



Munich Personal RePEc Archive

## **Porter vs Krugman: History, Analysis and Critique of Regional Competiveness**

Psofogiorgos, Nikolaos - Alexandros and Metaxas, Theodore

Department of Economics, University of Thessaly, Greece

December 2015

Online at <https://mpra.ub.uni-muenchen.de/68151/>  
MPRA Paper No. 68151, posted 02 Dec 2015 11:10 UTC

# “Porter vs Krugman: History, Analysis and Critique of Regional Competitiveness”

**Psofogiorgos Nikolaos Alexandros**

Economist, Researcher  
Department of Economics, University of Thessaly, Volos, Greece  
Email: [psofogio@uth.gr](mailto:psofogio@uth.gr)

**Metaxas Theodore**

Assistant Professor  
Department of Economics, University of Thessaly, Volos, Greece  
Email: [metaxas@econ.uth.gr](mailto:metaxas@econ.uth.gr)

## **Abstract**

The subject of this study is to determine the competitiveness through an interdisciplinary approach of the theories of the new economic geography and regional economy. This article describes in detail the theory of competitiveness, which is defined differently by many authors, with particular emphasis on opposing views of Michael Porter and Paul Krugman. One of the first writers who stressed the importance of the geographical position was Michael Porter. In his model, the author emphasizes that the geographical concentration of firms enhances productivity, innovation and export sector. Following this theory, many authors have focused on the research of the "location problem", which led to better connection of economics and geography. The result of these activities is the new guidelines that have been developed, such as the new theory of economic geography and regional economy. The new economic geography is mainly related to the Nobel prizied, Paul Krugman, whose theories often conflict with those of Porter. This study initially sets out the views of both authors, in terms of competitiveness and then attempts to make a comparative analysis between the theories they developed.

**Key words:** Michael Porter, Paul Krugman, Regional Competitiveness

**Jel Codes:** R11, R19, R38

## **1. Introduction**

The most important development of the regional economy began in 1980 in European countries. Regional policy aiming at the development of the wider economy took the place of Keynesian regional economy (Visser & Atzema, 2007). The theory of Porter, who had focused on territorial categories and the measurement of the performance of economies, regions and companies, presented the basis of the regional economy and the development of economic geography, giving economic thought a new impetus. This new direction of economy, which included geography as a science, mostly dealt with the issue of competitiveness.

Perhaps the most important theory of the business economy strategy is the theory of clusters of Michael Porter. This microeconomic basis of the theory of national, state and local competitiveness is put in a global economy (Porter 1990). According to Porter, companies in order to be competitive, must constantly improve the operational effectiveness of their activities, while at the same time must seek discreet and not mimetic strategic positions.

By comparison, at the macroeconomic level, the definition of competitiveness is strongly disputed. Despite the fact that improving the competitiveness of a nation or region is shown as a central objective of economic policy, arguments and opinions are presented as to what exactly this means and whether it is even reasonable to talk about competitiveness at the macroeconomic level eventually. The lack of a commonly accepted definition is itself a source of differentiation to the concept of macro competitiveness. Essentially the argument, made by many economists regards that economic policy, is dangerous to be based around such an amorphous concept that is open to varying interpretations and understanding (Aiginger, 1998).

Especially Krugman (1994), describes the concept of territorial competitiveness as a "dangerous obsession" by setting three key contrast points:

1. It is misleading and wrong to parallel between a nation and a company.
2. Despite the fact that firms compete each other for getting a greater market share and the success of a business means the failure of another, the success of a country or a region creates more than destroys the opportunities for others and as known, trade among nations is not a game "without result".
3. If competitiveness has any meaning, then it is just another way to describe productivity. The development of a national standard of living is determined primarily by the rate of productivity growth.

In what may be termed as the "consensus view" of macroeconomic competitiveness, there is a general assumption that improving the economic performance of a nation needs not to be at the expense of another nation and that productivity is one of the central problems of competitiveness (Porter, 2000).

## **2. The regional competition and business competition based on Porter's theory**

### ***2.1 The clusters theory***

According to Porter (2000), changes in technology and competition have reduced many of the traditional roles of the location. However, Porter (1990) presents clusters or else geographic

concentrations of interconnected companies, which are a feature of every national, regional, state or metropolitan economy, especially in more developed nations. The clusters are a new way of thinking about national, state and local economies and require new roles of business, government and other institutions to enhance competitiveness (Porter, 2000).

The copyright of clusters is dated to 1890-1920 and belongs to Marshall that included a fascinating chapter on externalities of specialized industrial areas. The clusters show that a good opportunity for competitive advantage is out of business, and even outside of their industries in the regions where the facilities are located. According to Porter (1998), the cluster is a geographical group of interconnected companies and associated institutions in a particular field, linked by similarities and complementarities. The geographical perspective of clusters, range from the region, the state and city to entire neighboring countries (eg southern Germany and German-speaking Switzerland). The geographical perspective of a cluster is associated with the distance in which there are information, transaction and other activities.

Clusters, as argued by Porter (2000), include a series of linked industries and other entities that are important for competition. They are also applied in many industries, in small, even in local industries, such as restaurants, car dealers etc. Complexes are located in both developed and developing economies too; although in developed economies tend to be in more developed form (Porter, 1998). Because lots of clusters are placed in different traditional industrial categories or service categories, significant clusters might be obscured or overlooked. In Massachusetts, for example, it has been proved that exist more than 400 companies associated in some way with medical devices, representing 39,000 high-wage jobs. The complex was entirely invisible, buried in many larger and overlapping categories of industry, such as electronic equipment and plastic products (Porter, 1998b).

The resulting question is why someone would observe economies from the perspective of clusters instead of the standpoint of businesses, industries, etc. The most important reason is that the cluster as a unit of analysis is better aligned with the nature of competition and appropriate government roles. Clusters, beyond traditional industry classifications, capture important linkages, complementarities and spillovers in terms of technology, skills, information, marketing, and consumer needs that cut across businesses and industries. Most participants in the complexes are not direct competitors, but rather serve different segments of industries. However, they share many common needs, opportunities, constraints and obstacles to productivity (Porter, 1998b). Observing a group of companies and organizations, such as the cluster, also highlights the opportunities for coordination and mutual improvement in areas of common interest with less risk of distortion of competition or reduce its intensity (Porter, 2008).

## ***2.2 Clusters and competitive advantage-productivity***

The clusters affect competition in three general ways that reflect and reinforce the pieces of diamond according to Porter (1998b): a) an increase of the existing (static) productivity in ingredients of companies or industries, b) an increase of the capacity of participants to the cluster for innovation and

increased productivity, and c) the encourage for new business formation that supports innovation and expands the cluster. Many advantages of clusters are based on external economies or interactions between businesses, industries and other institutions. The formal and informal organizational mechanisms and cultural standards often play their role in operation and development of clusters. According to Porter (2000), the proximity enhances competitiveness, for example, when increasing the benefits of locally available factors or suppliers. The co-location shortens the process by which competition is diffused to encourage the development of local suppliers and the speed with which the relevant industries create new competitors.

It should be clear that the clusters are a combination of competition and cooperation. Many of them are vertical (buyer-supplier) with the related industries, as well as the local agencies. Competition and cooperation can coexist as they are in different dimensions or because cooperation at some levels is part of winning the competition at other levels. Repeated interaction and informal contracts within the structure that comes from life and work in a geographic area, promote trust and open communication, while decrease the costs of disruption and recombination of relations of markets (Delgado, Porter, & Stern, 2011). The significance of complexes starts from the affectation of competition and the consequent increase in knowledge and innovation, which means that the incidence of clusters tends to increase with economic development (Delgado, Porter, & Stern, 2011). The connection between clusters and competition brings consequences for the economic geography of cities, states, nations and groups of neighboring countries (Porter, 1998a). Internal Trade within nations is a powerful force for improving productivity, such as trade with immediate neighbors (Porter, 1998b). The formation of clusters is an important part of economic development. The process, by which clusters emerge, grow and decline, is increasingly perceived (Porter, 1998a).

### ***2.3 The five forces shaping competition***

According to Porter (2008), the configuration of the five forces, vary from industry to industry. The market of commercial aircrafts is dominated by strong competition between producers in a dominant position, Airbus and Boeing, and the bargaining power of the airlines that have huge orders for aircrafts while the threat of entry of substitutes and power of suppliers are milder. In the movie industry, the proliferation of substitute forms of entertainment and the power of film producers and distributors of films are important (Porter, 2008).

The strongest competitive force determines the profitability of the industry and becomes the most important for strategy formation. The most prominent power, however, is not always obvious. For example, although competition is fierce in commodity industries, cannot be the factor limiting profitability. Low yields in the industry of photography, for example, are part of a superior substitute product such as Kodak and Fuji, the pioneers in the world producers of photographic film, learned with the advent of digital photography. In such a situation, the treatment of substitute products is the number one strategic priority. The structure of the sector is increased by a series of economic and technological

characteristics that determine the strength of each competitive force. These drivers will be examined below, taking the perspective of an existing organization or a business already existing in the industry. The analysis can easily be extended to understand the challenges faced by a potential new entrant (Porter, 2008).

1) ***Threat of entry.*** New entrants in an industry bring new capacity and desire to gain market share that exerts pressure on prices, costs and the investment rate that is necessary to compete with anyone. In addition, the entry barriers are advantages that existing businesses already have compared to new entrants.

2) ***The power of suppliers.*** Strong suppliers acquire the greatest of the value for themselves by charging higher prices, reducing the quality or the services or shifting costs to industry participants. Powerful suppliers, including labor suppliers can squeeze profitability of an industry that is not able to pass on cost increases to prices.

3) ***The power of buyers.*** Strong customers can gain greater value by reducing prices drastically, demanding better quality or more services. The buyers are powerful when they have bargaining power in relation to the industry, especially if they are sensitive to prices, using their influence to pressure for price reductions.

4) ***The threat of substitutes.*** A substitute performs the same function as the product of the sector in a different way. Plastic is aluminum's substituent. Many times, the threat of substitute is indirect when a substitute replaces a product of the buyer's industry. Substitutes always exist but are easy to be overlooked because they may appear different. If an industry does not take distance from substitutes through the performance of the product, marketing, will suffer in terms of profitability and growth potential.

5) ***Competition among existing competitors.*** Competition among existing industries, takes many forms, including lowering prices, new product introductions, advertising, and improving services. The high competitiveness levels reduce the profitability of an industry.

#### ***2.4 Review and critique in Porter's work***

A review of past literature reveals that some scholars (eg. Gray, 1991; Stopford & Strange, 1991) criticize the weakness / lack of Porter's for official detailed modeling, while others (eg. (Bellak & Weiss, 1993; Dunning, 1992; Grant, 1991; Gray, 1991; Rugman & D'Cruz, 1993; Thurow, 1990) dispute the originality of his work. The Porter has also been criticized for the way he "treats" the macroeconomic policy (Daly, 1993; Gray, 1991), the lack of clear definitions of determinants and various key terms (Dobson & Starkey, 1992; Grant, 1991; Thurow, 1990) and that did not give enough attention to the modern theory of trade (Bellak & Weiss, 1993) and the role of national culture (Van den Bosch & De Man, 1994).

The methodology used by Porter has also been the subject of many criticisms (Bellak & Weiss, 1993; Jacobs & De Jong, 1992). The heavy dependence of the world on exports as a measure of international competitiveness (Bellak & Weiss, 1993; Cartwright, 1993; Eilon, 1992; Grant, 1991; Rugman & D'Cruz, 1993), the inadequate treatment of relatively less competitive industries , and the treatment of multinationals and foreign direct investment (Bellak & Weiss, 1993; Dunning, 1992; Hodgetts, 1993;

Rugman & D'Cruz, 1993; Rugman & Verbeke, 1993; Rugman, 1991) are the most important criticisms related to Porter's methodology.

Porter brought more review with his model of the diamond. According to Stopford & Strange (1991) and Van den Bosch & De Man (1994), the remedy proposed by Porter on the role of government is insufficient, and it is worth considering whether or not the government can be added in model as the fifth determinant. Dunning (1992, 1993), on the other hand, considers that Porter underestimates the role of multinational enterprises in the global economy and it is possible "transnational business" to be treated as third exogenous factor, along with the "opportunity" and the "government". Additionally, according to Van den Bosch & Van Prooijen (1992), is given too little attention in Porter's model on the influence of national culture on the sources of competitive advantage. They concede that the national culture works through other determinants and for this reason does not make sense to add a fifth determinant, but require a more specific treatment for it. Narula (1993) maintains that Porter's model is static, since, in his view, the Porter fails to recognize the role of technology in the development process. Several researchers (e.g., Hodgetts, 1993; Rugman & D'Cruz, 1993; Rugman & Verbeke, 1993; Rugman, 1991) share the notion that the complex of double and / or multiple diamonds can reflect the sources of competitive advantage better than that of (single) model of "diamond" of the Porter.

### **3. The regional competition and business competition based on Krugman's theory**

#### ***3.1 The new economic geography***

One of the theories for which Paul Krugman became known and for which he was awarded with the Nobel Prize is the New Economic Geography. The New Economic Geography is at the moment one of the main currents in economic analysis of space. Below, will be presented the objectives of this theory, the characteristics and the models by which is composed. The defining issue of the new economic geography is how to explain the formation of a wide variety of financial accumulation (or concentration) in the territory. The accumulation or clustering of economic activity occurs in many geographical levels that have a variety of compositions. For example, a type of accumulation occurs when small shops and restaurants are clustered in a neighborhood. Another type of accumulation can occur in formations of cities of different sizes, can help in presenting a variety of industrial areas or the existence of strong regional disparities within the same country. At the other end of the spectrum, there is the core-periphery structure of the world economy that corresponds to the North-South dualism. It is also important to note that all these different kinds of accumulation at different levels are integrated into a larger economy, which all together forms a complex system (Krugman, 1991a). Moreover, one can understand most of the internal structure of the metropolis, thinking models of land use from (Alonso, 1964).

As Krugman (1996) supports, from the perspective of someone who has been used to the crystal clarity of the theory of international trade, this level of understanding is not sufficient. The debate on the economy of a city is to be incorporated in the report of the functioning of the global economy as a whole.

As an economist, Krugman suggests the theory of general equilibrium, which is not clear where money come from and where they go. This theory can explain both the concentration and dispersion: why so many people are working in Manhattan, but also why so many others do not work there. The great tradition of the analysis that comes from Von Thunen (1826), does an excellent job explaining the land use pattern around town or the central area of business, but especially presupposes that epicenter. And as much as possible, the story should explain the concentration of forces on the part of the fundamental stimulus (Von Thünen, 1826). As Fujita (1995) supports, the biggest issue is that through the modeling of the sources of increasing returns in spatial concentration, one can learn a lot about how these prices can change and then explore how the behavior of economy changes along with them.

### ***3.2 The new theory of trade***

The most basic concept of the new trade theory is that of the comparative advantage of trade. Namely, the theoreticians of the new trade theory argued that countries may not necessarily specialize and do business solely in order to benefit from their differences, but they make trade due to increasing returns that make specialization advantageous for them too. In this argument, theorists have introduced some arbitrariness in the pattern of specialization and trade.

Thus, as described, the new theory of trade does not sound particularly to be so new. The idea that economies of scale can be an alternative of comparative advantage in explaining international trade, can be found in Ohlin (1933) too, if not in Adam Smith. According to Krugman, new trade theory made three major innovations that released the debate on increasing returns from the critical limits. The first is the introduction of industrial organization in the theory trade, releasing the model of perfect competition. The second is that theorists have found a way to free trade from the "symmetry" that was characterized by-the slavish devotion to a model that has worked well for factors ratio theory but it has made us disabled by thinking about other alternatives. Finally, a development that now bears the full effects, the theoreticians of the new trade broke down the distinction between purely technological and financial, external economies which had made externalities seem empirically elusive or even suspicious. Thus, some of these changes are shown below.

#### ***3.2.1 Imperfect competition***

Until 1970, the only standard trade models with increasing returns had purely external economies which existed necessarily as internal economies of scale imply imperfect competition and there were no widely accepted models of imperfect competition. That all changed with the new trade theory. During the 1970s, theorists in the field of industrial organization, above all the Dixit and Stiglitz (1977), developed a set of consistent and very easy to use imperfect competition models. Nobody saw these models as plausible descriptions of real life competition in oligopolies. However, they provide a set of ways to approach issues relating to economies of scale at the enterprise level without sacrificing rigor. Thus, a key



feature of the new trade theory was to provide models in which increasing returns showed their natural affinity with imperfect competition, which created huge difference in terms of credibility and believability.

### ***3.2.2. Symmetry***

Before the rise of new trade theory, it is notable that most theorists of trade, dock with models with two goods. This made excellent sense for the model of Heckscher-Ohlin-Samuelson, weaken when the subject was one of the trade models with increasing returns. The reason according to Krugman, lies in the fact that the introduction of increasing returns in the standard of convex production capacity in traditional trade theory, pushes against the curvature and, if strong enough, the curve bends on the other side. The new trade theory also enabled economists to have their cake and to cut into small differentiated pieces according to Krugman (2007).

### ***3.2.3. External economies***

What they did theorists of the new trade, especially Ethier (1982), was to show that externalities can be strictly modeled without any fear to spill. A monopolistically competitive sector of intermediate goods could lead to economy with behavior of externalities in the secondary sector. These externalities could be international if intermediate goods were traded, but as shown by Helpman and Krugman (1985), would give impetus to international specialization in final products if the intermediate was not marketable. Rising odds together with imperfect competition in the labor market, could lead to working strength concentration which would lead to self-powered specialization standards as noted by the Rotemberg and Saloner (1990).

In short, the new trade theory really changed the mindset of international economists. The idea that trade is often a result of increasing returns and the related idea that the structure of trade is defined as a part of the history rather than the resources were not new. After the new trade theory, international economists have started to take into consideration the alternative of comparative advantage.

## ***3.3 Competitiveness - a dangerous obsession?***

Krugman (1994) describes the national competitiveness as a "dangerous obsession" which raises important issues, as argues that this concept is very confusing and that the ratio between the firm and the nation is wrong. He considers national competitiveness dangerous for three reasons: first because the objective of improving national competitiveness could lead to misallocation of resources, secondly because it could lead to protectionism and trade wars and thirdly because it could lead to poor public policy concerning a variety of important issues. At national level, competitiveness is based on economic performance and the ability of an economy to transform the results arising from productive activities to increase incomes. Competitiveness is often associated with the rise in living standards and increasing employment opportunities but also with the ability of a nation to comply with its obligations

internationally. In other words, competitiveness is not only a measure of a country's ability to sell its products internationally and maintain a trade balance (Krugman, 2008).

Although the term of national competitiveness is widely used by economic policy makers, both national and international level, however, was subject to harsh criticism for Krugman himself. Krugman considers competitiveness as a meaningless concept, especially in the hands of naive policymakers as a "dangerous obsession" with harmful consequences. In 1994, Krugman, the then young economist brought a serious criticism claiming that competitiveness was a meaningless concept when applied to national economies (Krugman, 1994). Instead, he expressed the view that "international trade is not related to competition and that it is a mutually beneficial exchange» (Krugman, 1996).

It should be said that Krugman argues correctly that the competitiveness of a nation is conceptually different from that of a company / organization. Certainly, if a company / organization is not competitive, then the most likely is that the agency may not be economically viable, which would eventually be lead to bankruptcy. But there is no similar proportion for a country. Even if the state's balance of payments is unsustainable, even if economy collapses, country, as opposed to banks and companies, does not cease to exist (Krugman, 1994). While a trade deficit can result from the weak performance of the country in the sector of tradable benefits, it can also be the result of a large influx of foreign investment, which (inflow) coincides with its competitive strength. A trade surplus of the country also sends an ambiguous message, as this surplus may be due to the low level of national economic activity or to strong export performance (Krugman, 1997).

However, some scholars, who understand very well that a country's trade balance is not a good measure of competitiveness, have come up with an alternative wording of national competitiveness, which is more difficult for Krugman to challenge. Tyson (1992) defines competitiveness as "the ability of a country to produce goods and services that meet the test of international competition while citizens enjoy a standard of living that is both rising and sustainable". The Tyson's wording implies that competitive country is one that is able to produce tradable goods, which are in sufficient demand both domestically and in international markets, as the commercial activity will be in balance without country having to resort to continuous devaluation of its currency or operate at activity level below that of the full potential of the economy (Tyson, 1992).

Thus, according to Krugman, the economic problems of the industrialized countries - unemployment, deindustrialization, low growth rates of per capita income - cannot be attributed to a non-competitive position with regard to competition between countries. The weak performance is due to problems within economies such as low productivity growth, the natural tendency in the advanced industrial economies to faster increase in the employment rate than the rate of industrialization, as well as problems related to legislation, social welfare and monetary restraint (Krugman, 1996).

In these analytical and empirical positions on the concept of competitiveness, Krugman adds important regulatory structures. He considers the attention that is paid to the international competitiveness by policy makers and international organizations as dangerous. This is because, as he believes, the policy-makers tend to see wrong economic interactions between countries as a "game" zero

sum more than positive. Such essentially mercantilist misunderstanding of the role of trade, may, in his opinion, finally lead to protectionism, or even worse policies (Krugman, 1994).

Kay (2005) in his work, repeated the arguments of Krugman, namely that it is undoubted the fact that countries are not / behave like corporations, since non-competing countries do not "disappear» (Kay, 2005). Instead, Peterson (2005) in his study questioned this view, noting that the states, which have failed to remain economically competitive and militarily strong (the latter points out that it is often a function of the first), in fact disappear in some cases, mainly due to internal turmoil or external intrusion. Examples given included the Soviet Union, the Republic of South Vietnam and the Democratic Republic of Yemen. Apart from these historical examples, from an economic standpoint, one of the reasons why countries do not disappear as businesses, refers simply to the fact that they can evade repayment of their debts when they go bankrupt, but companies do not have this option. Many of the countries that went bankrupt , followed this option, such as Mexico in 1982 when faced the debt crisis. So the idea that national competitiveness is meaningless just because countries do not cease to exist as businesses, can be questioned. This position is legitimate and extremely important as it can contribute in a primary stage to how the economic competitiveness of a country can be improved in order to avoid bankruptcy (Peterson, 2005).

#### **4. Comparison of Porter's theories and Krugman**

##### ***4.1 The development of competitiveness theory: The opposing views and review of Porter and Krugman***

According to Michael Porter (1990), if a state creates such a business environment, where conditions are favorable for business and where the state provides maximum support to companies that perform functions in local and global markets, then these conditions are the current competitive advantage of the nation. That assertion, according to Porter (1990), can also be applied at national and regional level. Krugman (1994) does not agree with Porter. He says that "the idea that prosperity and economic performance of a state depend on its success in the global marketplace is simply a case and that this would not imply that is necessarily true. Besides, practical and empirical aspects show that this assumption is completely wrong. " Krugman believes that the leading nations in the world are competing with each other and that there is a "significant degree of competition" between them.

Poot (2000) supports the position of Krugman (1994) and notes that there is fierce competition in the conditions of free market and globalization, but this occurs only at the level of companies and not of regions or states. This means that competition among nations is not a zero-sum game with a single winner. This "competition game" mainly concerns acts and decisions of "economic interest" taken to enhance the living standards of a given region or country. Porter (2004) argues again that competitiveness is not a zero-sum game, since many countries can enhance their productivity. He specifically mentions that "the main challenge of economic development of a country or a region is to create conditions for rapid and sustainable productivity growth."

Many writers (Krugman, 1994; (Ručinska & Ručinsky, 2007)), consider that competition between companies and nations cannot be compared. Companies can enter or exit a market, depending on their success, but states cannot abandon their territories, regardless of their success. Based on this, it is possible to point out the main difference between the competitiveness of a company and a country: Enterprises compete against each other and can improve their position in the market with the "expulsion" or the degradation / deterioration of the position of another company, while states can improve their position at the same time, without compromising the position of other states.

Krugman (1994) considers that it is not necessary to determine the competitiveness and that the definition of competitiveness of a nation or a region cannot be determined simply as the competitiveness of the business: "The competitiveness is not an essential condition. The claim that these countries are similar to companies and compete in a market, is a complete illusion" (Maskell & Eskelinen, 1998) However, although the countries have no business characteristics, there is a certain level of competitiveness among them and many writers wish to examine the nature and characteristics (Ručinska & Ručinsky, 2007). Poot (2000) points out that the competitiveness of a country presents its capabilities to achieve the sustainable development of living standards of all its components. The Cooke (1998) defines national competitiveness as the economy's capacity at sub-national level to attract and retain firms with stable or increasing market activities, while maintaining or improving the living standards of all those living in the region. According to the definition of Porter & Ketels (2003), competitiveness requires high and rising standards of living of a company with the lowest level of unemployment on a sustainable basis. This definition was later expanded: competitiveness is defined as the ability of an economy to provide its residents a high standard of living and a high level of employment for all those who want to work on a sustainable basis (Porter & Ketels, 2003). The main factor of competitiveness is productivity growth. In the mid 1990s, many writers and academic institutions have attempted to define the concept of national competitiveness, which became the subject of theoretical, empirical and policy discussions (Vuković & Wei, 2010).

#### ***4.2 Theories of national competitiveness: Porter vs. Krugman (Comparative and Competitive Advantage)***

This theory (national competitiveness and the new economic geography) particularly developed during the decades 1970-1990, when many economic geographers analyzed the dynamics of the industrial plant and the factors determining the location of economic activity. Most of the analysis was based on neoclassical economy. As in neoclassical analysis, the primary analytical concept is the "production function" that links the company (or country) with key factors: labor, capital and technology. Starting from this assumption, the economic geographers looked at the "geography of production", taking into account local features that depend on the factor of geographical distribution: availability of natural resources, labor, market access, etc. According to this theory, countries or regions compete to attract investments based on their comparative advantage, availability of indigenous factors (McCann, 2001).

Countries which tend to specialize in these industries and activities, have a comparative advantage (i.e producing these results that require greater involvement of factors that the country has traditionally). The theory gives a certain (but limited) response to the territorial location of economic activities and gives a very short explanation on the role of trade in the creation of economic growth. Similar models focus on the importance of the role of trade in generating economic development in order to overcome the shortcomings of the theory. Armstrong & Taylor (2000) and McCann (2001) believe that the economic performance of a country and its development depend on the relative size and success of the export industry orientation. A simpler model, like this, is the economic base model in which the competitiveness of a region depends only on increasing the economic base (the export sector of the local / domestic economy).

Traditionally, in the economy, the term comparative advantage comes from the Ricardian theories and has been redrafted in a more modern form of the theorem of Heckscher-Olin. The concept of comparative advantage refers to those countries which, through specialization, may have benefits from trade even if they do not have an absolute advantage. According to the theory of comparative advantage, trade reflects differences in factor availability of different countries (land, labor, natural resources and capital). The economies achieve comparative advantage producing goods in those industries in which the availability factor is greater, namely produce those products with the most intense rates available (Armstrong & Taylor, 2000).

The main contribution of classical and neoclassical theory comes from the concept of comparative advantage. The comparative advantage tells us about those competitiveness raising activities in which a country can participate successfully, depending on the model: hereditary factors, technology, level of economic development. However, in the neoclassical model, the perfect competition and the system of international free trade lead to factor price equalization. Two key issues for competitiveness in the macro-economic literature, are related to economic development and international trade (Barteisman, Scarpetta, & Schivardi, 2005).

The competitiveness becomes more comprehensible as a concept when we use economic models, including economy of scale, imperfect information, the imperfect competition and business innovations. Removing the assumption of perfect competition, attention turns to the issue of the relationship between market structure and competitiveness. Besides, if competitiveness is observed as a form of "search activity", then there is an obvious relationship between market concentration and monopoly power. Cohen (1994) states that "nothing creates more added value per employee from a monopoly price» (Chang, 2008).

In the last 30 years, the comparative advantage, based on production factors, proved not sufficient to explain the pattern of trade. So the position occupied a new model, competitive advantage. This means that nations can develop and improve their competitive position, that is not only result from hereditary factors, and often comparative factors are not enough to improve the competitive position. The competitive advantage focuses on the characteristics of a nation that allow companies to create and maintain competitive advantage in certain areas.

According to Porter, the importance of the concept of competitiveness is productivity. The main goal of any nation is to produce high and rising standard of living of its citizens. The ability to create competitiveness depends on the use of productivity of resources and not only their availability. Raising the standard of living depends on the business ability of a nation to maintain a high level of productivity and thus productivity increases over time. Sustainable productivity growth requires continuous improvement of the economy.

Same with Porter, Krugman defines the competitive advantage through productivity: if competitiveness has any meaning, then it (the meaning) is just another way to express its productivity. Productivity is not everything, but in long term it is almost everything. The ability of a country to improve its standard of living, over time depends almost entirely on its ability to increase production per employee (Krugman, 1990). Krugman in his approach (just quoted), as in many other works, he explains the concept of competitiveness. The author considers that it is useless to explain to him the term competitiveness, since it is only another name for productivity.

Competitive advantage or else the focus on maintaining higher productivity, has been studied in many developed countries. In the US, the largest investigations are those conducted by Porter and the Competitiveness Council (Council on Competitiveness) (2001). The Porter's approach has enormous significance and impact on many researches and his argument that "the competitive advantage is created and maintained through local procedures» (Porter, 1990) is of great importance. The identification process has the highest turn of Porter, from the competitiveness of a nation to regional competitiveness (Acs & Armington, 2006).

The scientific interest in the topic of competition in 1990 and then intensified when Porter's book entitled "Competitive Advantage of Nations" was published. Today there is a vast literature involving the economic geography and economics, which emphasizes the distinguishing role of nations, regions and cities as key sources of external economies. The interest in economic geography is created as a result of the increasing recognition of its role as a growing source of efficiency and because of the rediscovery and extension of the original ideas of Marshall about externalities of local industries. The system of Marshall (1890) shows the base of "concept cluster" of Porter, in which the regional competitive advantage is resulted from the presence and dynamics of geographically localized activities, among which there is a strong local rivalry and competition, favorable conditions for providing input, local customers and the presence of capable local suppliers and support industries modes (Porter, 1998).

Many authors criticize Porter (1990), considering that the economies which base their competitive position on cheap raw materials may not be successful in the long term (Ručinska & Ručinsky, 2007). Krugman (1994) also argues that the definition of competitiveness is not at all necessary and that the competitiveness of a nation or a region cannot be simply defined in the same manner prescribed by the competitiveness of an enterprise. Despite the fact that economic geographers have investigated regional development and significant numerous factors of regional development of the economy for a long time, they did not traditionally analyze and use the terminology of choral competitiveness and competitive advantage (Scott, 1985), until the 1990. Since then, the economic geography has diversified into three

main directions: the initial economic geography, regional economy and new economic geography in the field of economy.

## 5. Conclusions

This article is an attempt to approach the concept of spatial competition and competition that exists at enterprise level. Competitiveness is a multidimensional and dynamic concept, a term wide and multileveled. It also makes it possible to distinguish at different levels depending on the priorities and objectives set each time. However, the measurement of real competitiveness in terms of productivity and conceptual flexibility that allows the formulation of alternative approaches seems to repel any objections to the concept of competitiveness.

Unlike the definition of macroeconomic competitiveness for which there is a broad agreement among scholars, the concept itself of national or macroeconomic competitiveness raises many concerns. It seems to be a vague concept with greatly disputed importance. Competitiveness at the national level has not key features but there is also no consensus on whether ultimately this concept has meaning or not, namely if nations actually compete with each other or not.

Krugman, several years ago, pointed out that macroeconomic competitiveness can be a dangerous obsession, which can lead to bad economic policy. Therefore, he took the view that "the obsession with competitiveness is not only wrong but dangerous, since it distorts the domestic policies and threatens the international financial system» (Krugman, 1994). If competitiveness is meaningful, according to Krugman, this is just because it is just another way to naming productivity.

Krugman's main objection is that the concept of competitiveness is based on an image of rivalry between countries. The debate on competitiveness considers that these countries are competing each other like businesses, to capture larger shares of a common and finite market. The success of each business automatically means the failure of others. A similar picture appears in countries where the debate on competitiveness is associated with "picking winners". According to Krugman, this picture is totally misleading because international trade is a process by which specific industries and interests can be affected, but without losing any country as a whole.

States in their effort to recover maintain and / or augment their competitiveness, they can adopt principles and rules related to encouraging innovation, raising productivity, stability in the legal and fiscal framework, the improving infrastructure and attracting investment. The Porter's theory about Competitiveness of states, remains one of the earliest and most original analysis efforts of the development process in terms of not only macroeconomic (capital, natural resources, etc.) but also microeconomic, in terms that the characteristics and performance of individual companies within each country.

The Porter's model is an important technique for analyzing and understanding the micro-business environment. But, by some scientists is supported that it is incomplete as a model and also has some weaknesses. At some points it is not clear in its definitions. First, it is described as a static model. Many

people believe that is used to describe the environment and not for foreseeing it. Because every industry is characterized by significant changes, the best way to predict is the examination of the life cycle. But, there is a disadvantage at the way that structures the business relations which occur relatively simple and linear, while the competition is created mostly with more complex network relationships.

Many of the most successful businesses do not support their success in their quest to reach their competitors, but in what is called "value innovation". Under this action, businesses do not specify their mode of action in accordance with that of their competitors, but offer very different products and services. The Porter's model has been criticized because it does not mention the possibility of a business sector to take advantage of opportunities that may arise from their cooperation. The cooperation does not replace competition, but coexists with it. Additionally, there is no important reference to factor 'human capital' of enterprise and how it can affect the development of the environment. Finally, the study of the competitive environment of business, with the help of Porter, should be combined with the analysis of the wider environment to be as comprehensive as possible. Another issue that arises is whether companies that operate domestically and they are foreign ownership, can be a source of competitive advantage for the country itself. Porter says they cannot, although in most cases they can be characterized part of the national capital.

Nowadays the debate on competitiveness is not connected to the revival of protectionist policies aimed at gaining a country to the detriment of the other. The Krugman's review may not have abolished the use of the term, but certainly contributed to more cautious formulations in terms of analysts.

Although some researchers and economists (ie Krugman, 1994) put the usefulness of the concept in question and deny the ability of nations to compete each other, many international studies such as the World Competitiveness Yearbook (World Competitiveness Yearbook) and Global Competitiveness Report (the Global Competitiveness Report) support and confirm that governments and all the administrations can shape a favorable environment in which companies operate and thus contribute to national competitiveness.

It is quite interesting that in literature on national competitiveness by Krugman (under his work in the mid-1990s) is the only one who is often mentioned as the main opponent of the usefulness of the concept itself. None of the authors, after Krugman, has attracted so much popularity as much as Krugman, as an opponent of national competitiveness. This does not mean that all the doubts about the concept of competitiveness at the national level have been clarified several years ago. This means more that the very notion - as highly controversial - is rooted in all areas of human creation.

Krugman, in his pioneering work in the early 90s, looked in a general equilibrium model, the spatial dynamics that develop in an economy which has the following characteristics: a) the markets operate under imperfect competition, b) there is no differentiation of products, c) production at the enterprise level is subject to increasing returns to scale, d) there is mobility of capital and labor and e) transport costs are nonzero. The main conclusion of the work of Krugman, is that transport costs which are directly related to the geographical location, play an important role in the division of operational activities in space.



The main purpose of economic geography is the need to interpret clusters of populations and economic activities in space. All of these concentrations are formed and survive by virtue of the fact that there are economies of concentration, in which the spatial clustering itself configures the appropriate economic environment that supports the further and continuing contraction (populations and activities).

This concept might be used to justify intervention in the market for the benefit of a country, including subsidies, restrictions on local wages and devaluations. Often, indeed, it is said that lower wages or devaluation make a country more competitive. This concept of competitiveness, however, is deeply flawed. The need for low wages reveals a lack of competitiveness and reduces the welfare of citizens. Subsidies drain national resources and distort choices against the most efficient use of factors. Devaluation is equivalent to a collective, national pay cut, as it reduces the cost of products and services sold internationally, while it raises the cost of products and services purchased abroad. The actual competitiveness thus is measured in terms of productivity. Productivity allows high wages, strong currency and attractive returns on capital and along with them a high standard of living. The global economy is not a zero-sum game. Many countries can improve their welfare by improving their productivity. The central challenge in economic development is to create conditions for rapid and sustained productivity growth.

In 2006, Porter in the Report on Global Competitiveness, made a number of clarifications in relation to competitiveness, on which Krugman would be difficult to disagree: "Competitiveness remains a concept that is often misunderstood, despite the widespread acceptance of the its importance. A country's share on world markets, for its products, is the most intuitive definition of competitiveness ". However, for Krugman, the term competitiveness remains "an unspeakable entity that can neither be defined nor measured."

## References

- Acs, Z., & Armington, C. (2006). "Entrepreneurship, Geography and American Economic Growth " . New York: NY: Cambridge University Press.
- Aiginger, K. (1998). 'A Framework for Evaluating the Dynamic Competitiveness of Countries'. *Structural Change and Economic Dynamics*, pp. 159-188.
- Alonso, W. (1964). "Location and Land Use" . Cambridge, MA.: Harvard University Press.
- Armstrong, H., & Taylor, J. (2000). *Regional Economics and Policy*. Oxford: Blackwell.
- Barteisman, E., Scarpetta, S., & Schivardi, F. (2005). "Comparative analysis of firm demographics and survival: evidence from micro-level sources in OECD countries" . *Industrial and Corporate Change*, 14, pp. 365–391.
- Bellak, C., & Weiss, A. (1993). A note on the Austrian diamond [special issue]. *Manage Int Rev*, 2 (33), pp. 109– 18.
- Cartwright, W. (1993). Multiple linked 'diamonds' and the international competitiveness of export-dependent industries: the New Zealand experience [special issue]. *Manage Int Rev.*, 2 (33), pp. 55 – 70.

- Chang, H.-J. (2008). *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*. . London: Bloomsbury Press.
- Cooke, P., & Morgan, K. (1998). "The Associational Economy: Firms, Regions and Innovation",. Oxford: Oxford University Press.
- Delgado, M., Porter, M., & Stern, S. (2011). *Clusters, Convergence, and Economic Performance*. US Cluster Mapping Project Dataset: USA.
- Dixit, A. K., & Stiglitz, J. E. (1977). Monopolistic competition and optimum product diversity. *The American Economic Review*, 297-308.
- Dunning, J. (1992). The competitive advantage of countries and the activities of transnational corporations. . *Transnatl Corp*, 1 (1), pp. 135 – 68.
- Eilon, S. (1992). Editorial: on competitiveness. *Omega Int J Manage Sci*, 20 (1), pp. i –v.
- Ethier, W. J. (1982). National and international returns to scale in the modern theory of international trade. *The American Economic Review*, 389-405.
- Fujita, M., & Krugman, P. (1995). "When is the economy monocentric", Von Thu $\ddot{u}$ nen and Chamberlain Unified. *Regional Science and Urban Economics*, 25, pp. 505 - 528.
- Grant, R. (1991). Porter's 'competitive advantage of nations': an assessment. *Strategic Manage J*, 12 (7), pp. 535–48.
- Gray, H. (1991). International competitiveness: a review article [review of the competitive advantage of nations]. . *Int Trade J.*, 5 (5), pp. 503 –17.
- Helpman, E., and Krugman, P. R. (1985). "Market Structure and Foreign Trade," MIT Press, Cambridge, MA.
- Hodgetts, R. (1993). Porter's diamond framework in a Mexican context [special issue]. *Manage Int Rev.*, 2 (33), pp. 41 –54.
- Jacobs, D., & De Jong, M. (1992). Industrial clusters and the competitiveness of The Netherlands. *De Econ*, 140 (2), pp. 233– 52.
- Kay, J. (2005). 'The question of how countries compete'. New York: Financial Times.
- Kitson, M., Martin, R. L., & Tyler, P. (2004). 'Regional Competitiveness: An Elusive yet Key Concept?'. *Regional Studies*, 38 (9) , pp. 991-999.
- Krugman, P. (1990). "The Age of Diminished Expectations". Cambridge, MA: MIT Press.
- Krugman, P. (1991a). "Increasing Returns and Economic Geography". *Journal of Political Economy*, 99, (3), pp. 483-489.
- Krugman, P. (1994). "Competitiveness: A Dangerous Obsession". *Foreign Affairs*, 73, (2), pp. 28-44.
- Krugman, P. (1996). 'Cycle of conventional wisdom on economic development'. *International Affairs*, 72(1), pp. 717-732.
- Krugman, P. (1996). "Innovation and agglomeration: Two parables suggested by city-size distributions". *Japan and the World Economy*, 7, pp. 371-390.
- Krugman, P., & Smith, A. (Eds.). (2007). *Empirical studies of strategic trade policy*. University of Chicago Press.

- Krugman, P. (2008). *The Return of Depression Economics and the Crisis of 2008*. London: Penguin.
- Krugman, P. R. (1997). *Pop internationalism*. Cambridge, MA: MIT Press.
- Maskell, P., & Eskelinen, H. (1998). *Competitiveness, Localised Learning and Regional Development: Specialization and Prosperity in Small Open Economies*. . London: Routledge.
- McCann, P. (2001). *Urban and Regional Economics*. Oxford: Oxford University Press.
- Narula, R.. (1993). Technology, International Business and Porter's "Diamond": Synthesizing a Dynamic Competitive Development Model. *MIR: Management International Review*, 33, 85–107. Retrieved from <http://www.jstor.org/stable/40228192>
- Peterson, R. J. (2005). 'Letters to the editor: States do face real threat that they will disappear'. *New York: Financial Times*.
- Poot, J. (2000). Reflections on local and economy-wide effects of territorial competition. In *Regional Competition* (pp. 205-230). Springer Berlin Heidelberg.
- Porter, M. (1990). "The competitive advantage of nations". Free Press: New York.
- Porter, M. (1998a). "On Competition". Boston: Harvard Business School Press.
- Porter, M. (1998b). "Location, clusters and the new economics of competition". *Business Economics*, 33, pp. 7–17.
- Porter, M. (2000). Location, competition and economic development. *Economic Development Quarterly*, 14, pp. 23-32.
- Porter, M. E. (2004). Building the microeconomic foundations of prosperity: Findings from the business competitiveness index. *World Competitiveness Report*, 2005.
- Porter, M. (2008). "The Five Competitive Forces that Shape Strategy". *Harvard Business Review*, pp. 86-104.
- Porter, M., & Ketels, C. (2003). *UK Competitiveness: Moving to the Next Stage*. . DTI Economics Paper.
- Rotemberg, J. J., & Saloner, G. (1990). Collusive price leadership. *The Journal of Industrial Economics*, 93-111.
- Ručinska, S., & Ručinsky, R. (2007). Factors of regional competitiveness. 2nd Central European Conference in Regional Science – CERS, 2007. . Technical University of Košice, Faculty of Economics.
- Rugman, A. (1991). Diamond in the rough. . *Bus Q.*, 55 (3), pp. 61 –4.
- Rugman, A., & D'Cruz, R. (1993). The 'double diamond' model of international competitiveness: the Canadian experience [special issue]. *Manage Int Rev.*, 2 (33), pp. 17-39.
- Rugman, A., & Verbeke, A. (1993). Foreign subsidiaries and multinational strategic management: an extension and correction of Porter's single diamond framework [special issue]. *Manage Int Rev.*, 2 (33), pp. 71-84.
- Scott, R. (1985). "U.S. Competitiveness: Concepts, Performance, and Implications," . In B. R. U.S., *Competitiveness in the World Economy*. Boston: Harvard Business School Press.
- Stopford, J., & Strange, S. (1991). *Rival states, rival firms: competition for world market shares*. . Cambridge: Cambridge Univ. Press.

- Thurow, L. (1990). Competing nations: survival of the fittest. . Sloan Manage Review., 32 (1), pp. 95-97.
- Tyson, L. D. (1992). Who's Bashing Whom: Trade Conflict in High-Technology Industries. Washington, D.C: Institute for International Economics.
- Van den Bosch, F., & De Man, A. (1994). Government's impact on the business environment and strategic management. . J Gen Manage, 19 (3), pp. 50 – 9.
- Visser, E. J., & Atzema, O. (2007). Evolutionary Economic Geography. Utrecht : Utrecht University, Section of Economic Geography.
- Von Thünen, J. (1826). "The Isolated", (English edition 1966). Oxford: Pergamon.
- Vuković, D., & Wei, L. (2010). Regional Competitiveness: The Case of Western China. Journal of Geographical Institute Jovan Cvijic, SASA, 60 (1), pp. 107-127.