Alina Petronela NEGREA
The Bucharest University of Economic Studies

NEW APPROACHES TO EXPORT COMPETITIVENESS

Theoretical article

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Abstract

The economic literature and the political discourse typically look at international competitiveness mainly by the means of export market shares. However, globalisation, production fragmentation and the growing importance of global value chains (GVCs) increasingly challenge traditional approaches of export competitiveness and call for a more accurate and disaggregated level of analysis. Due to the growing fragmentation of production, a country exports now include a significant amount of imports of intermediate goods which are part of the export value. In this case, a simple analysis of the evolution of exports can distort the international competitive position of a country. The article suggests a new approach based on the value-added content of international trade measured by means of global value chain analysis.

Introduction

International competitiveness has traditionally been reflected on the agenda of all decision makers, proclaimed as the ultimate objective of European, national or regional policies, as the final goal of all nations, and the key for economic growth, jobs and productivity. Despite that, the meaning attributed to the term is far from being unanimous or clearly outlined. As a result, there is a proliferate literature on the definition and measurement of competitiveness, still with no agreement on a single definition that can be generally applicable. Consequently, the concept is not avoided by controversies and conceptual debates that range from determinant factors, adequate sphere of analysis and indices and methods of quantification to the radical idea that the concept is inadequate and pointless to macroeconomic analysis.

The economic literature and the political discourse typically look at international competitiveness mainly by the means of export market shares (i.e. a country's share in the world market for a particular good or industry). However, globalisation, production fragmentation and the growing importance of global value chains increasingly challenge traditional approaches of export competitiveness and calls for a more accurate and disaggregated level of analysis.

Aggregate export figures show that during the last decades developed countries has gradually lost export market shares is favour of emerging economies (Beltramello et al, 2012). Does this trend indicate a real loss of competitiveness of developed economies? Can export market shares still represent a comprehensive measure of competitiveness in a global economy characterized by global value chains (GVCs) through which exports of final goods are increasingly incorporate imports of intermediate inputs? In the end, what constitutes the true competitiveness of countries in international markets?

According to the IMF "the foreign content share in gross exports has almost doubled since the '70s" (IMF, 2013, p.3) leading to an increasing production fragmentation across national borders and modifying the nature of international competition. Therefore, traditional indicators of competitiveness based on gross exports become "less informative" (Timmer et. al, 2013) and "may fail to capture the value actually created in an economy by the production of its exports" (Amador et al., 2013).Value chain analysis can offer several advantages over the traditional sectoral analysis: it allows an investigation of the dynamic linkages between productive activities that go beyond a particular sector (both inter-sectoral or between formal and informal sector activities) and the analysis can also go beyond firm-specific type of analysis. Due to the focus given to inter linkages, GVCs analysis emphasizes the dynamic economic flow between producers within different sectors on a global scale (Kaplinsky & Morris, 2001).

1. Trade competitiveness

Trade indicators have traditionally been used in the analysis of comparative advantages and in assessing national, industrial and product competitiveness. Despite some perspective changes arising from the financial and economic crisis, consensus on the positive relationship between trade and economic growth in the long term remains consistent. The idea is also validated by numerous empirical studies that have shown a strong correlation between a country's exports market share and its economic performance (ex. Edwards, 1992; Sachs & Warner, 1995; Frankel & Romer, 1999; Dollar & Kraay, 2004; Romalis, 2007).

The relative position of a country or a product in the international markets and its dynamic over time can be a good indicator of the level of competitiveness. The fact that trade statistics are available for a considerable number of countries and a profile can be (partially) filled by "mirror statistics" for those that do not report their trade data represents one of the most important advantages of using trade statistics in measuring international competitiveness. Furthermore, trade data can be disaggregated at industry and product level offering a detailed perspective on the commercial performance. On this basis, developing countries can be classified according to their trade performance based on several criteria (UNCTAD, 2007).

In the report on competitiveness in the Euro area the European Commission (2009) a country's competitiveness is explicitly defined as "the ability to sell in foreign markets" (p.18). In other words, a country's trade performance can be a relevant indicator of its international competitiveness (i.e. ability to achieve main economic objectives - income and employment - without experiencing balance of payments difficulties (Fagerberg, 1988)). By way of proof, in World Bank's Strategy concerning international trade, trade competitiveness is one of the main pillars and is also an important dimension of the approach to private sector development. At the operational level an increasing request for more methodical support for a better understanding of the factors affecting the competitiveness of sectors involved in international competition is demanded (Reis & Farole, 2012).

2. Export competitiveness indicators

 Market shares analysis is often seen as an indicator of competitiveness (Krugman & Hatsopoulos 1987, Lipsey & Kravis 1987). This type of analysis allows the isolation of the effects of domestic demand and can reflect real changes in

export competitiveness. However, which are the reasons explaining that certain countries are able to export more than others? Why do certain countries gain export market share at the expense of others? These questions are at the heart of empirical studies on trade performance. Traditional answers to these questions are based on the ability countries have to offer lower costs / prices than their competitors. Reality proves that several other factors such as the type and range of available products, the nature of the market, the degree of economic diversification and a country's position in quality terms are also significant in explaining export performance and economic growth.

For the assessment of export competitiveness the most frequently ex post indicators are exports volume, international market shares and their growth ratio, degree of diversification, and exports quality or sophistication.

Lately, the literature refers to the increase of exports market share as a necessary parameter for assessing international performance, but not a sufficient one. The critics concern the fact that this type of perspective does not consider cases when market shares are maintained through a drastic and unjustified price reduction that would obviously have a negative effect on profitability and on the long-term performance. Consequently, the sustainability of indicators using market share are constantly open to interpretation (Buckley et al, 1988).

A more accurate picture of export competitiveness can be obtained by a disaggregate analysis at industry level based on the presumption that a market share decrease of high-tech industries and an increase of the less sophisticated products is a good reflection of a decline in competitiveness. Subsequently, the analysis can be completed by examining export destinations. The argument is that high export market share on LDCs markets suggest lower competitiveness degree than those earned in more advanced countries.

On the other hand, there is a strong association between products and markets *diversity* and economic growth (Lederman and Maloney, 2009), mostly in the case of developing countries. At the same time, there are also views that argue that there is no link between diversity and competitiveness (Harrison & Rodríguez-Clare, 2009) and suggests that *improving quality* is the right way to increase competitiveness (Hummels & Klenow, 2005; Hallak & Sivadasan, 2009).

Quality improvement can be realized either for the product itself, in the technology used (de Ferranti & Walton, 2004) or by integrating several phases of production within the firm or the production location (functional upgrading). It is possible for a country's exporters to face difficulties in penetrating global markets even though they are highly competitive in costs per unit terms, but they offer poor quality products.

Rodrik (2006) suggests that countries experience a faster productivity growth by exporting more *sophisticated goods*. This raises the question whether competitiveness is best achieved by following the comparative advantage or against it (Lin & Chang, 2009). A key debate is whether export competitiveness is best achieved through an evolutionary process - by selling inferior quality products to regional markets and strengthening benefits before moving on to more competitive and sophisticated markets, or by an initial specialize in sophisticated goods and / or to rich country markets.

Recent theories on exports and competitiveness argue that *spillover effects between industries* are the answer to competitiveness improvement (Hidalgo et al., 2007). Hausman et al. (2007) consider that certain goods offer greater growth opportunities because of their potential to vertically advance (i.e. in quality terms) within the industry and to benefit from inter-industry knowledge spillovers by exposure to high-quality technologies and to opportunities to improve productivity. There are scholars that question this hypothesis and state that innovative firms can achieve competitiveness in any sector, not only within sophisticated ones (e.g. Harrison & Rodríguez-Clare, 2009; Lederman & Maloney, 2009).

Dixit and Norman (1980) followed by Grossman and Helpman (1991) have focused on the influence of *innovation*, *new product development* (horizontal differentiation) and *improved quality* (vertical differentiation) on international trade. Research and development (R&D) activity is also often used as a variable for business performance, but empirical results are contradictory. Willmore (1992) and Wagner (2001) have demonstrated a positive correlation between the level of R&D expenditure and evolution of exports, Lall (1981) finds a significant negative correlation, while Lefebvre et al. (1998) state that R&D is not significant at all. An explanation for these different results lays in the fact that R&D activity is only a partial measure of technology and it does not consider incremental products and processes improvements. This is especially true for small and medium businesses that do not have an official department of research and development and also for firms in developing countries where the level of R&D is reduced because the technological change is mostly an adaptive one (Kumar & Siddharthan, 1994).

Another indicator often used in the analysis of export competitiveness concerns *changes in the structure of exports* towards products with greater added value. Structural changes in production and a shift from traditional labour intensive products to new skilled labour and technology intensive products are expected to lead to a considerable

improvement of export performance. While available raw materials and prices are traditionally the main factors that determine a country's production structure and of the foreign trade, in the case of new products, quality plays an important role in determining competitiveness and in achieving a significant market share in international markets.

Studies show that many Euro area countries perform relatively poor in terms of reorientation of their technological and export activities towards rapid growth sectors, unlike emerging countries such as China and India that are developing their innovative capabilities and obtain significant market shares in high-tech sectors. This example illustrates the positive relationship between innovation activities and export performance. It seems that countries that direct their innovative capabilities in areas offering high technology opportunities also change their production structure towards sectors with the largest global demand increase (Ilzkovitz et al, 2012).

For most countries, especially for middle and high income ones, the majority of export growth occurs "by increasing sales of the same products to the same markets" (Brenton et al., 2009, p.7). This deepening of trade relations is supported by the intensification of the specialization degree either by cross-specialization (in goods) or within the value chain of the same product. Specialization in the value chain of the same product could result from specializing in various stages of production of from specializing in different quality levels. The former one represents the source for trading components or intermediate products specific to global production networks, and the latter represents trade with similar finished goods.

3. Global value chains analysis

Another challenge of using market share as an indicator of export competitiveness is the fragmentation of the value chain. Globalization and its effects on the fragmentation of the value chain represents currently the conceptual framework of analyzing the relationship between foreign trade performance and economic growth; thus, the final export competitiveness indicator is the correlation between export results and domestic income created and captured along the value chain of production. The growing importance of global value chains in the international organization of production raises significant challenges to traditional manners of measuring export performance and hence to international competitiveness evaluation.

Although the interest in value chain analysis is not recent and at company level value chain analysis is already heavily-used practice to formulate and implement competitive strategies, a global perspective of the value chain has profound implications for quantifying the degree of competitiveness and growth of a country or industry because it emphasizes the importance of global production networks and the increasingly strong interrelation of consumption, production and income across national borders.

Determining the role of countries in global value chains can reflect national competitiveness since by using both domestic and foreign goods, services, embodied technology and relative endowments, this type of analysis characterises both the importing country competitiveness, but also the trade partner level of performance. At the same time, the value countries capture from production depends most of the time on their position in GVCs. Thus, evaluating countries by this criteria helps identifying the needs and possibilities to "*move up the value chain*" as to create more value and economic growth.

There are two main approaches used to analyse the value-added content of international trade. The first one refers to the increasing importance of *trade in intermediate goods and services* and represents the first step in the measurement of trade in value-added. The second one focuses on *vertical trade* as vertical specialization caused by the international fragmentation of production. Vertical trade refers to the import content of exports and occurs when the production process implies: two or more sequential stages, two or more countries providing value-added, and at least one country uses imported good in producing that certain product and exports part of the output (OECD, 2009).

Due to the growing fragmentation of production, a country exports now include a significant amount of imports of intermediate goods which are part of the export value. In this case, a simple analysis of the evolution of exports distorts the international competitive position of a country. The most frequently invoked case study refers to the Apple iPod example (Linden et al, 2009) that even though it is assembled in China, the market share of China's exports as shown in official trade statistics do not necessarily represent the competitive advantage China has for this product.

Empirical studies estimate that the US-China trade balance in 2008 is actually about 40 per cent lower if it were to be calculated in value-added terms (WTO and IDE-JETRO, 2011). Similar findings were emphasized by other studies which show a 50% reduction in the trade balance China has with EU15 countries and a fundamental change of the Japan-China trade balance (from a surplus to deficit) if the value-added analysis is used (Koopman et al. 2008).

Currently competitiveness and economic growth of a country rely on the ability to capture a larger segment of global value chains, especially for products for which global demand is growing (Porter, 1990). Thus, a new indicator of a nation's

competitiveness is a *country's share of total income generated along GVCs*. Compared with traditional indicators such as the share of countries in world exports this new approach provides three main benefits. First, it focuses more on countries ability to compete in terms of activities within global production networks rather than in manufacturing. Secondly, it reflects the strength of an economy to compete both on the domestic and global markets. Countries could obtain higher incomes by satisfying the external demand, but might lose income in the production for the domestic market. The analysis on the income of a country's in the overall manufacturing process measures the combined net effect. Third, the analysis allows the differentiation of effects on incomes and on employment by workers category (e.g. low and high skilled labour force).

Two related concepts capture a county's position in the global value chains: the extent to which final *consumption* depends on imported inputs and to what extent *exports* depend on imported intermediates. A large share of foreign value added content in a country's exports, or *value added in trade*, indicates a less significant role of that country in the production process either because it has specialised in the assembly phase or in the case of small economies forced to import more value added. Distinguishing foreign value added embedded in gross exports by source can indicate the degree of countries (industries) capacity to sell their intermediate outputs as intermediates inputs used in other countries' gross exports. A relatively low foreign content in gross exports indicates that that country's firms participate mostly in national value chains or that that country has the ability to produce most of the value-added content of high-tech exports - domestically (European Commission, 2013).

4. Conclusion

The context under which international trade takes place has dramatically changed and for a comprehensive understanding of how countries and industries relate nowadays, the framework analysis has to adapt as well. The growing importance of global value chains in the international organization of production obviously raises significant challenges to traditional manners of measuring export performance and hence to international competitiveness evaluation.

The trade in value-added approach can trace the value added by each industry and country in the production chain and the allocation of incomes from the value-added to these source industries and countries. The concept is useful to understand where economic activity and jobs are generated, (both internationally and domestically), shedding light on the supply side of international trade and sources of competitiveness.

However, despite their limitations in concerning the way economies and industries are interconnected within global production networks, conventional trade statistics remain fully relevant on the demand side and can indicate the number of consumers, companies and administrations have bought certain analysed imported goods and services.

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Biographical sketch

Alina Petronela Negrea has a Bachelor degree in International Business, a Master in International Business and Intercultural Strategies *(*Al. I. Cuza University, Faculty of Economics and Business Administration, Iasi, Romania) and is currently a PhD candidate in International Business and Economics, Bucharest University of Economic Studies, Romania. She was a member of the research team in the project on competitiveness and innovation in South Muntenia, 2012.

Recent publications: Alina Petronela Negrea, Valentin Cojanu (2013) - The Dynamics Of Romanias Competitive Position On Export Markets (2001-2011), Management & Marketing, Economic Publishing House, vol. 8 (Special-I), pages 247-254, October; Negrea Alina Petronela, Valentin Cojanu (2013) - Supporting regional competitiveness through innovation. Case study: Sud Muntenia, Journal of International Studies, Vol. 6, No 1, 2013, pp. 51-58.

Research interests: international trade, trade and innovation, regional and sector competitiveness.

E-mail: negrea_alina_petronela@yahoo.com