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The competitiveness puzzle: Interpretations, misunderstandings, and conceptual reorientations towards integrated competitiveness policy approaches

By Charis VLADOS ^{a†}
& Dimos CHATZINIKOLAOU ^b

Abstract. Competitiveness is a field of discord and controversies among economists from the very first moment it appeared in the theory and practice of economic policy. This article aims to identify how the concept of competitiveness evolves and find out possible points of convergence, divergence, and synthesis in contemporary scientific dialogue. It first presents older and recent approaches to competitiveness by identifying potential conceptual enrichments and reorientations at the meso-level of analysis. It finds that the rediscovery and deepening into the meso-economic approaches, which connect the micro and macro-economic levels of analysis dynamically, have the potential to offer new analytical content and interpretive potential on competitiveness. Growth poles, industrial districts, and innovation environments constitute such meso-level approaches. In conclusion, we propose a multilevel synthesis of competitiveness and an integrated form of industrial policy in the scheme of “competitiveness web” and “co-opetitiveness pole.”

Keywords. Competitiveness, Micro-meso-macro analysis, Growth poles, Industrial districts, Innovation environment, Competitiveness web, Co-opetitiveness pole.

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1. Introduction

A popular area of “discord” in economics lies in the study, definitions, and analysis of competitiveness. Somewhere in the 1980s, the issue of competitiveness arose primarily in policymaking and, secondarily, in scholarly debates (Council on Competitiveness, 1990; Dertouzos, 1989; European Commission & Competitiveness Advisory Group, 1995).

In the context of a political debate, many analysts consider at the beginning that the concept of competitiveness includes elements of “indirect” anti-liberalism and “silent” protectionism that calls allegedly for neo-interventionist policies. Some economists, predominantly Paul Krugman, and to a lesser extent Michael Porter, start to attack the concept

^{a†} Department of Economics, Democritus University of Thrace, Komotini, Greece. (and) School of Business, University of Nicosia, Nicosia, Cyprus.

☎. +302531039824 / +35722459090 ✉. vlad.coop@gmail.com and vlados.c@unic.ac.cy

^b Department of Economics, Democritus University of Thrace, Komotini, Greece.

☎. +302531039824 ✉. dimos.chatzinikolaou@gmail.com

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of competitiveness by favoring the concept of productivity as more comprehensive in promoting international trade and socio-economic development.

However, competitiveness passes later into a phase of “de-demonization” since it does not signify only an interventionist policy or selective and vertical industrial policy. The emergence—for some, the re-emergence—of “meso-economics” seems to be critical in the current repositioning of competitiveness. Milestones in these reorientations are the rediscovery of the Marshallian industrial districts, the introduction of industrial clusters that Porter introduced to classify the “competitive advantage of nations,” the “environment of innovation” approach, and, more recently, the analytical class of business ecosystems (Lizzeretti *et al.*, 2014; Rong & Shi, 2015).

Combined with the analysis of the dynamics of globalization, the “structural” dimension of competitiveness seems to constitute now the primary analytical engine, instead of “cost-” or “price-” competitiveness (Gilli *et al.*, 2013). This shifting perspective to “structural and systemic competitiveness” in the age of globalization seems to be a field of significant interest today (Vlados *et al.*, 2018b; Vlados & Chatzinikolaou, 2019a, 2020).

With these initial thoughts in mind, we will attempt to explore how past and contemporary approaches view the concept of competitiveness and what aspects they mostly highlight. We will also try to identify misconceptions and suggest conceptual reorientations in the concept of competitiveness nowadays, during the actual phase of crisis and restructuring of globalization (Andrikopoulos & Nastopoulos, 2015; Vlados *et al.*, 2018a; Vlados, Deniozos, & Chatzinikolaou, 2019). These advancements also seem to have implications for the design of new development policies and, more specifically, integrated industrial policies.

2. Methodology and structure

This study will venture on a literature review of the field, which can be indicative of the developments in the analysis of competitiveness. The general methodology it will use is a “semi-systematic” review of the domain, aiming to criticize the outcomes (Snyder, 2019) and, since this is primarily political economy research, to suggest policy implications.

The following steps reflect the design of the paper and the general outline of the path of analysis:

- I. First, it presents older and recent analyses to competitiveness to find specific interpretations and misunderstandings.
- II. Second, it links the competitiveness debate to the study of “meso-economics” and suggests an actual reorientation.
- III. Third, it summarizes the research by discussing future elements and policy implications.

3. Literature review: Older and contemporary issues about the concept of competitiveness

First, we will briefly examine the historical evolution of competitiveness definitions in relevant reports of various organizations and then propose some clarifications on the analytical background of the concept of competitiveness.

3.1. A brief history of the evolution of different definitions of competitiveness

The first debate on the concept of competitiveness began in the late 1980s. This fact was the result of increasing concern in the rapidly growing international economic presence of the Japanese economy that was challenging the economic, industrial, and technological leadership of the USA on the global economy (President's Commission on industrial competitiveness, 1985).

Within this understanding of competitiveness, a relative contradiction was apparent; a wealthy country, which is only slightly open to international trade, can only be "non-competitive" because it exports only a little compared to others.

OECD economists (OECD, 1997), through a series of annual reports on "industrial competitiveness" since 1997, are heading, in turn, towards a relatively differentiated definition of competitiveness. They begin to suggest that competitiveness is the capacity of firms, industries, national regions, or multinationals formations in generating a sustained increase in income and employment while remaining open to international competition. However, OECD (2001) appears later to shift its definition and focus not on the concept of competitiveness but at the productivity of countries. At the same time, the Directorate-General for Enterprise of the European Commission (2001) seems to pursue a similar path to define competitiveness, which is simply the ability to achieve a sustainable improvement in real incomes in regions or countries by creating adequate jobs and working conditions (Debonneuil *et al.*, 2003).

Therefore, it seems that past prevailing policy approaches neglected the internationalizing dimensions of competitiveness. The whole period of the first decade of 2000 and up to the manifestation of the 2008-09 global recession involved several ambiguities in terms of understanding and defining competitiveness. On the one hand, many economists in developed Western countries were particularly optimistic about the rapid advancement of the competitiveness of their economies based on the enormous potential of the exploitation of new technologies. On the other hand, many "pessimists" were cautious about the widening of foreign trade deficits in already developed countries (Artus & Fontagné, 2006).

A few, however, were able to see the gradual end of the previous cycle of the advancement of globalization and the inevitable entry of the global economy into a phase of deep crisis and restructuring, which nowadays

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seems to be heading progressively in the “new globalization” (Βλάδος, 2006, 2017).

In the wake of the 2008 crisis, most analysts focused on the effort to overcome and reverse the “emergency” crisis as quickly as possible, leaving behind the structural investigation of the causes. Nowadays, the debate on competitiveness seems to be drastically re-emerging after the relative stabilization that the global economy achieved at the end of 2009.

At this point, the World Bank’s relative approach is of particular interest. Even though this institution used to maintain a robust liberal position on international trade issues, it began to prioritize macroeconomic stabilization rather than the objective of enhancing the industrial competitiveness of the different countries (Independent Evaluation Group, 2004). Likewise, OECD (2015) suggests now a modified perception of the definition of national competitiveness, which is a measure of the advantages or disadvantages that a country has in selling its products on international markets. This shift reveals that a country’s competitive advantages and disadvantages have a significant impact on its growth process. In a similar vein, the European Commission (2014) maintains an ambiguity in the relative definition of competitiveness, emphasizing a perspective focused on the performance of European industries in international export markets.

What do these conceptual shifts in understanding competitiveness mean? A more comprehensive understanding of the shifts in competitiveness calls for an examination of some essential conceptual dimensions and interpretive structures.

3.2. Conceptual dimensions, analytical discrepancies, and clarifications

First, an essential clarification in the study of competitiveness is how it differs from the related concept of competition. Conditions of competition exist at any time when competing parties clash with each other by seeking to maintain or increase their benefits. That is, competition conditions exist in every “economic affair” where the needs are always higher than the means to meet them, in a world of “tightness” and scarcity. Competitiveness, by contrast, does not characterize all parties that operate in competition. A competitive actor is the one who can survive and thrive in conditions of competition. Competitiveness refers to the ability to offer products and services profitably in local, national, or international markets, in the changing conditions of the competition (Aghion *et al.*, 2005).

Within such an expansive definition, misunderstandings and divergent interpretations can occur, in such a way that critical “developmental” issues remain vague and obscure. In a first distinction, productivity and efficiency are “adjacent” concepts to competitiveness, although they differ in specific features. Productivity initially only makes sense through space-time comparisons since the productivity of an X factor of production equals the quantity of output Q divided by the quantity of input X. In economic

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terms, this input corresponds to either labor, capital, or nature. Relative to the concept of productivity is that of efficiency, without being identical. Technical efficiency means to produce the maximum amount of output from an amount of input and vice versa, while allocative efficiency is the ability to equate marginal value products with marginal costs. Overall efficiency, which comprises technical and allocative efficiency, means that a firm operates on its cost or revenue “frontier” (Heshmati, 2003; Hollingsworth, 2008).

Concerning competitiveness, there is no generally accepted definition, although the usual distinction follows three paths of analysis: the firm (micro-level), the national economy (macro-level), and the sectoral and spatial articulation of economic activity (meso-level):

- I. First, the content of the microeconomic approach concerns the analysis of the behavior and action of the units operating within the economy (individuals and firms) and refers mostly to the determinants of the prices of goods and factors (Lesourne *et al.*, 2006).
- II. Second, the macroeconomic direction refers to the overall and cumulative economic phenomena by studying factors such as inflation, unemployment, and total consumption (Acemoglu *et al.*, 2003).
- III. Third, a “bridge” between the “micro” and the “macro” seems to unfold gradually since the division of the economy between microeconomics and macroeconomics obscures the decline of the older sectors and, therefore, the related economic policy solutions (Barbour, 2017; Dopfer, 2011). The “meso-economic” approach deals with the intermediate, dynamic, and evolving socio-economic phenomena and studies the structural factors of the economic system, such as the sectors of economic activity, their concentration, and the evolving internal forms of competition and innovation (Mann, 2011).

Most introductory competitiveness approaches analyze the macro-level primarily. The competitiveness of nations refers to the ability of a “national socio-economic formation” to improve macro-economically in conditions of international and global competition. According to one of the first such definitions of the US Commission on Industrial Competitiveness (1985), the competitiveness of a nation means the ability under free and fair market conditions to produce goods and services that correspond to international markets and to increase, at the same time, the real income of the citizens. Competitiveness at the national level means higher productivity performance and the ability of the economy to shift its production to high-productivity activities, which in turn can generate high levels of real wages. Competitiveness is not just a measure of a nation’s ability to sell overseas and maintain its trade balance; competitiveness means rising standards of living, an increase of employment opportunities, and the nation’s ability to serve international obligations (D’Andrea, 1992; OECD, 1995; Reich, 1991; Scott & Lodge, 1985).

Some scholars criticize the “narrow” macroeconomic orientation of competitiveness, calling for a more comprehensive micro- and meso- level

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approach (Vlados & Katimertzopoulos, 2018) since it seems to silence critical dynamic and evolutionary dimensions of the phenomenon. For Reve & Mathiesen (1994), macro-competitiveness approaches are “traditional” since they exhaust their analysis in the “macro-terms” of competitiveness and specifically the relative prices of factors of production by neglecting the developments within specific industries and firms. The macro-approaches seek to stimulate industrial competitiveness directly through macroeconomic policy by focusing on the creation and maintenance of low inflation, interest rates, and business taxation. Reve and Mathiesen advocate a policy that begins at the micro-level, which involves the participation of skilled business individuals, the creation of customer-centric firms, and the formation of dynamic industrial networking between firms (clusters).

Chesnais (1986b, 1986a) provides a convergent approach by arguing that the international competitiveness of national economies is shaped by the competitiveness of the firms operating internally and have an exporting orientation. Chesnais considers the competitiveness of a country as the aggregation of the competitiveness of the domestic companies and the extent they manage to exert dynamism in terms of administrative practices, investment, and innovative capabilities.

Additionally, firm-level competitiveness is the ability to perform better than the other business competitors, that is, achieving higher productivity and greater capital efficiency, higher market shares, sales, and profits. The spatial level of micro-competitiveness can vary and include, at the same time, local, national, regional, international, or global determinants (Albinowski *et al.*, 2015). Concerning industrial competitiveness, this usually implies the selective reinforcement of specific sectors that have “strategic importance.” Selective industrial policies usually favor specific companies (“national champions”) in these sectors by providing state protection and aid (Falck *et al.*, 2011).

More specifically, according to Lall (2001), industrial competitiveness means to achieve relative efficiency together with sustainable development. Competitiveness in this perspective is a process rather than the outcome, and an industrial economy has to use and apply strategies to move gradually to sophisticated technologies. This process requires labor-intensive productive technologies, upgrading technology functions, locally produced value, and leveraging economies of scale, diffusion of innovation, and innovative networks.

However, there is controversy in the literature on this topic of industrial competitiveness. Porter (1990) recognizes that criticism on competitiveness is mostly questioning why nations succeed or fail in the context of international competition. According to Porter, this a false question since the purpose of development economics is to investigate why some firms and nations are prosperous and, therefore, we have to explore how a nation becomes the basis for successful international business in a given industry. Porter concludes that if the primary economic purpose of a nation is to

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create a high and growing standard of living for its citizens, then this does not depend on any “amorphous” perception of competitiveness. It depends on labor and capital productivity and, more specifically, on (a) firm strategy, structure, and rivalry, (b) related supporting industries, (c) demand conditions, and (c) factor conditions. According to Porter, productivity is the primary determinant of a country’s standard of living.

Krugman (1994) also argues that national competitiveness per se is problematic, as opposed to approaching firm competitiveness. Krugman argues against the “popular belief” that a company can be analogous to a nation since nations cannot go bankrupt and withdraw from the market. They may or may not be satisfied with their performance, but they do not have a clearly defined threshold, and, as a result, the concept of national competitiveness is unclear. Krugman (1997) also claims that productivity, income distribution, and unemployment are what matters for the economy and the living standards of people. Productivity is not everything, but it ends up being almost everything because the ability of a nation to improve depends on how it manages to increase the output it produces per worker. In conclusion, competitiveness in Krugman’s perspective is a “dangerous obsession” because the idea that a nation’s fortune depends heavily on its success in world markets is a hypothesis, not a fact.

In a critique of the “critique” of the notion of competitiveness, Burton (1994) argues that Krugman downgrades the importance of international trade by emphasizing domestic productivity, while proponents of competitiveness emphasize both internal and external dimensions. For Burton, the concept of competitiveness is useful because it allows, primarily, very different people to think about their performance in an international context of competition and strive for “world-class” standards. Secondly, it broadens the focus beyond trade to issues of technology and education, and finally, although its benchmark is international, it focuses on internal dimensions, such as productivity and investment.

Preeg (1994) also criticizes some views on competitiveness by refuting Krugman’s qualitative assessment that there is no causal link between international trade and national productivity. Preeg argues that the use of a measure of national purchasing power, which reflects the standard of living, and a measure of national product such as productivity, do not sufficiently capture the impact of international competition on national productivity. Finally, Yoffie (1993) considers that global competition and competitiveness result from the interplay between business strategy, state policies, and industrial structures, and opposes competitiveness theories that focus “rigidly” on factors of production. Yoffie does not deny the apparent importance of the comparative or competitive advantage of countries, arguing that, in certain circumstances, firms and governments have the most significant impact on measuring international trade and international specialization of production.

In recent literature, the debate around the analytical significance of competitiveness seems to settle towards an establishment of

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competitiveness as an “actual” term, although it bears divergent meanings and interpretations in most of the cases. According to the definition of the annual report of global competitiveness (Schwab & Sala-i-Martin, 2017), the level of prosperity an economy can achieve depends on the productivity while competitiveness encompasses all institutions, policies, and factors determining productivity. In a more thorough interpretation, Balkytė & Tvaronavičienė (2010) classify international competitiveness, block competitiveness, national competitiveness, regional competitiveness, sector competitiveness, and competitiveness of companies. Other scholars insist and suggest the “global aspect” of competitiveness (Bhawsar & Chattopadhyay, 2015) by also readdressing the model of “Porter’s diamond” of national competitiveness deriving from specific industries through the introduction of global analytical elements (Dunning, 1993).

The analysis of competitiveness nowadays seems to focus mostly on the determinants driving a nation towards development by improving the productivity of the factors of production (Auzina-Emsina, 2014; Bartelsman *et al.*, 2013). Industrial competitiveness, a factor that measures the share of a particular industry within a nation that provides specific competitive advantages, is another analytical aspect of competitiveness (Fetscherin *et al.*, 2012). Industrial and international competitiveness seems the primary concern for specific national economies that can determine the need for industrial policies (Fernández & Pablo-Marti, 2016; Siddiqui & Saleem, 2010).

At the same time, the notion of innovation in specific spatial outlines (Bosworth *et al.*, 2011; Froy, 2013) and global competitiveness, which is the ability of a national economy to sustain its existing position in the current conditions of global competition (Mosconi, 2015), provides a conceptual enrichment in competitiveness studies. Also, the concept of global competitiveness combines increasingly with the notion of sustainable development (Popescu *et al.*, 2015) while studies of regional competitiveness continue to focus primarily in national regions and complex agglomerations of industrial clusters and other business networks (Annoni & Dijkstra, 2019; Bačić & Aralica, 2017). Finally, firm (micro-level) competitiveness, which refers to a firm’s capacity to exploit competencies and achieve better results than the competitors (Díaz-Chao *et al.*, 2016), seems to acquire an increasing analytical interest.

In conclusion, the competitiveness literature shows that, despite starting from a controversy over whether it has analytical content, several contributions perceive and discuss its different facets with an increasingly open and systematic spirit. However, competitiveness seems to remain in the literature quite divided between macro, meso, and micro approaches, in the sense that few contributions suggest a multilevel synthesis and integrated applications of competitiveness.

4. A necessary reorientation of competitiveness conception in the study of interconnected spatial development dynamics

A conceptual reorientation of competitiveness seems to begin from the study of the dynamics of the meso-environment. Some “local development” approaches, though relatively neglected until recently, appear to come back dynamically, in the effort to grasp the phenomenon of local innovation and competitiveness. These approaches analyze the creation and diffusion of local development into the national and global socio-economic systems. This local competitiveness also appears to be of increasing importance in articulating a new, integrated, and multilevel industrial policy to enhance competitiveness.

This section aims to present critical meso-level approaches and to come up with some of the primary concepts underlying the dynamic spatial aspect of competitiveness.

4.1. Meso-economics and growth poles in Perroux’s analytical perspective

Francois Perroux, one of the founders of “mesoeconomics,” distinguishes between the concepts of growth, development, and progress (Perroux, 1969). Perroux argues first that growth is the augmentation, from one period to another, of the critical sizes of a national economy such as the Gross Domestic Product. Economic growth does not necessarily mean substantial and economic development since it can sometimes only bear quantitative economic increases without transforming in-depth the qualitative, institutional, cultural, and structural mainstays of the society.

Progress, in turn, manifests when the economy can cover social costs increasingly, that is, the costs that provide people with life expectancy, health, and access to knowledge, which are compatible with the specific conditions of the place and time. According to Perroux, underdeveloped economies share at least three fundamental and mutually reinforcing features: they are “de-structured” and dualistic, they are dominated by outsiders, and do not give their entire population the minimum of survival. As a result, the process of socio-economic development is asymmetric, discontinuous, and historically irreversible.

Perroux notes that growth does not occur everywhere at the same time; it appears primarily in “poles of growth” and diffused through specific spatial channels with varying intensity (Perroux, 1955, 1970). These growth poles are the driving socio-economic units that “attract the development of the rest.” Therefore, the process of development is about putting in place such poles that will trigger “backwash effects” (product purchases from other units) or “spread effects” (product sales to other units).

The accumulation of these effects can cause the necessary structural changes required by evolution. Socio-economic development, by extension, requires the creation of a framework capable of creating and exploiting the

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mechanism of growth poles within the least developed economies. Perroux also suggests that the post-war “world economy” tends to become a single system, consisting of unevenly interconnected subsystems maintaining asymmetric relationships from which a variety of influences and hierarchies emerge.

Central to Perroux’s view—and by Hirschman (1958) and many other development economists at that time (Myrdal, 1957)—is the notion of links between productive activities, which can be a “springboard” to initiate specific dynamics of socio-economic development. New development policies have to take into account the interconnection between industries and the ways “backwashed” industries use inputs from other industries, and vice versa.

Perroux’s analysis ignited and spread in the literature significant new concepts and tools for development economics. The degree of integration of an economic unit, which concerns the structure and interconnection between the different internal functions, is such an advancement. A denser network of internal interconnections of the structural components of the economic unit signifies a higher degree of integration (Figure 1).

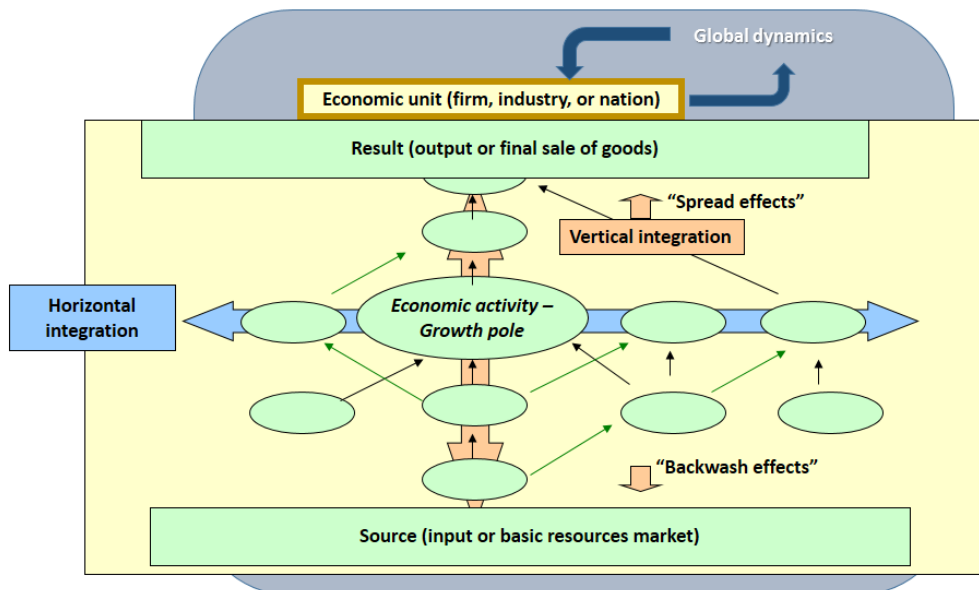


Figure 1. *Horizontal and vertical economic integration*

The concept of the integration of the economic unit can concern, at the same time, the macro-level (national economy), the meso-level (industry), the micro-level (firm), and the global level (global socio-economic system).

On the one hand, vertical integration refers to the internalization of control within an economic unit (firm, industry, or geographical area) of various economic activities that are vertically interdependent in the “input-output” scheme. Low vertical integration means that a unit might have a “leak” of endogenous potential. On the other hand, horizontal integration refers to the joint control exercised by a decision center over many similar

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(at the same level) activities. This methodology exploits mostly the positive economies of scale, experience, and specialization and leads to market leadership.

4.2. Local development perspectives: Industrial districts, local productive systems, and the innovation environment

In the 1970s and 1980s, some Italian economists (Bagnasco *et al.*, 1978; Becattini, 1979) suggested in the context of “Third Italy” a “local prism” of competitiveness. They attempted to revive the interest on the relatively forgotten concept of the Marshallian “industrial district” by examining the relationship between labor division and “agglomeration” at the local level (Belussi & Caldari, 2008).

Their primary research platform lies in the analysis of the mechanisms and processes that lead to the reproduction of relationships between economic actors and the institutional background they face at the local level. The dynamics of the “small and medium-sized” and “locally-established” enterprise lies at the analytical core of this theoretical reactivation (Markusen, 1996).

The industrial district describes a socio-spatial entity that includes features such as the variety of specialized small and medium-sized enterprises organized around a local industrial sector dominated by a “perfect osmosis” (shared values and culture) between the local community and the firms in the area. It also includes an industrial structure based on an “industrial atmosphere” derived from specialization and accumulation of skills (Bathelt *et al.*, 2004).

In Marshall’s perspective, increasing returns are not the exclusive prerogative of the big company but can also come from the economies of agglomeration, proximity, cooperation, and organization in networks created and reproduced within an “industrial district” (Becattini, 1990; Pyke *et al.*, 1990). The advantage of the Marshallian “industrial district” is that local agglomeration creates an efficient labor market that allows specialized and diverse material inputs at a low cost, due to the existence of strong inter-company relationships. The “Marshallian district” also faces conditions that can endanger its viability, such as the reduction of transport costs that facilitates the circulation of materials and information between remote production areas. The decline in demand or supply of raw materials in single-product districts or the transformation and destabilization of the local focus of the district due to changes in business strategy are also such endangering conditions.

According to Becattini (2002), the industrial district can be a spatial concentration of small and medium-sized enterprises operating in an industry. These firms specialize in different phases of the production process of that sector. Becattini defines the industrial district eloquently as a socio-spatial entity characterized by the active coexistence of an open community of individuals and a population of segmented enterprises.

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Overall, the “Italian School” views the concept of “industrial district” as a model of endogenous development interpreted with certain features of sociological or socio-economic reach. These scholars mean by endogenous development internal growth opportunities on a local scale, based on skilled labor, a dynamic and flexible labor market, and an “industrial culture” geared to innovation.

At the same time, the French and American schools of local development discuss the possibilities of a “système productif localisé” (localized productive system). According to Courlet (2002), the “French school” defines the “localized productive system” as the development of specific firms grouped in a spatial “neighborhood,” which are active around one or more related “industrial” professions. These firms maintain relationships around them and with their shared socio-cultural innovation environment, which are not only market relationships but also informal that produce “positive externalities.”

At the same time, the “American school” arrives at similar conclusions for these local productive systems (Scott & Storper, 2003; Storper & Scott, 1995; Walker, 1988). It partly differentiates by highlighting the division of labor dynamics and the external effects of agglomeration. These economists consider the industrial organization to settle the “transaction costs” between different firms. A local firm benefits from giving local subcontractors a portion of production only if the “transaction cost” is low and, therefore, the firm seeks to maintain the production internally by increasing its vertical integration.

From a converging perspective, the innovation environment approach (milieu innovateur) proposes a “spatially-established” set that incorporates expertise, specific rules, and “relational capital” (Aydalot, 1984). This environment depends on a community of actors and their available resources, both tangible and intangible (human resources). It is a system in continuous interaction with the external, “super-local” environment. The “innovation environment” concept attempts to provide a compound and evolutionary socio-economic explanation of the potential of spatial development.

Aydalot (1986) argues, *stricto sensu*, that the “environments of innovation” are the “innovators” instead of the firms. Creativity always lies in local experience and tradition, while accumulated knowledge in “local environments” is always the basis of progress. Creativity requires unorganized contact and spontaneous action, which big corporations cannot provide with their strict planning (Figure 2).

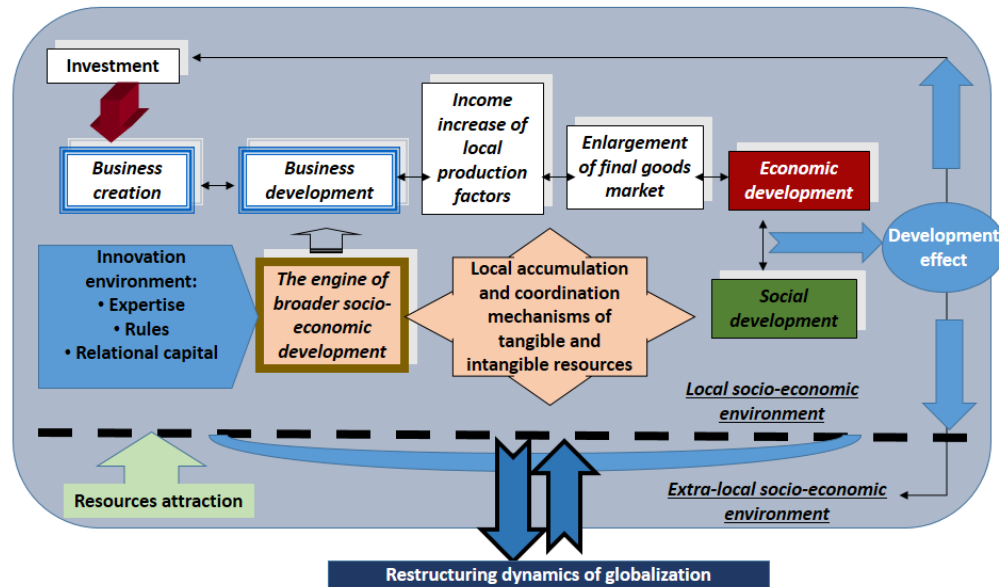


Figure 2. The “innovation environment,” based on Vlados et al. (2019).

The innovation environment suggests that expertise, socio-economic rules, and relationships between actors lead to business creation and innovation. Business development, that is, the most significant engine of local socio-economic development, causes increased income for the local production factors. This unifying systemic process results in the economic development of the local system, which interacts dynamically with the external environment and, thus, creates the structural competitiveness of the spatial system.

From this approach, we understand that the process of fostering innovation at the local level is one of the main components of enhancing and reproducing competitiveness for specific socio-economic organizations, primarily at the “micro” level and, by extension, at the “meso” and “macro” levels. In this context, the creation of local accumulation mechanisms of tangible and intangible resources is crucial. An “integrated” industrial policy of enhancing multilevel competitiveness seems to include such mechanisms, and this is the field of study of the concluding section.

5. Final remarks: A multilevel synthesis on competitiveness comprehension

This article studied the complicated concept of competitiveness and highlighted specific misunderstandings and emerging areas of analytical interest. Although competitiveness faced opposing views in the past, contrasted mostly with the concept of productivity, several contributions perceive competitiveness in a dynamic and “correlative” context (Vlados, 2019a). The dynamics of space, and more specifically the meso-level, contribute in this interpretive direction of competitiveness because they connect dynamically and evolutionarily the micro and macro levels (growth poles, industrial districts, and innovation environments).

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Several scholars call nowadays for a more “unified” perception of competitiveness where the activity of the firm lies at the center. The evolutionary theory of the firm (Gavetti *et al.*, 2012; Loasby, 2015; Nelson *et al.*, 2018; Scherer *et al.*, 2014; Teece, 2017), which attributes to the strategic behavior of firms the most critical “developmental” role, seems that it also constitutes a conceptual repositioning of the structural competitiveness notion. Structural competitiveness (Da Silva & Teixeira, 2014) is a multilevel system of “competitivenesses” that unfolds at all the levels of space (local, regional, national, international, and supranational) by having as point of reference the innovative activity of the firm (Esser *et al.*, 2013; Vladoš & Chatzinikolaou, 2019b).

One question that arises from the literature of competitiveness is whether “microeconomics” is the “source” of knowledge progression and economic development. According to Ruttan (1998), the significant advancements in understanding economic development result from the research conducted at the microeconomic level. The causes of growth due to efficiency improvement, technical changes, institutional reforms, and planning can only result from surveys in households, firms, and industries. The results of these technical and institutional changes create disequilibrium effects for the economy as a whole, in the form of economies of scale and total factor productivity.

Overall, the micro, meso, and macro approaches to the problem of economic growth and development are not by definition incompatible or “inexorably” conflicting. Their mere distinction lies only at their different starting points in the study of economic phenomena. Microeconomics begins by observing the “tree” to understand the “forest,” macroeconomics observes the “forest” to understand how the “tree” develops, and “mesoeconomics” bridges them by realizing that “there is no evolution in the forest without the evolution of specific trees,” and vice versa. Therefore, competitiveness analysis should make use of all three approaches in a compound way.

Competitiveness is never one-dimensional. Competitiveness cannot be homogeneous for a socio-economic space irrespectively of the specific firms operating internally. Competitiveness cannot be an isolated phenomenon since it combines—simultaneously and in a continuously “dialectical” way—the evolutionary activity of the firm, the evolutionary and globalized dynamism of the industries, and the evolutionary socio-economic and historical “physiognomy” and trajectory of the location hosting the firm (Figure 3).

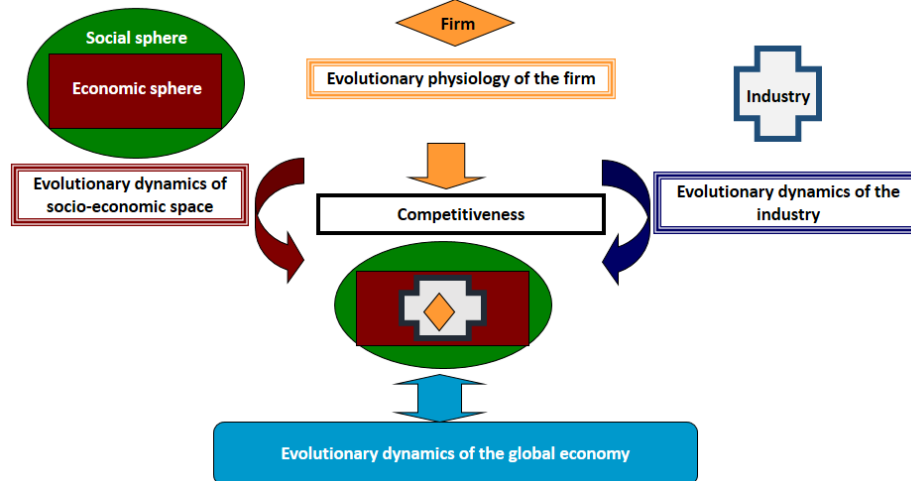


Figure 3. The “evolutionary grid of firm-space-industry” creates and reproduces competitiveness in today’s globalized economy, based on Vladoš (2006)

The “physiology” of the firm signals the evolutionary and “biological” perspective of the behavior of economic actors (Nelson & Winter, 1982). Every “socio-economic organism,” despite articulating conscious actions, has specific “environmental boundaries” posed by the co-evolution between the internal and external organizational environment (Chatzinikolaou & Vladoš, 2019). The “evolutionary grid” of competitiveness is also complemented by the globalized sectors of economic activity (or industries) that articulate cross-sectoral flows, and by the dynamics of “evolutionary geography” (Boschma & Frenken, 2006), in the “neo-Schumpeterian” and “neo-institutional” sense that space is also an “organism” that evolves (Chatzinikolaou & Vladoš, 2019). Finally, “totalizing” micro-meso-macro socio-economic systemic impacts, articulated at the global level, schematize the actual competitiveness nowadays.

Such a multilevel and integrated perspective of competitiveness brings necessarily a repositioned framework of the industrial policy nowadays. Although the industrial policy has been for a long time a one-dimensional tool to enhance specific sectors selectively, it seems that it constitutes now a form of “super-policy” that perceives the “evolutionary grid of firm-space-industry” dynamics and competitiveness.

Recent literature and policy practice suggests this industrial policy as “integrated” or “holistic” because it perceives the continuous socio-economic space at many levels (Bianchi & Labory, 2012; European Commission, 2010). According to Peneder (2017), competitiveness and industrial policy may form today a “dynamic rationale” in the sense that competitiveness is the ability of the socio-economic systems to evolve, and industrial policy must nurture this development potential and perspective. The industrial policy to enhance the multilevel and evolutionary competitiveness is neither horizontal nor vertical but takes a “diagonal”

and systemic form to understand the environmental constraints and intervene dynamically (Torfing *et al.*, 2012).

According to Vladoš (2019b), the socio-economic systems of multiple levels resemble a “competitiveness web,” where the levels of space interact dynamically, in a continuous evolutionary way (Figure 4).

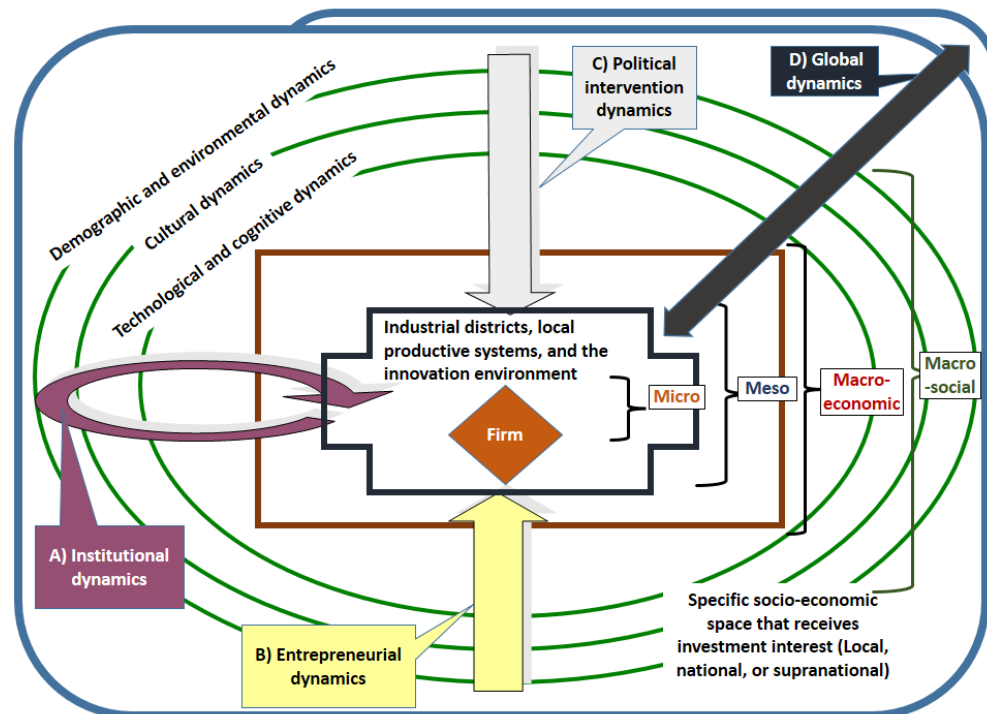


Figure 4. The competitiveness web, based on Vladoš (2019b).

The “macro-social” super-system of demographic, cultural, and technological dynamics affects the macro-economic, meso-economic, and micro-economic subsystems systemically, and institutional, entrepreneurial, political, and global dynamics alter in an unstoppable and evolutionary way these unified subsystems. This interaction—and the continually systemic produced mutation—could also be in the form of parallel competition and cooperation (“co-opetition) in the sense that the competitiveness web evolves as a whole and not in parts. Although the concept of “co-opetition” comes from the strategic management literature (Brandenburger & Nalebuff, 1996; Mongkhonvanit, 2014), a “co-opetitiveness” approach within the framework of the socio-economic system could be a counterproposal for deepening the meso-level business ecosystems, industrial districts, or growth “poles of co-opetitiveness” (Baaziz, 2019). We think that this notion of “co-opetitiveness” could address contemporary concerns about stimulating competitiveness and provide new fruitful directions for developing a relevant “hyper industrial policy.”

Is the concept of co-opetitiveness easily “measurable”? To the extent that we can build competitiveness indices by taking into account comparative

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data, then “co-opetitiveness” is also measurable. The competitiveness web system, with the structural “micro-meso-macro” determinants and dimensions, could lead us to argue that constructing an index in its national context could classify the “competitiveness versus co-opetitiveness” of the “evolutionary grid of firm-space-industry” with relative accuracy and completeness.

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