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Summary

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Competitive advantage in rural Romania

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Contents

Chapter 1

Chapter one begins with an overview of the main terms that are the subject of this study. Thus, the concept of competitiveness was first analyzed. Thus, a number of definitions of competitiveness have been presented, as well as regional competitiveness, and finally this concept can be defined. Considering all the definitions of competitiveness, the present paper defines competitiveness as the ability of an organization, public or private, to be able to identify and use competitive advantage to differentiate itself from competitors and add value to the organization. In referring to the competitiveness of a municipality, this refers to its ability to provide its inhabitants with an increased quality of life by improving specific indicators of the concept.

Competitiveness is a concept that needs to be researched because it has a positive long-term effect on economic growth (Charles and Zegarra, 2014, p. 5371), being an important element in the national economy (Lall, 2001, p. 1502), but it can also have a negative effect, because the indices that measure competitiveness include aspects related to the degree of corruption in institutions. Therefore, the more corrupt a country is, the lower its competitiveness and the more indebted it tends to be (Podobnik, 2012, p. 1), which is why a clear definition of competitiveness and a measurement as close as possible to the profile of the organization and its actual situation at the level of the organization is needed.

Then, the concept of competitive advantage was presented, from different perspectives: economic, performance, strategic management, resources, and finally the sources of competitive advantage. Competitive advantage has been presented not only at the level of private organizations, but also at the level of public organizations, and finally the competitive advantage at the regional level. Regions are considered to have competitive advantage when they have superior technological, infrastructural, administrative or social characteristics because they are not owned by existing firms but by the community and support the prosperity and productivity of the commune, including firms (Thompson and Ward, 2005, p. 14). Productivity at the commune level can also be generated by educated human resource, highly skilled people, as they support rural businesses.

There may be important unidentified or unrecognized sources of competitive advantage at the level of municipalities, which can help to promote them, to diversify their economic activities,

and other actions, which have a positive impact on the quality of life of their inhabitants (Lynch, 2009, p. 151).

A distinction has also been made between competitive and comparative advantage, as they are often confused. Comparative advantage is considered as a given, a characteristic that each organization or territory possesses, to provide a product or service at a lower cost than other countries, and if this characteristic or ability is used to its full capacity it can turn into competitive advantage (Algieri et al., 2018, p. 42). Comparative advantage can be defined by referring to the existence of resources (human resources, physical resources, knowledge, natural resources, historical, cultural or cultural resources or infrastructure (Cracolici, Nijkamp and Rietveld, 2006, apud Barbe et al., 2016, p. 167), and competitive advantage refers to the ability to utilize those resources efficiently (Crouch and Ritchie, 1999, p. 143). In our view comparative advantage refers to those characteristics that are taken as a 'given', where humans have no input in determining it. From our point of view comparative advantage refers to those characteristics that are considered as a "given", where humans have no input in determining it. The difference between competitive advantage and comparative advantage is that the former emphasizes the provision of services or goods of higher value than others, whereas comparative advantage is concerned only with the lowest price, the latter being determined by characteristics that are not necessarily human-input (resources, location). We can conclude that both types of advantages support the competitiveness of an organization, and they should be seen as a whole and not separately, because comparative advantage supports the formation of competitive advantage in certain situations. The next section of this chapter included the presentation of theories referring to competitive advantage. After analyzing these theories, it was found that in general the more traditional approaches relate competitiveness and competitive advantage only to the economic side, while the more modern ones include other reference factors in addition to the economic ones. From the literature review on competitiveness, we can conclude that it is seen as the ability of an organization to compete effectively and maintain a leading position in relation to other organizations, mostly related to productivity and prosperity, which are generated by the competitive advantage of the organization. Competitive advantage, on the other hand, is a more specific concept, focusing on characteristics possessed by the organization that are difficult or impossible to imitate or replace. We believe that the two concepts are categorically different but interdependent, competitiveness cannot exist without competitive advantage, and competitive

advantage without awareness and identification of competitive advantage could not sustain competitiveness. Competitive advantage is what sustains competitiveness and competitiveness is achieved by strengthening and utilizing competitive advantage.

Chapter 2

This chapter provides a synthesis of the main studies and reports that address and assess competitiveness and competitive advantage, presented at three levels (national, regional and local). The identification and analysis of these studies informed the development of the practical section of this paper, as this stage includes concrete examples related to the measurement of the two concepts.

The measurement of competitive advantage has often been a sensitive topic, due to the fact that it has been operationalized either only in relation to performance (O'Shannassy, 2008, p. 175; Sigalas and Economou, 2013, pp. 61-62), or only through the implementation of a strategy that adds value to an organization and is not implemented at the same time as the competition (Barney, 1991, apud O'Shannassy, 2008, p. 169), or only in relation to economic aspects (Czaplicka-Kolarz et al, 2020, p. 68). Moreover, it has been found that although there are a number of factors that determine competitive advantage (as we have seen in the previous chapter), there is no clear, universal, established definition of this concept (Ma, 2000; Foss and Knudsen, 2003; Rumelt, 2003; O'Shannassy, 2008, apud Sigalas and Economu, 2013, p. 63).

At the national level, a tool created by the World Economic Forum was analyzed which measures national competitiveness both by analyzing official data and by capturing citizens' opinions. Also analyzed was the IMD index which is based on country rankings of their ability to sustain and create an enabling environment for business competitiveness. The index is based on four broad factors: economic performance; the efficiency of public institutions; the efficiency of the business sector; and infrastructure. Each of these factors is composed of 5 sub-factors, and each sub-factor in turn contains a number of criteria analyzed. For each sub-factor, irrespective of the number of criteria from which it is composed, there is the same weight of the total (5%), and at the end the results of all 20 sub-factors are aggregated to allow the overall ranking to be realized (IMD- International Institute for Management Development, 2022, p. 34).

At the regional level, the measurement of competitiveness at the regional level in China was analyzed with reference to a number of indicators such as: human capital, clusters, business sector, public support, innovation, investor attractiveness, infrastructure, geographical location, social capital and institutions (Vuković and Wei, 2010, p. 112). Subsequently, a paper was analyzed which includes several indices such as the UK Competitiveness Index; European Competitiveness Index; World Knowledge Competitiveness Index; German BISW Index; German State Competitiveness Index; German Ranking Index; Vietnam Provincial Competitiveness Index and German Future Index) Bristow noted that there are a number of variables that are analyzed such as: economic performance; economic performance; employment or unemployment; labor cost; productivity; skilled employees; innovation capacity; quality of labor force; quality of institutions; political and social stability; public administration (public employment rate); bureaucracy; taxation; road infrastructure; information and communications; entrepreneurship; financial capital; demand and purchasing power; poverty and inequality; inflation; health; health; ecology; quality of life; corruption; crime; general attitudes and values; population growth (Bristow, 2010, pp. 81-83). In addition, the regional competitiveness index was analyzed in relation to the following indicators: institutional framework; infrastructure; macro-economy; health; education; labor market; financial market; technological level; business environment diversity; innovation; natural resources; these indicators are in turn made up of measurable indicators (Benzaquen et al., 2010, p. 72). The Regional Competitiveness Index 2.0 used across regions in European Union countries consists of 3 indicators: core, efficiency and innovation, each of which is made up of several sub-indicators, which in turn are made up of measurable indicators, such as: institutions; macroeconomic stability; infrastructure; health; education; continuing education; labor market efficiency; market size; technology; sophisticated business and innovation (Dijkstra et al., 2023, p. 8). Competitiveness was measured in relation to the resources and capabilities that a region possesses that lead to increased well-being. The indicators considered were grouped into five categories namely: government and institutions; economic development; infrastructure; human capital; and business efficiency (Benzaquen et al., 2010, p. 67; Huggins and Clifton, 2011, p. 1344). Capabilities are also defined by referring to innovation, education, institutions, social capital and ecology (Aiginger et al., 2013, apud Aiginger and Firgo, 2017, p. 158) and refer to competencies or rather the ability of the organization to perform an internal activity in an appropriate way (Thompson et al., 2018, p. 88).

Moreover, they are developed based on the organization's resources and are translated into human resource or organizational processes (Thompson et al., 2018, p. 88).

At the local level, a competitiveness measurement index used in Finnish sub-regions to determine their competitive advantage has been analyzed, and subsequently to create a competitiveness indicator, it provides the most relevant results on this aspect. This index consists of 16 variables grouped into 4 dimensions: human capital, innovation, agglomeration and accessibility, and for each of the four variables it creates a set of measurable indicators. In the case of measuring competitiveness at the level of English cities, the authors started by identifying the relationship between assets (the measured indicators) and outcomes. The selected indicators (assets) were grouped into larger categories such as: the economic environment; the political or institutional environment; the physical environment and the social environment (Deas and Giordano, 2001, pp. 1416-1419), but the identification of measurable variables from our point of view is too narrow, the authors limiting themselves to a restricted number of variables mostly referring to the age of inhabitants, public sector employees, European funds, road density, percentage of voter turnout or house prices (Deas and Giordano, 2001, p. 1417). They only tested the instrument through correlations and regressions. An interesting element in the construction of this index is the voter turnout, which was seen as a civic engagement of residents, thus showing an increased civic engagement at the city level, which could be a source of competitive advantage.

Jiang and Shen have developed an index to measure competitiveness at the city level in order to integrate as many measurable indicators as possible that determine the competitiveness of cities, overcoming the barrier of associating competitiveness with economic growth only, by relating it to three broad dimensions: economic, social and environmental (Jiang and Shen, 2010, p. 309). Another index used in measuring the competitiveness of cities and municipalities in the Philippines looks at five key indicators viz: Dynamics of the economy (size of the local economy, growth of the local economy, capacity to generate employment, cost of living, cost of doing business, cost of business development, financial dependence, productivity, and presence of business and professional organizations), efficiency of governance (capacity of health services, capacity of schools, security, efficiency of business registration, compliance with certain required standards, presence of investment promotion unit, compliance with national

guidelines for administrative units, collection of their income tax, social protection), infrastructure (condition of road networks, distance to the city, availability of basic resources, annual investments in infrastructure, connectivity to technology and information, number of public transport, health infrastructure, education infrastructure, number of ATMs), resilience (land use plan, disaster risk reduction plan, annual disaster training, early warning system, local risk assessments, emergency infrastructure, utilities, number of employees, health system) and innovation (plans for information technology, financing of innovation, use of innovation, internet network capacity, availability of local risk assessments, emergency infrastructure, utilities, number of employees, health system) (Philippine National Government, 2023).

Competitive advantage, from the perspective of other authors, is based on the ability of communities to compete in broad ways for market share, capital, or workers (Markey et al., 2006, p. 25). Others are of the opinion that competitive advantage at the regional and urban level is much more comprehensive, containing both traditional factors used in production, infrastructure and location, as well as economic factors, which influence the quality of life and opportunities in the urban or regional environment (Malecki, 2004, p. 1108). As can be noted, both concepts (competitiveness and competitive advantage), even if sometimes treated differently in the literature (the indicators analyzed measured competitiveness), are measured and identified based on similar indicators. Most of the indicators created are meant to serve as official documents at the level of countries, promoting the competitive advantages they possess, making different rankings, issuing a series of comparisons, all with the purpose of helping the analyzed unit to develop further, to become even more prosperous, and more competitive.

Thus, on the basis of this chapter we were able to identify, in accordance with the specialized literature, the determinants of competitive advantage and the determining role they play in its development.

Chapter 3

Chapter three outlines a number of possible sources of competitive advantage in rural areas, such as associativity, clusters, local development strategies, the creative class, tourism and the economy. These sources have been analyzed and developed in the specific rural context to provide a deeper understanding of the concept of rural competitive advantage.

Often, the state cannot meet all the needs of the inhabitants, thus it is necessary to support their activities by another sector in addition to the private sector, namely the non-profit sector. This sector is based on cooperation and collaboration for community or individual causes, meeting people's needs where the state cannot. The structures outlined above represent a hybrid form of collaboration, which include elements from both the private and not-for-profit sectors, reaching out to local communities to help them solve their existing problems, of course in close collaboration with the public sector.

Associativity is an important principle in development because whether it is formal (recognized by law, with legal personality) or informal (established without being recognized by law), its purpose is to develop joint activities between different actors, whose common goal is to improve the living conditions of the inhabitants, i.e. to raise the quality of life.

Clusters can be defined as "a group of similar industries that create competitive advantage" and support each other, maintaining diversity and coping with novelty (Porter, 1990, p. 83); but they can also be identified as "geographic concentrations of interconnected companies and institutions in a particular field" that are intended to sustain competition in the territory (Porter, 1998, p. 78), but also associate on the basis of commonalities (Porter, 2000, p. 16). Perceiving particular rural areas (communes or communes and towns) in the context of clusters helps to measure competitive advantage more efficiently and effectively because it emphasizes the linkages that exist between them (Porter, 2000, p. 18), linkages that can be transformed into competitive advantage at the micro-level. Rural clusters can be the ones that lay the foundations for harmonious development based on competitive advantage, because once the competitive advantage in the communes has been identified, different clusters can be formed at local and regional level that can strengthen collaboration and cooperation between communes or between actors in communes for harmonious development.

For local public organizations, it is recommended to focus on strategic thinking and strategizing in order to be able to identify at an early stage the threats that public spaces (e.g. cities) may face (crowding, high prices, lack of quality spaces) and that may lead to the migration of certain groups of people (especially the creative class) from urban to rural spaces (Huggins and Clifton, 2011, p. 1357). Thus, strategic thinking not only helps the urban space to know how to manage future problems, but it also helps the rural space to know how to manage the issues related to the

presence of new groups of people. The role of strategies needs to be very well understood, because the implementation of a good strategy is correlated with gain, and this lays the foundation for increased performance (Ma, 1999, p. 348). Most of the time an organization's strategy can be considered as a guide that contains a set of relevant information about the commune, which helps it to develop. Extrapolating the role of the strategy to the level of a commune, it comprises a set of future actions to be followed in order to solve local problems, based on the strengths that the commune has, but also on the resources it has, respectively on its competitive advantage, all of which are realized and assumed by the commune (Olaru and Stănică, 2021, p. 243).

An element of novelty in rural areas is the presence of the creative class. The creative class is supported by the diversification of the economic sector, and this diversification has started to be present in rural areas, mainly due to the fact that agriculture in rural areas is no longer a core economic sector, with only 23% of the total workforce working in the agricultural sector at national level (European Commission, 2023). However, there are studies that have analyzed the presence of the creative class in rural areas, where it is supported by cheaper services as well as higher quality of life (Beyers and Lindahl, 1996; Goe, 2002, apud McGranahan and Wojan, 2007, p. 199). The presence of the creative class at the rural level has been shown to be beneficial, supporting rural development through the labor of the creative class, the development of social capital at the local level (Mahon et al., 2018, p. 278), but more importantly by relocating firms from urban to rural areas, thus providing the rural with a potential for development, i.e. a source of competitive advantage, and also economic development at the rural level. In order to be successful in developing an economy based on the creative class, localities need to attract creative people who support and generate innovation, as more often than not this category of people tends to be present only in certain cities or regions that support a social environment open to the new, to diversity and creativity (Florida, 2002, apud Huggins și Clifton, 2011, p. 1346).

The development of rural tourism can directly contribute to improving the quality of life of residents by creating new services, generating new jobs, diversifying local economic activities, promoting rural areas, capitalizing on local resources and attracting tourists, new investors and new residents at the local level. . However, it is preferable that the development of rural tourism

is controlled, preserving the values of the local community, directly involving both the local community and local institutions, and promoting collaborative relationships between them to avoid chaotic development that could have a negative impact on the community. Practicing rural tourism can directly contribute to local development from all perspectives (economic, social, community) as long as it involves community members (local community, private sector, public sector and non-profit sector) working together to manage it. process, jointly recognizing the area's competitive advantage and leveraging its advantages favorably, both for individual and collective interests.

The rural economy has changed over time, especially when, for example, in the 1970s in the United Kingdom, a new type of migration began, known as counter-urbanization, which involved people moving from urban to rural areas, as rural areas offered jobs. , access to services and improved transportation to urban areas (Shucksmith, 2012, p. 6). This phenomenon materialized much later in Romania. Both competitiveness and competitive advantage are perceived in relation to economic development, which helps to achieve their overall goal of improving or improving living conditions for residents. Rural areas are often considered deficient in new business development, although they have abundant natural, cultural, human and other resources that can be harnessed to help develop rural spaces. In Romania, entrepreneurs face significant financial challenges, the financing opportunities offered at the European level being an option for attracting and promoting local development (Burcea, 2012, p. 170). Despite this fact, the rural environment has started to develop economically, and this development is also reflected in the economic sector.

The population is the core of any administrative-territorial organization because any settlement that is not characterized by the presence of a population is considered deserted. All public institutions pursue a common goal: improving living conditions among the population. Thus, without population, we cannot have competitive advantages; we cannot discuss competitiveness and, most importantly, we would not have public institutions, because they are created to help solve people's problems, provide local services and coordinate their entire existence. All activities within an organization are carried out by people, through people. Whether we are talking about productivity, the economic sector, the tourism sector or the non-profit sector, all of these have human resources at their core. The presence of human resources within an

organization is the main source of advantage it possesses. If we are talking about a well-trained human resource with a high level of education, a positive migratory trend and a positive natural increase, then we can say that we are also talking about a source of competitive advantage. Without human resources, competitive advantage cannot be achieved, developed and capitalized.

Currently, in Romania, rural areas face significant problems such as depopulation, migration of residents, demographic decline, economic recession, poor infrastructure, degradation and even loss of traditions, decrease in natural resources, low level of education among residents, low productivity, services inadequate public. (health, education, etc.) and more difficult access to urban amenities and markets. In addition, rural areas also struggle with gender inequalities and poverty (Tandir et al., 2016, p. 63). Rural areas are less developed than urban areas, do not provide sufficient living conditions and have a lower quality of life. However, in one out of three OECD member countries, rural regions have had the highest rate of job creation, as old paradigms based on agriculture have been replaced by new paradigms focused on rural competitiveness, capitalizing on the resources they they own rural communities and the development of various sectors of activity. (tourism, industry, etc.) (OECD, 2006, pp. 12-15).

Chapter 4

Chapter four, developed on the basis of the previous chapters, details the research methodology used in this paper.

The main purpose of this paper is to develop a new measurement method in the form of a composite index that allows the identification of competitive advantages or potential competitive advantages at the level of a municipality, based on measurable indicators, which derive from the analysis of specialized literature.

The objectives of the research are:

1. Development of a composite index that allows the identification of the presence of competitive advantage at the level of communes in Romania.

2. Identifying the simplest method of developing a composite index to facilitate comparisons over time and to assess the different levels of the presence of competitive advantage.

3. Identifying the relevance of the dimensions of the competitive advantage within the tool created following the choice of the most suitable aggregation method.

4.1 Assessing the impact of having a long-term strategic perspective on municipalities' competitive advantage performance.

4.2 Evaluation of the impact of belonging to an associative structure of communes on their performance in terms of competitive advantage.

The creation of a composite index could contribute to the development of rural communes by revealing the importance of competitive advantage, but also by making aware of the competitive advantages they possess, based on which local public authorities, the private sector, but also the non-governmental sector can make decisions regarding projects and future actions appropriate and necessary for the community. Based on the identification of competitive advantages, municipalities can emphasize their promotion, develop future partnerships, all of which support sustainable local development, based on the adoption of appropriate public policies. Local development must be understood as a whole, referring to a type of development that capitalizes on the competitive and comparative advantages that a community has, supports the mobilization of specific community resources for development (Romeo, 2012, p. 3), keeping account that development is seen as a means by which competitive advantage is obtained (Suoniemi et al., 2020, apud Ali and Anwar, 2021, p. 1).

The present study has a longitudinal character and covers the period between 2011 and 2022. Based on the manual for constructing composite indices developed by the OECD (Nardo et al., 2018), but also the work "Measuring competitiveness - a composite indicator for municipalities Italian" (Scaccabarozzi et al., 2022), in the development of our index the following stages were developed: establishing the theoretical framework related to the studied concept; identification and selection of the data to be analyzed taking into account their availability, the developed theoretical framework; identifying missing data; multivariate analysis (where data aggregation and weighting are usually included); data standardization (to allow comparison of variables); analyzing data uncertainty and sensitivity (estimation of missing data and data standardization) (Nardo et al., 2018, pp. 20-21).

We consider that the competitive advantage is a factor that generates competitiveness, it includes the resources, goods, services or social and cultural factors present at the level of a municipality, which confer uniqueness, plus value, and are difficult to imitate. The index was made based on specialized literature and included 7 dimensions (economics, connectivity, housing, demographics, education services, health services, tourism) which add up to a total of 27 variables, following the application of the Cronbach Alpha test which is a test of internal consistency that indicates how well the variables in a dimension measure the same concept, that is, how homogeneous and coherent the variables are within a dimension, leaving 25 valid variables.

Missing data from variables was imputed using interpolation and extrapolation to ensure the integrity and accuracy of the analysis. In the construction of composite indices, most of the time the included indicators do not have the same reporting units, that is why they must be normalized in a similar unit to be able to issue comparisons between them (Freudenberg, 2003, apud Farurugia, 2007, p. 17), but also to ensure accuracy and consistency of the final results. Taking into account the fact that the variables that form the index have different units of measurement, although they have been transformed into relative values where it was allowed, it is necessary that the data be normalized, i.e. brought to a similar unit of measure, which fall within a specific range, to have comparable variables. This stage was carried out with the help of Min-Max which was calculated for each variable separately (OECD, 2008, p. 28; Mazziotta and Pareto, 2017, apud Scaccabarozzi et al., 2022, p. 68). Normalization involves scaling the values of each variable in a specific range, between 0 and 1. The variables received equal weights, equal weighting being the most common in the case of composite indexes, they use the variables as having the same weight, because they form an index where all have an important and equal role (Farrugia, 2007, pp. 18-19; OECD, 2008, p. 31; Dobbie and Dail, 2013, p. 272; Scaccarozi et al., 2022, p. 69; Ladner and Keuffer , 2021, p. 214).

In order to be able to identify the most robust way to measure competitive advantage, we chose to use and develop three different aggregation techniques, which support comparisons in absolute terms between the variables included in our index, but which have also been used and in other studies regarding the identification of competitiveness at the municipal level (Scaccabarozzi et al., 2022). We chose to use three aggregation methods, one simpler, totally compensatory, linear

(arithmetic mean) and two more complex, partially compensatory, non-linear (geometric mean and AMPI - Adjusted Mazziota - Pareto Index), these being used together and within other composite indices (Scaccabarozzi et al., 2022, p. 59).

Due to the fact that we decided not to assign weights to the variables included in the index, we will carry out an influence analysis, because we started from the idea that each variable has equal importance in the index proposed by us, so the approach of such an analysis was necessary to be able to evaluate if our approach is correct, and we will be able to observe which variables have the greatest impact on our index. This analysis is essential for evaluating and managing how variables affect our composite index results and helps identify certain critical points or certain potential risks that may exist in our construct.

In the influence analysis the composite index was calculated after excluding each dimension and the absolute differences between the original result including all dimensions and the new result with six dimensions was calculated for each commune. We performed these analyzes for each aggregation method used (arithmetic mean, geometric mean and AMPI), obtaining a series of boxplot graphs where the absolute differences between the results, resulting from the exclusion of each dimension in turn, are presented for each dimension separately , for each aggregation method separately, for all the years included in the period 2011-2022.

Subsequently, we wanted to see to what extent having a development strategy influences the competitive advantage at the level of municipalities, given that in the public sector this hypothesis has already been confirmed (Ali and Anwar, 2021, p. 7). Moreover, it was also followed whether these strategies identified the competitive advantage of the communes. We also wanted to see if belonging to an associative structure of communes indicates an increased level of competitive advantage at the commune level. Thus, comparison of means and the application of the t-test were used.

The present study analyzes the rural area of the North-West Region of Romania, which includes the 403 communes, from the 6 counties of the region (Bihor, Bistrița-Năsăud, Cluj, Maramureș, Satu Mare and Sălaj).

The limits of the research have been presented in this paper, especially in relation to the availability of data at the commune level and data access.

Chapter 5

This chapter focuses on the practical component of this work. It starts with a more detailed presentation of the analyzed region, with an emphasis on the characteristics of the rural space, in order to have a more comprehensive understanding of the analyzed territory. The description includes a series of essential information about the socio-demographic characteristics of rural areas in Romania, as well as rural areas at the county level in the North-West region. Next, the methods that formed the basis of the development of the composite index of competitive advantage are presented, including both the descriptive analysis and the influence analysis that formed the basis of the choice of the most suitable index aggregation method, which can later be used by to common ones from Romania. The chapter concludes with a bivariate analysis, which through means comparison tests highlights the importance of associativity and strategic perspectives in relation to competitive advantage.

Conclusions and recommendations

Between rural and urban there are unidentified, unaware, respectively unexploited links. Awareness of these links can lead to the development of joint projects, which contribute to the growth and improvement of the quality of life of the inhabitants. To establish rural-urban cooperation, principles such as: strategic coordination should be taken into account; complementarity; reciprocity; the scientific approach; partnerships based on fairness; assuming the responsibility of the urban towards the rural (and vice versa), but also affecting the functions of the rural space as little as possible (maintaining the characteristics that give it its rural character) (Stănică, 2022, p. 58). The rural-urban connection can lead to increased competitiveness and improved quality of life, to a balanced territorial development (Stănică, 2022, p. 51).

The index we designed integrated multiple dimensions of development (economy, connectivity, housing, demography, education, health and tourism), and the methodology used in its construction aimed to identify a robust measure in terms of including or excluding variables in the instrument. Thus, we normalized the data and analyzed three versions of the composite indicator by applying the three aggregation techniques (arithmetic, geometric mean and AMPI), methods that were applied and compared with each other (taking into account, however, that the arithmetic mean is a method compensatory, and the others partially compensatory or not

compensatory at all), and AMPI, the latter aggregation method proved to be a more robust and reliable method that can be used to measure competitive advantage at the level of municipalities, as it offers a superior ability to manage variability and external influences. The creation and use of this composite index also makes a significant contribution to understanding the determinants of development at the local level. We believe that this tool provides local public authorities and other interested actors with the clearest possible perspective on municipalities in terms of strengths, opportunities, and vulnerability of municipalities, all of which facilitate the strategic allocation of resources to capitalize on competitive advantages. Moreover, this index can be considered an essential tool for the continuous monitoring and evaluation of the competitive advantage of municipalities.

We believe that we have developed a robust and useful tool, which can be used by local public administrations, in order to develop the communes. This composite index allows the identification of competitive advantages at the level of municipalities in a rigorous and substantiated manner, even supporting the issuance of valuable recommendations to local public authorities for the future. Moreover, we believe that we have succeeded in contributing to the specialized literature by clarifying the distinction between the concept of competitiveness and competitive advantage, this differentiation bringing a significant contribution to the field of research, highlighting the complexity and diversified importance of competitive advantage, beyond strictly economic aspects. We believe that by developing this index we managed to respond to the first three research objectives proposed in this paper, because we developed a composite index that allows the identification of the competitive advantage at the level of communes in Romania, we identified the simplest method of aggregation and development of a composite index that allows comparisons over time and classifications of municipalities according to the level of competitive advantage, and finally we identified the relevance of the dimensions of competitive advantage in the developed tool. Our proposed tool can be adjusted and expanded to provide a deeper understanding of local dynamics as new information and data about municipalities become available.

The last two objectives, which refer to the impact of strategic perspective and membership of associative structures on the performance of municipalities in terms of competitive advantage, were met by using comparisons of environments. They highlighted the importance of a strategic

and collaborative approach at the level of the communes, the strategic approach proving to be an essential element for ensuring sustainability and increasing competitiveness, and the involvement in associative structures indicated a positive influence on the consolidation of the competitive advantage.

In recent years, the presence of competitive advantage in the public environment has become increasingly important, because it allows public administrations access to concrete recommendations to improve their activity with an emphasis on supporting and consolidating competitive advantage. Moreover, to be able to present in detail their competitive advantages at the local level, public administrations can create online platforms accessible to the public, an initiative of this kind can facilitate the development of municipalities, offering investors and interested persons quick access to information about local opportunities, which perhaps otherwise they would not have been noticed (Bowen Jr., 2012, p. 410). An alternative to these online platforms is local strategies dedicated to investors, which highlight the municipality's competitive advantages or potential competitive advantages. Such a strategic document allows investors to have an in-depth understanding of the resources and opportunities available at the local level, facilitating the assessment of the compatibility of the place with the specifics of the municipality and thus supporting the decision-making process regarding potential investments and collaborations.

We believe that once the competitive advantages at the level of the communes are realized (following the application of the composite index), the local public authorities must emphasize the strategic documents at the local level, and then focus a lot on the visibility of the commune and these strategic documents, which as we have seen have a determining role on the development and performance of the communes.

This index that identifies the presence of competitive advantage at the level of the communes should be updated every year, referring to new available data, to everything that happens around us, in order to be able to capture the new elements that appear in society and that influence the presence of competitive advantage. Moreover, after several tests, other necessary variables can be identified that must be taken into account, and it can be decided to eliminate some variables that are no longer sources of competitive advantage. Following the choice of the AMPI aggregation method, we were also able to identify the situation of the competitive advantage at

the level of the communes (Annex 4). On average, for the analyzed period (2011-2022), the communes with the highest competitive advantage are: Fărcașa (Maramureș), Tinca (Bihor), Prundu-Bârgăului (Bistrita-Năsăud), Ileanda (Sălaj), Florești (Cluj) , Șuncuiuș (Bihor), Rus and Crasna (Sălaj), Ariniș (Maramureș) and Nușfalău (Sălaj). The municipalities with the lowest level of competitive advantage, according to AMPI, for the period 2011-2022, following the calculation of the average for this period, are: Girișu de Criș and Toboliu (Bihor), Aiton (Cluj), Agriș, Lazuri and Viile Satu Mare (Satu Mare), Cetariu and Sânicolau Român (Bihor), Iara (Cluj) and Socond (Satu Mare).

We believe that our analyzes emphasize the importance of an integrated and multi-dimensional approach to better understand the competitive advantage of municipalities, but also to develop it, thus emphasizing the essential role of local resources, innovation, but also of public policies, which contribute to the formation of a sustainable and prosperous economic environment.

Based on the information in this paper, we believe that local public administrations must place greater emphasis on the strategic perspective and focus on the development of local development strategies that include the identification and capitalization of the municipality's competitive advantages. These strategies can be based on the results provided by the tool we created, as it offers a personalized approach adapted to the profile of each municipality.

It is also essential to develop formal or informal cooperation structures between municipalities, in order to be able to share their expertise, but also to collaborate in the development of joint projects that capitalize on competitive advantages outside administrative boundaries (for example, clusters or other associative structures).

Moreover, local public administrations must consider investing in basic infrastructure, to create the conditions for economic development, by attracting investors, but also by stimulating the local economic environment by providing basic services necessary for development. They must also encourage local entrepreneurship through various public policies such as tax exemptions, easy access to financing, offering professional programs, etc., thus encouraging long-term development.

In conclusion, we can say that the information provided by us can be used by local public administrations, to guide their decisions, to help adapt policies and decisions at the local level in

accordance with the real needs of the community, all of which directly contribute to maximizing the competitive advantages of the communes, with a view to a balanced local development.

Contributions and future studies

The element of novelty that this paper brings consists in the fact that it provides a newly created and tested tool, related to the profile of the communes, which allows the identification of the competitive advantage, making a clear distinction between it and competitiveness, taking into account the fact that most studies emphasize competitiveness or competitive advantage in different fields (tourism, culture, economy), the tool created corroborating data from various fields of activity.

Moreover, the contribution of this paper also has an impact on the specialized literature in the field of local development, because the identification of competitive advantage differentiated from competitiveness needs to be studied and tested, and very few studies develop this topic. Moreover, at the level of Romania, a gap is identified in the specialized literature regarding the topic addressed in this paper, a fact that once again indicates a need for development and a need that must be fulfilled.

Also, this tool and its application are innovative, given that they have not been tested and measured together, we are coming up with an element of novelty by trying to create a tool as close as possible to reality, to the profile of the communes, but more chosen based on publicly available data and indicators, thus relying on the idea that this tool will be replicated by all municipalities in order to identify their competitive advantages or the level of competitive advantage, which will then be developed on their base.

We have tried that through the proposed methodology we can identify the competitive advantage or potential competitive advantages at the level of rural communes, based on already existing theories, which usually have a greater applicability at higher levels (municipalities, counties, regions) or in the private domain.

This work can contribute to a more in-depth understanding of the economic dynamics at the level of communes in Romania, offering a tool that can be used not only for local development, but also for county and regional development. We believe that a future study can aim to identify traditional events at the level of the communes that take place on their territory, because events

of this type support the local economy by attracting participants, and promoting the commune at a higher level and most of the time indicate a competitive advantage at the local level.

Other future studies related to competitive advantage may aim to include more dimensions and develop those already existing within the index. It would be necessary to develop the environmental dimension, where to include information on environmental hazards (landslides, floods, seismic risk, precipitation), on the existing land fund at the commune level by categories of use. The connectivity dimension could be developed on the basis of isochrones for air, rail and road transport.

In the future, in the development of the composite index of competitive advantage, mountain products, which are present in the communes included in the mountain area, may also be included. However, we must take into account the fact that not all communes are part of the mountain area, thus there are limitations regarding this variable. The mountain products and the communes included in the mountain area, operate on the basis of a law that entered into force in 2018.

Another indicator that could be included in the composite index for competitive advantage is traditional approved products. They are included in a national register and operate on the basis of order 724 of 2013, regarding the attestation of traditional products. We decided to exclude them from our index because they appeared since 2020 and would have also affected the results of our longitudinal analysis.

The North-West region includes municipalities that are on the border with other countries. A variable that includes this aspect would be very relevant, because being part of a cross-border area can bring a number of benefits such as the development of partnerships with localities in neighboring countries. We decided to exclude this variable from our index, because we would have disadvantaged the other areas, but depending on the geographical position, the communes could consider this indicator as well.

Another aspect worth studying refers to the development of a comparative study between the newly established communes and those where they were component localities, in order to be able to identify the role they had before becoming independent communes, but also for to identify the impact that this process of establishing new municipalities had on all the component localities.

The educational dimension could also include information related to the education level of the inhabitants, because an increased level of instruction etc. scholar at the rural level can directly contribute to an increased level of competitive advantage, as it can support the development of productivity and innovation, investment attraction, economic development, local development, community development. We believe that the level of education can be a key factor in determining the competitive advantage at the level of the communes, influencing the development processes through its action.

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