Analele Universităţii din Oradea. Seria ştiinţe economice
TOM XXXIII, 2nd Issue, December 2024

CONCEPTUAL FRAMEWORK AND LEVELS OF COMPETITIVENESS

Orsolya Tünde NAGY[1], Anita KISS[2]

[1]*Institute of Accounting and Finance, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary, nagy.tunde@econ.unideb.hu*
[2]*Institute of Accounting and Finance, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary, kiss.anita@econ.unideb.hu*

Abstract: *Rivalry, competition itself, is essentially ancient to humanity, but the concept's rise to prominence dates back to the 19th century, a natural feature of capitalist economies, in the underlying marketplace, all essential activities take the form of competition.*
The concept of competitiveness, however, only entered the public consciousness in the 1980s, in connection with the activities of the Sectoral Competitiveness Committee set up by Ronald Reagan. In 1979, he published his academic paper "How Competitive Forces Shape Strategy", in which he identified the five forces that influence industry competition, providing a framework for conducting industry analysis and business strategy development. In the years that followed, an increasing number of academic works on the conceptual definition and empirical analysis of competitiveness were published. Among the competitiveness approaches, there are comprehensive analyses that look at the main elements and aspects of competitiveness in a general sense. In addition to comprehensive approaches, academic works identifying different levels of competitiveness predominate, with national and regional competitiveness being the most frequently highlighted on a territorial basis, and industry and firm competitiveness being the most frequently highlighted in relation to economic factors. There is no consensus on the relationship between the different levels.

Keywords: efficiency, competitiveness, business competitiveness

JEL Classification: G12, G15, G32

1. Introduction

The use of the concept of competitiveness is quite common, many researches deal with the identification of influencing factors belonging to each level of competitiveness. It can be stated that the appropriate level of competitiveness at the international, national, regional and company levels is important, not only for the business sector, but for society as a whole in order to build a sustainable and prosperous future. Competitiveness research helps to identify the factors that contribute to productivity growth, GDP expansion and economic stability. Another value of competitiveness research is that it can help identify the industries with the greatest job creation potential, thus helping to increase employment and reduce unemployment. Competitiveness research makes it possible to compare the performance of countries with those of other countries. This can help identify strengths and weaknesses and adapt best practices and strategies.

The purpose of this study is to present the results of theoretical research related to the conceptual definition of competitiveness and the identification of competitiveness factors in a unified framework. It presents in detail the economic and management science approaches that provide a framework for the concept of competitiveness, the main views and definitions of competitiveness belonging to each approach. The focus of the study is on corporate competitiveness, so it mainly deals with the description of the concepts of corporate competitiveness most often used in the literature, and the presentation of the factors influencing corporate competitiveness. The summary presentation of the theoretical background of competitiveness lays the foundation for empirical competitiveness research to be carried out later.

2. Conceptual framework of competitiveness

When examining competitiveness, two things should be borne in mind. Firstly, it is dynamic, i.e. it is in a constant state of change, and secondly, it is relative, i.e. it can only be assessed in relation to competitors (Viszt, 2006).

There are several approaches to defining competitiveness. One of these is the economic interpretation. Its proponents include Smith, Ricardo, Hechscher, Ohlin, Krugman, among others, who have primarily sought to clarify the conceptual definition. Competitiveness typically refers to the international relations of the national economy, the market share of exports and the factors influencing the development of international trade. From 1990 onwards, the emphasis shifted to an economic approach to competitiveness. This approach does not derive the definition of competitiveness from a fundamental economic finding, but rather from observable economic processes (Nagy, 2016). The econometric approach is associated with Porter. This approach draws conclusions related to competitiveness based on observable economic processes and the characteristics of firms' strategies.

Table 1 summarises the competitiveness interpretations of the economics and management approaches.

Table 1: Economic and managerial approaches to competitiveness

Representative	Focus area, keywords
Adam Smith	An absolute advantage that gives a country an edge over another country in terms of labour productivity and cost levels in the production of certain products.
Ricardo	Comparative advantage, where a country has an advantage over other countries in terms of relative labour productivity and relative input costs in the production of products in international trade.
Heckscher és Ohlin	Comparative advantage, a country can gain an advantage in international trade if it specialises in the production of products for which factors of production are relatively abundant, given the relatively different factor intensity of the products (labour intensive or capital intensive).
Krugman	Comparative advantage, achieved through mutually advantageous division of labour arrangements between countries.
Porter	Competitive advantage, which occurs over direct competitors and is a function of factors that are sustainable over time and cannot be offset by competitors.

Source: own editing based on Somogyi (2009a)

Adam Smith defined the concept of absolute advantage as the driving force of international trade in the late 18th century (Madarász, 2014), which he argued was the way to make good use of available resources: each country specialises in producing goods that it can produce at a lower cost, i.e. has an absolute advantage over the other country. At the beginning of the 19th century, David Ricardo introduced the concept of comparative advantage, according to which international trade is caused by differences in labour productivity between countries (Krugman - Obstfeld, 2003). Ricardo was followed by Heckscher and Ohlin, and later by Krugman, in the formulation of theories related to comparative advantage.

In my opinion, the problem with the classical comparative approach presented here is that it only takes into account the supply side of competitiveness and does not take into account other factors such as demand, the market's operating model, technological and supplier linkages. Taking into account both supply and demand factors is essential when assessing the competitiveness of countries.

It is only by looking at the supply side that a false picture can be created that competitiveness is nothing more than the recognition of the comparative advantage that factor endowments can bring at world level. Moreover, other factors such as market imperfections, tariff barriers, transnational corporations and the costs of international trade should also be taken into account when defining competitiveness. However, these factors are missing from the economic approach.

Somogyi (2009a) also criticises the economic approach. He highlights demand-driven product differentiation as a possible basis for competitiveness.

The economics approach focuses on the participation of firms in international competition and considers the success of firms as the determinant of a country's success and competitiveness. The aim of this approach is not conceptual clarification but the identification and application of proposals for improving competitiveness.

In contrast to comparative advantages, Porter thinks in terms of competitive advantages, which are displayed against competitors. This advantage depends on factors that are sustainable over time and cannot be offset by competitors. Porter argues that the focus should be on productivity in the case of competitiveness, preferably by industry. This approach has the advantage of taking into account the fact that countries cannot be competitive in all industries (Somogyi, 2009a). Porter has interpreted national, industry and firm competitiveness separately, based on cost advantages and the benefits of product differentiation (Porter, 1990). Porter's model has been applied by a number of researchers, such as Őz (2002), Jackson (2006), Zhao et al. (2012), Hoványi (1999), Vanhove (2002).

Porter criticised the theory of comparative advantage for not taking into account economies of scale, technology, the importance of know-how, product differentiation, the strengthening of international business networks and strategic alliances, changes in the factors of production in countries and flows between countries. However, competitiveness must take into account the competitive strategy of global companies within the industry and their innovative developments.

Since the mid-1990s, the economic and managerial approaches have co-existed as a basis for competitiveness analysis (Somogyi, 2009a).

I believe that the econometric approach is much more complex, and that in addition to the understanding of competitiveness at the level of the national economy, it is appropriate to interpret the concept at both the industry and the firm level.
Building on the economic approach outlined above, there are a number of other approaches to competitiveness. In the following, the conceptual definitions of competitiveness of D'Andrea Tyson, OECD, Aiginger and Landesmann, Attila Chikán, György Szilágyi are presented in detail. The definitions of these authors are summarised in Table 2.

Table 2: Other approaches to competitiveness

Representative	Focus area, keywords
Laura D'Andrea Tyson	Competitiveness linked to prosperity.
OECD	The concept of competitiveness is linked to the longer-term maintenance and improvement of living standards of the population.
Aiginger – Landesmann	Emphasis on the social and environmental relationship, income generating capacity, competitiveness over time, broader definition of competitiveness.
Attila Chikán	Understanding competitiveness at the micro and macro level, with a focus on profitability at the micro level and the well-being of citizens at the macro level.
György Szilágyi	Competitiveness is a system of endowments and capabilities.

Source: own edits based on Somogyi (2009a), Somogyi (2009b)

A new approach was brought by Laura D'Andrea Tyson's (USA, 1992) definition of sustainable well-being, which citizens can enjoy if their country produces products and services that are competitive and thus competitive. This approach has been criticised by Krugman, who argues that in the case of low export volumes, competitiveness is merely another way of describing productivity, since in such a case the trade balance is affected by the correct choice of exchange rate (Csáki, 2004). This has been confirmed by research on tourism in the North Great Plain tourist region (Sőrés et al., 2012). Low exports also have little economic impact, and the exchange rate has no significant effect on living standards. In the case of low exports, it is therefore not possible to speak of a comparison of the competitiveness of a country with other countries, as it is only a comparison of productivity changes over time, typically along internal factors. At higher levels of external trade, real competitiveness may emerge, due to the continued devaluation of national currencies to make products exportable. This will bring a fall in living standards through more expensive imports, which will offset domestic economic growth. The definition of competitiveness linked to welfare is therefore not necessarily clear-cut from this point of view.
Despite the criticisms, this approach - with additions - has been adopted by many. One of the international organisations is the OECD, which links the concept of competitiveness to the longer-term maintenance and growth of living standards of the population, using it as a kind of yardstick to measure a country's ability to produce for international markets under free market conditions (OECD, 1997). The OECD

interprets the concept not only at the country level but also at the regional level, which differs from the country approach only in that the place of sale is not only the international but also the domestic market. Going further, the organisation also extends the concept to the micro level. At this level, it uses the term structural competitiveness, which refers to the corporate feedback of national competitiveness through structural factors such as infrastructure, research and development, service quality and economic policy.

Aiginger - Landesmann (2002) also define the concept of social and environmental relations, which is increasing in the case of the ability to maintain market share. Three levels of competitiveness of a given state have been defined:
- The income generating capacity of an open economy (productivity and employment effect);
- periodic competitiveness analysis (where the country started and how it has maintained its development);
- a broader definition of competitiveness, including social, health, education, environmental, etc.

Chikán interprets competitiveness at both micro and macro levels (Somogyi, 2009b). At the macro, national economic level: "the ability of a national economy to create, consume and sell goods and services in a globally competitive environment in such a way that the returns to its own factors of production and, in turn, the welfare of its citizens, increase in a sustainable manner. This competitiveness is conditional on the promotion of resource productivity growth through the continued maintenance of conditions that ensure the efficiency gains of firms and other institutions (Chikán et al., 2006:8)."
Another approach is linked to György Szilágyi's name, according to which competitiveness is a set of characteristics that help a given participant to win, regardless of the nature of the field or the technique used. According to him, competitiveness is a system of aptitudes and abilities. In the economic environment, competitiveness can be measured at three levels: firm, regional and national (Szilágyi, 2008). Competitiveness helps to assess the overall rating of economies and measure their performance. However, neither its concept, nor its level of analysis and interpretation has been clearly defined to date.

3. Levels of competitiveness

There are many different interpretations of competitiveness, and no consensus on the level at which the concept can be understood (Nagy, 2015). Increasingly, a range of levels of competitiveness is becoming accepted. According to Balkyté - Tvaronaviciené (2010), six levels of competitiveness can be distinguished:
- product-level competitiveness,
- firm competitiveness,
- sectoral competitiveness,
- regional competitiveness,
- national/national competitiveness,
- international competitiveness (global, external competitiveness).

However, competitiveness is typically measured at national/national and company level. In addition, it is nowadays increasingly accepted to measure competitiveness at the regional level alongside countries (Lukovics, 2008; Rittagasszer - Lukovics, 2012; Papp, 2012; Tömöri et al., 2022). The separate treatment of regions is also justified because they contribute to the growth of the national economy as separate entities (Maleczki, 2002). Enterprise competitiveness is described in more detail below.

4. Company level

The company-level interpretation of competitiveness is the most widely accepted, alongside the national level. The most common interpretations of enterprise competitiveness are summarised in Table 3.

Table 3: Different interpretations of corporate competitiveness

Representative	Focus area, keywords
Krugman	Productivity is the basis of competitiveness at both national and company level.
Porter	Competitive advantage is the basis of competitiveness at both national and company level.
Ferenc Kozma	Profitability, exchange rates and factor efficiency are the basis of competitiveness, and competitiveness can be interpreted at the product level as well as at the country and firm level.
Attila Chikán	He interpreted competition in a broader sense, emphasising profitability and the ability to adapt to the environment at the firm level.
Gyula Horváth	Successful adaptation, the optimisation of the economic base, is the decisive factor, while company competitiveness determines regional and national competitiveness.

Source: own edits based on Somogyi (2009a), Somonyi (2009b)

Krugman, a proponent of the economic approach, saw competitiveness as the existence of comparative advantage, which is achieved through a mutually beneficial division of labour arrangement between countries. However, he also saw competitiveness as a concept that can be understood at the firm level. In this approach, competitiveness is a competition between firms, and in his view only firms with sufficient productivity can compete successfully.
Porter's model incorporates five competition factors at the firm level (new entrants, threat of substitution, bargaining power of customers, bargaining power of suppliers and competition between industry rivals). For new entrants, it is the constraints that new entrants face in a profitable industry that determine the entry barriers. Such barriers or constraints include size, brand loyalty, specific knowledge, strength of incumbents, etc. Incumbents also need to pay attention to these factors in order to maintain their market position. Linked to this is the threat of substitutes, as these products satisfy the same customer needs and consumers choose between the options they know in terms of quality, utility and cost. The bargaining power of suppliers comes to the fore when the buyer is interested in the purchase and knows

few alternative suppliers or when switching to another supplier/product would be too costly. Buyer bargaining power can be considered in several cases. Typically, where there are few and large buyers on the market or where the buyer is well informed or where the product purchased is not very important to the buyer. Rivalry between competing firms is an indication of the intensity of the behaviour of market players. In order to compete on price and to increase market share, it is essential to know and analyse the competitor, to compare key competences and to define the future strategy (Porter, 1990).

Ferenc Kozma interprets the concept of competitiveness at two plus one levels - product, company and nation. He links it to profitability, which is no less than that expected for corporate competitiveness. The competitiveness of the company is thus seen as a factor that adds up to the competitiveness of the products. A company is competitive if its goods are competitive and generate the expected profit. Market competitiveness is observed according to an external and an internal signal. The external sign of competitiveness is the nature of the use-value, i.e. how much demand there is for the product, how marketable it is. The internal signal is a profit rate - expected profit - which indicates the lowest level of profit that does not yet threaten the dynamic level of the firm (Kozma, 1995). From a competitiveness point of view, firms are considered successful if they are able to perform in the market in several aspects at the same time (Szentes et al., 2005). This is therefore a capability that depends on a number of components at the firm level.

Attila Chikán interpreted competition in a broader sense, not only at the national and company level, but also for products, product groups and sectors. At the micro, firm level: 'firm competitiveness is the ability of a firm to offer consumers products and services that they are more willing to pay for on terms that ensure a profit for the firm than those of its competitors, while adhering to standards of social responsibility. This competitiveness requires that the company is able to perceive and adapt to environmental and internal changes by meeting market competition criteria that are consistently more favourable than those of its competitors (Chikán et al., 2006:9)."

In his definition, Gyula Horváth stresses the importance of gaining a position in the market competition, of maintaining a stable position, and that different levels of competition have different characteristics of competitiveness (Horváth, 2001). He emphasised the interrelationship between corporate, regional and national competitiveness. He defined competitiveness as the adaptability of firms, i.e. their ability to successfully adapt best practices to their operating environment, and the competitiveness of a region or country is fundamentally influenced by the overall adaptability of the firms operating there. Competitiveness is also affected by the extent to which a company is able to optimise parts of its economic base, such as the quality of inputs or infrastructure. I do not fully agree with Gyula Horváth's interpretation. Corporate competitiveness does indeed have an impact on the competitiveness of the country or region in which it operates, but the competitive position of the country or region itself also has a fundamental impact on the competitiveness of the companies operating in it. In addition, the success of adaptation, the adoption of best practice from another business environment, is not in itself, in my opinion, a guarantee of a company's competitiveness; rather than a follow-on attitude, a proactive, change-averse attitude may be the key to competitiveness.

5. Conclusions

After reviewing the presented definitions and approaches to competitiveness, it can be stated that science has so far failed to provide a clear definition of competitiveness. Many researchers directly question the definability of the concept of competitiveness, considering that, this concept cannot be derived directly and unambiguously from any of the basic paradigms of economics, i.e. it cannot be defined theoretically. It can be stated that until now the international and national competitiveness interpretation is the accepted one, but competitiveness is interpreted more and more broadly. The interpretation of corporate competitiveness is becoming more and more widespread, and among the influencing factors, "soft" factors, such as company management, the quality of human resource management, the customer center, flexibility are increasingly prominent.

However, it is important to talk about the limitations of the present literary research. The provided theoretical overview includes the concepts of competitiveness related to each level, the related competitiveness factors, but also other factors of an empirical corporate competitiveness research, which need to be taken into account, and appropriate methodological support is required.

References

1. Aiginger, K. – Landesmann, M. (2002): Competitive Economic Performance: the European View. Wifo Working Papers. No. 179. 87. p.
2. Balkytė, A. – Tvaronavičienė, M. (2010): Perception of competitiveness in the context of sustainable development: Facets of „sustainable competitiveness". Journal of Business Economics and Management. Volume 11. Issue 2. pp. 341-365.
3. Chikán A. – Czakó E. – Kazainé Ónodi A. (2006): Gazdasági versenyképességünk vállalati nézőpontból – Versenyben a világgal 2004–2006 kutatási program. Zárótanulmány. Budapesti Corvinus Egyetem, Vállalatgazdaságtan Intézet, Versenyképesség Kutató Központ, Budapest, 59 p.
4. Csáki Gy. (2004): Versenyképesség és külföldi közvetlen befektetések a mai magyar világgazdaságban. MTA Világgazdasági Kutatóintézet, Budapest, 67 p.
5. Horváth Gy. (2001): A magyar régiók és települések versenyképessége az európai gazdasági térben. Tér és Társadalom. 15. évf. 2. sz. pp. 203-231.
6. Hoványi G. (1999): A vállalati versenyképesség makrogazdasági és globális háttere. Michael Porter két modelljének továbbfejlesztése. Közgazdasági Szemle. 46. évf. 11. sz. pp. 1013-1029.
7. Jackson, J. (2006): Developing regional tourism in China: The potential for activatingbusiness clusters in a socialist market economy. Tourism Management. Volume 27. Issue 4. pp.695-706.
8. Kozma F. (1995): Gondolatok a versenyképességről. Ipar– gazdaság. pp. 1–8.
9. Krugman, P. – Obstfeld, M. (2000): Nemzetközi gazdaságtan - Elmélet és gazdaságpolitika. Panem Könyvkiadó, Budapest. 667 p. ISBN: 963-545-339-6
10. Lukovics, M. (2008): Térségek versenyképességének mérése. JATEPress, Szeged, 231 p.
11. Madarász A. (2014): A láthatatlan kéz – szemelvények egy metafora történetéből. Közgazdasági szemle, 61. évf. 7. sz. pp. 801-844.
12. Malecki, E. J. (2002): Hard and Soft Networks for Urban Competitiveness. Urban Studies, Volume. 39. Issues 5-6. pp. 929-945.

13. Nagy, T. O. (2016): SME sector, a crucial area corporate competitiveness measurement. Gradus. Volume 3. Issue 1. pp. 446-453.
14. Nagy, T. O. (2015): Versenyképesség növelés a Lean gondolkodás segítségével. In: II. Gazdálkodás és Menedzsment Tudományos Konferencia. A vidék él és élni akar. pp. 431-435. (Szerk. Ferencz, Árpád) Kecskeméti Főiskola, Kertészeti Főiskolai Kar, Kecskemét, Magyarország
15. OECD (1997): Regional Competitiveness and Skills. OECD Publishing, Párizs, 193 p.
16. Őz, Ö. (2002): Assessing Porter's framework for national advantage: the case of Turkey. Journal of Business Research. Volume 55. Issue 6. pp. 509-515.
17. Papp Zs. (2012): A turisztikai desztinációk versenyképessége – hogyan mérjük? Modellek és módszerek áttekintése. In: Regionális innovációs képesség, versenyképesség és fenntarthatóság. (Szerk. Bajmócy Z. – Lengyel I. – Málovics Gy.) JATEPress, Szeged, pp. 225-238. ISBN: 978–963–315–071–9
18. Porter, M. E. (1990): The Competitive Advantage of Nations. Harward Business Rewiew. March-April pp.71.-91.
19. Rittgasszer I. – Lukovics M. (2012): A versenyképesség és a kreativitás területi szintű kapcsolatrendszere. pp. 207-224. In: Regionális innovációs képesség, versenyképesség és fenntarthatóság. (Szerk. Bajmócy Z. – Lengyel I. – Málovics Gy) JATEPress, Szeged, 393. ISBN: 978-963-315-071-9
20. Somogyi M. (2009a): Versenyképesség a szakirodalomban- A fogalmi megközelítések összegzése és elemzése (I. rész) Vezetéstudomány. XL. évf. 4. sz. pp. 54- 64.
21. Somogyi M. (2009b): Versenyképesség a szakirodalomban- A fogalmi megközelítések összegzése és elemzése (II. rész) Vezetéstudomány. XL. évf. 5. sz. pp. 41-52.
22. Sőrés A. – Pető K. – Csipkés P. (2012): Examining life quality in Hajdúszoboszló Tourist Area, with a special focus on health conditions. Agrárinformatika. 3. évf. 1. sz. pp. 1-9.
23. Szentes T. – Bató M. – Blahó A. – Dorner A. – Kutasi G. – Magas I. – Polyánszky T. Z. (2005): Fejlődés, versenyképesség, globalizáció II. Akadémiai Kiadó, Budapest. 292 p. ISBN: 963-05-8316-0
24. Szilágyi Gy. (2008): A versenyképesség mérése a nemzetközi összehasonlítások módszertanának tükrében. Statisztikai Szemle. 86. évf. 1. sz. pp. 5-21.
25. Tömöri G. – Bács Z. – Felföldi J. – Orbán I. (2022): Impact of Pharmaceutical R&D Activity on Financial Flexibility and Bargaining Power. Economies. 2022; 10(11), 277. https://doi.org/10.3390/economies10110277
26. Vanhove, N. (2002): Tourism policy — between competitiveness and sustainability: The case of Bruges. Tourism Review. Volume 57. Issue 3. pp. 34-40.
27. Viszt E. (2006): Versenyképesség – nemzetközi kitekintésben. pp. 7-28. In: Honnan hová? Tanulmányok a versenyképességről. (Szerk. Viszt E.) MTA Szociológiai Kutatóintézete, Budapest, 260 p. ISBN 978-963-8302-28-1
28. Zhao, Z. Y. – Zuo, J. – Zillante, G. – Zhao, X. J. (2012): Foreign architectural and engineering design firms' competitiveness and strategies in China: A diamond model study. Habitat International. Volume 36. Issue 3. pp. 362-370.