

The relevance of national competitiveness for the entrepreneurial environment

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Abstract

The multidimensional nature of competitiveness and the wide range of highly endogenous and interdependent factors that stimulate or on the contrary constrain it make the exercise of clarifying the notion of competitiveness one without a result applicable to all spheres of analysis. The paper aims to contribute to the dedicated literature of competitiveness analysis with a new perspective on performance in export markets by introducing in the framework the impact that the orientation towards research-development- innovation (RDI) activities can have on the performance of entrepreneurial environment. The article presents a comprehensive theoretical framework through a synthesis of different theoretical approaches to competitiveness and innovation in terms of their implications at sectoral and national level. The role played by innovation activities and positioning on the global value chains (LVA) in export performance are the guidelines of the present theoretical overview.

Keywords: competitiveness, innovation, entrepreneurial performance

JEL codes: O3, O33, L25, L26

1. Introduction

Although it is on the agenda of all policy makers, is proclaimed as the ultimate goal in national, European or regional policies, the meaning given to the concept of „competitiveness” is far from being unanimous or clearly outlined. Consequently, this has contributed to the proliferation of a wide literature on defining and measuring competitiveness, but without reaching unanimity on a generally valid definition. Simultaneously, the concept is not bypassed by controversies and conceptual debates ranging from determinants, the appropriate scope of analysis, indices and methods of quantification, to even supporting the idea of the uselessness of the concept in macroeconomic analysis. Thus, competitiveness is attributed a wide range of meanings used on multiple levels of analysis and on a wide range of thematic coverage. The ambiguity of the definition and use of the concept is highlighted including by the European Commission in the 2009 Competitiveness Report: “the economic literature does not provide a single, generally valid definition of competitiveness” (p. 18).

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A first feature that distinguishes the definitions and representations attributed to competitiveness is the perspective on *causality*: is competitiveness a *cause* or an *effect*, is it a means of achieving performance or a result of it? Another differentiation concerns the *level of analysis* at which the assessment of competitiveness can, and is relevant to be made. The available definitions refer to the attributes of a country, a region, an industry or a company, thus the analysis of competitiveness can be performed on two levels of aggregation: *micro* (company or industry) or *macro* (region, nation). Depending on the level of analysis, the definition will emphasize or refer to concepts such as productivity, standard of living, price, companies' skills, quality of business environment, international trade, etc. Over the past years, several facets of competitiveness have emerged: economic and non-economic; wide and narrow; micro and macro; national and international etc. (Hunya 2001, Reiljan et al 2000, Siggel 2006). Each level of analysis involves different actors, measures, policies and strategies. While in the case of company level things are relatively clear and validated by empirical studies, difficulties arise in the analysis of the competitiveness of countries due to the diversity of theories leading to a large series of definitions and a multitude of indicators.

The inclusion of social objectives in the definition of competitiveness is an additional criterion for differentiating the available definitions. Some definitions focus on improving living standards and human well-being and include implicitly or explicitly as indicators of competitiveness aspects related to job creation, job quality, income distribution or other social objectives (e.g. Scott and Lodge 1985, Fagerberg 1988, Hatsopoulos et al. 1988, Aiginger 1998, Aiginger et al. 2013 etc). In this spirit, the European Union defines competitiveness as “the ability to provide its citizens with high and growing living standards and jobs for all who wish to work” (The Europe 2020 Competitiveness Report, p.8). Boltho (1996) defines competitiveness as a long-term goal of raising living standards, while Fagerberg (1996) extends this approach and considers competitiveness as the ability of an economy to ensure a higher standard of living than comparable economies now and in future times. A comprehensive synthesis of the definitions of competitiveness from this perspective can be found in Aiginger (2006) and Siggel (2006).

Last but not least, the differences regarding the meaning given to competitiveness are also due to the vision on the *sources/factors* that lead to an increased level of competitiveness. According to the theory of comparative advantage, the endowment of a nation with factors determines its competitiveness, but the economic reality raises challenges on this hypothesis: nowadays raw materials,

capital and even labour are mobile. Hence the endowment with factors is not enough to determine an increased level of competitiveness of a nation. Other economists perceive national competitiveness as an eminently macroeconomic or financial phenomenon and suggest that a cheap currency and balanced budgets can contribute to the increase of a country's competitiveness (e.g. Boltho, 1996). However, there are many cases in which nations have prospered despite the appreciation of the currency and budget deficits.

2. Conceptual delimitations on competitiveness

Most of the time competitiveness is associated with economic factors and concepts such as: productivity level (Porter, 1990), relatively cheap labour (Muellbauer, 1991), real exchange rate (Boltho, 1996), manufacturing (Pitelis and Antonakis, 2003), knowledge-based services (Windrum and Tomlinson, 1999), foreign direct investment (Gugler and Brunner, 2007), technology (Guerrieri and Tylecote, 1994; Narula and Wakelin, 1998; Fagerberg, 1996), innovation (Cantwell and Fai 1999, Clark and Guy, 1998), social infrastructure represented by government institutions and policies (Hall and Jones, 1999) and the degree of regulation (Williams et al. 2002).

One of the most complex methodologies for calculating national competitiveness is considered to be the ICG index (Global Competitiveness Index), developed by the World Economic Forum in the annual Global Competitiveness Report. This indicator takes into account 12 factors of competitiveness called “pillars of competitiveness” that can be divided into three categories: *key factors*: institutional system, infrastructure, macroeconomic stability, health and primary education; *efficiency factors*: higher education, efficiency of the goods market, efficiency of the labour market, financial market sophistication, degree of technological training, market potential; *innovation and sophistication factors*: business sophistication and innovation (World Economic Forum, 2012).

2.1 Market share competitiveness

From this perspective, competitiveness is a zero-sum game: one country can improve its competitiveness only to the detriment of another country. Research on strategic commercial or industrial policies (Krugman 1996; Lall 2000, Zhou et al. 2002) suggests that countries can increase their well-being by capturing significant market shares in sectors involving economies of scale through the use of government support. Subsequent research, however, calls into question the benefits of this type of selective policy (Porter, 1990; Krugman, 1996).

Nonetheless, the underlying view that competitiveness is reflected in a country's market share in certain strategic sectors has been perpetuated under the notion of "industrial competitiveness" (e.g. UNIDO, 2009) and continues to influence current governmental policies. In this regard, in the Lisbon Strategy the European Commission places a particular emphasis on the challenges facing the EU in terms of "intensifying global competition" (p. 11), as "competing countries [...] endanger Europe's position in the global economic league" (p.11). In the same vein, the OECD defines competitiveness in international trade as a measure of a country's ability or inability to sell its products on international markets" (OECD, 2001, Glossary of statistical terms). Similarly, Fajnzylber (1988, p. 12) defines competitiveness as "a country's ability to maintain or increase its market share in international markets and, at the same time, to improve the standard of living of its citizens".

Large market shares can indeed be a symptom of the advantages of some countries but they can also be sometimes a consequence of targeted subsidies. Thus, large market shares in certain sectors are neither the ultimate goal of economic policies nor the main cause of overall economic performance. According to R. D. Atkinson (2013) the true definition of competitiveness is the "ability of a region or country to export more in terms of added value than it imports, including in the analysis all government benefits, reductions and import barriers" (pp. 2-3). According to this definition, a nation can have a large trade surplus, but if it does so by providing benefits to its exporters or by applying significant barriers to imports, the nation in question is not really competitive. Finally, this type of policy adjusts the trade balance by requiring its residents to give up some of their income to foreign consumers and/or pay higher prices (Atkinson, 2013, p. 3).

2.2 Cost competitiveness

Another perspective focuses on cost-based competitiveness under various interpretations. Reduced labour costs (per hour, per employee) are seen as a sign of competitiveness leading to lower unemployment, higher exports and higher FDI. Unit labour costs are often used to assess whether a country's balance of payments is sustainable (e.g. European Central Bank, 2008). This type of analysis provides a relevant diagnosis for the functioning of markets, but is not a pivotal cause of economic performance. The naive interpretation of low-cost competitiveness, especially low wages, is clearly wrong if the ultimate goal is prosperity.

2.3 Productivity related competitiveness

Michael Porter (1990) was the one who reoriented the debate towards the idea that competitiveness is the basis of well-being and economic performance (Porter, 1990; Aiginger, 2006) and from this perspective, competitiveness becomes closely linked to productivity. He developed a comprehensive approach to national competitiveness, the so-called Porter's Diamond, in his book *The Competitive Advantage of Nations* (Porter, 1990). The perspective proposed by Porter has been validated by a vast literature that has identified *productivity* as a central source of differences between countries in terms of prosperity (Hall and Jones 1999, Lewis 2005) and proposed different categories of factors that explain differences between countries in terms of productivity (Hall and Jones, 1999; Porter et al. 2008; Fagerberg et al. 2007). Porter's vision was also embraced by international institutions, as evidenced by the WEF's Global Competitiveness Report and the World Bank's Doing Business ranking and a series of indicators were developed to capture most of the determinants proposed by Porter. Moreover, policy reference documents such as the OECD Agenda 2005 and the European Commission's 2020 Strategy are largely based on this productivity-focused approach as a vector of competitiveness (Delgado et al., 2012). However, Porter's theory is not immune to criticisms. According to Rugman (1991), the model is not so relevant for small economies because their internal variables are very limited. To solve the disadvantages of the model, the "Double Diamond" model was proposed by Moon et al. (1998), and Cho (1994) proposed an extended diamond model by incorporating the role of human factors, named the "Diamond of the 9 factors". The table below summarizes the main determinants of competitiveness suggested in the literature.

Table 1. The main determinants of competitiveness

Factors	Authors
Productivity levels	Porter (1990); Aiginger (2006)
Cheap labour force	Muellbauer (1986, 1991)
Real exchange rate	Boltho (1996)
Manufacturing	Pitelis and Antonakis (2003)
Knowledge- based services	Windrum and Tomlinson (1999)
Foreign direct investments	Gugler and Brunner (2007)
Technology	Guerrieri and Tylecote (1994); Narula and Wakelin (1998); Fagerberg (1996)
Innovation	Cantwell and Fai (1999); Clark and Guy (1998)

Factors	Authors
Social infrastructure (government institutions and policies)	Hall and Jones (1999)
Regulations	Williams, Macdonald and Kind (2002)
Essential factors, efficiency factors, innovation and sophistication factors	Global competitiveness index (World Economic Forum, 2012)

Source: authors' adaptation

Wignaraja (2003) proposes a classification of theories of competitiveness from three perspectives: (1) the macroeconomic perspective, (2) the environmental and business strategy perspective, and (3) the technological and innovation perspective.

The *macroeconomic* perspective is based on the theory that the exchange rate is a key factor in determining a country's ability to create the right macroeconomic conditions to achieve international competitiveness. Therefore, international competitiveness represents the level of the real exchange rate which in combination with appropriate domestic economic policies leads to internal and external equilibrium (Wignaraja, 2003). An appreciation of the real exchange rate is associated with a loss of a country's international competitiveness, while a depreciation of the real exchange rate implies an improvement. Competitiveness indicators related to this perspective are the relative price of non-marketable products, real effective exchange rates, relative consumer prices, relative wholesale prices and relative unit labour costs in the manufacturing sector. The most widely used indicator is the real effective exchange rate due to data availability. This perspective has been heavily criticized against the exclusive use of relative prices or unit costs as indicators of competitiveness, while non-price factors such as technological capacity, the ability of firms to compete on delivery and factors that prevent firms from having success in developing countries like poor infrastructure and lack of highly skilled labour, are not taken into account. However, the indicators covered by this perspective are widely used in the analysis of the level of competitiveness in both developing and developed countries.

Unlike the previous approach, which is based on purely economic fundamentals, *the perspective of the business environment and strategy* is based on the analysis of the business environment and addresses issues of rivalry between companies and the strategies they adopt to compete locally and internationally. Porter, one of the most important supporters of this school, approached the study

of international economic relations between nations with means of micro analysis specific to the theory of business strategies and released the theory of national competitive advantage. The main question he set out was why some countries are more successful in some industries than others and he had identified four classes of attributes of a country (called the National Diamond) that provide the basic conditions for determining a nation's competitive advantage: factors of production, domestic demand, related industries, firm strategy and competitors. Two other factors are added, government policy and hazard (exogenous shocks), that support and complement the system of national competitiveness but do not create lasting competitive advantages. Porter defines four stages of competitive development at a national level: (i) the stage of development determined by the factors of production; (ii) the stage of development determined by investments; (iii) the stage of development determined by innovation; (iv) the stage of development determined by wealth. The transition from one stage to another involves a metamorphosis of the industrial infrastructure, the financial system, technological standards and mindsets. At the same time, the cultural values behind the forces of creating and distributing wealth are of great importance.

According to Porter, competitiveness and productivity are overlapping concepts because productivity is associated with improving the prosperity and living standards of nations over time and consequently “the concept of competitiveness at the national level makes sense only in relation to national productivity”. However, competitiveness and productivity are conceptually different (Oral et al, 1999). A nation can sometimes increase its competitiveness by changing strategies (e.g. protectionism or currency devaluation), but without any change in productivity. Productivity characterizes the internal capacity of an organization/nation, while competitiveness refers to the relative position of an organization/nation in relation to its competitors. The relative competitive position on international markets, not only the absolute value of productivity, is a critical element for assessing a country's competitiveness, productivity being in fact one of the key factors for improving national competitiveness (Önsel et al, 2008).

The business environment and strategy perspective was strongly criticized by Krugman (1996) who objected in particular to the presumption that nations compete similarly to companies in world markets. In his view, this analogy cannot be accepted because “international trade is not a zero-sum game, but one in which specialization and trade based on the comparative advantage of countries generate gain for all parties” (p. 17). Secondly, the definition of national productivity is considered unclear as it is not specified whether total factor productivity or partial

productivity is used as a method of calculating competitiveness. Third, in his view, political debates over national competitiveness lead to unnecessary and wrong public spending in the attempt to increase a country's competitiveness and a trend towards protectionism and trade wars. While the argument that political concern for national competitiveness tends to lead to protectionism is debatable, reference critique of Krugman regarding the weak analogy with firms in studying national or regional economies remains open. In this regard, it is useful to analyze the factors that determine the growth rate of domestic productivity. Englander and Gurney (1994) analyze the promoters of productivity change in OECD countries and conclude that an increase in the intensity of trade seems to stimulate the increase of labour productivity. A subsequent analysis by Edwards (1998) confirmed the positive effect of trade openness on increasing total factor productivity. This is consistent with microeconomic data at firm level: exporters appear to be more productive than their non-exporting counterparts, and participation in international trade further stimulates enterprise productivity (Girma et al., 2004).

Thirdly, the *Technology and Innovation perspective* is rooted in industrial competitiveness and emphasizes the role that companies must play in technology imports (through foreign direct investment) and their ability to acquire technology (through training, research and development) resulting in their ability to innovate. Innovation and the learning process require interaction between different institutions (firms, government, support structures and others) within the national innovation system (NIS), YET the government is having an active role in creating competitiveness. This theory defines competitiveness at both micro and macroeconomic levels. At the microeconomic level “competitiveness refers to the ability of firms to compete, increase profits and progress”. Competitiveness is related to costs and prices, but much more to the ability of companies to use technology efficiently and improve product quality and performance. While at the macroeconomic level competitiveness is “the ability to deliver products that meet international requirements while increasing real domestic income” (OECD, 1992). In other words, at the macroeconomic level, competitiveness can be synthesized as an indicator of success in international markets which will generate an increase in real incomes and living standards. In this sense, the literature offers a series of definitions that synthetically capture the characteristics and values of competitiveness: (1) “the degree to which a country can produce, in a free and fair market, goods and services that meet the requirements of international markets, in while simultaneously maintaining and expanding the real income of the population in the long run” (Young, 1986); (2) “expression of the advantage or disadvantage that a country has in selling its products on international markets” (OECD); (3) “field of economic theory that analyzes the facts and policies that shape a nation's

ability to create and maintain an environment that supports the creation of more value in business and more prosperity for its citizens” (Institute for Management Development, 2013) or (4) “set of institutions, policies and factors that determine a country's level of productivity” (World Economic Forum).

One of the main indicators derived from this approach is the Manufacturing Export Competitiveness Index (MECI), used to compare the competitiveness of manufactured products exports in developing countries. It uses data on the value of exports per capita, the average increase in exports of manufactured products in the medium and long term and the percentage of exports of technology-intensive products in total exports of goods. Another category of indicators that fall under the scope of this school of thought are those related to market share. Market share analysis can vary greatly depending on the purpose and scope of the analysis, with market shares being a percentage of a country's exports relative to world exports, a region's exports or even the total exports of its main trading partners. In this context, another important point in defining the competitiveness of a nation is the comparison of nations with similar comparative advantages and competing on similar industries (Cho and Moon, 2005). Therefore, the competitiveness of a nation can be defined as the relative competitive position on the international market compared to countries with a similar situation.

Following this perspective, one of the most comprehensive definitions of competitiveness is provided by Kharlamova et al (2013): “competitiveness is a complex multidimensional concept that reflects the favourable position of the national economy, mainly in the field of international trade, and at the same time, its ability to strengthen this position”. At the same time, the competitiveness of the national economy is “a concentrated expression of economic, scientific, technological, organizational, managerial, marketing and other capabilities that are implemented into goods and services, successfully insuring their competing opposite foreign goods and services at the domestic and foreign markets.” Last but not least, national competitiveness is “an ability of a state to achieve high rates of economic growth, ensure a steady increase in real wages, promotion of domestic firms on the world market represented by high-performance clusters that improve the quality of products and services that enable the creation of new jobs in the future” (Kharlamova et al, 2013, pp. 39 -52).

Conclusion

The debates on competitiveness revolve around *three main directions* for assessing the level of competitiveness: market share competitiveness, costs competitiveness

and competitiveness related to productivity. From the various perspectives on competitiveness at national level four key factors seem to enjoy a high degree of acceptability: innovation (Schumpeter, 1942), Penrose, 1959; Hall and Soskice 2001), human resources, especially the role of entrepreneurs (Penrose, 1959); Teece, 2011), low unit costs due to economies of scale (Chandler, 1962) and firm strategy and structure (Porter, 1990). In the economy of the present paper, national competitiveness is an expression of a country's ability to create added value as well as its ability to maintain a large market share in world exports (which attests to the country's performance in foreign markets). As a result, the performance of exports expressed through market shares and the unit price of the main products exported can be used as indicators of competitiveness.

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