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The Origin of EU Regional Policy

In a Theoretical Perspective

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I. Background and Relevance

Reducing the regional disparities is a major concern for governments in both developed and developing countries because large regional inequalities can seriously threaten the economic, social and political stability of a country. Shankar and Shah (2009) listed some extreme cases: the poorest region in Bolivia demands for drastic redistribution policies; richer region like Basque in Spain calls for separation by hoping so as to avoid significant redistribution of their wealth; poorer regions such as Quebec, Scotland also calls for separation hoping to do better in an alternative dispensation.¹

Similarly, regional disparity is a huge threat to the economic and political integration process in Europe. So at the initial stage of European integration, the founding members set out to put particular emphasis on regional inequality. As early as in 1957, the preamble to the Treaty of Rome mentions the need “to strengthen the unity of their economies and to ensure their harmonious development by reducing the differences existing among the various regions and the backwardness of the less-favoured regions.” Also two sector funds the European Social Fund (ESF) and the European Agricultural Guidance and Guarantee Fund (EAGGF) were created respectively in 1958 and 1962. In the process of deepening European integration, the regional policy also has been evolving and improving.

The 1972 enlargement, when Denmark, Ireland and the UK joined the Community, increased regional disparities. Some of the UK regions (the north of England and Northern Ireland) and the Republic of Ireland were suffering major problems such as low per capita income and high unemployment. The 1974 Oil Crisis also further deepened the regional disparity within European Community. It was against this background that the first explicit fund for regional redistribution --- the European Regional Development Fund (ERDF) was set up in 1975 aimed at redistributing part of the Member States’ budget contributions to the poorest regions and financing infrastructure, job creating investment, local development projects and aid for small firms. The creation of the

¹ Shankar, R. and Shah, A. (2009), *Lessons from European Union Policies for Regional Development Policy*, Research Working Paper no. 4977, World Bank, p.2.

European Regional Development Fund (ERDF) is viewed as the origin of the regional policy in Europe.

The accession of Greece in 1981, and Spain and Portugal in 1986, all of whom had per capita income levels significantly below the EU6 average, further increased the regional disparities in the Community. To meet the challenge, in 1988, EU regional policy undertook the most important reform by far. This landmark reform is notable in the following respects: integrating the ERDF with the other two existing financial instruments --- the European Social Fund (ESF) and the Guidance Section of the European Agricultural Guidance and Guarantee Fund (EAGGF) into the Structural Funds and allocate ECU 64 billion to the Structural Funds; introducing 4 key principles such as concentration, multi-annual programming, additionality and partnership; defining 5 priority objectives and 16 Community Initiatives.

The German re-unification in 1990 added another 17 million people to the EU whose average per capita income in purchasing power standard was only 35 per cent of the EU average. In Maastricht on 7 February 1992, the Treaty on European Union (also called the Treaty of Maastricht) was signed. Title XIV Economic and Social Cohesion legally gave some detailed provisions on regional policy including 5 articles. The fourth enlargement of 1995 brought Finland, Sweden and Austria into the EU. The peripheral Arctic and sub-Arctic regions of Finland and Sweden added other lagging regions into the EU. On this basis, the regional policy went through the second reform in 1993. The key points of this reform are as follows: creating two new financial instruments --- the Financial Instrument for Fisheries Guidance (FIFG) ¹ and the Cohesion Fund ² ; adding a new objective --- Objective 6 (as of 1 January 1995) ³; establishing a new advisory institution for regional policy --- the Committee of the Regions ⁴.

The eastern enlargement of the EU in 2004 has greatly increased the economic disparities within the EU because the average per capita income in 2000 for all ten new member states was only 43.7 per cent of the average for EU 15. To meet the challenge of the biggest ever enlargement, balance the interest of all member states and increase the implementation efficiency, on 24 March 1999, the Berlin European Council reached an agreement on the Commission's proposals covering the reform of the Common Agricultural Policy, the reform of the Cohesion Policy, the pre-accession instruments and the new financial framework. The main two themes of the 1999 reform of EU regional policy are simplification of the cohesion policy's design and procedures and preparation for the eastern enlargement. The main reforming points are: reducing the number of Structural Funds Objectives from six to three and the number of Community Initiatives from 13 to four; creating two new pre-accession instruments --- the Instrument for Structural Policies for Pre-Accession (ISPA) and the Special Accession Programme for Agriculture and Rural Development (Sapard) ⁵.

¹ In 1995, the Financial Instrument for Fisheries Guidance (FIFG) was created and added to the Structural Funds.

² Created in 1994, the Cohesion Fund, is designed to assist Member States with a gross national product (GNP) per capita of less than 90% of the Community average (Council Regulation No 1265/1999), including Greece, Ireland, Portugal and Spain.

³ Objective 6 refers to involve the regions with an extremely low population density, the new Member States Finland and Sweden falls into this category.

⁴ The committee plays an advisory role in EU regional policy-making, which is comprised of representatives of local and regional authorities from all the member states.

⁵ The first pre-accession instrument was created in 1989, called Phare programme. Following accession, the ERDF and ESF will take charge of the interventions made by Phare, while the Cohesion Fund will take charge of those by the ISPA, and the EAGGF-Guidance those of Sapard.

With 2004 and 2007 enlargements, economic and social disparities have significantly deepened. Now Luxembourg, the wealthiest Member State in terms of per capita income, is seven times richer than the poorest one, Romania. At the regional level, the difference is even bigger: the richest region is Inner London with 290% of EU-27's average GDP per capita, while the poorest region is Nord-Est in Romania with 23% of the EU average (European Commission, 2008). It was against this context, the European Union carried out the fourth reform during 2004-2006. The key points of this reform can be summarized as follows: merging the previous objectives and the Community Initiatives into three priority objectives ---convergence, regional competitiveness and employment and European territorial cooperation; reducing the number of financial instruments for cohesion from six to three --- ERDF, ESF and the Cohesion Fund¹; creating the Instrument for Pre-accession Assistance (IPA) in 2007, which replaced the previous pre-accession instruments (Phare, Sapard, ISPA); establishing the European Grouping for Territorial Cooperation (EGTC) in 2007, which will enable regional and local authorities from different countries to set up cooperation groupings as legal entities for projects such as cross-border transport or health services.

From the above description of the EU enlargement process, we can clearly see that the various enlargements have thus transformed the EU into a more and more heterogeneous group of countries with significant regional economic imbalances. It is in this context that the regional policy at EU level has gradually formed and improved.

II. The definition of “region” and “problem region”

2.1 What is a region?

It is difficult to give “region” a universal definition since “region” tends to be the common study object of several disciplines. Different scholars in different disciplines tend to define a region from different perspectives. Geographers define a region as a unit sharing the similar natural and geographic features on the earth surface; statesmen think a region is an administrative unit based on state management; in sociologists' view, a region is an entity which has the same language, religious belief and ethnic origin. As Blair and Carroll (2009) said, “a region is a chameleon word, taking meaning from the context of its use”.

In the field of regional economics, there is not a clear definition for a region until now. A commonly accepted definition was given by American regional economists Hoover in 1970. According to Hoover (1971), “A region is an area that is usefully considered as an entity for purposes of description, analysis, administration, planning, or policy. It can be demarcated on the basis of internal homogeneity or functional integration”. Hoover and Giarratani(1984) divided a region into two types: a *homogeneous region* and a *functional region*. A *homogeneous region* is demarcated on the basis of internal *uniformity*, e.g. the winter wheat belt in the central part of the United States (growing the same main crop in the same way), Italy's Mezzogiorno (suffering a common syndrome of poverty, low economic development, and limited job opportunity). A functional region is composed of areas that exhibit more interaction with one another than with outside areas. The extent of economic interdependence serves as a criterion for the regional demarcation. Hoover and Giarratani (1984) put an emphasis on and defined one particular type of

¹ The specific aid of the former EAGGF and FIFG now come under the new European Agricultural Fund for Rural Development (EAFRD) and the European Fisheries Fund (EFF).

functional region --- the *nodal region*, the structure of which resembles that of a living cell or an atom. A nodal region has a nucleus and a complementary peripheral area.

Blair and Carroll (2009) divided regions into three types: functional region, homogeneous region and administrative region. The definitions of functional region and homogeneous region given by Blair and Carroll are similar to those given by Hoover and Giarratani. According to Blair and Carroll (2009) administrative regions are formed for managerial or organizational purposes. An administrative region could be a functional or homogeneous region.

2.2 Problem regions and the objectivity of their existence

There is not a universal definition of the problem regions since different problem regions have different features. The existence of problem regions is an objective economic phenomenon, for which some theories provide explanations.

2.2.1 The features of problem regions

State intervention in regional economic activity is rooted in the existence of regional economic problems. Brown and Burrows (1977) summarized the typical regional economic problems in two aspects: On the one hand, regional problems are the states of affairs about which predominant opinion in regions feels a sense of communal grievance. These problems causing the grievance include noticeably lower average incomes, higher unemployment rate, and high rate of net outward migration of young, vigorous and well-educated people. On the other hand, regional problems also refer to the matters touching regional economic welfare about which the central government or predominant or national opinion feels unease.

A region or space with one or some economic problems can be defined as problem regions though the area and the degree of backwardness in problem regions in different countries may vary greatly. American regional economists Friedmann (1966) generalized ten common characters of poor regions and poor nations: a low per capita income; a low rate of economic growth; low levels of labor productivity; a low level of capital formation; large unemployment and/or underemployment; a high proportion of employment in mining and agricultural activities; a large subsistence sector; a high degree of dependence on external aid; a low level of urbanization; high fertility rates; low indices of health; high family dependency ratios; low levels of educational attainment. Generally speaking, different countries and the same in different development stages will define the regional problems in different way. The developed countries focus on the welfare difference among the regions. So they view income per capita and unemployment rate as the main indicators measuring regional disparity. However, developing countries attach more emphasis on economic growth. Accordingly, they tend to regard the GDP and industrialization level as the main indicators measuring the regional disparity.

Backward regions are one type of problem regions. Besides, there are some special types of problem regions such as depressed area because of the decline of traditional industry or the depletion of mineral resources, congested regions because of dense population and overloading infrastructure; border areas linked to the ethnic, religious, national defense issues.

2.2.2 A theoretical explanation for the existence of problem regions

Regional disparity is common in both developing countries and developed countries. Many governments are trying to reduce it. But we must realize that its existence is objective. The objective reasons for the existence of problem regions and regional disparity are as follows:

The imperfect flow of production factors

Geographic economists tend to explain the uneven distribution of economic activities in

different types of location based on the endowments difference (minerals, land) and natural conditions (topography, hydrology and climate). For instance, Shanghai, Rotterdam and New York are important port city just because they are close to ocean and have a natural waterway leading to the mainland. There tend to be many power plants in the regions abundant in coal.

Agricultural products in the regions with fertile soil tend to be of good quality and of high yields. And these unique production conditions are not easily transplanted from one region to the other region. So the difference in resources endowment and the comparative advantages is a major reason for regional development disparity.

The agglomeration economies

The uneven distribution of raw materials, production factors and demand requires companies to select their locations benefiting their production and sales activities. This process of location election will gradually result in spatial concentration of production. The concentration of economic activities in space will produce some advantages accruing to firms: reduced production costs due to large plant size; the presence of advanced and specialized services; the availability of good infrastructures; the presence of skilled labour and managerial expertise, which is called 'agglomeration economies' in regional economics. Agglomeration economies will attract more and more firms to invest in this region, and the firms in this region also will benefit from this agglomeration.

Capello (2007) grouped these advantages resulting from agglomeration into three categories: 1) economies internal to the firm, also called economies of scale. According economic theory, large-scale production processes will yield lower costs per unit of output. To reap the advantages of large-scale production, the firm tends to concentrate its plants in a single location. 2) economies external to the firm but internal to the sector, or localization economies. Large number of firms in the same sector will get a wide range of specialized suppliers, skilled labour and managerial and technical expertise. 3) economies external to the firm and external to the sector, or urbanization economies. The high density and variety of productive and residential activities in an area will promote the presence of large-scale fixed social capital (urban and long-distance transport infrastructures, advance telecommunication systems) and city enlargement.

The agglomeration economies will result in the appearance of some growth poles. The production factors will flow into these growth pole, and therefore increase the regional disparity within a country.

The exclusiveness and competitiveness of innovation

According to the theories of endogenous growth, the sources of growth are the knowledge stock (Romer's model) and learning and human capital (Lucas model). These models and theories have been already adopted and identified by the theory of local development.

Knowledge accumulation is closely linked to innovation. The higher the knowledge accumulation rate in a region is, the stronger the innovation ability is, and vice versa. The economic fact shows that the economy in the innovative regions tends to grow faster. On the contrary the less-developed regions tend to be those regions weak in innovation. Owing to the exclusiveness and competitiveness of technological innovation, once the innovation centers form, they will have some advantages over the other regions. So the regional disparity will not easily be reduced in a short time.

The transportation costs of goods and services

In real life, the goods and labour can not completely smoothly flow because of the spatial

distance between two points in space (e.g. production site and the final market; place of residence and the workplace; the raw materials market and the production site). The theory of location defines the transportation friction as ‘transportation costs’, which include the economic cost of shipping goods (the pure cost of transporting and distributing them); the opportunity cost represented by time taken to cover the distance which could instead be put to other uses; the psychological cost of the journey; the cost and difficulty of communication over distances; the risk of failing to acquire vital information.

Some out-of-the-way and remote regions will have to suffer the high transportation costs, which reduce their attractiveness and competitiveness. So the location also is an objective reason for regional disparity.

III. A theoretical argument: convergence or divergence?

The economic literature offers different arguments about the economic growth and convergence among countries and regions. The convergence theory considers that the market helps growth for less developed regions, leading to convergence. On the other side, for the divergence theory, growth possibilities are different for each region and the growth process does not necessarily help convergence. Both schools are justified in theory, and we can not simply say which is wrong or right.

3.1 The convergence theory

The convergence theory examines the reasons for diminishing disparities between rich and backward regions. Ranged on the convergence side are theories originating within the neoclassical paradigm and which interpret development as a process tending to equilibrium because of market forces. In equilibrium, not only is there an optimum allocation of resources but also an equal distribution of the production factors in space which guarantees, at least tendentially, the same level of development among regions (Capello 2007). Theories of regional convergence strongly rest in the neoclassical growth theory.

The neoclassical growth theory

The earliest framework on the economic growth was independently pioneered by Harrod (1939) and Domar (1946). And the Harrod-Domar model would serve as the foundation for the neoclassical growth theory which is known today. In 1956, MIT professor Robert Solow formulated an economic model to describe and predict the future growth path of the US economy in his paper. The model was regarded as an extension of the Harrod-Domar model. Solow further extended his theory by introducing the influence of technological progress on the production process in his 1957 paper. The basic point of the neoclassical growth theory is that regional differences in factors return will tend to converge, that is, the market mechanism will eventually eliminate the difference in the interregional income per capita and lead to the balanced economic growth under the following assumptions: (1) all the market agents are in pursuit of return maximization; (2) the market agents have perfect knowledge of prices; (3) all the markets are in a state of perfect competition; (4) prices are elastic and flexible and factors of production are completely mobile; (5) there is no transportation cost between regions; (6) constant returns to scale.

The aggregate production function lies at the heart of neoclassical growth models. In an economy in which there is no technical progress, output is determined entirely by capital and labour

inputs. The relationship can be expressed with the following equation:

$$Y = F(K, L)$$

A specific form of this general relationship is provided by the well-known Cobb-Douglas production function. Assuming constant return to scale, the function is as follows:

$$Y = f(K, AL) = AK^\alpha L^{(1-\alpha)}$$

According to the neoclassical model, the three sources of output growth are capital stock, labour force and technology. A region's output growth will therefore depend upon the growth rate of these three factors. Therefore, the interregional production factor migration is a potentially important influence on regional disparities. According to the neoclassical model, there are no impediments to factor mobility between regions and there is perfect knowledge about factor prices in all regions. Capital and labour will move to those regions offering the highest rate of return. Capital will flow from high-wage to low-wage regions and labour will flow in the opposite direction until returns to capital and labour are equalized. In the Solow model, a policy change can therefore have effects on the steady state level via its influence on investment rates, but it can only temporarily increase growth rates along the transition to the new steady state. As long as economies are similar in terms of technology levels, investment and population growth rates, they will converge to the same steady state. Then, differences in per capita income can temporarily exist, but the poor, capital scarce regions tend to catch up with the richer ones. Indeed, the neoclassical model predicts spatial disparities in per capita incomes will converge in the long run and convergence of welfare among countries with similar economies.

Technology transfer and catch-up model

Though the Solow growth model argues that the growth in output per capita is driven by the rate of technological progress, the causes of technological progress are not identified in the Solow model. The endogenous growth theory attempts to overcome this deficiency by giving an explanation for the causes of technological progress. Basically speaking, entrepreneurs are looking for ways to make a profit and one way of doing this is to produce and sell new ideas. In turn, this profit-incentive innovation will promote economic growth. So the endogenous growth theory refers to the technological process as the engine of growth.

In terms of globalization, the endogenous growth model can be used to explain the growth of the world economy as a whole because the technological process diffuses across geographical space. The process of technology diffusion will can even benefit the small countries which will not have to rely on knowledge created within their own frontiers. Recently, with the expansion of multinationals and the development of information technology, the new ideas travel very quickly across international frontiers.

The catch-up model argues that the public goods properties of technical knowledge can have an international dimension that favours less advanced countries. Furthermore, the model argues that the further away a region's technology is from the technology of the most advanced region, the faster its technological progress will be. The basic idea is very simple: followers can imitate the inventions of the technological leader, without having to reinvent the wheel. So, provided they have the capability to absorb and adapt foreign technology, the lagged countries or regions can exploit the knowledge obtained in advanced countries to catch up. In this perspective,

technological backwardness leaves scope for successful imitation, thereby leading to convergence.

3.2 The divergence theory

The arguments of the convergence theory do not correspond with the reality. In the real economic world, boom and bust in different regions, different countries or different sectors often co-exist. The gaps and disparities in regions and countries are common.

The development problems in developing countries and the decline of traditional sectors in developed countries have caused people to doubt the convergence theory. In addition, the neoclassical assumption that all factors of production are completely mobile between regions is difficult to be realized in the real economy. Opposite to the convergence theory, divergence theory argues that the market does not help the convergence but favors the activity concentration. As a result, the regional disparities will become larger and larger.

The polarization theory

According to Myrdal (1957), growth begins where there are initial advantages and then, the free market benefits to regions with better conditions. In addition, the labour and the capital movements also increase the differences. Regions that grow attract manpower and capital from lagging regions. People who emigrate are the youngest, enterprising and qualified population. The new investments tend to flow into the prosperous regions. However, in lagging-behind regions, there are not growth prospects to promote the investment, and the needs of capital stay at low levels. The inflow of human resources and capital favors the prosperous regions and harms the weakest regions. This phenomenon that the rich will become richer and the poor will become poorer is called *Matthew Effect*.

The idea of growth pole (Perroux, 1955) refers to interrelations between the growth centers and their nearer environment. Growth begins in some areas and these places turn into growth poles. The growth is spread across the whole. When growth begins, there are some driving industries that encourage new industries. Therefore, the regional disparities are inevitable.

The inverted-U hypothesis

The economic activity is often concentrated in a few geographic clusters. It has long been recognized that economic agglomerations can affect the dispersion of income across regions. An early example is Williamson (1965) who suggests that national growth is driven by growth-pole effects in some major agglomerations. In his view, the high growth is first accompanied by a widening of regional disparities. Over time, due to diseconomies like congestion, productive factors are reallocated and regional disparities will be reduced again. Hence, the so-called Williamson inverted-U hypothesis predicts divergence in the early stages and convergence later on (Ederveen, S., et al., 2002).

The new growth theory

The endogenous or new growth theory seeks to explain the economic forces that drive technological progress. These models consider that convergence is difficult because of the differences among regions in terms of the infrastructures, the level of R&D and the training human capital. Endogenous growth models have become more important since the 1980s.

One of the pioneers of this idea is Romer (1986). In the endogenous growth theory, differences in long-term economic growth can be explained by differences in the efforts to generate or adapt knowledge on new technologies. Rich countries at the technological forefront may therefore find it easier to think of new ideas and increase their lead. Hence, technology may be an important source for divergence. However, a poor economy will stay poor, because it simply lacks the ability to

invent and adapt new technologies. In contrast, rich economies innovate all the time and grow richer and richer.

Keynesian Theory

The theories of Keynesian also stand on the divergence side by introducing the positive and negative feedback mechanisms, the commutative attraction and repulsion of productive resources respectively in a country's rich and poor areas. Based on this, the theory envisages not only the persistence but also the worsening of disparities among regions. (Capello 2007).

IV. A theoretical explanation for the necessity of the regional policy

Some theories have proved the necessity of the regional policy. The theorists state that the regional disparity will impose some negative effects on the economic development and political stability. However, some scholars think the market failure is the main reason for the regional policy implementation. All these theories can explain the necessity of the government intervention in the regional balanced development

4.1 The negative effects of the regional disparity

It is widely recognized that large and persisting regional disparity regardless of its forms and types will impose some negative effects on the efficient operation of the national economy and also may result in some harmful political and social consequences. British regional economists Armstrong and Taylor (2000) summarized these negative effects as follows. First, the existence of substantial regional disparities in living standards causes dissatisfaction and resentment. This is most strongly felt by those whose job prospects and living standards are poor in spite of no fault of their own. Second, persisting high levels of unemployment in the disadvantaged regions have harmful economic consequences. On the one hand, higher unemployment will result in the wasting of human resources and increase the burden of taxpayers. Therefore, the economic growth rate will become lower. On the other hand, high unemployment also is closely associated with higher crime rates and more social hardship. Third, regional disparities in the economic growth can inflict severe economic costs on rapidly growing urban areas through the excess demand for the social infrastructure and public services. However, the social infrastructure is often underused in lagged regions. Fourth, regional disparities in the unemployment will increase the inflationary pressures. Persistent disparities in the unemployment rate between regions mean that whenever a significant business upturn occurs inflationary pressures build up very quickly in the low-unemployment regions because of the intense competition for scarce skilled labours.

Brown and Burrows (1977) also discussed the harmful effects of regional disparities in their book. The concentration of a high proportion of the high earning occupations or those demanding higher educational standards in a particular region (usually the metropolitan one) tends to cause antipathies between classes and senses of separateness between regions. In some extreme cases, it may lead to the secession of a country. In addition, the cultural and other facilities of which the better-off of the better-educated are the strongest patrons become unduly concentrated in the metropolis. This contributes further to the geographical separation of cultures; it also hinders the growth of the regions of lower income and educational standards by making them less attractive to the managerial and professional classes. This, in turn, also tends to make the cultural division of the country self-reinforcing.

In terms of China, the large regional disparity is threatening the economic development

sustainability, the political stability and the social harmony. The increasing congestion in the coastal provinces and cities has resulted in some environmental and ecological problems, which are harmful to China's sustainable development. The further demise of the western part of China has aroused the discontent and complaint, which is seriously threatening China's social stability, national utility and political stability. In recent years, the budget for the maintenance of social stability gradually increases. This kind of expenditure is a great waste of economic and social resources and a heavy burden for taxpayers. As far as the EU is concerned, the regional disparity becomes larger with the enlargement of the EU, which is also seriously threatening the process of European integration.

4.2 The market failure and the state intervention

The basic assumption of the neo-classical economic theory is that everyone is rational, and will seek to maximize his/her own interest. Such a goal under the free market conditions can be attained when the market arrives at the equilibrium point. So the market is viewed as the best mechanism to resolve the allocation of resources. According to the neo-classical economists, the market force --- "the invisible hand" can make the regional economy automatically achieve the equilibrium without the state intervention. Under the condition that production factors freely flow from region to region without any frictions, the wage will decline in the high unemployment areas and rise in the low unemployment areas; labour will flow from the low-wage areas to the high-wage areas; the manufacturers will move from the high-wage areas to the low-wage areas. The perfect competition will result in the equalization wage levels and full employment in different regions.

The neo-classical trade theory further explains that, even in the absence of the regional flow of capital and labor, the regions with different resources endowments also can achieve the balanced development under free trade conditions.

The regions adequate in capital but short in the labor develop the capital-intensive industry and the regions adequate in labour but short in capital develop the labour-intensive industry. And if the regions exchange the goods under the rule of comparative advantages, the cost of production factors will converge in the long run and ultimately the inter-regional wage and profitability differences will eliminate.

Since the market mechanism will automatically reduce the regional disparity, the government should not intervene in the regional economic issues. So neo-classic economists think that regional economic problems exist just because the excessive government interventions damage the market mechanism.

But in reality, the assumptions in the neo-classical theory such as the perfect competition, the perfect information, and the complete freedom of production factors movements are difficult to be achieved. Even without the state interventions, these assumptions can not be met.

According to Armstrong and Taylor (2000), there are two main reasons why market forces fail to reduce the unemployment disparities. First, there are formidable barriers to both capital and labour migrations, such as the mobility cost, the location preference, the uncertainty, etc. Second, wages fail to respond to the local labour market conditions because of the industry-wide collective agreements, the easy access to unemployment benefit and the fixing of minimum wages.

In a word, the market mechanism has its inherent flaws, so market operations alone can not achieve the balanced development among regions. The regional policy and the state interventions are necessary in the regional development.

V. The origin of the regional policy in Europe

5.1 The arguments for EU regional policy

The EU's main objective is to step up efficiency and stimulate the economic growth by integrating the markets of goods and production factors (Molle, 2006). At the early stages of European integration, it was commonly believed that the market efficiency was more important and could solve any problems since the member states were more or less homogenous. But with the expansion of the EU, both regional and national disparities within the EU become larger and larger. Undoubtedly, the disparities within the EU will curtail the development potential of the periphery member states and, as a consequence, of the whole of the EU. Unbalanced developments and large disparities will make the EU lose its attraction and therefore produce some negative effects on the integration process. So more and more scholars and politicians started to pay more attention to territorial differences and explore the reasons and solutions to these problems within the EU. Is the European economic integration increasing the disparities? Is it necessary for the EU to intervene the economic activities with the 'visible hand'? Will the regional development policy be effective and efficient?

In fact, the debate within economics on whether development policies are really needed to tackle disparities is inconclusive. We have discussed two opposite economic strands within the field ---the convergence theory and the divergence theory above. According to the divergence theory, in the process of the economic integration, the combination of the greater accessibility of production factors and a greater capacity to generate and assimilate innovation in core areas is likely to lead to a greater concentration of economic activities in the core and to an increase of economic disparities in the EU. From this perspective, European economic integration may thus contribute to accelerating the process of the concentration of economic activities and as a consequence, some sort of development policy is necessary in order to counterbalance the economic polarization. In contrast, the convergence theory claims that the economic integration is likely to contribute to the channeling of investment and innovation from core regions to areas with lower labour costs and to fostering migration from the periphery to the core. The free flow of production factors under the market rules will ultimately result in the economic convergence. Therefore, from this point of view, the economic integration will contribute *per se* to the reduction of economic disparities across the EU, making the need for a development policy almost redundant.

A good argument for the EU regional policy is that there are significant differences among regions within Europe. Though the EU is one of the most developed and prosperous spaces in the world, the national and regional disparities there have always existed. Regions within Europe vary greatly in their economic capacity, institutional structures and the political, economic and social demands they articulate (Keating 1995). Large disparities existed even when the Community of Six was created. According to Levi Sandri (1965) the per capita income of the most favoured region in the Community (Hamburg) was about seven times that of the least favoured Italian region (Calabria). But the 'rich man's club of the 1950s was relatively homogeneous except the southern part of Italy. Both the 1973 enlargement (Denmark, Ireland and the UK) and the accession of Greece (1981), Spain and Portugal (1986) further increased the disparity within the Community. The eastern enlargement of the EU in 2004 when 10 central and eastern European countries joined has much increased the differences in wealth levels within the EU. According to

Molle (2006), the gap between the new and old member states in the second wave of enlargement in the 1980s was about 30 per cent; it is about 60 per cent in 2004 enlargement. Danuta Hubner (2008), the member of the European Commission responsible for EU regional policy, also emphasized the disparities within today's EU. She stated that 43% of the economic output and 75% of investments in research and innovation are concentrated on just 14% of the European territory, the so-called pentagon between London, Hamburg, Munich, Milan and Paris. It is worth mentioning that differences between the dynamic regions and lagging regions¹ are not only manifested in terms of GDP per head, but also in many other economic and social indicators, including the unemployment rate, the productivity rate.

Furthermore, economic theories suggest that in the absence of appropriate accompanying policies, market forces unleashed by the EU integration will not of themselves be sufficient to eliminate regional divergence, but rather reverse (Armstrong, 1995:23). This is because the elimination of tariff and non-tariff barriers to trade, and of other obstacles to the free inter-regional and cross-border movements of factors of production tends to favour the core regions because their products are more competitive, resulting in the trade creation effects and increasing the overall welfare. But the industries in the lagging member states will be hit or even contract because they are required to dismantle all forms of protection against member states and conform to the common external protection (tariffs and quotas). That is to say they have to suffer the trade diversion effect and the overall welfare will be reduced. Therefore, the forces unleashed by the EU's ever-deeper economic integration not only generate efficiency but also a threat to equality.

The regional policy at the Community level can also be justified by some benefits of the establishment of an EU regional policy. Armstrong (2000) summarized these benefits in his book: the EU can ensure that regional policy spending by member states is more closely matched to the severity of the problem faced; the EU can greatly improve the co-ordination of regional policy; EU regional policy offers a means by which any one member state can legitimately become involved in solving the regional problems of other member states; EU regional policy is necessary if further integration is to be sustained.

5.2 The origin and evolution of EU regional policy

The above arguments in favor of the regional policy in the EU show that the decision to set up European development policies to reduce the existing economic disparities within the EU has been not only an economic but also a political problem. In the early days of European integration, the community started to put emphasis on reducing the regional disparity within its territory and created some instruments for promoting the development of lagged regions. European regional policy can date back to the 1950s when the provision for grants to the depressed areas for the industrial conversion and retraining was made by the European Coal and Steel Community. Funds were later provided under the framework of the Common Agricultural Policy. In 1958, the institutions designed to reduce the regional disparities are the European Investment Bank (EIB) which provides low-interest-rate loans for national governments undertaking infrastructure projects and the European Social Fund (ESF) which provides financial aids to the employment projects and the immigrant workers. In 1962, the Guidance Section of the European Agricultural Guidance and Guarantee Fund (EAGGF-Guidance) was designed to give financial support to the

¹ Some scholars describe the national and regional imbalances as a core-periphery structure. 'Core' refers both to location close to the centre in Europe and to areas with high development level. On the contrary, the periphery refer both to the location at the edge of the European continent and to the regions with high income level.

upgrading of the farms and the farming equipment, the improvements of farming methods, and the provision of benefits to farmers. During this time, the regional policy was strictly in the hands of the member states. According to Lonardi (2005), the reasons for this can be attributed to two dimensions: the first involves the institutional structure and the second is related to the dominant sectorial approach to policy that reined at that time. From the institutional perspective, no provisions were made in the Treaty of Rome for the participation of sub-national levels of governments or groups in civil society in the decision-making process or other activities. The other dimension means that EEC interventions were strictly sectorial in nature and procedures followed in implementing these policies were monopolized by the national governments. In 1969, the Commission proposed a common regional policy, including the creation of a regional development fund, but found little support among the governments of the member states. It was not until 1975 that the European Regional Development Fund (ERDF) was born to redistribute funds so as to help those lagging regions to adapt to the new situation and accelerate their development, which symbolized the birth of the real regional policy at the Community level. And since the 1980s, the dominating political view in the EU has been that economic integration is likely to enhance territorial disparities and therefore a development policy is needed to achieve greater economic and social cohesion in the EU. As a result, every recent step towards the economic integration in the EU has been accompanied by the expansion and strengthening of its development policies. In February 1986, the EC member states signed the Single European Act (SEA) with the aim of realizing the free flow of goods, services, labour and capital at the end of 1999. It was feared that the Single Market would unleash strong centripetal forces of competition and agglomeration which would ultimately lead to a greater concentration of economic activity in the centre at the expense of the periphery (Krugman and Venables, 1996). The Single European Act brought the new attention to the regional policy, introducing a new Title V on Economic and Social Cohesion, and arguing the need to 'clarify and rationalize' the use of the structural funds. The SEA provided the legal basis for a new approach to the regional policy that was structured on the combined resources of the three existing Structural Funds (ERDF, ESF and EAGGF-Guidance section), providing for the coordination of the interventions undertaken by the three Funds, and giving the Commission the power to formulate the rules and regulations for the management of the development programmes (Lonardi, 2005). Further reforms of the regional policy were agreed in 1988 in response to the Single Market initiative. The 1988 reform introduced four basic principles for cohesion policy, agreed on five priority objectives and increased spending percent on structural funds in the EC budget. The 1988 reforms were also aimed at improving the efficiency of regional policy by setting up the Community Support Frameworks under which the Commission, the member states and the regions would work more closely together on agreeing the means to achieve regional development planning goals. (McCormick, 2005:195) More changes to the regional policy came with Maastricht Treaty (1993), under which the Committee of the Regions (CoR) was created to give regional authorities a greater say in European common policy, and the Cohesion Fund was created to assist the least prosperous countries of the Union. With the biggest ever enlargement of the EU --- the 10 new Member States joining in May 2004, came increased disparities in income and employment as the average GDP per head in these new member countries was under half the EU average and only 56 % of their population were in active employment, compared to 64 % in EU-15. So the 1999 reform and the 2006 reform of the regional policy mainly focused on simplification of Cohesion Policy's design and procedures in parallel

with preparation for enlargement.

VI. The regional breakdown in the EU

Eurostat (2009), the statistical office of the European Commission, defined a region as “a tract of land with more or less definitely marked boundaries, which often serves as an administrative unit below the level of the nation state”. The limits of a region are usually based on one of the following: natural boundaries (rivers, mountains, sea or lake coasts, etc.), historical boundaries, administrative boundaries. Eurostat (2009) also gave out the ideal requirements for a region: appropriate boundaries (acceptability to the people administered, homogeneity of the unit and suitable size) and stable boundaries (permitting data collection over an extended time frame).

At the beginning of the 1970s, Eurostat set up the “Nomenclature of territorial unit for statistics (NUTS)” classification as a single, coherent system for dividing up the Community’s territory in order to produce regional statistics for the Community. For around thirty years, the implementation and the updating of the NUTS classification was managed under a series of “gentlemen's agreements” between the Member States and Eurostat. In 2003, the Regulation (EC) No 1059/2003, adopted in May 2003 and entered into force in July 2003, formally gave NUTS a legal status and specified stability of the classification for at least three years. When national interests require changing the regional breakdown of a country, the countries concerned should inform the European Commission about the changes. The Commission in turn amends the classification at the end of period of stability according to the rules of the NUTS Regulation.

In 2005, the amendment (EC) No 1888/2005 to reflect 2004 enlargement completed the NUTS classification with the regional breakdowns of the 10 new member states. Commission Regulation (EC) No.105/2007 amending the annexes to Regulation (EC) No 1059/2003 was adopted in early 2007 and the NUTS version 2003 was replaced by the version 2006 on 1 January 2008.

The NUTS is a three-level hierarchical classification. The NUTS subdivides each Member State into a whole number of regions at NUTS 1 level. Each of these is then subdivided into regions at NUTS level 2, and these in turn into regions at NUTS level 3. The current NUTS nomenclature valid from 1 January 2008 subdivides the economic territory of the European Union into 97 regions at NUTS 1 level, 271 regions at NUTS 2 level and 1303 regions at NUTS 3 level.¹ (See table 1)

Table 1 Number of NUTS regions for EU-27 (valid from 1.1.2008)

country	NUTS 1	NUTS 2	NUTS 3	country	NUTS	NUTS	NUTS
Belgium	3	11	44	Lithuania	1	1	10
Bulgaria	2	6	28	Hungary	3	7	20
Czech	1	8	14	Malta	1	1	2
Denmark	1	5	11	Netherlands	4	12	40
Germany	16	39	429	Austria	3	9	35
Estonia	1	1	5	Poland	6	16	66
Ireland	1	2	8	Portugal	3	7	30
Greece	4	13	51	Romania	4	8	42
Spain	7	19	59	Slovenia	1	2	12

¹ The second regular amendment (EU) No 31/2011 has been already adopted by the Commission and will be applicable from 1 January 2012.

France	9	26	100	Slovakia	1	4	8
Italy	5	21	107	Finland	2	5	20
Cyprus	1	1	1	Sweden	3	8	21
Luxembourg	1	1	1	United	12	37	133
Latvia	1	1	6	EU 27	97	271	1303

Note: Non-administrative levels are in grey.

Source: European Communities (2009). *European Regional and Urban Statistics Reference Guide*, Luxembourg: Office for Official Publications of the European Communities, p. 8.

The NUTS nomenclature serves as a reference not only for the collection, development and harmonisation of Community regional statistics and socio-economic analyses of the regions but also for the framing of the Community regional policies. For the purposes of appraising eligibility for aid from the Structural Funds, the regions whose development is lagging behind (regions covered by the Convergence Objective) have been classified at the NUTS 2 level. The areas eligible under the other priority Objectives have mainly been classified at the NUTS 3 level. So making the NUTS regional division clear is the starting point of EU regional policy study.

It is worth mentioning that the NUTS classification follows three principles.

Principle 1: The NUTS regulation defines minimum and maximum population thresholds for the size of the NUTS regions to ensure that regions of comparable size all appear at the same NUTS level. (See table 2)

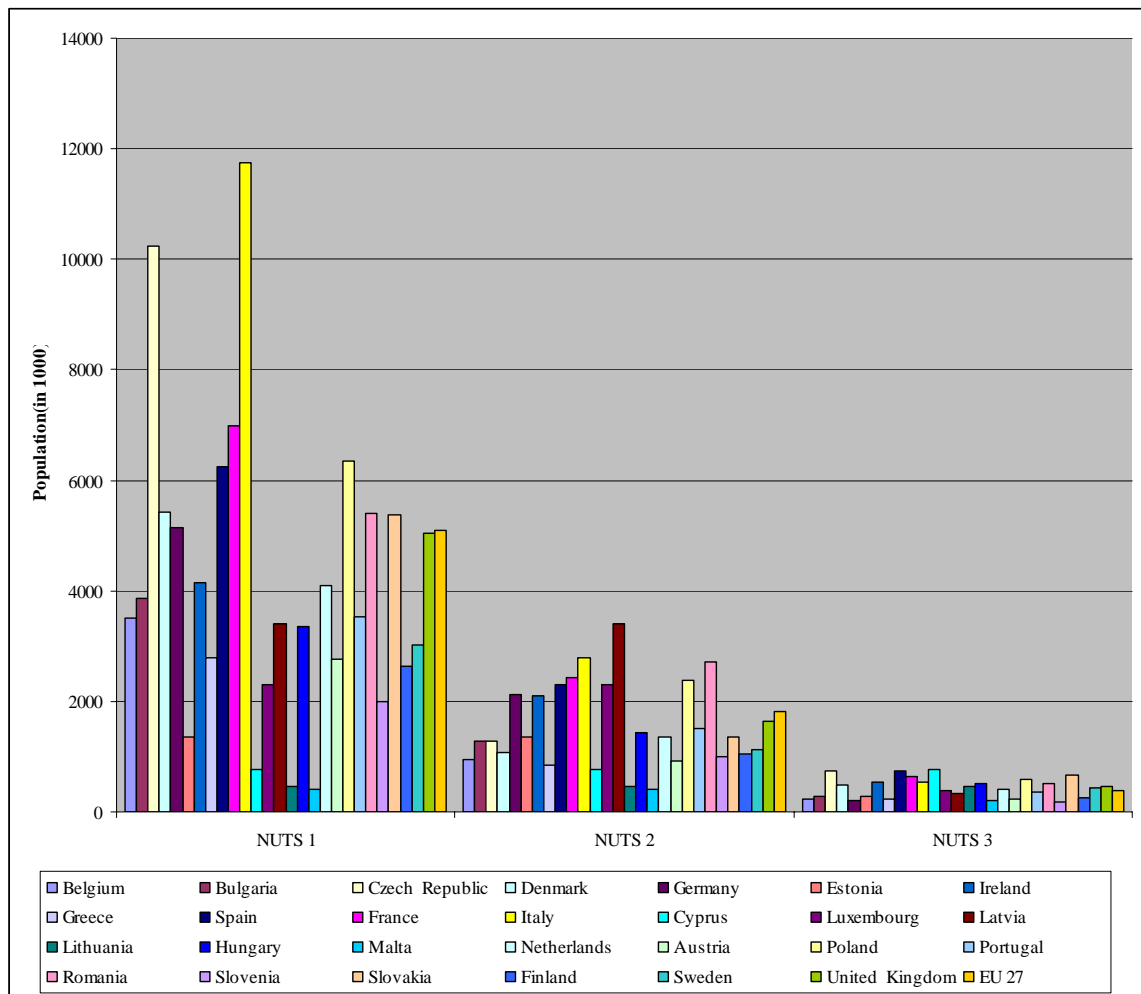
Though ensuring regions of comparable size all appear at the same NUTS level, each level still contains regions which differ greatly in terms of population. From figure 1, we can see that the largest gap in population appears at NUTS 1 level. With the population of 11750, Italy's average size of NUTS 1 regions ranked the first. However, Malta's average size of NUTS 1 regions is the smallest one with the population only 404. The difference of the average size of the NUTS 2 and NUTS 3 regions is not very large and obvious compared with that of NUTS1 regions.

Table 2 The minimum and maximum population thresholds for the 3 NUTS levels

Level	Minimum	Maximum
NUTS 1	3 million	7 million
NUTS 2	800 000	3 million
NUTS 3	150 000	800 000

Source: European Communities (2011). *Regions in the European Union– Nomenclature of territorial units for statistics –NUTS 2010 /EU-27*, Luxembourg: Office for Official Publications of the European Communities, p.10.

Figure 1 A comparison of the average size of EU NUTS regions



Data source: European Communities (2009). *European Regional and Urban Statistics Reference Guide*, Luxembourg: Office for Official Publications of the European Communities, p. 6.

Principle 2: NUTS favours administrative divisions (normative criterion). For practical reasons the NUTS classification is based on the administrative divisions applied in the Member States. From table 1, we can see that at least one NUTS region overlaps the administrative region in the Member States.

Here we take the NUTS division in the Netherlands as an example to illustrate this principle. There are four NUTS 1 regions in the Netherlands: Noord-Nederland, Oost-Nederland, West-Nederland, Zuid-Nederland. Each of the NUTS 1 regions comprises several provinces of the Netherlands. Noord-Nederland consists of three NUTS 2 regions (provinces): Groningen, Friesland, Drenthe; Oost-Nederland also consists of three NUTS 2 regions (provinces): Overijssel, Gelderland, Flevoland; West-Nederland consists of four NUTS 2 regions (provinces): Utrecht, Noord-Holland, Zuid-Holland, Zeeland; Zuid-Nederland consists of two NUTS 2 regions (provinces): Noord-Brabant, Limburg. The 40 NUTS 3 regions are subdivisions of the 12 provinces. (see table 3 and map1) That is, in the Netherlands, the NUTS 2 regions overlap the 12 provinces.

Table 3 The regional division in the Netherlands under the NUTS system

NUTS 1 (4 regions)	NUTS 2 (12 regions)	NUTS 3 (40 regions)
Noord-Nederland(NL1)	Groningen(NL11)	Oost-Groningen (NL 111) Delfzijl en omgeving(NL 112) Overig Groningen (NL 113)
	Friesland (NL12)	Noord-Friesland(NL121) Zuidwest-Friesland (NL122) Zuidoost-Friesland (NL123)
	Drenthe (NL13)	Noord-Drenthe (NL131) Zuidoost-Drenthe(NL132) Zuidwest-Drenthe (NL133)
Oost-Nederland(NL2)	Overijssel (NL21)	Noord-Overijssel(NL211) Zuidwest-Overijssel(NL212) Twente(NL213)
	Gelderland (NL22)	Veluwe(NL221) Zuidwest-Gelderland(NL224) Achterhoek(NL225) Arnhem/Nijmegen(NL226)
	Flevoland (NL23)	Flevoland (NL230)
West-Nederland(NL3)	Utrecht (NL31)	Utrecht (NL310)
	Noord-Holland(NL32)	Kop van Noord-Holland(NL321) Alkmaar en omgeving(NL322) IJmond(NL323) Agglomeratie Haarlem(NL324) Zaanstreek(NL325) Groot-Amsterdam(NL326) Het Gooi en Vechtstreek(NL327)
	Zuid-Holland (NL33)	Agglomeratie 's-Gravenhage(NL332) Delft en Westland(NL333) Agglomeratie Leiden en Bollenstreek(NL337) Oost-Zuid-Holland(NL338) Groot-Rijnmond(NL339) Zuidoost-Zuid-Holland(NL33A)
	Zeeland (NL34)	Zeeuwsch-Vlaanderen(NL341) Overig Zeeland(NL342)
Zuid-Nederland(NL4)	Noord-Brabant(NL41)	West-Noord-Brabant (NL411) Midden-Noord-Brabant(NL412) Noordoost-Noord-Brabant(NL413) Zuidoost-Noord-Brabant(NL414)
	Limburg (NL42)	Noord-Limburg(NL421) Midden-Limburg(NL422) Zuid-Limburg(NL423)

Note: The code for every NUTS region is in the bracket.

Source: European Communities (2011). *Regions in the European Union– Nomenclature of territorial units for statistics –NUTS 2010 /EU-27*, Luxembourg: Office for Official Publications of the European Communities, pp. 96-97.

Map 1 The NUTS Regions in the Netherlands



Source: European Communities (2011). *Regions in the European Union– Nomenclature of territorial units for statistics –NUTS 2010 /EU-27*, Luxembourg: Office for Official Publications of the European Communities, p. 99.

Principle 3: The NUTS favours the regional units sharing a general character. The general geographical units are normally more suitable for any given indicator than geographical units specific to certain fields of activity. NUTS excludes the specific territorial units and the local units. The territorial units specific to certain fields of activity (the mining regions, the rail traffic regions, the farming regions, the labour-market regions, etc.) may sometimes be used in certain Member

States.

To meet the demand for statistics at the local level, Eurostat has set up a system of Local Administrative Units (LAUs) compatible with NUTS. These are called “Local Administrative Units” (LAU) and are not subject to the NUTS Regulation. LAU consists of upper LAU level (LAU level 1, formerly NUTS level 4) and lower LAU level (LAU level 2, formerly NUTS level 5). The upper LAU level is defined for most, but not all of the countries. The lower LAU level consists of municipalities or equivalent units in the 27 EU Member States.

VII. Conclusions

In both developed and developing countries, large regional inequalities and disparity can seriously threaten the economic, social and political stability of a country. In the process of the EU enlargement, the economic and social disparities have significantly deepened. It is necessary to narrow the regional disparity within the EU, which is required by the European integration and justified by some theories. Compared with the regional policy in other countries or areas, EU regional policy has more perfect institutional framework, better governance at both national and regional level, more clear aid objectives and diversified instruments. In terms of the results, regional policy has also achieved noticeable progress in narrowing regional gap and promoting smooth development of European integration.

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