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# Local economic development strategies in a medium-sized city on the European periphery: a path to become an economic center of Eastern Central Europe importance

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Large cities are becoming increasingly valuable in the spatial structure of globalized economies. Although these centers vary significantly regarding population, economic structure, and income conditions, they—compared to their surroundings—generally show a higher productivity level, a higher rate of employment, higher education, and higher innovation performance. However, this metropolization and concentration of the economy in large cities made the development of cities regarded as medium-sized on an international scale an issue of competitiveness in Europe, characterized by dense town networks, a small number of metropolises, and a significant weight of medium- and small-sized towns. However, one of the main preconditions for achieving success in this competition is to form a comprehensive and complex concept with a significant emphasis on economic development. Therefore, the aim of our study is to analyze the local economic development strategies for the last three decades, as elaborated in Debrecen. In the framework of our empirical analysis, we examined how different mainstream concepts appear in local development strategies and which development objectives are determined by the local strategies. Furthermore, we also aimed to identify possible changes in ideas about city roles by referring to the organization of economic space.

## KEYWORDS

Debrecen, Hungary, medium-sized cities, local economic development, development strategies

## 1 Introduction

Fundamentally, two tendencies can be traced to the spatial structure of a globalizing economy. First, large cities are becoming increasingly valuable; these centers—compared to their surroundings—generally have higher productivity levels, higher rates of employment, higher education, and higher innovation performance (Rennie-Short, 2013; Sassen, 2018). This increase is powered by the positive effects of agglomeration economies and the so-called borrowed size, which represents the density and close connectedness of the surrounding town network (ESPON, 2013). Second, metropolization and concentration of the economy in large cities made the development of cities regarded as medium-sized on an international scale an

issue of competitiveness in Europe, characterized by dense town networks, a small number of metropolises, and a significant weight of medium- and small-sized towns (Kunzmann, 2010; Dijkstra et al., 2013; ESPON, 2013).

These new trends led, on the one hand, to the revival of the growth poles theory (Moseley, 2013; Polenske, 2017) and, on the other hand, urban network policies aimed at spatial compensation and polycentric development (Brezzi and Veneri, 2015) were accompanied by decentralization in Western Europe, providing greater space for city policies based on, instead of universal recipes of success—endogenous resources and processes (ESPO, 2013). This issue has a specific significance in Eastern and Central Europe: although there are differences among the countries in the region, for example, Poland has a balanced metropolis network, the Czech Republic has significant provincial centers, and Hungary is monocentric (Csomós, 2011).

One of the most important prerequisites for success in the aforementioned competition between cities is the elaboration of development concepts based on which cities can create attractive conditions for actors in economic life. In light of the above, this study aims to analyze the local development strategies of Debrecen, the second-largest town in Hungary (population of approximately 200,000 inhabitants), situated in the eastern part of the country (Figure 1). The geographical location of the city offers several advantages. On the one hand, it has long been the starting point for economic links from Europe to the East (e.g., Ukraine, Romania). On the other hand, recent developments in the field of transport (e.g., the creation of a motorway link between the Slovak-Hungarian and Romanian-Hungarian borders via Debrecen; investments to improve the airport in the city) have further strengthened its regional role.

This city was selected for several reasons. First, it has a special role in the urban network of Hungary: traditional town hierarchy studies (Beluszky and Györi, 2004; Kocsis and Lenner, 2012) and analyses measuring innovation orientatedness (Rechnitzer et al., 2014), economic competitiveness (Vida, 2022), and cultural and creative industries (Kézai and Rechnitzer, 2022) undoubtedly place Debrecen to the group of towns immediately following Budapest. According to official national spatial development documents, Debrecen has a dominant economic role in the outer ring of cities, located at a greater distance from Budapest, and one of its important tasks is to fulfill its international gateway role (Badar et al., 2023; Csapó et al., 2023). Second, Debrecen has been governed by the same political force, the conservative FIDESZ, since 1998 and is therefore seen as one of the party's strongest bastions. Therefore, it is not surprising that today, some leading politicians have expressed the opinion that the Debrecen should be developed into the second capital of the country.

This study comprised three major parts. The theoretical chapter discusses changes in the focus points of local economic development practices and the network of aims and measures worldwide. In the empirical chapter, the different developmental concepts of Debrecen are compared from three perspectives. The Discussion section aims to answer three important questions.

- What economic spatial planning concepts were formulated in the Debrecen?
- To what extent are the stages of local economic development strategies and their characteristics present in the economic development documents developed by the city?
- How successful is the city's economic development strategy?



FIGURE 1  
Geographical location of Debrecen. Source: own work.

Additionally, the factors behind the changes were analyzed.

## 2 Theoretical overview

*Global socio-economic context and challenges*, as well as the way *how spatial development and territorial governance are managed*, have changed more frequently in Europe during the last decades (Pálné and Mezei, 2016). Furthermore, these developments have had an influence on the scope of local development policies.

(1) After World War II, the Fordist socio-economic structure and growth and the Keynesian welfare state were coupled with top-down regional development approaches based on centrally determined development plans and a centralized redistribution of financial resources (Jessop, 1991).

(2) At the turn of the 1970s–1980s, an evolving economic recession generated new answers for Western Europe. The socio-economic shift from Fordism to Post-Fordism was coupled with the exhaustion of welfare states and the emergence of neoliberal economic philosophy, pulling down central support and putting more emphasis on local resources and strategies. The Emerging European Union cohesion policy appreciated the regions of subsidiarity, vertical and horizontal partnership, the involvement of resources of economic actors and NGOs, and the exploitation of synergies between government levels as key priorities. Accordingly, decentralization and multi-level governance, the heyday of “new regionalism,” formed in the 1990s.

(3) After the turn of the millennium, owing to challenges of the global economy, a concentration on competitiveness and metropolises replacing the earlier emphasis on spatial cohesion and regions can be observed, and changing the European Union cohesion policy gave more importance to national states.

(4) The recent era of regional development and territorial governance dates back to the global crises of the 2000s and 2010s. Owing to disappointment in the earlier model, crisis, and emerging new tasks, a neo-Weberian turn (recentralization) seems to have occurred in the 2010s, and the success of regionalization has been challenged (Pálné and Mezei, 2016; Bouckaert, 2022). These changes are well reflected in the regional and local self-rule indicators of the European Union member states regularly published in the cohesion reports; while regional autonomy primarily increased between 1990 and 2000, local autonomy seems to grow later as well. However, regional and local autonomy has been declining in some member states during the last two decades (Dijkstra, 2021).

The latter observation points to the *variability of regional development policies and territorial governance* across Europe, whereby former socialist economies of the European Union have their own (and within the group-variegated) development paths (Domanski, 2010). The earlier differences between capitalist and socialist regimes can be summarized in three main—necessary and sufficient—characteristics: ownership structure (private vs. state), economic coordination mechanism (market-based vs. bureaucratic), and the preferences of political leadership regarding these two points (Kornai, 2016). Top-down development approaches based on centrally determined plans and a centralized redistribution of financial resources showed similarities with the Western situation after WWII, but state control over the economy and society was much more extended, and sectoral priorities (e.g., development of heavy

industries) often overwrote regional development issues. There was a strong focus on urban development coupled with centralized territorial governance (Lux, 2017). After the regime change, there was a shift toward a market-based economy coupled with an economic restructuring process and altering foreign economic relations.

However, as, for example, the “varieties of capitalism” concept describing East–Central European countries as dependent market economies (Nölke and Vliegenthart, 2009) claims, the differences in the European economies have not disappeared. Although an adaptation process regarding regional development and governance forced by the EU accession took place, it was based on external models and took less time than in older democracies. Accordingly, regional decentralization could not take root; it only took a short period, with the exception of Poland (Pálné and Mezei, 2016). This process is coupled with the ambiguous situation in Hungary’s municipalities. Local governments had relatively large autonomy and influence over local institutions and communities after 1990, but they were underfinanced, faced capacity problems, and were unable to create durable development coalitions with internal and external actors (Pálné, 2019). After 2010, in the framework of an “open and systematic centralization” municipal finance and competences were re-regulated, a hierarchical institutional system was set up to control local processes and mediate political power, and municipalities were made increasingly powerless. Consequently, local resources (labor market, education and training, infrastructure development, and land use) have been placed under central governmental control, largely but selectively limiting the scope of local economic development strategies (Pálné, 2019; Nagy et al., 2021; Molnár et al., 2022). At the same time, Debrecen, due to its size and economic strength, belongs to the category of municipalities that can be active in this field, which also underlines the importance of research.

Therefore, considering the economic development strategies implemented by local governments, scientists have identified three phases (Swinburn, 2007; Leigh and Blakely, 2017). In the period between the early 1960s and 1980s, the primary aim of local economic development was to attract processing industry investments (with special attention given to foreign capital) that were considered possible by establishing physical infrastructure and providing cheap labor and land (Barnekov and Rich, 1989; Kessides, 1993; Peter, 1998). The organization of activities was expected to be in the public sphere, and the general view was characterized by a project-based approach.

The second phase includes the period between the early 1980s and middle 1990s: the establishment/development of the economic basis that was typical for the area before received a much greater emphasis on which local (small and medium-sized) companies were also relied on, apart from mega-companies (Leitner, 1990; Cox, 1995). Specific company development services came into play, and greater care was given to soft factors (e.g., education of the labor force and entrepreneurship) regarding infrastructure development (Hanushek and Wößmann, 2007; Surdea-Blaga, 2018). Organizing activities are still performed by the public sector; however, the opinion of the business sphere was also considered, and some steps toward strategic thinking could be detected.

The third phase, starting in the 1990s, is dominated by the strategy-based approach, which played a special role in the development of innovation potential and presented the basis of competitiveness (Bajmócy et al., 2010; Wiechmann and Pallagst, 2012). Providing a local office environment at an appropriate level for

companies and supporting initiatives to improve the quality of life to attract or retain highly qualified labor has a central role (Fabula et al., 2017). A new element assists in networking in which clusters are assigned special roles (Porter, 2000; Delgado et al., 2016; Keeble and Wilkinson, 2017). Execution of the strategy is still controlled by the public sphere; however, civil and business spheres increasingly demand partnerships in the entire process (Horvath et al., 2018).

There are significant differences among the measures applied during different periods (Varró and Faragó, 2016) regarding the Central European economic development practices, and there are differences between the supply-based approach that relies on involving external resources and the demand-oriented approach that is based significantly on inner resources (as well). The supply-based approach involves the attraction of major companies from outside the region and their integration into the local economy, the attraction of knowledge and labor carrying that knowledge, and the redistribution of development resources among the regions. However, regarding the demand-oriented approach, the support of new local companies, improvement of innovation capacity, the establishment of location (and frequently industrial sector)-specific advantages that cannot be copied, and supply of highly qualified human resources with easily convertible knowledge can be found (Bajmócy et al., 2010).

We believe it is very important to study such non-capital cities for several reasons. On the one hand, they can have optimal conditions for economic growth by combining agglomeration economies and economic density with a more human dimension. On the other hand, they have the potential to address poverty, quality of life, and business environment advantages by tapping into new, dynamic industries. Despite successes in Western Europe and North America, less is understood about their potential in Central and Eastern Europe, Asia, and Latin America. Intermediate cities are frequently overlooked in development agendas and challenged by a considerable resource gap. Their local governments have limited authority and capacity to mobilize resources, making them dependent on financial transfers from central governments (Rodríguez-Pose and Griffiths, 2021).

After reviewing the strategies that can be followed in local economic development, it is legitimate to ask what internal and external circumstances determine the steps to be taken in the strategies to be followed, which stage of the process will lead to greater success, and whether there are differences between different geographical areas in this respect. One of the major shortcomings of the literature on the subject is that it has not addressed this issue or provided a clear explanation.

### 3 Methods

The study was made difficult because no comprehensive complex concept was created in the first decade after the regime change, in which economic development issues would have received special focus. Therefore, the analysis of other documents (e.g., economic advertising publications summarizing the major goals) was necessary. The reason for this was primarily that, similar to other Hungarian local governments, in this period, the leaders of Debrecen were busy solving actual short-term problems, and thus less attention was devoted to long-term issues.

In the new millennium, significant changes took place regarding development documents. Hungarian local governments tried to approach the issue in a complex way, and thus concepts covering every

aspect of the life of a settlement (e.g., economy, education, environmental protection, and traffic) were compiled. This process was intensified when Hungary joined the European Union in 2004, resulting in legal obligations to prepare various developmental concepts to enable the use of EU support. Accordingly, Debrecen's leadership paid great attention to this field and prepared five documents over the last 20 years.

Economic Development Concept of Debrecen Town with County Rights (2000):

- Operative Development Programme of Debrecen Town with County Rights between 2004 and 2006 (2003);
- Strategic and operative programme of the development of Debrecen between 2007 and 2013 (2006);
- Integrated Urban Development Strategy of Debrecen (2007);
- Urban Development Concept of Debrecen Town with County Rights 2014–2020 (2014); and
- Urban Development Concept of Debrecen Town with County Rights (2020).

These developmental concepts were compared in the following study of three important elements/levels (documents used different terms) of the concepts. The first was a vision for the future/general aim that recorded the most important characteristics of a positive future state of the town, which can be regarded as a guiding principle of development. At the second level, strategic aims/middle-term aims/development priorities represent the most important directions of development. The third field to be studied was measures/operative aims, which occasionally included particular branches or projects.

The analysis of development documents/strategies prepared by different territorial units (mainly municipalities) has long been considered a standard tool for scientific studies. Research of this kind can basically be divided into two groups. One is the comparison of strategies prepared by several municipalities on similar topics (e.g., smart city and climate adaptation) over a given period (1–2 years), focusing on how different natural, economic, social, and political factors influence the content of the document (e.g., Lux, 2015; Kaufmann and Arnold, 2018; Masik et al., 2021; Salvia et al., 2021; Shamsuzzoha et al., 2021; Egyed and Zsibók, 2023; Schmeller and Pirisi, 2023). The other, essentially smaller, group of analyses (e.g., Monyók et al., 2020; Essandoh et al., 2021; Czuczor et al., 2023) compares documents produced over a longer period of time for a given municipality, looking at how they have changed in response to changes in the external and internal environment and how the objectives have been achieved. Our study falls into the latter category.

### 4 Analysis of documents on local economic development

As mentioned previously, no such development document was made in Debrecen in the 1990s, when economic development received special focus (Kozma, 2009). Considering the development of the city, the first document containing goals in the 1990s was the Urban Policy Program, which was accepted in 1996. The document focused mostly on the human sphere (health and social issues), while regarding economic life, it set the task of making the city attractive to capital investment and better utilizing technical and intellectual infrastructure.

TABLE 1 The general aim/vision for the future in each development document of Debrecen (the document prepared in 2000 did not contain such part).

2003	A	To improve significantly and permanently the living circumstances, subsistence conditions, and urban life conditions like comfort, aesthetic quality, and healthy and safe environmental conditions in Debrecen in a way to also sustain development resources in the long term.
	B	Maintain the high mental potential, natural values and traditions of the town so that they become significant and lasting resources for the development of Debrecen.
2006/2007	C	Based on the values of the past and meeting the challenges of the future help Debrecen to become a significant regional center in the Northern Great Plain Region and the region beyond the border with space organizing power and a center for knowledge of international significance.
	D	Competitive economy at both Hungarian and international levels relying on the geographical location and the mobilizable and renewable natural, economic and human resources of the town that by preserving and sustainable use of values ensures quality life conditions for those living in the town.
2014	C	Debrecen is a vigorous town becoming a competitive economic, educational and health center providing outstanding life quality, developing in a balanced and sustainable way based on the values of the region and on innovation at international level as well.
	D	The town is a regional center and knowledge center relying on its geographical location, mobilizable and renewable economic and human resources having influence even over the border due to its services; moreover, the town is about to create an innovative economy competitive on Hungarian and international levels providing quality life conditions for its inhabitants in the long-term by preserving and sustainable use of values.
2020	C	Debrecen is one of Hungary's largest cities, which, after the capital, has the most significant regional integrating power. It has the potential to be the economic, transport, educational, cultural and health center of the eastern region of Hungary, as well as of Eastern Slovakia, Western Ukraine (Subcarpathia) and Western Romania (Partium).
	D	Strengthening the national—and, at the same time, cross-border macro-regional central—role Economic growth: developing a competitive and innovative economic sector and knowledge center, which will provide the basis for the sustainable development and long-term functioning of the city.

A, general aim; B, special aim; C, vision for the future; D, overall aim. Source: Excellence (2003), Euro-Régió Ház (2006, 2007), Euro-Régió Ház – INNOVA (2014), and BFVT (2020).

More detailed information regarding the particular ideas of the local government is given by publications made during this period that inform potential investors primarily on the industrial parks under construction at that time (DRGA, 1994; Grasselli and Láng, 1995). Such publications presented the conditions of the city, first emphasizing the beneficial geographical location and R&D background provided by higher education institutions. Regarding the future and capital investment, these economic branches had decades of traditions in the industry of the city; therefore, highly skilled, free labor was available in high numbers (e.g., pharmaceutical industry, cosmetics industry, plastic processing, medical equipment, production of telecommunication equipment, and light industry). It was also emphasized that the conditions of the settlement make it possible to attract industrial branches with high technological standards for the operation for which a developed scientific (research and development) background is required.

By studying the documents mentioned in the previous chapter from the perspective of the vision of the future/general aim, significant changes were observed (Table 1). In this part of the document, from 2003, no mention of the economy was made, whereas the documents made in 2006/2007 outlined the necessity of creating knowledge centers significant at the international level and in a competitive economy; moreover, they emphasized the space-organizing strength of towns crossing borders. Debrecen's Urban Development Concept, accepted in 2014, contained the same elements but also went beyond them, highlighting the importance of utilizing innovation. The latest document (Urban Development Concept of Debrecen Town with County Rights) continues to emphasize the importance of the previous elements (with special mention of the innovative economy and the knowledge center), but in some areas, it goes beyond them. On the one hand, it emphasizes the macro-regional, cross-border economic

role of the city, while on the other hand, it clearly positions the settlement in second place after the capital; moreover, it clearly expects economic development to contribute to the sustainable development of the city.

In the case of ideas composed at the second level of the development documents (strategic aims/middle-term aims/development priorities), analyses were made significantly difficult by differences in terminology and content; therefore, a comparison was possible only in the case of documents composed in 2000, 2003, 2006, 2007, 2014, and 2020.

Comparing the first three documents, similarities can be found in the case of the documents made in 2000 and 2003 regarding the field of strategic goals (Table 2): Job generation, which was the most frequently appearing target of local economic development, was placed first and was completed with one specific strategic goal naming a single branch (tourism). The difference between the two documents was that the one in 2003 also contained development priorities (one of them was the development of the economy), and the demand for the development of human resources appeared in this document. In contrast, in the Operative Development Programme of Debrecen, strengthening the central role and forming a competitive economy at the international level were strategic aims, and many more palpable measures were implemented in relation to development priorities.

Significant changes could be experienced in the Integrated Urban Development Strategy in the Urban Development Concept for 2014–2020 and in the Urban Development Concept of Debrecen Town with County Rights at the level of middle-term thematic aims/sub-aims related to economic life (Table 3). Considering economic development and tourism, the demand to meet international requirements already appeared in 2014, but these were not considered sufficiently important to be mentioned in 2007.

TABLE 2 Strategic aims and development priorities in relation to the economy in the documents made in 2000, 2003, and 2006.

2000	A	Generating jobs Development of tourism
2003	A	Generating jobs Development of tourism
	B	Development of the economy Human resources development
2006	A	Strengthening the (inter)regional central role of the town, forming an economy competitive at an international level
	B	Creating the conditions necessary for effective development of the economy Human resources development

A, strategic aims; B, development priorities. Source: VÁTI – Excellence (2000), Excellence (2003), and Euro-Régió Ház (2006).

Both documents emphasized the necessity of higher education and research development, whereas, in the concepts elaborated in 2014 and 2020, the importance of placing great emphasis on the utilization of the results was also recorded. However, the most recent document includes two new elements. On the one hand, in line with the vision for the future, it stressed the importance of increasing the role of the city in this area. On the other hand, it highlighted the importance of supporting societal innovation.

As for human resources, the documents composed in 2007, 2014, and 2020 represented advancements compared to earlier documents (although this meant the occurrence of public education, its economic importance was not significant), but there was no significant difference between the three documents in this respect.

The greatest change was observed for various measures at the third level. This can be traced back to the fact that with the realization of certain investments, their appearance in the documents became unnecessary, and changes in the external conditions had the greatest effects in this field.

In the case of infrastructure development aimed at meeting economic demands, one of the most important issues is the development of industrial parks. In this framework, the establishment and then expansion of the Debrecen Regional Innovation Science and Technology Park and the Debrecen Agricultural-Industrial Park situated in the western part of the town was the focus over the decade after the turn of the millennium. In contrast, the improvement of accessibility is currently the most important aim related to the above buildings, which can be explained by two factors. On the one hand, their development/expansion is hardly possible because of the conditions of the natural environment; on the other hand, former levels of accessibility are not suitable now because of the increase in traffic as a result of the growing number of settled companies (the fullness of establishments reaches 75–80%). As a result, the concept of 2014 indicates that the Southern Industrial Park near the airport and the airport itself (performing logistics at a higher level) in the southern part of the city would be in focus for investment requiring development.

The concept of urban development adopted in 2020 brought significant changes in two respects. On the one hand, it included the need for significant expansion (from 200 to 700 hectares) and infrastructure development of the Southern Industrial Park; on the other hand, a new industrial zone of approximately 500 hectares was designated in the northwestern part of the city.

Another important element of economic development in the documents is the support of small- and medium-sized enterprises through various measures. In this respect, concepts composed in the

early 2000s included the establishment of incubator houses, while a much more complex approach was taken, including helping to find new plants (it was important, especially for firms that operate in residential areas), support to access the market, and measures to serve the training of appropriate standards.

The third center of interest, not detected before, is the fact that the concept was drawn up in 2014 and, in particular, in 2020, has already mentioned several specific sectors. A study of the branches reveals that, in addition to the city's previously important industries (e.g., food, engineering, and pharmaceutical industries), the sectors of the 21st century (e.g., informatics, electromobility, and services, especially the SSC sector) have played an important role.

The second major group of measures in the document associated with the economy is its relationship with higher education. The documents prepared in the early 2000s regarded the development of a complete vertical of innovations and the strengthening of partnerships, helping technology transfer between universities and the production sector, as important only in a general approach. The demand for the establishment of knowledge centers occurred as a new element in the 2000s involving the fields of informatics, agricultural economy, and pharmaceutical industry.

The Urban Development Concepts accepted in 2014 and 2020 still consider these fields to be important; however, two important changes were involved. In 2014, the quadruple helix model was applied as a new approach in which participants in the economy, the government, and the scientific public took society as the end-user into the center of their activities, which was included in the document adopted in 2020 as Open Innovation 2.0 Debrecen. However, biotechnology, the functional food industry, and the health industry, involving several branches adjusting to the demands of the 21st century, emerged as new branches.

Tourism played an important role in the measures related to the concepts reflecting the above; however, some changes in the focus issues were observed. First, initially relying on the medical water and mental capacity of the higher education institutes in Debrecen, the development of medical and thermal tourism occurred. From the second half of the 2000s, building on the potential offered by the University of Debrecen, the term health tourism was emphasized to represent a more complex approach to the issue.

Second, from the 2000s, different concepts placed an increasing emphasis on the development of cultural tourism (called event tourism in earlier documents), which can be traced back to two facts. On the one hand, the dynamic development of this branch of tourism was a worldwide trend resulting in significant income owing to the

TABLE 3 Middle-term/thematic aims/sub-aims in the documents composed in 2007, 2014, and 2020.

Conditions of economic development	2007	Infrastructure development meeting the demand of the economy.
	2014	Infrastructure development meeting the demand of internationally competitive economy, creating an environment supporting those involved in the economy.
	2020	Strengthening an internationally competitive economy, improving the business environment
Higher education and economy	2007	Development of the education-research infrastructure of the University of Debrecen and ATOMKI, HAS, increasing the level of connection to those involved in the economy.
	2014	Development of the infrastructure of the higher education and research institutes of the town, increasing the utilization of scientific results in practice.
	2020	Strengthening the city's role in higher education and research, improving the infrastructure of institutions, increasing the utilization of scientific results in practice, supporting innovations for societal purposes
Tourism	2007	Establishing the conditions of quality tourism, increasing the level of already available conditions.
	2014	Improving the conditions for quality tourism at an international level, increasing the level of already available conditions.
	2020	Improving the conditions for quality tourism at an international level, increasing the level of already available conditions
Development of human resources	2007	Development of the education and public education infrastructure of the town
	2014	Development of the education and public education infrastructure of the town
	2020	Development of the education and public education infrastructure of the town

Source: Euro-Régió Ház (2007), Euro-Régió Ház – INNOVA (2014), and BFVT (2020).

highly paid participants for related settlements. On the other hand, in 2010 and 2023, Debrecen was among the candidates for the title of European Cultural Capital (the proposals were not eventually successful), and these efforts appeared in various development documents.

Third, changes are evident in sports tourism, the importance of which is increasing. In the early 2000s, cycling and water sports-based tourism were the focus of development, while increasing attention was paid to sporting events and associated infrastructure development. Another turning point was the Urban Development Concept for 2014–2020, which considered holding various sports events important, but—owing to the significant constructions in former periods—regarded the expansion of already available buildings sufficiently and satisfactorily.

For human resources, the fourth group of economy-related measures, all concepts emphasize the importance of creating and introducing training and curricula that meet the demands of the economy. However, the documents produced from the second half of the 2000s onwards were much more specific: on the one hand, they stressed the importance of giving priority to IT, and on the other hand, they considered it necessary to start training in English and German, which also met international standards (the institutions concerned were established in the second half of the 2010s). Furthermore, the need to modernize and expand the city's network of secondary school colleges was also reflected in the Urban Development Concept adopted in 2014, which pointed to the growing importance of quantitative requirements in human resources, in addition to meeting qualitative needs.

## 5 Discussion

Analyzing the results of the document analysis from the perspective of spatial economic planning leads to the following conclusions. Concepts increasingly emphasize that Debrecen's competitiveness in industry, the service sector, tourism, and higher

education must be improved not only in Hungary but also internationally. The background to this is that urban competition, which became increasingly fierce globally in the 1980s (Buck et al., 2017; Nasi et al., 2023), gradually appeared after 1990 in East-Central Europe as the barriers created by national borders were gradually removed, and the cities had to take serious steps to attract businesses, tourists, and university students (Kozma and Ashworth, 1993; Raźniak et al., 2018; Light et al., 2020).

Contrarily, concepts increasingly pointed out that Debrecen has to become an economic and social center not only in the Northern Great Hungarian Plain but also in the eastern half of the entire Carpathian Basin, which would give further tasks to the city. This ambition can be partly explained by strategic and ethnic factors. The former implies that the city's leadership believes that its long-term success depends on becoming the center of this geographical region, attracting as many functions as possible to its borders. The latter factor is related to the fact that in the geographical area concerned, outside the borders of Hungary, there are a larger number of Hungarian nationality residents, and Debrecen wanted to be a center for them as well.

A mixed image was obtained when the characteristics of the phases of local economic development were compared with the development documents prepared in Debrecen. On the one hand, the development of physical infrastructure, which was typical of the first phase, played an important role in all documents; however, since the mid-2010s, this field has received particular attention. The preference for processing industry investments and the presence of a project-based approach were features of the documents until the early 2000s, but the former (especially foreign direct investments) has become important again since the mid-2010s.

On the other hand, considering the characteristics of the second phase, developing an economic base supported by local antecedents formed an important part of all concepts. However, support for local small- and intermediate-sized companies received greater emphasis only from the beginning of the 2000s. In documents made from the 2000s, the importance of creating the soft side of infrastructure

development (e.g., labor training) and specific company development services (e.g., helping companies reach the market) occurred.

Third, considering the characteristics of the third phase, providing a high-level business environment for companies played an important role in the documents from the 2000s, and the same was typical in the case of the high quality of life necessary for retaining highly skilled labor. The idea of creating a competitive economy based on local innovation potential and networking concepts occurred in the Urban Development Concept for 2014–2020 of Debrecen Town with County Rights (2014) and in the Urban Development Concept of Debrecen Town with County Rights (2020).

The fact that documents accepted since the mid-2010s have characteristics of all three phases (in particular, the specificities of the first phase) can be explained by both internal and external reasons. The former means that the city's management realized in the mid-2010s that major investments in the sectors that constitute the city's former economic base (e.g., pharmaceutical and food industries) were not expected. Consequently, the city set the objective of attracting investment in the automotive industry, but this required the development of larger industrial sites.

Among the external reasons, reindustrialization plays an increasingly important role in today's global economic processes (Christopherson et al., 2014; Capello and Cerisola, 2023). In recent years, the Hungarian government has increasingly seen this as the key to economic recovery (Lengyel et al., 2017), and as the automotive industry plays a very important role in the Hungarian economy (Molnár et al., 2020; Pavlínek, 2022; Szalavetz and Sass, 2023). A key trend in the automotive industry today is the growing role of electromobility, and in the changed circumstances, the Hungarian government considered that its survival could only be ensured if the country is open to battery industry developments from the Far East (Czirfusz, 2023). However, owing to the significant labor requirements of the investments, only the country's larger cities could be considered, and since some of these were controlled by the opposition as a result of the 2019 local elections, the preference for the pro-government city of Debrecen seemed a logical choice despite the lack of some of the conditions (scarcity of technological water and electricity; Éltető, 2023; Gyórfy, 2023).

Overall, at the document level, the city gradually shifted toward a demand-oriented approach, based largely on internal resources, until the early 2010s, whereas in the last 10 years, a more supply-based approach has been observed. There is a growing emphasis on the relocation and integration of large companies from outside the region into the local economy (the success of the latter is highly questionable in the case of Far Eastern companies) and the attraction of knowledge and labor carrying that knowledge.

It is also worth noting whether the local economic development strategies were successful and the current economic situation of the city. The question can be answered from practical and theoretical perspectives, as well as in two fields that are strongly related to each other. Regarding the latter, international prizes received by Debrecen in recent years could be mentioned as recognitions; among other things, fDI Intelligence, a division of the Financial Times (UK), ranked Debrecen in the TOP 10 list of the world's best investment promotion destinations in 2021, and in 2022, Debrecen was evaluated among the top 10 among smaller cities in the 2022/23 ranking of European cities of the future by fDi intelligence. Practically, the investments already announced will bring working capital to the city at €11 billion and create nearly 20,000 new jobs. The most important new investments are the new BMW factory (which can be seen

TABLE 4 Changes in the economic indicators of Debrecen and other settlements with more than 100,000 inhabitants outside Budapest between 2000 and the early 2020s.

	A*			B**			C***		
	1	2	3	1	2	3	1	2	3
Debrecen	2.18	1.33	2.46	1.20	0.97	0.47	2.37	1.35	2.03
Szeged	2.17	1.21	2.16	1.04	0.83	0.36	2.14	1.39	1.63
Miskolc	2.34	1.33	1.96	1.07	0.69	0.60	2.93	1.38	2.11
Győr	4.38	1.23	1.54	1.30	0.50	0.69	2.34	1.76	1.61
Pécs	2.51	0.95	2.39	1.43	1.01	0.40	2.18	0.97	1.98
Kecskemét	2.43	1.43	2.73	1.27	0.73	0.57	2.89	1.93	2.60
Nyíregyháza	2.14	1.48	2.18	1.17	0.83	0.49	2.59	1.60	1.87

A, revenue from local business tax; B, number of registered unemployed; C, gross value added. 1: 2008/2000; 2: 2015/2008; 3: the early 2020s/2015. \* 2023; \*\* 03.2024; \*\*\* 2022.

as the flagship of the transition to electromobility) and the 100 GWh capacity plant of the Chinese battery manufacturer CATL, which is also globally significant. Another possibility to judge the success from a practical point of view is to examine the indicators reflecting the economic situation of the city, comparing it with other Hungarian settlements, which also tries to answer the questions asked at the end of the second chapter of the study. The three indicators analyzed (Table 4) show that Debrecen has developed at the fastest pace compared to other municipalities since the mid-2010s (the city's most favorable position in terms of positive change in the data is between 2015 and the early 2020s). In our view, this is very interesting in that the characteristics of the first phase of local economic development (e.g., the "first phase") were much more pronounced in this period compared to previous years.

The data suggest that the international trends mentioned earlier (e.g., the emergence of the reindustrialization drive in Central Europe, the growing role of electromobility) and the Hungarian government's response to them (strong support for investment in this sector), based on existing assets (e.g., the prominent role of the automotive industry), have resulted in the municipalities concerned (and Debrecen in particular) being able to demonstrate significant success. However, the question rightly arises as to what extent this can be considered a Central European phenomenon, what type of cities (e.g., of what size) are affected, and how this phenomenon is being experienced, which requires further analysis.

## 6 Conclusion

The main findings of this study are summarized below. Urban development concepts have paid increasing attention to improving Debrecen's international competitiveness, and in this context, it was considered important to increase the city's macro-regional role. Second, while in the 20 years after 1990, the city gradually progressed through the phases of local development strategies (moving from phase one to phase three), in the last 10 years, the city has increasingly been characterized by phase one. Third, Debrecen's activities in this direction can be considered fundamentally successful: the city's economic development strategies have been rewarded with world-renowned awards by various international organizations, and companies with a significant role in the global economy have settled in the city because of concrete activities based on these concepts.



## Author contributions

GK: Conceptualization, Investigation, Writing – original draft, Writing – review & editing, Data curation, Supervision, Visualization. FS: Conceptualization, Formal analysis, Supervision, Writing – review & editing. EM: Conceptualization, Investigation, Methodology, Writing – original draft, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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