COMPETITIVENESS ASESSMENT: AN OVERVIEW

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Abstract
Measuring competitiveness of companies, industries or nations and their ranking according to the level and dynamics became, for several decades already, a significant concern for scholars. Competitiveness should be approached in a multi-layered and comprehensive manner, considering that it has a specific content and is perceived differently depending on the system involved. In our view, a comprehensive approach has to adress five levels, facilitating a rigorous and consistent approach to variables that determine competitiveness. These levels are:

- *product competitiveness;*
- *company competitiveness;*
- *industry competitiveness;*
- *region competitiveness at regional level;*
- *country competitiveness.*

The premise of product competitiveness approach is that a company cannot be successful on the market unless it provides more attractive and better products / services than its competitors. Product competitiveness is directly related to customer satisfaction. Consequently, a competitive product is one that satisfies to higher extent - ideally highest possible - various needs of customers, either through an advantageous price, a superior quality or a mix of both.
The reason to assess competitiveness at company level is that, ultimately, the following types of competitiveness are ultimately generated in companies. Hence, it is one of the most common levels of analysis in the literature. Competitiveness at company level is strongly linked with competing advantage and its sources and relies on assessing competitive position by reference to direct competitors. Considered a feature that allows a company to withstand competition in a certain industry, competitiveness is also a way to pressure and control effectiveness parameters.
Measuring competitiveness at this level envisage comparisons between industries within the same economy - or, more rarely, however, due to their different characteristics - from industries of two or more countries. If, when measuring competitiveness at product and firm level problem of equivalence assessment indicators was not very important, from this level is become essential. When comparing industries in different countries we must ensure such an approach that,

by concepts and methods used, information collected and the way it is processed and gave sense to avoid distortions.
Addressing regions competitiveness is relatively new in literature. The main cause of increasing interest for this concept is the development of the European Union put in a position to integrate, countries with different levels of development, formed themselves from regions heterogeneous in terms of economic efficiency. The concept of regional competitiveness is closely linked to the regional development, which most experts subordinate.
Along with the competitiveness of companies, national competitiveness is the most analysed in the literature. Competitiveness between nations aims to establish, usually on a yearly basis, a ranking of the best performing economies in the world or on continental level – for instance European Union, South America or Asia. Due to the great variety of assessment indicators and methodologies this type of competitiveness is also the most controversial.
In conclusion, we find out that competitiveness - particularly complex concept and approach with a pronounced synergistic size - remains a controversial topic that requires further investigation likely to consider multiple mutations generated by the new economy.

Keywords: *competitiveness, competitive advantage, competitiveness asessment*

JEL classification: L26, M1, O30, O10

1. Introduction
Any approach for measuring competitiveness must consider, on the one hand, the level the analysis is done - micro, meso or macro - and on the other hand, that competitiveness and competitive advantages are resultants of various, both direct and indirect, variables (Ceptureanu EG, 2015a). In fact, measurement scales for competitiveness, ultimately, try to assess impact and level of relevant variables.

2. Background
Competitiveness should be approached in a multi-layered and comprehensive manner, considering that it has a specific content and is perceived differently depending on the system involved. In our view, a comprehensive approach has to adress five levels, facilitating a rigorous and consistent approach to variables that determine competitiveness. These levels are (Nicolescu, 2007):

- product competitiveness;
- company competitiveness;
- industry competitiveness;
- region competitiveness at regional level;
- country competitiveness.

A. Product competitiveness
The premise of product competitiveness approach is that a company can not be successful on the market unless it provides more attractive and better products / services than its competitors. Product competitiveness is directly related to

customer satisfaction (Miron, 2003). Consequently, a competitive product is one that satisfies to higher extent - ideally highest possible - various needs of customers, either through an advantageous price, a superior quality or a mix of both. The competitiveness of a product we believe should be assesed from two perspectives: customers and producers.

Customers consider a product as competitive when it meets their expectations at a higher degree. This means providing superior quality, a low price or a reasonable quality / price ratio.

So a product is competitive in a market where customers are satisfied at a higher level and therefore continue buying it. It is considered the main element, but not the only one (Ceptureanu SI, 2015a).

Producers consider their products or services as competitive when, in addition to recognition on the market by purchasing, they fulfill the objectives of the organization. Most often, recording the desired level of return determines ranking of a product as a competitive one. Consequently, manufacturers are interested in elements such as profit margin per unit, production volume, sales volume, cost structure etc. The products will be more competitive on the market as manufacturers will provide the same quality as competitors, but at a lower price, or if it provides higher quality products at a price close to the rest of the competition.

A firm that seeks to be competitive and successful it is necessary to aim as a strategic objective accomplishment of products and services that meet customer requirements on short, medium and long term (Ceptureanu SI, 2015b). In terms of internationalization process, companies must continually adapt their offer to market requirements, considering the level of potential competitors abroad, also.

B. Company competitiveness

The reason to assess competitiveness at company level is that, ultimately, the following types of competitiveness are ultimately generated in companies. Hence, it is one of the most common levels of analysis in the literature. Competitiveness at company level is strongly linked with competing advantage and its sources and relies on assessing competitive position by reference to direct competitors. Considered a feature that allows a company to withstand competition in a certain industry, competitiveness is also a way to pressure and control effectiveness parameters. The competitiveness of the company is decisively influenced by two main factors of competitive environment: customers and competitors.

According to Voiculescu (Voiculescu, 2001), there are four approaches on competitiveness at firm level: a) cost-driven, focusing on cut costs to gain cost related competitive advantages. The companies following this approach should focus on profit generating parts of company, the transfer of production facilities to countries with reduced labour costs, mass production for economies of scale, etc; b) marketing-driven, which is a mix of previous approach with marketing and market related forecasting. As such, a company following this approach should center its activities on forecasting market reaction, improving flexibility of the company; c) time-driven, which assumes that market demands will change significantly in the foreseeable future (Ceptureanu EG, 2015a). A company following this approach should focus on minimizing the time to adjust products or services to the rapidly changing requirements of the market; d) globalisation-driven, which focus on significant changes that globalization, induce to economic relations, affecting not only market mechanisms, but also production and financial ones.

C. Industry competitiveness

Measuring competitiveness at this level envisage comparisons between industries within the same economy - or, more rarely, however, due to their different characteristics - from industries of two or more countries. If, when measuring competitiveness at product and firm level problem of equivalence assessment indicators was not very important, from this level is become essential. When comparing industries in different countries we must ensure such an approach that, by concepts and methods used, information collected and the way it is processed and gave sense to avoid distortions (Ceptureanu EG, 2015b).

The best known approach for industry belongs to Michael Porter, who developed the model that it made famous. Porter's model is based on an essential premise, namely that an industry can not be assessed as competitive or efficient if competition between its members is not too strong. Hence, in the model the focus is on evaluating the intensity of competition. Porter identifies five categories of competitors and competition:

- direct competitors;
- potential competitors;
- competition from substitute products;
- suppliers competition;
- competition from new customers.

Fig. 1 shows the relationship between these categories of competitive factors.

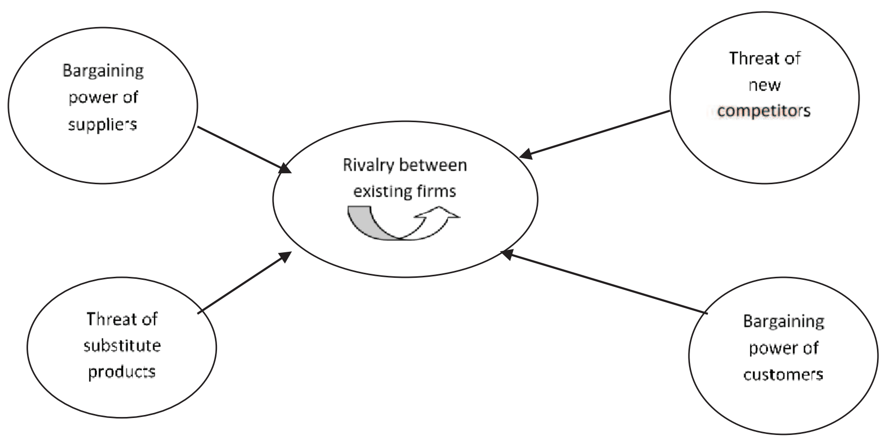

Fig. 1. Porter 5 forces model (Porter, 1990)

The main economic elements considered determinant for the 5 competitive forces are:

- economy of scale;
- learning effect;
- change costs;
- structure of production costs;

- degree of concentration and balance of competitors;
- entry-exit barriers;
- competitors' goals and managerial culture (Verbonu I, Ceptureanu E. et al, 2010a).

Economy of scale is the relationship that exists between unit cost and production volume for a determined time. Cutting unit cost is the result of better use of resources, achieved mainly by increasing production volume. Meanwhile, unit cost increase is the result of fixed costs increase through exploitation of new production capacities, increase of structural costs (indirect) and management deficiencies that occur given the increased complexity of the activities accompanying greater production output (Verboncu I, Ceptureanu S. et al, 2010). Major advantages of scale effects consist of creating barriers for entry to competitors and increase bargaining power on the procurement and clients markets by offering large amounts of products, respectively, by buying large amounts of resources.

Learning effect is the result of increase use of production capabilities and resources, as well as experience acumulations. The main advantages of learning effect for company are increased barriers to entry for competitors, increasing the capacity to make concessions to suppliers and customers and avoid competitors' threats (Ceptureanu EG et al, 2012).

Change costs defines additional costs that occur when the company drop a supplier or a customer and choose another one, being associated with new markets. The causes of these additional costs lies in carrying out studies to assess the new market segments, using new equipment to meet new markets requirments, establish new business relationships etc.

Structure of production costs affects struggle between competing companies from two points of view: fixed costs and supply costs. Fixed costs influence is related to a common trend to grow as a result of increasing technical degree of machinery and equipment and due to management, marketing, legal, etc associated costs. To counter that the company usually increase its output. Supply costs has a special significance considering the large share they hold (50-80%) in the total cost and the possibility of reducing them that may occur in the event of effective supply, all of which influence significantly the total cost.

Concentration of competitors influence the competitive struggle in the sense that if there is a high concentration, the market will be dominated by a small number of competitors, and if the concentration is low, then there is no leader or groups competing to dominate (there so-called fragmented markets).

Exit/entry barriers in a particular industry and / or market significantly influences competition, meaning that they can be an obstacle or not for competitors. Thus, if exit barriers and competition are strong, competitors are left with no choice but to stay and fight, and vice versa, since it is difficult to leave that specific industry or market. If entry barriers are strong attraction to a particular industry will be reduced for potential competitors (Ceptureanu SI et. al, 2015a).

D. Region competitiveness

Addressing regions competitiveness is relatively new in literature. The main cause of increasing interest for this concept is the development of the European Union put in a position to integrate, through emergence of Common Market and the enlargement process, countries with different levels of development, formed themselves from regions heterogeneous in terms of economic efficiency. The concept of regional competitiveness is closely linked to the regional development, which most experts subordinate. Competitiveness at regional level is often approached in correlation with competitiveness at industry level (Ceptureanu SI, 2015c). The main explanation lies in the fact that convincing empirical observations support the hypothesis of a general tendency to agglomerate industries in central regions at the expense of other peripheral areas.

Essentially, regional competitiveness refers to those characteristics of the region that affect business - availability of manpower, infrastructure, functional markets, appropriate social and environment conditions, economic structure and the region's ability to sustain macroeconomic and sectoral growth paths and to encourage innovation and learning processes.

Studies have regard to the two categories of targets:

- identification of variables that determine the success (competitiveness) of specific regions;
- know-how transfer in less competitive regions, based on the conclusions of the successful regions asesseement and best practices.

According to EU experts and specialists regional competitiveness is “ability to produce goods and services that satisfy the demands of international markets, while maintaining high and sustainable levels of income and, more generally, the ability of regions to generate, while are subject to external competition, relatively high levels of income and employment" (European Commission, 2005).

Other specialists consider regional competitiveness as "the ability of a regional economy to optimize local assets in order to compete and thrive on national and global markets and to adapt to changes in these markets" (Cambridge Econometrics, 2005, p.3).

In addressing regional competitiveness two approaches can be used:

- regional competitiveness as a sum of the competitiveness of companies operating in that region. From this perspective, the companies headquartered in the region, capable of producing goods and services that meet market requirements, increase the region's competitiveness. The premise of this approach is that the interest of the region and the companies operating on its territory are always convergent, which does not always happen because companies are focused on acquiring productivity, while regional competitiveness focus on employment and its economic and scientific potential.
- regional competitiveness as a continuation of macro-level competitiveness. And this approach has its limitations because, for example, some economic regulations regarding international and national trade are not available at regional level or exchange rate fluctuations and price-wage flexibility does not exist at regional level (Camagni R., 2002).

The indicators developed for the analysis of regional competitiveness refers to the level of basic infrastructure, innovative capacity, qualified human resources reserves or concentration of expanding or declining industries. Due to the difficulty of equivalency, most approaches focus on results and not causes.

We consider useful to present results of a study (Union Europeene, 1999) dealing with simplifying the measurement of regional competitiveness by building a simple model of the relationship between GDP / capita in the region and assesement factors. The conclusion was that four factors are strongly linked regional competitiveness:

- structure of economic activity, represented by the percentage of population employed in agriculture, manufacturing industires, construction, commercial and non-commercial services; highest GDP / capita regions tend to have a concentration in commercial services and manufacturing industries;
- extent of innovation activity, measured by the number of patents for registration; regions with a higher GDP / capita tend to have a higher number of patents application than other regions;
- accessibility of the region, evaluated by an index of peripherality; regions whose GDP / capita is above average tend to have better accessibility (Ceptureanu SI et al, 2015b);
- qualification of human resources, measured by the number and percentage of people in the range 25-59 years who have a high level of education (university level), medium (second cycle of secondary education) and low (basic education); more developed regions tend to have an above average share of highly skilled workers.

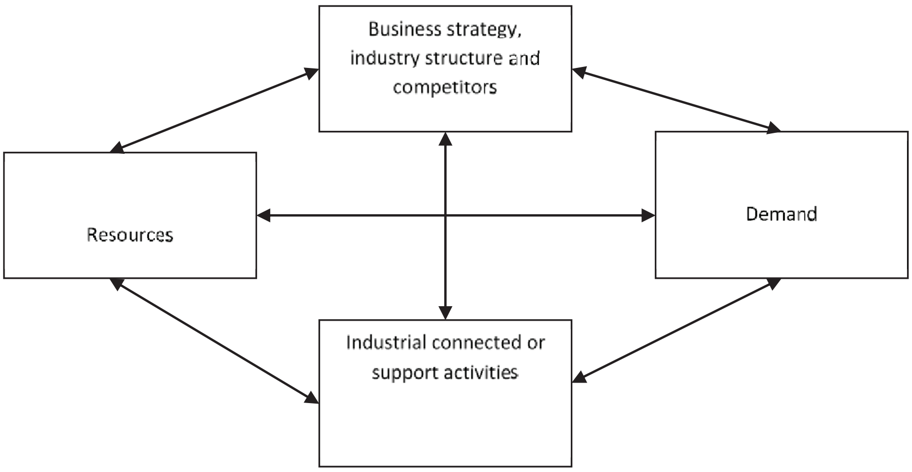

Fig. 2. The determinants of national advantage (Porter's Diamond)

E. Country competitiveness

Along with the competitiveness of companies, national competitiveness is the most analyzed in the literature. Competitiveness between nations aims to establish, usually on a yearly basis, a ranking of the best performing economies in the world or on continental level – for instance European Union, South America or Asia. Due to the great variety of asessment indicators and methodologies this type of competitiveness is also the most controversial.

Michael Porter (1980) ranks company as a central element in acquiring, maintaining and developing competitive advantages as a basis for national competitiveness. His approach starts from a different premise than previous studies. According to him, macroeconomic competitiveness is determined primarily by microeconomic foundations. If traditional approaches gave government a key role, in Porter's opinion companies are own the levers supporting the competitiveness. His theory is reflected in the so-called national diamond, Fig. 2, which is based on the following axioms:

• No nation can be competitive in all economic fields;

• Competitiveness must not be sought at national level but at industries and even market segments;

• Competitors holding a genuine international competitive advantage are located only in a few countries.

Simultaneously, Porter takes into account the following assumptions (Porter, 1990):

a) a country can influence competitive advantage in a particular industry;

b) a host country can provide transnational corporations competitive advantages compared to other countries;

c) competitiveness is dynamic, innovations acting as driving force that feeds a continous changing and determines companies to abandon inertia.

Based on these elements, Porter proposes to identify and strengthen a system that determine a country's competitive advantages, including:

- factorial determinants;
- demand determinants;
- upstream and downstream industries;
- strategy and structure of companies, and competition between them;
- international climate;
- governmental action.

The components of this system are linked, their evolution depending on the critical mass they create in the economy.

a) Factorial determinants - grouped in two categories:

• general factors, common in all industries. Their development, although require certain investments, are less risky.

• specialized factors – like highly qualified personnel, special infrastructure etc. - limited to specific industries. Creating them requires greater investment with a higher risk and are determined by the ocurrence of general factors (Ceptureanu SI, 2014).

If creation and development of basic factors is usual responsibility of public bodies and institutions, creation of specialized factors are usually the subject of collaboration between public and private sectors. No country can develop all factors of production, choosing the categories of factors that will be developed depends also on other conditions of competitive advantages of a country.

b) Domestic demand, which, despite globalization, continues to play a decisive role in acquiring competitive advantages. Requirments and structure of internal market largely determines the quality of the products. The situation is different in developed countries, which enforce international standards based on domestic demand, while developing countries is aligning production factors mainly to comply with international standards. A demanding and sophisticated market maintains focus for manufacturers to meet these requirements, and trade and direct investment flows contribute to the organization and development of the internal market. If the requirements of internal market anticipate supply on other markets, then national companies gain competitive advantages.

c) Upstream and downstream industries - providing parts for the finished product - contribute to national and international competitiveness of the manufacturer if they are located in the same country, thus facilitating quick access to parts. If suppliers are internationally competitive they must be supported to export because they can bring additional competitive advantages. A country becomes more competitive as the national economy, both horizontal and vertical is concentrated and specialized, resulting in new competitive products and services (Ceptureanu EG et al, 2014).

d) Strategy and structure of companies, and competition between them determines international competitiveness of a country by the way they are organized and managed, through objectives and strategies. Differences between countries originate in education, objectives, style and approaches of managers. To acquire competitive advantages is essential to harmonize company objectives with those of its owners, shareholders and managers. Business behavior and objectives on the environment in which they operate: whether it operates in a system based on property divided among a large number of shareholders, what insignificant role in company management or a system based a concentrated ownership based on institutional investors, which have a more important role in managing that company. Individual goals are important as they motivate managers and workers to improve their training and strive to create and maintain competitive advantage. Creation and maintaining competitive advantages are strongly linked to real and effective competition which determines businesses to promote new products and find new markets to boost growth. Internal competition is at least as important as international competition, the existence of multiple competing companies is beneficial to all if competition is real and not based of hidden agreements (Ceptureanu SI et al., 2012).

Internal rivalry between companies in the same country positively affects competitiveness because:

- make companies rethink production and export in conjunction with internal competitive pressures and existing opportunities on foreign markets;
- drive companies to improve their products, to continuously renew their portfolio, to target other market segments through new products and to offer them at attractive prices for consumers;
- determines development of new products and services that meet a variety of requirements.

e) International climate is reflected in geographical position of the country and the international climate changes, which are aut of companies or countries influence. These relate to changes in the international prices, international market developments, political events, random natural phenomena, etc. Acquisition of national competitive advantage is determined by the qualities and culture of the people, entrepreneurial spirit, ability to accept novelties etc.

f) Governmental action can influence the state of production factors through public investment, state aid, market regulation by consumer standards or government rules on procurement.

Only countries that have a functional "diamond", ie which components interaction is intense and positive, possess, after Porter, national long-term competitive advantages, facilitating international competitiveness. He argues that no country is in a position to be the "equally competitive" in all areas. A highly international competitiveness is achieved, usually, only by those industries or companies which first succeed on an internal demanding and competitive internal market (Ceptureanu EG, 2015c).

A quite different approach to competitiveness has Institute Management and Development (IMD), the auhors of World Competitiveness Yearbook. It develops a comprehensive set of postulates and requirements creation and asessment of competitiveness, grouped according to nature and scope in 8 categories:

a. in terms of internal environment:

- On short term, the added value expresses productivity.
- On the medium and long term, competitiveness requires capital formation.
- The prosperity of a country expresses its past economic performance.
- The more competition there is in the national economy, the national companies will be more competitive in the global market.

b. in terms of internationational environment:

- In the absence of trade barriers, the success of a country on the international arena reflects the competitiveness of the economy.
- The openness of a country increases its macroeconomic competitiveness.
- International investments more efficiently allocate economic resources on a worldwide market.
- Export-driven competitiveness directs growth of national economy.

c. in terms of political interference:

- State intervention in the economy should be reduced to create fair competitive conditions for companies.
- The task of the state is to create macroeconomic conditions and social economic development.
- Government economic policies must adapt flexibly to changing external environment.

d. in terms of financial:

- A fully functional financial system facilitates added value activities.
- A fully functional financial system increases the competitiveness of a country.

e. in terms of infrastructure:

- A developed infrastructure, including information technology and telecommunications facilities, and environmental protection, is an important competitive strenght for a country's economy.

f. in terms of management:

- Managerial ability is reflected in a competitive ratio price / quality products.
- Competitiveness depends on current managerial efficiency, combined with the adaptability to the competitive environment.
- In initiation of a business entrepreneurial spirit is crucial; mature stage are required integration and differentiation ability in business and management.

g. in terms of technology:

- Investment in research and development offers greater opportunities for increasing the competitiveness of a company, as one branch or country.
- Competitiveness is stimulated more by private investment in research and development than public investments ones in military sector.

h. in terms of demography:

- Competitiveness depends on the population education level and its attitude towards work.
- Increasing competitiveness tends to increase households' expectations about the standard of living.

Conclusions

In conclusion, competitiveness is a particularly complex concept. Its assessment requires a comprehensive approach due to its still controversial definition and its multiple dimensions and interactions. For instance, product competitiveness is a sources for company competitiveness but there are many instances when a company does not achieve competitiveness even though has competitive products in its portfolio. The same logic can be applied for regional and national competitiveness, and Romania is such a case, where Bucharest Regions presents a striking difference compared with all other regions. There is a lack of relevant studies about industry-region competitiveness, while both are significant sources for countries competitiveness.

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