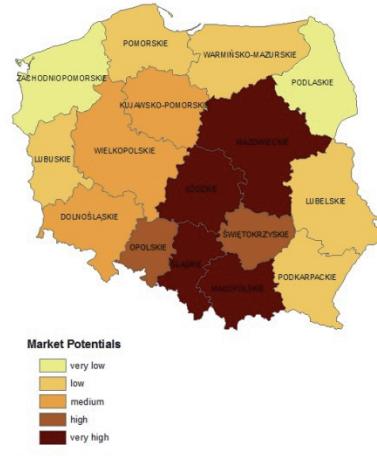
In this section we analyze the distribution of market potentials across the sixteen NUTS 2 regions in which Poland is divided over the period 2000-2008. We started by analyzing the spatial structure of market potentials at the beginning of the period, year 2000 and compare it with the spatial structure in the year 2008³. We have also performed our analysis by dividing the whole period into two sub periods (2000-2004) and (2004-2008) by averaging for each Polish NUTS 2 region its market potential value over the corresponding sub-period of time. Averaging market potentials over 4 or 5 year-intervals allow us to avoid misleading interpretations in the evolution of the spatial structure due to distortions that could be caused by chosen a year at the pick of the cycle and compare it with another year which is at the bottom of the cycle.

³ To compute the evolution of market potentials year by year would not add much more insights to the analysis we carry out here due to the fact that the increase in the volume of economic activity which causes the increase in market potential values from one year to the next has to be scaled by the bilateral distances between the different locations and therefore the potential variation in market potentials heavily smoothed. For instance, the calculations imply that if two regions are 100 km away from each other the scale factor is 1/100 which implies dividing by 100 the increase in the volume of economic activity from one year to the next.

Map 1: Market Potential in Poland (2000)



Map 2: Market Potential in Poland (2008)

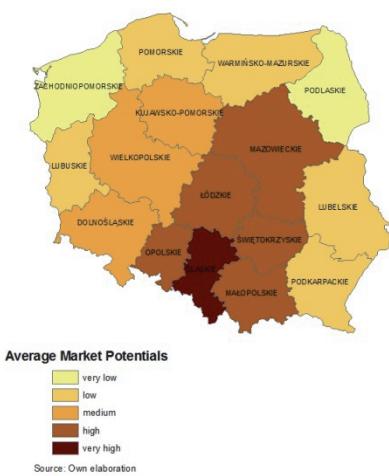


Map 1 and Map 2 depicts the spatial structure of market potentials across NUTS 2 regions in Poland for 2000 and 2008 respectively. Both figures show a well-established *core-periphery* pattern in the distribution of market potentials across the space. Around the regions that make the so called *economic core* we can distinguish successive envelopments of regions with decreasing levels of market potential that make the so called *economic periphery*. Both in 2000 and 2008 the *economic core* is made of the regions which we labeled as regions with very high and high market potential values according to the legend. They are geographically located in the South and Central Eastern parts of the country. These regions are Śląskie, Mazowieckie, Małopolskie, Łódzkie, Świętokrzyskie, Opolskie. Surrounding these regions, the next envelopment of regions labeled as regions with medium market potential values are located on the Western part of the core, Dolnośląskie, Kujawsko-Pomorskie and Wielkopolskie. The regions labeled as low market potential regions made the next envelopment which takes in Lubelskie and Podkarpackie surrounding the Eastern side of the core regions and Lubuskie, Pomorskie and Warmińsko-Mazurskie surrounding the Western side of the medium market potential regions. Finally the very low market potential regions take in the Northwest

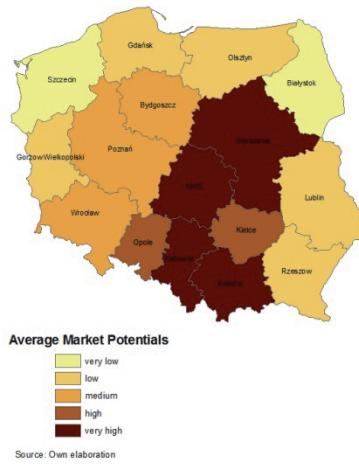
region of Zachodniopomorskie and the Northeast region of Podlaskie. As we can see from the maps the changes between 2000 and 2008 has taken place only within the so called *economic core* regions where there was an expansion of the very high market potential regions from only one region in 2000 (Śląskie) to three more regions in 2008 (Mazowieckie, Małopolskie, Łódzkie).

The next set of maps (map 3 and map 4) show the distribution of market potentials across Polish regions dividing the whole period of analysis into two sub periods 2000-2004 and 2004-2008 where the market potential for each NUTS 2 regions was computed as an average of the values of the

Map 3: Market Potential in Poland
(2000-2004)



Map 4: Market Potential in Poland
(2005-2008)



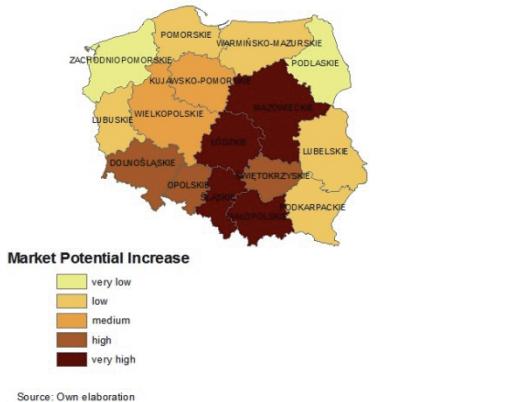
corresponding years of the sub-period.

As it can be seen from maps 3 and 4 the general conclusions that we have obtained previously comparing 2000 and 2008 are repeated here. There is a strong core-periphery pattern in terms of market potentials across Poland in both periods of analysis and the changes in market potentials from the first period to the second one has taken place only at the level of the regions labeled as very high and high market potential regions (the so called economic core) with the expansion of those regions recording very high market potential values both to the West of Śląskie taking in the Małopolskie region where the capital of the region Krakow is placed and to the North of Śląskie to the regions of

Łódzkie and Mazowieckie where the city of Łódź and the capital of the country are located.

A clearer picture of the winning regions can be seen in the following map 5 which depicts the average increases in total market potentials from the period 2000-2004 to the period 2005-2008 for each region.

Map 5: Market Potential Increase in Poland
from 2000-2004 to 2005-2008



As can be seen in map 5 those regions that form the economic core of the country have been the ones most benefited from the increase in market potential values over time. Therefore we can conclude that in this 9 year-time span there was a process of reinforcement of the *economic core* in which several regions with high market potential values have been upgraded to very high market potential values while the regions belonging to the so called *economic periphery* during 2000-2004 (regions with medium, low and very low market potential values) has not experienced any upgrades in the subsequent period 2004-2008. This process reflects a situation in which the spatial structure of the Polish economic activity over these years has been dominated by the superior effects of the centripetal forces that tend to cluster economic activities together in the so called *economy core* locations of the country versus

centrifugal ones that tend to push them apart to other locations in the economic periphery and other intermediate locations.

A closer look at the evolution of the so called *economic core* and *economy periphery* of Poland can be obtained by computing its market potential annual growth rates over the period 2000-2008. The results of these computations are shown in table 1 and figure 1. From these computations it is clear that market potential growth rates in core regions are greater than market potential growth rates in periphery regions⁴. Moreover, figure 1 shows quite clearly that market potential growth rates have risen quite substantially from 2004 onwards both in core and periphery regions.

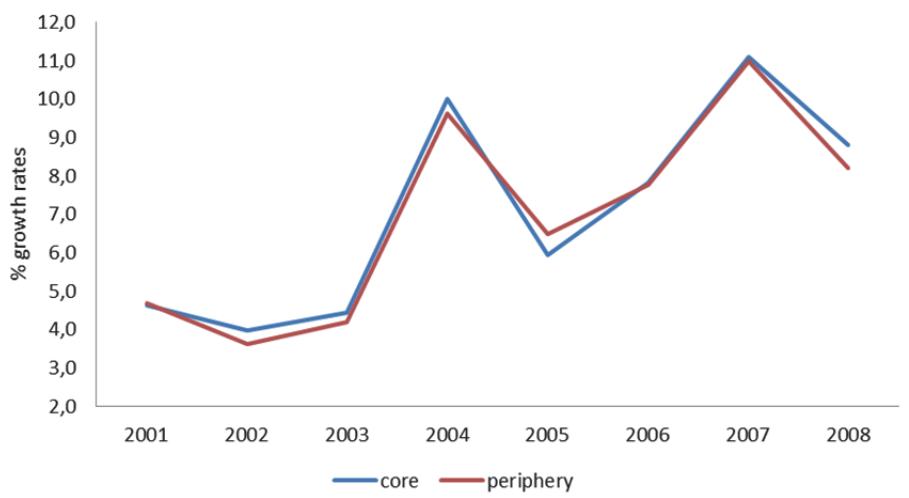
Table 1: Market Potential Growth Rates

Regions	2001	2002	2003	2004	2005	2006	2007	2008
core	4.6	4.0	4.4	10.0	5.9	7.8	11.1	8.8
periphery	4.7	3.6	4.2	9.6	6.5	7.8	11.0	8.2
Average growth core		4.3				8.7		
Average growth periphery		4.1				8.6		

core: Śląskie, Opolskie, Małopolskie, Łódzkie, Mazowieckie, Świętokrzyski; periphery: remaining regions

Source: Own elaboration

Figure 1: Market Potential Growth Rates



This evolution of market potential growth rates over time in the *economic core* and *economy periphery* of Poland could be originated by a difference in prices between these two areas favoring the core regions when we use GDP

⁴The only exception is the year 2005

measured at current prices in our market potential computations. In order to correct for this bias and to get a more accurate picture of market potential growth rates over time we have recomputed growth rates again using GDP adjusted for purchasing power parity (GDP measured in PPS). The results of the computations are downgraded but the qualitative conclusions are the same. Market potential growth rates in Poland *economic core* regions are higher than in *economic periphery* regions in both periods of time and once again an important rise in market potential growth rates is observed after 2004. Table 2 and figure 2 show very clearly the pattern followed by the economic core and economic periphery Polish regions in both periods of time.

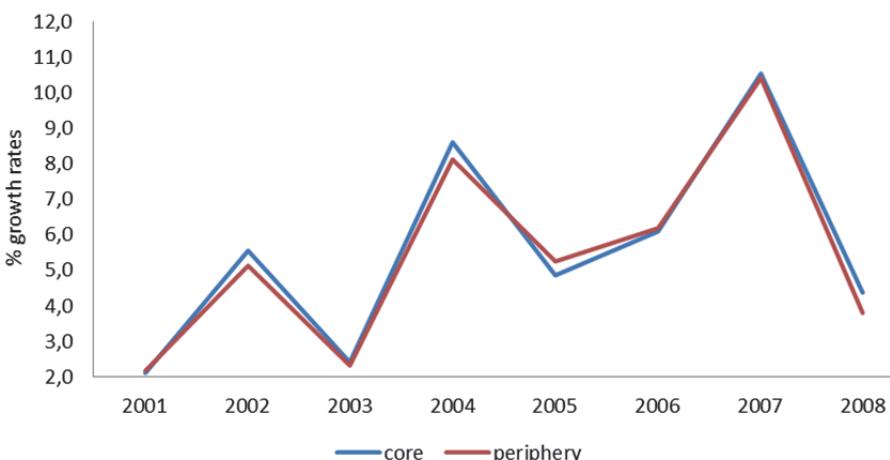
Table 2: Market Potential Growth Rates (GDP measured in PPS)

Regions	2001	2002	2003	2004	2005	2006	2007	2008
core	2.1	5.5	2.4	8.6	4.9	6.1	10.5	4.4
periphery	2.1	5.1	2.3	8.1	5.2	6.2	10.4	3.8
Average growth core		3.34					6.9	
Average growth periphery		3.19					6.7	

core: Śląskie, Opolskie, Małopolskie, Łódzkie, Mazowieckie, Świętokrzyski; periphery: remaining regions

Source: Own elaboration

Figure 2: Market Potential Growth Rates
(GDP measured in PPS)



Averaging growth rates for 2000-2003 and 2004-2008, growth rates in the latter period more than double those of the former period either using GDP at current

prices or GDP measured in PPS. This fact calls for a detailed analysis of the reasons behind this outperformance in terms of market potential growth rates in Poland in 2004-2008 compared with the previous period. The next section is devoted to shed some light at this phenomenon.

The results in terms of market potential and its evolution over time reflect the fact that there is a pattern of increasing agglomeration of economic activities in Poland over time. In the next table (table 3) we have computed for the years 1995, 2000, 2004 and 2008 the concentration of GDP in space (measured both in PPS and at current prices). The results show quite clearly the concentration of economic activities in the regions of the country we refer to as *economic core* and moreover over time this concentration has continued.

The *economic core* of Poland takes in one third of the total area but more than 50% of its GDP and around 47% of its population. In 1995 GDP in the *economic core* regions represented 51% of total Polish GDP while by 2008 this share was 53.2% (figures in PPS and at current prices are very similar). Regarding the evolution in terms of population concentration the figures have kept stable ever since 1995 with 47% of population concentrated in the economic core regions and 53 % in the so called economic periphery regions.

Table 3: Concentration of GDP and Population in core and periphery regions

Year	1995	2000	2004	2008
% GDP (PPS) economic core	51%	52%	53%	53%
% GDP (PPS) economic periphery	49%	48%	47%	47%
% GDP (at current prices) economic core		52%	53%	53%
% GDP (at current prices) economic periphery		48%	47%	47%
% Population economic core	47%	47%	47%	47%
% Population economic periphery	53%	53%	53%	53%
% Area economic core			33%	
% Area economic periphery			66%	
Core regions: Śląskie, Opolskie, Małopolskie, Łódzkie, Mazowieckie, Świętokrzyski				
Periphery regions: Dolnośląskie, Wielkopolskie, Pomorskie, Zachodniopomorskie, Kujawsko-Pomorskie, Lubelskie, Podlaskie, Lubuskie, Podkarpackie, Warmińsko-Mazurskie				

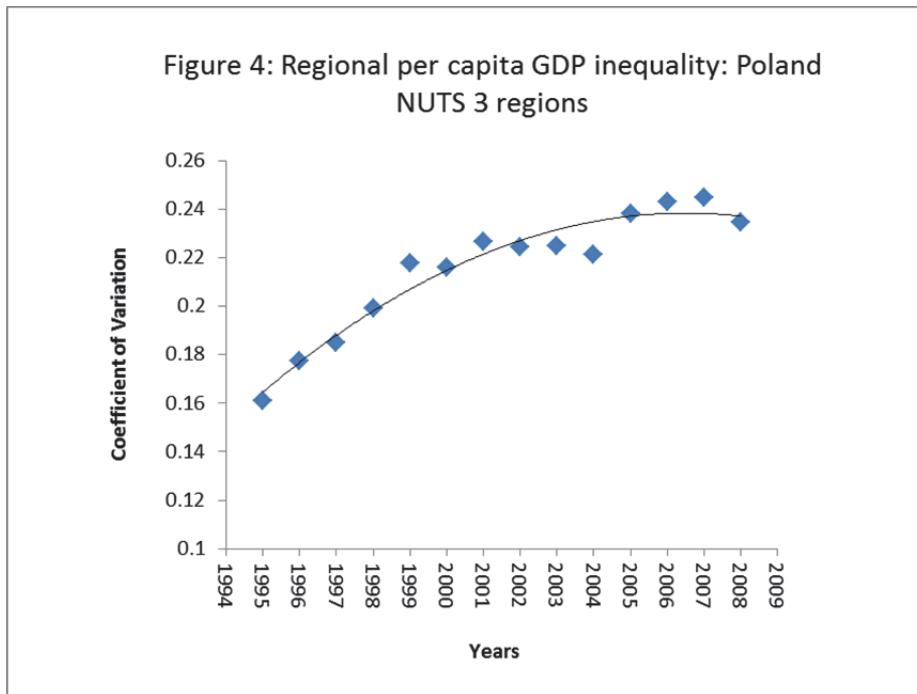
Source: Own elaboration

This pattern of concentration of economic activities over time is in light with some of the predictions of core-periphery New Economic Geography models (Krugman 1991a, 1991b) and is much less supportive of the predictions of neoclassical models of growth (Barro 1991, Barro and Sala-i-Martin, 1995). Therefore, as economic activities in Poland tend to concentrate over time, it is important to put into practice some policy measures to counterbalance the relative higher strength of centripetal forces with respect to the centrifugal ones and achieve a more balanced development across the whole Polish territory. At this point European Union regional policy and the own Polish policies should play a major role in even out the development levels across Poland.

4. Market Potentials and Economic Growth in Poland

The economic growth experienced in Poland in the recent past did not come along with a reduction in regional inequalities within the country; in fact it was quite the opposite. Taking the coefficient of variation as our measure of inequality, figure 4 shows the evolution of per capita GDP disparities at NUTS 3

level in Poland from 1995 to 2008. As it can be seen in figure 4, the evolution of regional inequalities over time in Poland witnessed a remarkable increase, especially from 1995 to 2001, then they seem to come to a halt from 2001 to 2003 and again they regain momentum from 2004 onwards. Taking only our initial and final year into account the increase in Polish per capita GDP inequalities measure by the coefficient of variation was 45.8%.



What are the driving forces behind this evolution of regional income inequalities? At a theoretical level from the point of view of neoclassical growth models, their prediction is in favor of convergence in the long run where the main mechanism behind the process of convergence is the assumption of diminishing returns to scale in labor and capital implicit in the neoclassical production function. However since the beginning of the nineties, a new branch within the spatial economics, the so called New Economic Geography (Krugman, 1991, 1992) has emphasized the role of second nature geography factors⁵ (access to consumer markets and to inputs suppliers) as a driving force behind the agglomeration of economic activities in space and income

⁵ The term second nature geography refers to how far a country or regions is from its consumer markets or from its input suppliers whereas the term first nature geography refers to the physical geography of a country (access to navigable rivers, endowments of resources, sunshine hours, ruggedness, etc)

inequalities. Within this framework, the combination of falling in transport costs with increasing returns to scale in manufacturing activities and the size of the market interact in a cumulative process which may lead to the spatial concentration of economy activities or in more technical words to an industrialized core and a deindustrialized periphery⁶. The empirical literature in NEG has triggered a plethora of contributions since the end of nineties on the pattern of the spatial concentration of economic activities by testing on of the main predictions of these models which is the relationship between market potentials and income levels for different scenarios⁷, a sample of world countries (Redding and Venables, 2004), counties within US (Hanson 2005), EU regions (Breinlich, 2006) etc.

Therefore taking into account the Polish market potential patterns analyzed in the previous sections of this paper and the recent patterns in regional inequalities we can ask if accessibility (measured by our market potentials) played a role in the increase in regional inequalities during our period of analysis or in other words, can market potential to some extend explain the different growth rates in regional per capita income in Poland?

In order to shed light to these questions, we are going to depart from Ottaviano and Pinelli's (2006) NEG model to derive the structural equations which relate per capita GDP growth with market potentials as the main factor to explain the disparities observed in regional per capita incomes. Then we will estimate the structural equations of the model using Polish data for the period 1995-2008.

Theoretical Framework

The theoretical foundations of our empirical estimations are based on Ottaviano and Pinelli's (2006) NEG model who carried out an extension of a standard 2x2x2 core-periphery NEG model such as Redding and Venables (2004), Breinlich (2006) incorporating labor mobility à la Hanson (1998) and Helpman

⁶ For a comprehensive survey of NEG models see Combes et al. (2008), Baldwin et al (2003), Brakman et al (2001), Fujita et al. (1999), Fujita and Thisse (2002).

⁷ The testing of this relationship is known as the testing of the nominal wage equation which can be easily derived from a typical core-periphery 2x2x2 NEG model.

(1998). We consider a world with R regions $j:1.....R$ and we focus on the manufacturing sector, composed of firms that operate under increasing returns to scale and produce differentiated products. On the demand side, a typical individual in region j derives utility from consuming a set of horizontal differentiated goods X_j and land services, L_j ("housing") according to the following Cobb-Douglas utility function:

$$U_j = X_j^\mu L_j^{1-\mu}, \quad 0 < \mu < 1$$

$X_j = \left[\sum_{i=1}^R n_i x_{i,j}^{\frac{\sigma-1}{\sigma}} \right]^{\frac{\sigma}{\sigma-1}}$ is a CES quantity index of available variables at the disposal of individuals at location j where n_i is the number of firms in location i , $x_{i,j}$ is the country j demand for a variety produced in i , σ is the elasticity of substitution between any two varieties. The final demand in i from location j is given by the expression # (1)

$$x_{i,j} = p_{ij}^{-\sigma} \left[\sum_{n=1}^R n_n p_{nj}^{1-\sigma} \right]^{-1} Y_j \quad (1)$$

If we define a price index for manufacturing goods as $P_j = \left[\sum_{n=1}^R n_n p_{nj}^{1-\sigma} \right]^{\frac{1}{1-\sigma}}$ and rewrite the expenditure on consumption as $E_j = Y_j$, the final demand in location j can be given by $x_{ij}^{cons} = p_{ij}^{-\sigma} P_j^{\sigma-1} E_j$. However, in order for x_{ij}^{cons} units to arrive, $T_{i,j} x_{ij}^{cons}$ units must be shipped. Thus effective demand facing a firm in i from j is given by expression # (2)

$$x_{ij} = T_{ij} p_{ij}^{-\sigma} P_j^{\sigma-1} E_j = p_i^{-\sigma} T_{ij}^{1-\sigma} P_j^{\sigma-1} E_j \quad (2)$$

$P_{i,j}$ ($P_{i,j} = P_i T_{i,j}$, $T_{i,j}$ stands for iceberg transport cost, so $T_{i,j} = 1$ the trade is costless, while $T_{i,j} - 1$ measures the proportion of output lost in shipping from i to j) is the price of varieties produced in i and sold in j and Y_j is the total income in location j .

Turning to the supply side, a representative country i firm maximizes the following profit function:

$$\Pi_i = \sum_{n=1}^R p_i x_{in} - w_i^\alpha r_i^{1-\alpha} c_i (F + x_i)$$

where the total output of the firm is $x_i \equiv \sum_j x_{i,j}$. Technology has increasing returns to scale and its represented by a fixed output requirement $c_i F$ and a marginal input requirement c_i , parameters that can vary across regions. For our purpose, we suppose that we only need primary factors in the production of manufacturing goods, entering in the production function as a Cobb-Douglas form. Basically, we assume that we need labour (with price w_i and input share α) and land (with price r_i and input share $1 - \alpha$).

The first order conditions for profit maximization yield the standard result that equilibrium prices are $P_i = \frac{\sigma}{\sigma-1} w_i^\alpha r_i^{1-\alpha} c_i$. Substituting this pricing rule into the profit function we obtain the following expression for the equilibrium profit function, $\Pi_i = \left(\frac{P_i}{\sigma}\right) [x_i - (\sigma-1)F]$. Free entry assures that long-run profits will be zero implying that $x_i = \bar{x} = \frac{\sigma-1}{F}$. The price needed to sell this many units satisfies $P_i^\sigma = \frac{1}{\bar{x}} \sum_{j=1}^R E_j G_j^{\sigma-1} T_{i,j}^{1-\sigma}$. Combining this expression with the fact that in equilibrium prices are a constant mark-up over marginal costs we obtain the following zero-profit condition which can be termed as the free entry condition (FE)

$$FE: \left[\left(\frac{\sigma}{\sigma-1} \right) w_i^\alpha r_i^{1-\alpha} c_i \right]^\sigma = \sum_{j=1}^R E_j P_j^{\sigma-1} T_{i,j}^{1-\sigma} \quad (3)$$

According to equation #(3), the nominal wage level in region i depends on a weighted sum of purchasing power in all accessible regions j , whereby the weighting scheme is a function declining with increasing distance between locations i and j . This sum we will refer to as the “*market potential*” of country i (MP_i). Equation (3) can be rewritten as:

$$w_i = A(MP_i)^{\frac{1}{\alpha\sigma}} r_i^{\frac{-\beta}{\alpha}} c_i^{\frac{-1}{\alpha}} \quad (4)$$

Where $A = \left(\frac{\sigma}{\sigma-1}\right)^{\frac{-1}{\alpha}}$ combines constants from the equation #3 and

$MP_i = \sum_{j=1}^R E_j P_j^{\sigma-1} T_{i,j}^{1-\sigma}$ is the “*market potential*” of region i . The meaning of this

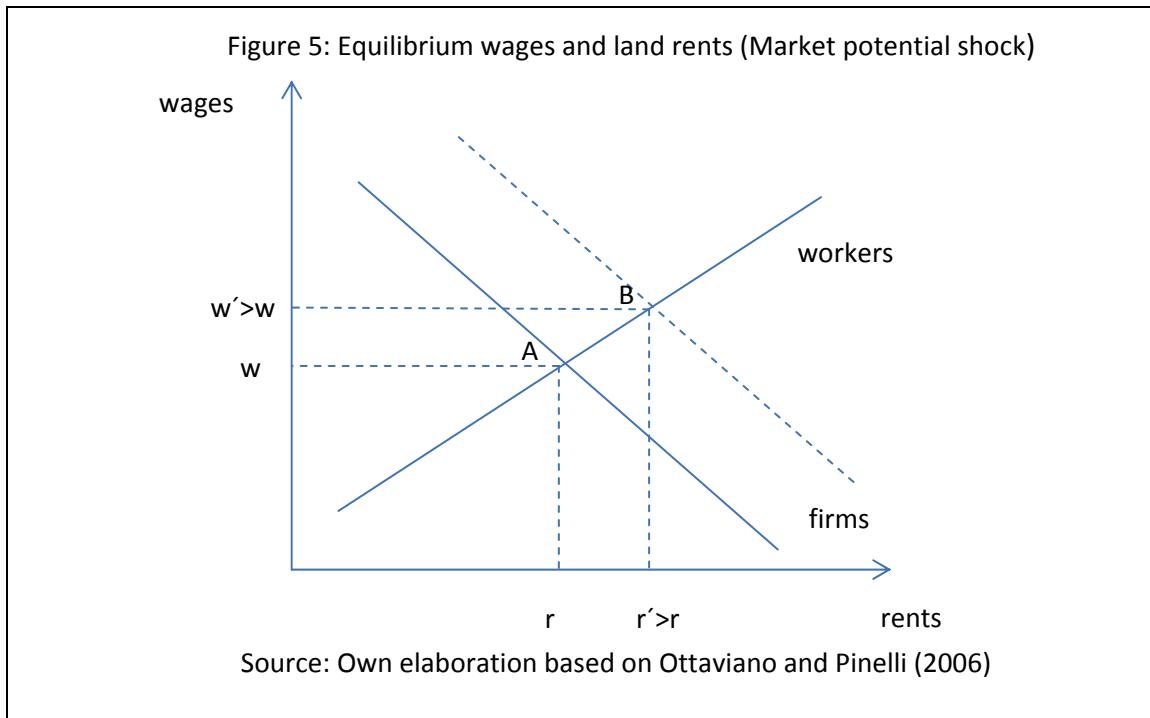
equation is that access advantages raise local factor prices. More precisely, production sites with good access to major markets because of relatively low trade costs tend to reward their production factors with higher wages.

Based on the assumption of labour mobility, workers would be indifferent among locations condition that they provide the same level of indirect utility V . Therefore, given a chosen level of utility V , if we assume that the land is locally owned, the condition of free mobility (FM) can be expressed mathematically as:

$$(FM) \quad \frac{w_i}{r_i^{1-\mu}} = V \quad (5)$$

Taking logs in expressions (4) and (5) it is possible to depict a graph which relates wages and land rents. Figure 5 shows this relationship where the downward sloping curve corresponds to the FE condition which shows combinations of wages and land rents that make firms indifferent between locations. If wages increase in order to be indifferent between two locations they would have to offset by paying less in land rents and vice versa. The upward sloping curve corresponds to the FM condition which shows combinations of wages and land rents that make workers indifferent between locations. In this case, if there is a positive shock in land rents in a location in order to achieve the same level of utility in that location and therefore continue to live there workers have to be compensated with higher salaries in order to keep the same level or real wages and vice versa. Therefore within this framework it is easy to simulate the potential impact on wages and land rents of a shock in market potential by looking at the displacement in the curves and the results in the new equilibrium. A positive shock in market potential only affects the curve derived from the FE condition shifting it up to a new equilibrium at higher wages and land rents. An increase in a location’s market potential (*ceteris paribus*) increase its attractiveness both for firms and workers. Land values capitalize this situation since the increase flow of workers to the location experiencing an

increase in market potential values will boost the bid for land and therefore a hike up in land rents should be observed.



Econometric approach

The former analysis suggests that we can estimate the impact of market potentials on the growth of wages by estimating standard growth regressions and incorporating to them our market potential measure. We are going to estimate two different growth equations; one based on the incorporation of the initial conditions in both wages and market potential and another based on the incorporation of the initial conditions in wages and the changes in regional market potentials occurred in our period of analysis.

To estimate the relationship between the growth in wages and the initial wage levels and market potentials the following regression equations will be used:

$$\log \left[\frac{y_{i,t+T}}{y_{i,t}} \right] = \alpha + \beta \log [y_{i,t}] + \gamma \log [MP_{i,t}] + u_{it,t+T} \quad (6)$$

The term on the left-hand side of the equation is the growth of per capita GDP from the base year t to the year $t+T$. Initial per capita GDP in region i is given by $y_{i,t}$, initial market potential is given by $MP_{i,t}$ and $u_{it,t+T}$ is the disturbance term.

In order to estimate the effects of the changes in market potentials observed in Poland on the growth of wages the following regression equation will be used:

$$\log\left[\frac{y_{i,t+T}}{y_{i,t}}\right] = \alpha + \beta \log[y_{i,t}] + \gamma \log[\Delta MP_{i,t,t+T}] + u_{it,t+T} \quad (7)$$

Where the only difference with the previous equation is the term $\Delta MP_{i,t,t+T}$ that represents the change in market potentials between the base year, t , and the year $t+T$.

Data and regional system

We are going to analyze the relationship between regional per capita GDP disparities in Poland and market potentials using cross regional data at NUTS 3 level for the 66 Polish regions for the period 1995-2008.

Regarding to market potential data, on the one hand we compute market potential for the period 2000-2008 which take GDP figures at current prices as a proxy for the numerator of the Harris (1954) market potential function and on the other we will extend our regional market potential computations from 1995 to 2008 which take GDP figures expressed in PPS⁸ as the proxy for the numerator of the Harris (1954) expression. The data for the growth regressions comes from Cambridge Econometric regional databank and from the Polish Office for National Statistics.

Regression results

The results of the impacts of changing market potentials on regional per capita GDP growth in Poland are summarized in tables 6 (variables measured at current prices) and 7 (variables measured in PPS). The first two columns of table 6 contain the results of the estimation of equation (6) where regional per

⁸ See sections 2, 3 and 4 for further details regarding to market potential computations

capita GDP growth in Polish regions in 2000-2008 has been regressed on 2000 values of regional per capita GDP and regional market potential using OLS (column 1) and IV (column 2). The results of these estimations show that initial regional market potentials have a positive and statistically significant influence on the growth rates of the period whereas initial per capita GDP values they do not exert any influence on growth rates. In column 3 we perform the estimations for the period 2000-2008 analyzing instead the impact of changing market potentials on growth rates and in columns 4 and 5 we carried out the same analysis but splitting the sample period into two sub periods, 2000-2004 and 2004-2008.

The overall results for 2000-2008 and for the two subsamples point to the fact that growing market potentials do indeed positively affect the regional growth in per capita GDP levels. However, the coefficients of the initial per capita GDP values for the three periods although turn out to be positive which would indicate the lack of convergence or catching up between Polish regions they are not statistically significant at the conventional critical values. Therefore, taking into account the results obtained in the previous sections of this paper where we pointed out to the fact that the largest changes in market potentials could be observed in the so called *economic core* regions of Poland, if, additionally, we have shown that changing in market potentials positively affect growth rates, a pattern of divergence in income levels among Polish regions should be expected. This is in fact the result as it can be seen in the pattern of increase in regional inequalities depicted in figure 4. The same results have been obtained in the analysis of recent economic developments in the new member states (NMS) regions which show that especially the capital cities have been outperforming other regions of the respective countries in terms of economic growth (Jasmand and Stiller 2005, Niebuhr and Schlitte 2008). Therefore, national growth rates in the NMS seem to be driven mainly by agglomeration processes. These patterns in terms of regional growth have been observed in cohesion countries during earlier enlargement rounds of the EU (see European Commission 2004).

Table 6: Market Potential and Regional Growth (I)

Dependent Variable	per Cápita GDP Growth				
	2000-2008	2000-2008	2000-2004	2004-2008	
Regressors	(1)	(2)	(3)	(4)	(5)
Constant	-0.15 (0.21)	-0.32** (0.15)	-0.60** (0.19)	-0.27 (0.07)	-0.34** (0.14)
Log per cápita	-0.02		0.02	0.007	
GDP 2000	(0.05)		(0.03)	(0.01)	
Log MAGDP2000	0.14** (0.04)	0.15** (0.04)			
Log inc MAGDP2000-2008			3.03** (0.51)		
Log inc MAGDP2000-2004				3.61** (0.70)	
Log inc MAGDP2004-2008					2.80** (0.56)
Log per cápita GDP 2004					0.02 (0.02)
Estimation	OLS	IV	OLS	OLS	OLS
R2	0.53	0.49	0.74	0.75	0.57
Prob (F-statistic)	0.00	0.00	0.00	0.00	0.00
Number observations	66	66	66	66	66

Note: Table displays coefficients for OLS estimations and Huber-White heterocedasticity robust standard errors in parenthesis. The dependent variable is the log of per capita GDP growth in the years 2000-2008 (Columns 1, 2 and 3) and the log of per capita GDP growth in the years 2000-2004 (Column 4) and 2004-2008 (Column 5). LogMAGDP2000, is the logs of market access in the years 2000, Log inc MAGDP2000-2008 , 2000-2004 and 2004-2008 are the percentage increases in market access between 2000-2008 , 2000-2004 and 2004-2008 respectively. IV estimation is based on the use of the average distance between regions. For data sources see text and appendix A. * and ** signify statistical significance at the 5% and 1% levels

Table 7 summarizes the results of estimating the impact of changing market potentials and initial levels of per capita GDP on the regional per capita GDP growth of Polish regions (equation 7) for the period 1995-2008, 2000-2008, 2000-2004 and 2004-2008 (columns 1, 2, 3 and 4 respectively) using PPS values for the variables included in the regressions.

Overall, the results are in line with the previous ones. For the period 1995-2008 we do not find any significant effect of the initial level of income in the subsequent rates of per capita GDP growth. On the contrary, the effect of changing market potentials on per capita GDP growth is positive and statistically significant. Therefore this result shows that changes in market potential do not support a process of convergence among regions in Poland in the period under analysis based on the fact the higher increases in market potential are realized in the so called *economic core* regions, the ones that are already the richer regions.

In order to compare the results of table 7 with the previous ones we have also carried out the estimations for the period 2000-2008 and for the two sub periods 2000-2004 and 2004-2008. The results show again that there is a positive relationship between changing market potentials and per capita GDP growth across the three periods analyzed. With regard to the effects of the initial levels of per capita GDP on the rates of growth, we found that the coefficients are negative but they are not statistically significant at the conventional critical levels of 1% or 5%⁹.

These results suggest that per capita GDP growth in Polish regions is strongly affected by the changing market potentials. Therefore as these changes in market potential are more important in the so called *economic core* regions (central regions in economic terms) than in peripheral ones, a pattern of cumulative effects of increasing market potentials and income levels in these regions should be expected with the side effect of increasing in regional disparities as has been shown in figure 4.

⁹ The coefficients on the initial levels of per capita GDP are significant at 10% levels for the period 2000-2008 and for the sub period 2000-2004.

**Table 7: Market Potential and Regional Growth (II-
PPS values)**

Dependent Variable	per Cápita GDP Growth			
	1995- 2008	2000- 2008	2000- 2004	2004- 2008
Regressors	(1)	(2)	(3)	(4)
Constant	-0.01 (0.39)	0.12** (0.05)	0.05*** (0.02)	0.06*** (0.03)
Log per cápita	0.07			
GDP 1995	(0.10)			
Log inc	0.27**			
MAGDP1995- 2008	(0.05)			
Log per cápita		-0.31*** (0.01)	-0.012*** (0.00)	
GDP 2000				
Log inc		0.99** (0.07)		
MAGDP2000- 2008				
Log inc			1.02** (0.05)	
MAGDP2000- 2004				
Log inc				0.98** (0.07)
MAGDP2004- 2008				
Log per cápita				-0.01 (0.00)
GDP 2004				
Estimation	OLS	OLS	OLS	OLS
R2	0.58	0.85	0.90	0.93
Prob (F-statistic)	0.00	0.00	0.00	0.00
Number observations	66	66	66	66

Note: Table displays coefficients for OLS estimations and Huber-White heterocedasticity robust standard errors in parenthesis. The dependent variable is the log of per capita GDP growth in the years 1995-2008 (Columns 1), 2000-2008 (column 2), 2000-2004 (Column 3) and 2004-2008 (Column 4). Log inc MAGDP 1995-2008, 2000-2008, 2000-2004 and 2004-2008 are the percentage increases in market access between 1995-2008, 2000-2008 , 2000-2004 and 2004-2008 respectively. For data sources see text and appendix A. *, ** and *** signify statistical significance at the 1% ,5% and 10% levels

5. Concluding Remarks

In the first part of the paper we have used the Harris (1954) market potential function to examine the evolution of the spatial structure in Poland and to assess the changing centrality of Polish regions over the 2000-2008 period. The main results that have emerged in this analysis are: a) a well-defined core-periphery structure in terms of market potential in Poland with its core being located in the South and middle North-eastern parts of the country, b) a huge acceleration in the market potential growth rates in the period 2004-2008 with respect to the period 2000-2004. This phenomenon has been widely spread across to all Polish regions without exception and which meant that taking the average market potential growth rates in both periods, in the second one growth rates were more than double of those of the first period 2000-2004, c) Comparison of the core-periphery structures in 2000-2004 and 2004-2008 shows that the so called *economic core* regions have been the ones that have obtained the higher gains in this process of changing market potentials due to high market potential regions are the only ones that have been promoted to very high market potential ones. In the second part of the paper we analyse how this changing market potentials have influenced the increasing pattern of per capita GDP disparities observed in Poland over the period 1995-2008. The theoretical rationale behind this analysis is based on Ottaviano and Pinelli (2006) New Economy Geography model where they derived the relationship between growth in wages and market potentials. We then move on estimating growth-type regressions including as our key variable the changing in market potentials observed in the period under analysis. The estimations have been carried out for the 66 NUTS 3 Polish regions with data expressed in current values (2000-2008) and also with data converted at PPS values (1995-2008)¹⁰. Overall the results show that there is a very significant effect of the changing market potentials on per capita GDP growth across the different periods analysed in the paper. Therefore taking into account the pattern of changes that have occurred in market potentials across Polish regions described in the first

¹⁰ Data availability in PPS values allow us to extend the period of analysis five years back.

part of the paper, this implies that the so called *economic core* regions in Poland have been the ones that have experienced the fastest rates of growth. Therefore the already relative rich regions tend to benefit more from the observed changes in market potentials than the poorest ones. This result works against the catching-up process on the Polish poorest regions to the income levels of the richest ones. Moreover the inclusion in the estimated growth regressions of the initial levels of per capita GDP turn out to be no significant for the rates of growth of per capita GDP in the different periods analysed and once again reinforcing the pattern of increasing disparities observed in the income levels across Polish regions.

Finally, the process already described, in a New Economic Geography fashion, reflects the superior effects of the centripetal forces versus centrifugal ones that tend to agglomerate the economic activity in the so called *economic core* locations of the country and which may lead to cumulative effects of increasing income levels and market potentials in these regions and therefore a lack of convergence across regions.

6. References

- Baldwin, R.E., Forslid, R., Martin, P., Ottaviano, G.I.P., Robert-Nicoud, R., 2003. *Economic Geography and Public Policy*. Princeton, NJ: Princeton University Press.
- Barro, R., 1991. Economic growth in a cross-section of countries, *Quarterly Journal of Economics*, 106, 407–443.
- Barro, R., Sala-i-Martin, X., 1995. *Economic Growth*. New York, McGraw-Hill.
- Brakman, S., Garretsen, H., van Marrewijk, C., 2001. *An Introduction to Geographical Economics*. Cambridge University Press.
- Breinlich, H., 2006. The Spatial Income Structure in the European Union - What Role for Economic Geography?. *Journal of Economic Geography*, 6, 593–617
- Combes, P-P., Mayer T., Thisse, J., 2008. *Economic Geography*. Princeton: Princeton, University Press.
- Clark, C., Wilson, F., Bradley, J., 1969. Industrial Location and Economic Potential in Western Europe. *Regional Studies*, 3. 197-212.
- Crafts, N., 2005. Market Potential in British Regions 1871-1931. *Regional Studies*, 39, 9, 1159-1166
- Dicken, P., Lloyd, P., 1977. *Location in Space*. Harper and Row, New York.
- European Commission, 2004. A new partnership for cohesion. Convergence, Competitiveness, Cooperation. Third report on economic and social cohesion, Luxembourg.
- López-Rodríguez, J., Faiña, J., Bolea-Gabriel, C., 2011. Economic Remoteness and Wage Disparities in Romania. *Tijdschrift voor economische en sociale geografie*, 102, 5, 594–606
- Fujita, M., Thisse, J-F., 2002. *Economics of Agglomeration: Cities, Industrial Location and Regional Growth*. Cambridge University Press, Cambridge, UK.
- Fujita, M., Krugman, P., Venables, A., 1999. *The Spatial Economy*. MIT Press, Cambridge MA.

- Hanson, G., 2005. Market potential, increasing returns and geographic concentration. *Journal of International Economics*, 67, 1-24.
- Harris, C., 1954. The market as a factor in the localization of industry in the United States. *Annals of the Association of American Geographers* 64, 315–348.
- Jasmand, S., Stiller, S., 2005. Capital Cities in the New EU-States - Current Trends and Economic Status quo. *Intereconomics*, 38,5, 298-305.
- Keeble, D., Owens, P.L., Thompson, C., 1982. Regional Accessibility and Economic Potential in the European Community. *Regional Studies*, 16. 419-432.
- Krugman, P., 1991a. *Geography and Trade*. MIT Press, Cambridge MA.
- Krugman, P., 1991b. Increasing returns and economic geography. *Journal of Political Economy*, 99, 483-99.
- López-Rodríguez, J., Faiña, J.A., Lopez Rodriguez, J., 2007. Human Capital Accumulation and Geography: Empirical Evidence from the European Union. *Regional Studies*, 42, 217-234.
- Martinez Galarraga, J., 2010. *Market Integration and Regional Inequality in Spain, 1860-1930*. PhD Thesis, University of Barcelona
- Midelfart, K. H., Overman, H. G., Redding S. J., Venables, A. J., 2002. Integration and Industrial Specialisation in the European Union. *Revue Economique*, 53, 3, 469-481
- Niebuhr, A., Schlitte, F., 2008. EU Enlargement and Convergence: Does Market Access Matter?. *HWI Research Paper*, 1-16.
- Ottaviano, G.I.P., Pinelli, D., 2006. Market potential and productivity: Evidence from Finnish regions. *Regional Science and Urban Economics*, 36, 636-657
- Redding, S., Schott, P., 2003. Distance, Skill Deepening and Development: Will Peripheral Countries Ever Get Rich?. *Journal of Development Economics*, 72, 515-41.
- Redding, S., Venables, A.J., 2004. Economic geography and international inequality. *Journal of International Economics*, 62,1, 53-82.

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