

Article

Revitalising Rural Spaces: Lessons Learnt from Brownfield Regeneration in a Shrinking Region

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Abstract: In the post-socialistic space, old, industrialised regions are not only dealing with problems with the regeneration of industrial brownfields but also with the occurrence of post-agricultural brownfields. The main objective of this paper is to identify and interpret how a successful network of cooperating actors was formed that participated in the process of transforming an agricultural brownfield into a successful rural business zone. From a methodological perspective, the article is based on the findings derived from a set of written memories with ten key actors who were involved in the redevelopment process. The studied regeneration project, which was implemented thanks to the successful cooperation of network of actors both from different hierarchical levels (local, regional and central level) and from the different sectors (public, private and non-profit sector), regenerated an area of 10.4 hectares thanks to both public and private investments of approximately CZK 240 million. Regeneration contributed to the creation of approximately 450 new jobs, and thanks to this project, the population in Třanovice also increased significantly in the transition period (1991–2021), which the studied community positively distinguishes from the shrinking urban centres and rural communities in the post-industrial neighbourhoods.

Keywords: shrinking region; de-agrarianisation; depopulation; post-agricultural brownfield; regeneration; Central Europe



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1. Introduction

In the 21st century, many rural municipalities in the European Union have to face a variety of complicated problems related, for example, to the decline and ageing of the local population [1–4], processes of digitalisation and energy transition [5–7], the decay of some settlement structures [8], and the appearance of neglected and abandoned brownfields with different types of original use [9,10]. The nature of these challenges often exceeds the capabilities of rural municipalities, which—compared to large cities—lack the financial resources and staff capacity of the relevant experts to address them effectively [11]. Rural municipalities are in a worse position compared to urban ones in the regeneration of brownfields because rural municipalities usually lack specialised experts with the necessary know-how [12,13]. Additionally, the majority of private investors are more interested in the redevelopment of brownfields in core areas (A sites in CABERNET “ABC classification”) [14] like urban centres [15] or brownfields located in proximity to main development axes [16]. The lack of interest from private investors can be addressed with public investment, and the lack of experts in rural communities can be partly compensated for by using web-based tools to support decision-making and involve stakeholders in process of brownfield regeneration [17–19]. In the field of brownfield regeneration, it is important for small rural municipalities to obtain funds from other levels of public

authority (EU, central, regional), but the preparation of applications for various subsidy programs again requires specialised experts with special know-how because, for example, EU financial instruments are associated with bureaucratic burdens [20,21].

There are many studies that have identified various factors that support successful brownfield regeneration. One of them emphasises the good quality of transport infrastructure, distance from metropolitan (core) areas and the intensity of pollution in the form of environmental burdens [22]; other studies highlight clear ownership structure, the influence of original use and the role of incentives [23,24]. Other studies, which rely on qualitative data obtained through interviews, also rank cooperation between different involved actors among the main factors governing successful redevelopment [25–27]. In this context, it can be mentioned that different groups of actors participating in the redevelopment process may emphasise different factors and conflicts between them are very common [28].

1.1. The Rise of Agrobrownfields

The emergence of agrobrownfields can be attributed to various factors, primarily related to changes in politics and economic frameworks [29]. In the context of Central and Eastern European countries (CEE), the shift occurred with the fall of communist regimes in 1989. In the entire economy, the shift from a centrally controlled to a market-based economy formed the foundation of the agricultural transformation processes. The process involved returning nationalised property to its original owners, transforming cooperative farms, and privatising state-owned farms [30]. The reduction in subsidies and the implementation of free trade policies resulted in profit decline of agriculture enterprises, a significant decline in agricultural employment [29,31] and a drop in the gross agricultural production or share on the GDP [30]. In addition, there was a reduction in the number of farms [32].

During the transformation period from 1990 to 2003, the production of livestock experienced a significant decrease in numbers of cattle, pigs, and poultry [31,33]. Additionally, the production of intensively cultivated crops such as vegetables and potatoes, along with the cultivation of orchards, also suffered decline. While agricultural production has declined, the non-productive functions of agriculture have developed and multifunctionality has increased. New activities such as organic farming, energy crops, energy production, or agro-tourism are examples of the shift towards multifunctional agriculture [30,34]. Most of the agricultural structures that were formerly employed for livestock production are no longer required. These structures are typically extensive in size and may include facilities such as barns, grain silos, storehouses, mill houses, cowsheds, calf houses, and pigsties. The properties were not suitable for modern agricultural technology and the possibility of using them for other purposes was limited [9]. The result of the described transformation processes was the creation of many abandoned or under-used agricultural premises in all regions of the Czech Republic [9,33]. This trend slowed in the first decade of the 21st century, when the European Union's Common Agriculture Policy was implemented [31,34].

1.2. Post-Agricultural Brownfields in the Czech Republic

On the territory of the Czech Republic, previous studies that dealt with the issue of agricultural brownfields were devoted especially to regions where agricultural production was most intensive and where agricultural production was most intensively affected by a decline in its production after the return of the market economy in 1989. The study based on data from the South Bohemia Region shows that the transition in the utilisation of pre-1989 agricultural premises is strongly influenced by the social and economic contexts in which particular sites are located [9]. Another study based on data from the South Moravian Region emphasises that the regeneration of agricultural brownfields can have positive effects on tourism development in rural municipalities [35]. Another paper, which uses data from both the South Moravian and South Bohemian regions, states that there was not a relationship between the size of an agricultural premise and its probability of being an agricultural brownfield and that lower agricultural land costs drove the higher probability that a brownfield was reused [36]. Further research deals with examining the spatial

unevenness of the creation, remediation and persistence of post-agrarian brownfields in the same two regions, concluding that the brownfields initially identified in 2004 are concentrated in regions with lower quality agricultural land while simultaneously being located in the hinterlands of regional urban centres and that peripheral regions most often contained long-term brownfields [37]. Another paper based on collected data from questionnaires from selected municipalities in three southern regions of the Czech Republic (South Moravian Region, South Bohemia Region and Vysočina Region) concludes that three types of reuse were identified as most preferred among respondents: agricultural reuse, industrial reuse and reuse for housing, and services and leisure time activities [38]. From a spatial perspective, agricultural re-use of post-agricultural brownfields can be primarily found in municipalities not suitable for intensive agriculture located in the fodder crop and potato areas of agricultural production with the highest shares of permanent grassland on agricultural land and, on the other hand, areas with the best preconditions for agriculture tend to re-use former farm premises for non-agricultural production [39].

1.3. The Role of Actors and Their Cooperation in the Redevelopment Process

The process of brownfield redevelopment usually involves a longer period of time; in this context, it should be emphasised that in the initial stages of this complicated process, the temporary uses and temporary activities could be a successful way of finding opportunities in periods of uncertainty and crisis, financial market volatility, deindustrialisation and political change [40–42]. Initially, new uses may be those that do not require major investment in revitalisation—for example, uses for renewable energy development [43,44], or the brownfields could be used as temporary green spaces for interim use or gardening with interim form of use [45,46].

Different forms of cooperation between different groups of actors are discussed in the context of brownfield redevelopment process. Attention is often paid to the experience with the development of public–private partnership [47,48], because revitalisation projects in many locations often use public investment in the initial stages of redevelopment to attract private investors in the later stages of this process [26]. Other successful revitalisation projects have been implemented through networking of majority of actors within the private sector [35] or through the collaboration of majority of actors within the public sector [25]. The cooperation of actors in the sense of networking is also discussed in previous studies—for example, one study emphasise that three moments must be followed when regeneration is planned with an endeavour to increase the chance for success: (i) defining the brownfield problem, (ii) mobilising networks, and (iii) leading by example, which together have the potential to define an entrepreneurial path for particular brownfield sites [49]. In terms of cooperation between actors, it is important to note that most rural municipalities in the Czech Republic are significantly smaller in population compared to other EU countries [50,51]. Due to the existence of a large number of small rural municipalities, inter-municipal cooperation [52,53] or cooperation within local action groups [54,55] is used to solve many development problems, which also include redevelopment of brownfields.

The overall economic situation of the region also influences the success in finding political support and financial resources for brownfield regeneration. In this context, it is much more difficult for small municipalities located in regions undergoing significant structural change to find support for their projects. They have to compete within this region with large shrinking cities that face serious problems such as depopulation [56,57], the occurrence of large post-industrial and post-mining brownfields [58], and the impoverishment of the population and emergence of socially excluded localities [59,60]. Actors at both regional and central levels prioritise these issues, and smaller settlements are not given attention. Local actors thus need to make a much greater effort to overcome this imbalance.

The aim of our study is to analyse the network of cooperating actors at different hierarchical levels (local, regional, national) that have managed to successfully regenerate an agricultural brownfield. A sub-objective is to complete the existing mosaic of knowledge

on rural brownfield regeneration by adding the context arising from the location of the brownfield in a structurally affected, peripheral, shrinking region.

2. Materials and Methods

2.1. Case Study Area

Most studies in structurally affected regions are devoted to the problems of brownfields in urbanised areas of industrial or mining origin [12]. In this article, we focus on brownfields of agricultural origin located in the small rural municipality of Třanovice, which is situated in a Moravian-Silesian region (Figure 1). Třanovice was part of the municipality of Hnojník until 1990, when Třanovice became an independent municipality and started to develop independently. Before 1989, the state farm had its main seat in the rural municipality of Hnojník. Both of these two rural municipalities have a similar peripheral location position in relation to capital Praha, but they are well connected to the main highway routes leading from the Czech Republic to Poland and Slovakia. As they are neighbouring municipalities with a common history and the same geographical location, these two rural municipalities are used to compare basic population trends.



Figure 1. Localisation of the case study area. Source: own elaboration.

Attention is focused on the selected agricultural brownfield in rural municipality Třanovice, which underwent the type of development typical for the territory of today's Czech Republic in the 20th century. The original traditional farmstead with its typical grand plan shape (Figure 2), which belonged to the German-speaking Kappel family, was nationalised after the end of the Second World War. The original owners were expelled to Austria and the family farm became a state farm Hnojník. As part of the intensification

of agricultural production, additional buildings were added to the original farm during the 1980s—for example, livestock buildings such as calf sheds in the northern part of site (Figure 3). After the return of the market economy, the state farm was transformed into a joint stock company, TRANAGRO, 100% owned by the state. Unfortunately, the state management did not prove to be a good manager and, in 1998, the general meeting of this company decided to liquidate the company. The liquidation of the assets of the bankrupt farm was influenced by the municipality's leaders, who feared that the brownfields could deteriorate over a long period of time (Figures 4 and 5) and adversely affect the development of the municipality and its image. Thanks to the development of cooperation among local actors and actors at other hierarchical levels (central, regional), the area was transformed into a successful business zone (Figures 6 and 7). As part of the revitalisation process, part of the site was transformed thanks to public sector investment (e.g., Figure 8), and other parts were developed by medium-sized and small entrepreneurs from the region (e.g., Figures 9 and 10). Selected basic characteristics and milestones of the redevelopment process are listed in Table 1 and Figure 11 for a better and systematic overview. In the context of revitalisation of post-agricultural brownfields in small rural municipalities, our case study area is unique and deserves more in-depth attention.



Figure 2. State farm in an aerial photo from 1955, consisting of the nationalised farmyard of the German-speaking Kappel family. Source: [61].

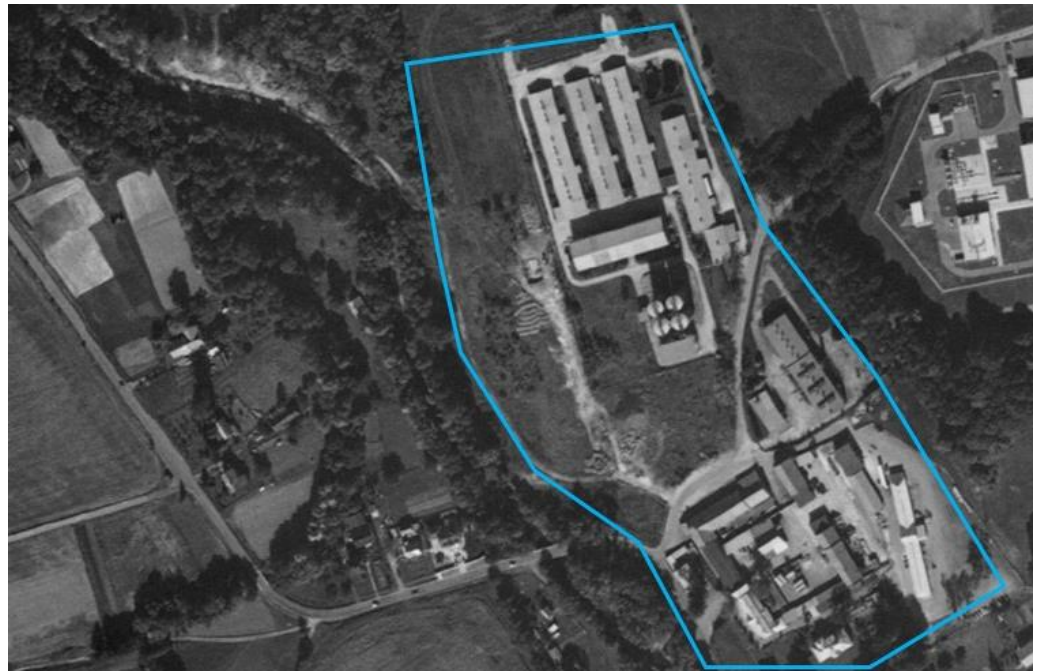


Figure 3. Abandoned site of the former state farm in an aerial photo from 2000. The boundary is marked by the blue line. Source: [61].



Figure 4. An example of a partially destroyed building from the grounds of a state farm. Source: [62].



Figure 5. Neglected and abandoned building of the former state farm before the start of the revitalisation process. Source: [62].



Figure 6. The case study area in an aerial photograph at the start of the regeneration process (e.g., prepared new parking lots) in 2003. The boundary is marked by the blue line. Source: [61].



Figure 7. Intensively used revitalised area with a large number of parked cars in 2021. The boundary is marked by the blue line. Source: [61].



Figure 8. The rebuilt grounds of the historic Kapples Agricultural Yard in the southern part of the case study area (photo: P. Dvořák).



Figure 9. Revitalised northern part of the study area used by the company AGROCHOVEX—Vitakraft engaged in production of feed for small animals (photo: P. Dvořák).



Figure 10. Example of two devices of a transport company—completely new construction truck washing station (right) and renovated petrol station with solar panels on the roof (in the background on the left) (photo: P. Dvořák).

Table 1. The selected basic characteristics related to transformation of former state farm into rural industrial zone in Třanovice.

Characteristic	Description
Total area of site	10.4 hectares
Public investments in the redevelopment of site	CZK 140 million
Estimated amount of private investment in the redevelopment of site	More than CZK 100 million
Approximate number of new jobs created	450
Start and completion of the redevelopment process	1998–2015

Source: data—[63,64], authors' own processing.

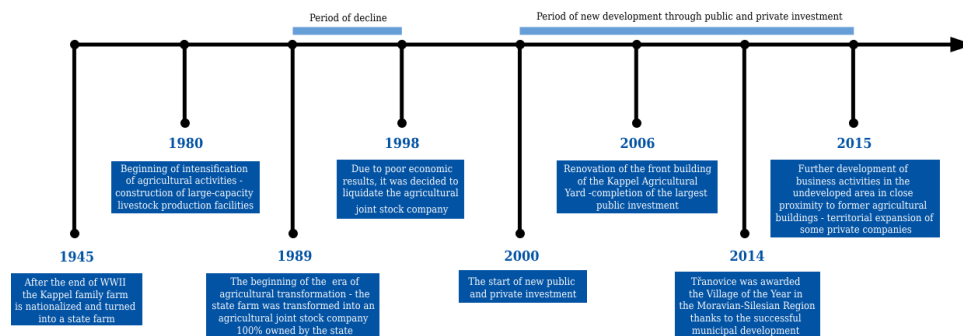


Figure 11. Source: data—[63,64], authors’ own processing.

2.2. Methodology

Our methodology is based on the analysis of memories from ten actors (see Table 2) who directly participated in the process of revitalisation of the agricultural complex in Tranovice belonging to the liquidated agricultural joint stock company TRANAGRO (before 1989, the former state farm Hnojník). We used the coding system in the software ATLAS.ti 23 and identified the main supporting factors and main barriers related to the redevelopment process of the case study area. In addition to the memories, ATLAS.ti was also used to analyse two important materials [63,64] that served as dissemination material about the good practice example to create a word-cloud for how the redevelopment process is presented to stakeholders from different regions of the Czech Republic. All collected data and information were analysed mainly with regard to the way in which the network of actors was created that managed to implement this large development project in the conditions of a small rural municipality in a peripheral shrinking region. The research procedure is shown schematically in Figure 12.

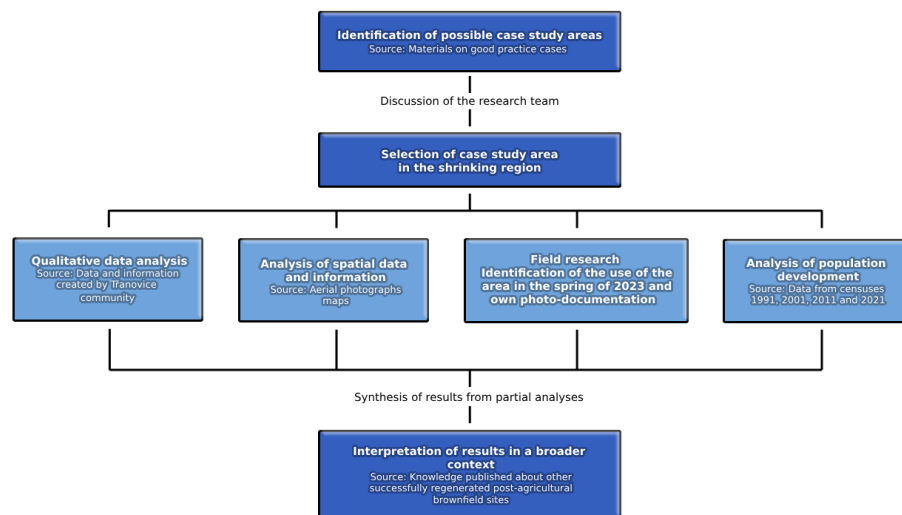


Figure 12. Graphical representation of methodology.

Table 2. Basic characteristics of the actors participating in the revitalisation process who published their memories.

Involved Actor	Sex (F/M)	Role in the Revitalisation Process
Jan Laitl (+)	M	Liquidator of an agricultural joint stock company TRANAGRO with 100% state ownership (former state farm)
Jan Tomiczek (+)	M	Mayor of the municipality—the main visionary and driving force behind the revitalisation project and public projects

Table 2. Cont.

Involved Actor	Sex (F/M)	Role in the Revitalisation Process
Karel Baron	M	Project manager in property sales company—leader in the preparation, management and implementation of the entire revitalisation process including the creation of the development strategy
Oto Onderek	M	Director of the public benefit company Třanovice Services , which was responsible for the implementation of public revitalisation projects
Zbyhněv Janczyk	M	Member of the municipal council —Chairman of the Community Development Commission, planner
Boris Guziur	M	Managing Director of company TISPOL , which was created by the municipality of Třanovice in 2005 to take care of the largest investment projects of the municipality
Tadeáš Barteczek	M	Managing director of company SPETRA CZ —purchase of part of the buildings in the south-eastern part of the site and implementation business plan in the area of truck and car transport
Jindřich Mackowski	M	Managing director of company AGROCHOVEX—Vitalkraft —purchase of part of the buildings in the northern part of the site and implementation business plan in the area of small animal feed factories, aquarium fish production, etc.
Jiří Hladík	M	Representative of the Ministry of Regional Development and the State Land Fund —supported the project at central level, particularly in the area of debt management
David Walter Novák	M	Programme designer (working activities for Třanovice Services and Local Action Group Pobeskydí), e.g., preparation of applications for grants from EU and national sources

Source: data—[63,64], the person with † symbol has already died, authors' own processing.

2.3. Data

The written memories collected and published by the Rural Renewal School [63,64] were the original source of information about the revitalisation process we used. These materials describe the lessons learned from successful brownfield redevelopments and also represent a valuable historical source of information because two of the key actors (e.g., the liquidator of an agricultural joint stock company and mayor of the municipality) have unfortunately passed away. In addition to the memories, both written and oral materials related to the development of the site were analysed, such as local development studies [65,66], dissemination presentation of actors [67] or information from videos [68–70]. During the analysis of the available material, we also used information from aerial photographs, statistics and field surveys within the study area. Regarding the statistical data, we used data from the last four population censuses (1991, 2001, 2011 and 2021) for two selected rural municipalities (Třanovice, Hnojník), which formed a common municipality until 1990, and for the two most important surrounding urban centres (Frýdek-Místek, Ostrava) as well as for the whole territory of the Moravian-Silesian Region.

3. Results

3.1. Finding Solutions for Inherited Problems

After the return of the market economy after 1989, the state-owned farm was transformed into joint-stock companies with 100% state ownership. The new agricultural company was unable to cope with the new economic conditions and its economic situation deteriorated. The gradual decline was characterised by Oto Onderek from the company Třanovice Services as follows: “Citizens in the village could see where this joint-stock company was going. Unmaintained and dilapidated buildings, swamp running across the road, nettles reaching up to the windows of some buildings, fewer and fewer employees, cattle and farm machin-

ery sold off; these were all signs of the end of the joint-stock company". In November 1998, it was decided at the general meeting that the joint stock company would be dissolved by liquidation, and Jan Laitl was appointed liquidator. Project manager from Ostrava property sale company Karel Baron described his first impressions of the site as follows: *"The area was very devastated, all the cattle had been sold long ago and the proceeds spent by the previous management, the machinery confiscated and sold by the tax authorities as the main creditors. The only trace of animals left behind was manure, dung and mouldy hay. The real estate of agricultural buildings was there, some of them badly ruined, some of them quite usable"*. Resident of the village and a member of the municipal council Zbyhnev Janczyk described his impressions in a similar way: *"The condition of the buildings of the former state farm at the end of the 1990s was dismal. Empty buildings with half-decayed walls, crumbling roofs, all left to time and weather without care or maintenance"*.

Longer-term dilapidation of the site could have been a major problem in terms of the image of the municipality, as the existence of such a large brownfield site within a structurally affected region that suffered from high unemployment at the end of the 20th century would have been a deterrent to investors and residents alike. The mayor Jan Tomiczek described the atmosphere of economic shrinkage at the end of 20th century in the following way: *"Once in the press in the year 2000, information appeared that jobs were being created in Třanovice (we had an idea of a hundred jobs at the time); the village was not torn and there was no shortage of personal visits from the unemployed. We felt very sorry for them and we didn't want to just to give up hope (they came from farther distances), so we devised a questionnaire that job seekers could fill out and then we made it available to incoming entrepreneurs (we collected about a hundred questionnaires at that time)"*.

The biggest inherited problem was that all the properties were mortgaged because of the debts of the agricultural joint stock company. The company had debts with the tax authorities for non-payment of taxes, with insurance companies for non-payment of health and social insurance for employees, with private banks and with smaller creditors. The liquidator of the company, Jan Laitl, advised the municipality to buy the receivables from the banks for a favourable price, and thanks to this risky financial operation, the municipality of Třanovice suddenly became the biggest creditor and immediately bought all the undeveloped land on the site and paid for it with claims. Project manager Karel Baron described the importance in the following way: *"The municipality was able to realise on its property and the purchased land subsidised projects (sewage treatment plant, sewerage system, electrical distribution and roads), which was extremely important for the future enterprise zone"*. It was very important for solving the debt problem that the mayor managed to convince local and regional businessmen. One of these businessmen, Tadeáš Barteczek from SPETRA CZ Company, described the situation as follows: *"The mayor of the municipality contacted me with the project manager Karel Baron with the possibility of buying part of the land and buildings. I paid part of the social security and tax debt for the joint stock company. I also approached my business acquaintances and told them about the possibility of buying the land and buildings that might be of interest to them"*. Project manager Karel Baron described the mechanisms of sale that has ensured increased interest on the part of private investors as follows: *"We came up with a great trick that we could afford as owners of cheaply acquired receivables. We offered the entrepreneurs that the municipality would lend them up to half of the sale price to buy the properties as a repayable subsidy that would become non-repayable if they business in Tranovice for at least five years"*. The funds obtained from the sale of part of the real estate were gradually used to pay debts to other creditors, which the liquidator of the joint stock company Jan Laitl described in the following way: *"The financial resources raised in this way were used primarily to pay the outstanding wages, social and health insurance fees, payment of outstanding (deferred) taxes and also some fines and fees. It was also possible to negotiate with the relevant social and health insurance authorities and the Ministry of Finance to obtain relief from the fines and penalties imposed, so that all liabilities of this type could be settled"*. From a spatial point of view, it was important that the sale of part of the property led to the release of mortgages on other parts of the real estate, which could then be gradually sold to other interested entrepreneurs. The

settlement of most of the liabilities of the liquidated joint stock company was concluded in April 2006 with the deletion of the liquidated joint stock company TRANAGRO from the commercial register.

3.2. Regeneration Process and Related Issues

The revitalisation of the case study area was carried out, on the one hand, thanks to public funding and, on the other hand, thanks to the involvement of capital from private medium-sized and small entrepreneurs. The revitalisation projects implemented with public funds, which were implemented by the municipality of Třanovice with the support of subsidies from EU and national funds (Table 3), focused on building the technical infrastructure necessary for the functioning of the business zone and on the revitalisation of the historical buildings of the Kappel farmyard. A look at the table shows that the representatives of the municipality must have had extraordinary courage, because the amount of money invested far exceeded the usual investment of most similar rural municipalities in the Czech Republic. Zbyhnev Janczyk, a member of the municipal council, described this courageous approach as follows: *“From the very beginning, it was necessary to have that we are a municipality of approximately one thousand inhabitants. Facilities such as the business incubator, the canteen, the collection yard, the sewage treatment plant, etc., which are common parts of the infrastructure of cities and large municipalities, may not have been appropriate for a smaller community. This can most clearly be illustrated by the example of car parks. At a time when the enterprise zone had not been developed into what it is today, two relatively large car parks were built in advance. From the perspective of that time, these structures might have appeared megalomaniacal and unusable. From today’s perspective, however, they are absolutely a necessity”*. The investments were successful, but there was a risk that if private investors were not interested and public subsidies for municipal projects were not obtained, the municipality would go into debt and the area would not be revitalised.

Table 3. Overview of public funding for specific revitalisation activities.

Phases of Revitalisation	Period of Realisation	Total Costs (CZK)	Subsidy Received (CZK)	Share of Subsidies (%)
Financial and property settlements	1998–2006	8,500,000	0	0.00
Wastewater treatment, main sewer collector	2000	12,429,000	7,300,000	58.73
Engineering networks—sewage and rainwater drainage, water supply line, gas pipeline and low voltage distribution lines	2000–2001	8,079,000	4,039,000	49.99
Transport infrastructure—new car parks, public lighting	2002	6,356,000	4,412,000	69.41
Central boiler room for biomass	2002–2003	16,139,000	13,261,000	82.17
Business Incubator	2003	15,199,000	10,600,000	69.74
Catering facilities—canteen	2004	15,973,000	13,184,000	82.54
Front building of Kappel’s yard and waste collection yard	2005–2006	56,871,000	49,552,000	87.13
Total		139,546,000	102,348,000	73.34

Source: data—[64], authors’ own processing.

The municipality of Třanovice has become very successful in the use of subsidies, and Table 3 shows that almost three quarters of the funds for revitalisation projects were obtained thanks to subsidies from EU and national sources. This success would not have been possible without the preparation of grant applications by professionals, and for this reason, the municipality established the public benefit corporation Třanovice Services in June 1999. The first director of this company Oto Onderek described its role as follows: *“The company Třanovice Services became a “producer” of successful projects for various subsidies programmes and has been instrumental in obtaining significant financial funds not only for our municipality, but also for private business entities and municipalities in the wider area. Initially we focused mainly on obtaining grants for the implementation of revitalisation project, which we have*

been successful in doing. The original intended focus of Třanovice Services, i.e., municipal services for municipality and citizens, was quickly expanded to include strategic planning and activities related to obtaining subsidies, in particular from EU pre-accession funds (SAPARD, Phare), but also from national subsidy programmes. It is certainly worth mentioning the preparation of development strategies of micro-regions, which we prepared for eleven micro-regions, and all of them were very positively evaluated by the Ministry of Regional Development". The most recent and largest public investment to date in the former State Farm premises was carried out in the years 2005–2006 and was focused on the revitalisation of the front building of Kappl's yard and the construction of a waste collection yard. The implementation of this investment exceeded the staffing capacity of Třanovice Services, so the municipality established a new company, TISPOL, in April 2005. Its first managing director, Boris Guziur, described the hectic early days as follows: "At that time, a rural business was started in the zone, the demolition of the last part of the building owned by the municipality and the completion of a service and business support centre began, i.e., Kappl's Yard. Construction of a new bus stop was undertaken to improve accessibility for those working in this enterprise zone. It was necessary to renovate the existing wastewater treatment plant, which was no longer suitable due to the high demand and 'influx' of new business". Currently, not only specialised organisations (Třanovice Services, Local Action Group Pobeskydí) operate in the premises of the Kappl Agricultural Court, but the premises are also used for services important to local citizens (doctors, veterinarian, cosmetic services).

The successful development of the rural enterprise zone was due to the development of private business activities. One of the first companies was the transport company SPETRA CZ, which contributed to the new development of the south-eastern part of the site. Its managing director, Tadeáš Barteczek, described the development of business of this company in the locality as follows: "In the year 2000, a new company headquarters was built in the business Třanovice village centre. The company's premises were where an administrative building was built, a warehouse was reconstructed and a parking lot was built for its own vehicles. A new truck washing line was built and a petrol station was purchased, which we renovated. We built a service station for trucks under the subsidy project "Trucks service in the rural industrial zone in Tranovice". In the year 2015, we built a new storage hall". In this context, it should be mentioned that the new hall has already been built on undeveloped land (Figure 13), which shows the successful development of business activities and economic benefits, but at the same time, the development of the open landscape is no longer entirely positive from an environmental perspective because it threatens the soil fund and important functions of the landscape (e.g., water retention function). The revitalisation of the northern part of the site, where the livestock production buildings from the 1980s were located, was carried out by the company Agrochovex—Vitalkraft. Its managing director Jindřich Mackowski described the process of development of business activities in the following way: "In 2000, some of the buildings were purchased, and in 2002, the transfer of the remaining properties was completed. In 2003, the renovation was completed and the former calf houses became an office building, a wholesale warehouse, a nursery aquarium fish and a small animal feed manufacturing plant. New premises gave us the opportunity to develop in all activities company... We also took advantage of our geographical location and became become a major supplier of breeding supplies to the market Czech, Slovak and Polish markets". EU enlargement in 2004 played a positive role in the spatial expansion into the markets of neighbouring countries, as barriers and obstacles related to trade with Poland and Slovakia disappeared. There were more private companies developing their business activities, and it can only be estimated that the total amount of business investment in the zone significantly exceeded CZK 100 million [64].



Figure 13. Construction of the new storage hall in aerial photos from 2012 (left) and 2016 (right). Source: [61].

3.3. Evaluation of the Overall Revitalisation Impacts

The gradual development of small and medium-sized enterprises had a positive impact on the supply of job opportunities. The revitalisation of the site created new jobs, which was clearly positively evaluated by the involved actors. Project manager Karel Baron described the situation after the revitalisation as follows: *“The municipality has achieved its objectives and successfully governs the village enterprise zone Třanovice and together with the entrepreneurs has created around 450 jobs, which is quite high for a poor village in the Pobeškydí region”*. The project was important in terms of inspiration for the regeneration of agricultural brownfields, which the liquidator Jan Laitl characterised in his assessment: *“It has succeeded almost unrealistically in bringing most of the buildings whose use was in question back into use, albeit for a different type of business. A number of buildings that had been purpose-built for agricultural activities proved to be usable for other activities. The years of transformation of an agriculturally oriented village into a village dominated by the production of other products or the provision of new job opportunities for the citizens of the municipality”*. In this context, the mayor Jan Tomiczek stressed that *“entrepreneurial activities have a positive impact on the creation of jobs, the appearance of the village and, last but not least, its reputation. Cooperation and partnership have proven to pay off; meaning local government, entrepreneurs, and the non-profit sector”*.

The revitalisation has also had a positive impact on local population because there has been a slight increase in the number of inhabitants of the Třanovice municipality [71,72]. While at the beginning of the transition period in 1991 the rural municipality of Třanovice had 870 inhabitants, in 2021, it had 1045 inhabitants (Table 4). This population increase of 20% is significant compared to the neighbouring rural municipality of Hnojník, where investments were concentrated in the period in the era of centrally planned economy before 1989 as Hnojník was a central rural municipality, and from which Třanovice administratively separated in 1990. The increase in the population of Třanovice was significant in comparison with the shrinking urban centres (Frýdek-Místek, Ostrava) and with the values for the whole Moravian-Silesian Region. In this context, it should be noted that urban centres have depopulated more intensively than rural municipalities because, after 1989, there was a shift from collective mass housing in the form of prefabricated housing estates to individual housing in the form of family houses, for which rural municipalities have better conditions (e.g., cheaper building land compared to cities). The project has also had a positive impact on the environment because it led to construction of the wastewater treatment plant, new central biomass boiler plant and waste collection yard. The environmental negatives of the revitalisation project include increased traffic intensity, which coincides with business development. The successful development of the rural municipality was also recognised by the fact that in 2014, the village of Třanovice was awarded the Village of the Year in the Moravian-Silesian Region in the framework of the Rural Renewal Programme competition [73].

Table 4. Population changes (1991–2021) in the study region.

Municipality/Region	1991	2001	2011	2021	Population Change (1991–2021)
Třanovice	870	932	1057	1045	+20.1%
Hnojník	1484	1446	1479	1439	−3.0%
Frýdek-Místek	63,808	61,400	56,356	53,698	−15.8%
Ostrava	327,371	316,744	296,224	282,450	−13.7%
Moravian—Silesian Region	1,278,726	1,265,019	1,205,836	1,162,841	−9.1%

Source: data—Census 1991, 2001, 2011 and 2021 (Czech Statistical Office), authors' own processing.

4. Discussion

4.1. Supporting Factors and Barriers Governing Redevelopment Process and Ex Post Presentation of Redevelopment Project

The different supporting factors (Table 5) were mentioned in the studied memories of the involved stakeholders. Factors with the highest frequency included cooperation between actors from different hierarchical levels (municipal, regional and national) and also creating cooperation between public, private and non-profit sector actors. Another important factor was the initiative of the municipality, which was the main driver in creating a network of cooperating actors. The following two factors are related to the financing of the redevelopment project in the condition of shrinking region, because without securing public funding and without the creation of a dedicated institutional background in the form of organisations that generated applications to public grant programs, the redevelopment project could not be implemented. A final important factor was political support from higher hierarchical levels (both national and regional), which was particularly important in dealing with the huge debts that existed on the properties as economic burdens from previous agricultural activities. In this context, political support at a municipal level and the related stability of local government were also very important.

Table 5. Information about the main identified supporting factors of the redevelopment process.

Code No.	Supporting Factors	Frequency	Description
1	Cooperation of stakeholders	21	Development of successful long-term cooperation between actors from different levels (municipal, regional, national) and different sectors (public administration, private sector, NGOs).
2	Municipal activity	17	Significant activities and efforts of the municipality during all phases of the redevelopment process.
3	Public funding	14	Obtainment of significant amounts of public funding from various grant funds for redevelopment projects.
4	Institutional support	10	Creation of various specialised organisations focused on the preparation of projects for the redevelopment of the territory and on securing their financing (obtaining subsidies).
5	Political support	8	Political support for the project from central and regional government officials. Political support at local level—the same mayor was re-elected for several terms.

Source: data—[64], authors' own processing using ATLAS.ti software (Scientific Software Development GmbH, Berlin, Germany).

Also, different barriers (Table 6) were identified in the studied memories of the involved stakeholders. Most of the barriers are related to previous unsuccessful agricultural activities from the period of economic transition. In the beginning, the properties were indebted and there were a large number of creditors, which made ownership relations extremely complicated. Most of the buildings were in poor technical condition due to previous lack of investment, and it was also necessary to address the environmental burdens that resulted mainly from the sudden end of livestock production. During all phases of the

redevelopment project, it was also necessary to overcome the distrust and scepticism of some actors who considered the revitalisation project unrealistic and unfeasible.

The analysis of dissemination materials, which were also published with the support of Czech Ministry for Regional Development, showed (Figure 14) that the case study is presented as a successful development project of cooperation between the private and public sectors (keywords: company, municipality, mayor and development). In the presentation for the other actors, not only is the economic success (keyword: business) highlighted but so is the fact that the project has brought significant social benefits (keyword: social), which, in the context of a shrinking region, is very important.

Table 6. Information about the main identified barriers related to the redevelopment process.

Code No.	Barriers	Frequency	Description
1	Debt on buildings and land	29	Former farm buildings and land were mortgaged—large debts were tied to them
2	Poor technical state	19	The buildings were in poor technical condition—some of the buildings needed demolition, others needed repairs.
3	Distrust among some of the stakeholders	17	Some stakeholders did not believe at the beginning that such a large development project could be implemented in such a small rural municipality. There were also prejudices among stakeholders from different levels (national and regional).
4	Environmental burdens	8	Before starting the redevelopment process, it was necessary to remove some of the remains of livestock production such as slurry, manure, urea, mouldy hay.
5	Complicated property relations	7	In the early stages, ownership relations were complicated by the large number of creditors. In the later stages, the number of owners increased again due to the increase in the number of private investors.

Source: data—[64], authors’ own processing using ATLAS.ti software (Scientific Software Development GmbH, Berlin, Germany).



Figure 14. Word-cloud for how the redevelopment process is presented to stakeholders from different regions of the Czech Republic; data—[63,64], authors’ own processing.

4.2. Cooperation with Actors at Central Level

The cooperation of the local actors with the actors at the central level was very important because the regeneration project was beyond the capacity of a small rural municipality. Actors at the central level made important decisions on how to liquidate indebted agricultural companies and how to deal with debts that were registered on real estate and land, and influenced not only the distribution but also the setting of specific subsidy rules related to subsidies directed to support peripheral and shrinking deindustrialised regions. For

example, debts were registered on the real estate on site also due to the fact that a company operating agriculture did not pay social insurance for its employees and it was necessary to negotiate with the Minister of Labour and Social Affairs of the Czech Republic and get political support to resolve this part of the debt. Project manager Karel Baron described these negotiations as follows: *“A regional MP has arranged for us to meet with the MP and the Minister for Labour and Social Affairs Mr. Špidla. We went with the mayor to the Parliament, and Minister told us that he had just eight minutes before the next vote. . . I stammered out what was going on and what after we want him to do (I always stutter when there is a rush). To this day, I still don’t understand that he understood or didn’t understand; he didn’t ask further questions and promised to help. Within four days, the director of the Czech Social Security Administration called me and invited us to a meeting in Prague. The director and I had quite an understanding. . . he understood our efforts to resolve the debts properly. He offered us a fair solution that if we paid back the principal part of the debt (about CZK 2 million), he would forgive us under of his powers and would pay the amount of the accessory debt, which was more than CZK 1.5 million”*.

Cooperation with central level actors was initially influenced by a great lack of information about the situation in other regions and by prejudices between actors from different regions. For example, the liquidator of the bankrupt agricultural company TRANAGRO was Jan Laitl from the core Central Bohemia Region in the hinterland of capital Prague, who recalled his starting situation in case study area: *“For me, as a stranger, it was not easy to look for potential buyers or ways to liquidate the assets. And so I approached the mayor of the village with a request for help in dealing with the sale of the property”*. Project manager Karel Baron, who was responsible for selling the property to regional and local entrepreneurs, described the initial problems in communication as follows: *“Jan Laitl was a Central Bohemian man with a typical dialect, irritating to the inhabitants of our region, and with an extraordinary ability to annoy creditors by strict compliance with regulations and laws. I tried to negotiate with potential investors, but all I had to do was mention his name and the negotiations were over. Perhaps it was my persistent negotiating position and the mayor’s intervention that finally celebrated success”*.

Of course, it was also necessary to deal with the existence of prejudices on the part of some actors from national institutions located in the capital city of Prague. For example, Jiří Hladík, who was in charge of the Rural Renewal Programme at the Ministry of Regional Development, recalled the establishment of cooperation as follows: *“After the evaluation the effectiveness of the first two years of the Rural Renewal Programme, it became clear that the activity of the local governments varied considerably regionally. The most active municipalities, and therefore those that drew the majority of the program’s funds, were from South Moravia, most of South Bohemia and East Bohemia. The other regions had few active municipalities and the Ostrava region was among the areas that belonged to the laxer group. I went on a mission to this location with certain preconceived notions of a “black Ostrava” and with the warning that there was probably no active local government I wouldn’t find. I think the surprise was mutual, because I soon found a lot of friends and beautiful spots. . . Mayor Tomiczek called me after one of my lectures in Ostrava and said that he needed to consult on a problem that was weighing on the whole community and which was a bankrupt farm that was affecting a large area of the village and whose liquidation or abandonment of the dilapidated buildings could irreversibly affect the life and further development of the whole rural municipality”*.

4.3. Cooperation with Actors at Regional and Local Level

The involvement of regional actors usually took place through contact by local actors, but there was also an exception. Project manager Karel Baron found out about the Třanovice project by chance, which he characterised in the following way: *“Sometime at the end of 1999, I accidentally met my colleague in Prague, Ing. Laitl, with whom I met after 1989. I had worked with on several development projects... When I met him, he said the memorable phrase: “I need to sell a stolen farm, you’re the only one who could do it.” I went to Třanovice to see the mayor, and after an hour of conversation, it was clear that he was a man who was well aware of that further devastation of property threatened the community, and above all, he knew what he wanted to achieve—the transformation of a devastated agricultural site into a rural business zone”*. The role of Karel

Baron was appreciated by the liquidator Jan Laitl: *“We have received great help by establishing cooperation with company from Ostrava and especially by participating with their partner, Mr. Baron, who ensured negotiations with buyers, to whom he assisted in negotiating subsidies and loans”*. Project manager Baron sold properties in the Tranagro area to entrepreneurs who were partly contacted by the mayor of the municipality, which can be evidenced by the case of entrepreneur Jindřich Mackowski, who described the initial contact as follows: *“In 1998, I was approached by the mayor of the municipality to see if I would be interested in revitalising the former buildings of the state farm, abandoned calf farms in Třanovice. At that time, I was doing business in Český Těšín and I was struggling with the lack of space for developing breeding supplies business. The idea of revitalisation farm buildings of former calf farms immediately excited me”*. Other entrepreneurs were recommended by local entrepreneurs, which was the case of Tadeáš Barteczek, who was one of the first to start a car transport business in this site, and who described the process as follows: *“I approached my friends and told them about the possibility of buying the land... Some of them welcomed my information, bought the land and buildings and are still doing business in Třanovice”*.

It was important for networking actors at the local and regional level that in 2000 the municipality established the Rural Renewal School as a platform for exchanging and sharing information, knowledge and experience on rural development. This organisation has focused on organising conferences, seminars, excursions, study tours and other educational events for representatives of local governments, but also business entities, non-profit organisations and for the general public [64]. For example, the first study trip abroad, which took place in 2001 to Austria, focused on the energy utilisation of waste wood, significantly contributed significantly to bringing Třanovice closer to the practical use of biomass and other sources of renewable energy [64]. In 2004, Třanovice became the seat of the newly established Local Action Group Pobeskydí, which focuses on community-led local development. Director of the public company Třanovice Services, Oto Onderek, who also served as the first chairman of the programme committee of local action group Pobeskydí, commented on the beginning of this type of cooperation as follows: *“It can be said that without the participation in the described revitalisation project, this local action group would not have been established here. All the principles that are applied in the work of local action groups (partnership, cooperation, local initiative, local decision-making, etc.) were fully tested for the first time in the revitalisation of the area in question agricultural area. Thanks to this project, they were able to local action group to employ skilled staff, who are involved in the development of the rural area, comprising 53 municipalities with almost 90,000 inhabitants”*.

From the point of view of ensuring the successful revitalisation of the former state farm, the cooperation of actors within the municipality of Třanovice was also important. It is important to note that brownfield regeneration projects usually span several electoral terms and that the support of elected representatives can vary. The rural municipality of Třanovice, which had Mayor Jan Tomiczek at its head for six terms between 1994 and 2018, had a huge advantage in the stability of local government. Program designer David Walter Novák, who has worked with him for a long time on a revitalisation project, described the mayor's role in the revitalisation project as follows: *“Třanovice should be grateful to the mayor for its fate. Jan Tomiczek has my admiration for a number of reasons... First, he is a great visionary, willing to take on things that others don't have the courage to even think about. Second, his persistence and stubbornness are almost endless. Third, he knows how to surround himself with the right people and get them excited about his idea. Fourth, I consider him one of the few politicians who has principles and who can be trusted”*. In this context, it should be appreciated that the mayor has ensured new local development in the conditions of a municipality where citizens of two different nations (besides the Czech-speaking majority, there is also a Polish minority) and also different religions (the largest religious groups are Catholics and Protestants) live.

4.4. Local Patterns and International Approaches

The findings from the case study in relation to the international research show several important facts. From the point of view of rural development, even in shrinking regions, the formation of local action groups is very important [55,74,75]. In the case of the revitalisation of the case study area, such a group was naturally formed *de facto* at first and this cooperation was later formalised *de jure*. From the point of view of the development of larger brownfields, it is important to mention the continuity with participatory planning [76,77] because the site was revitalised in the course of time in parts with the participation of different groups of stakeholders. Last but not least, the actual regeneration process could have been more efficient if the actors could have used some online tools for planning of brownfields [19,78] that were developed for end users later in connection with the increase in the use of the Internet and the creation of various online applications.

5. Conclusions

The successful brownfield development in the study village of Třanovice had a positive impact on its population development, both in comparison with the neighbouring rural village of Hnojník, from which Třanovice broke away in 1990, and with shrinking urban centres as Frýdek-Místek or Ostrava. The main drivers of the whole process of redevelopment have been local and regional actors such as local government officials and local and regional entrepreneurs, who have taken advantage of the historical opportunity of EU enlargement accompanied by the creation of the EU single market and the availability of specialised EU regional funds, and who have been able to create networks of cooperating actors from other levels (central, regional) that have enabled them to raise sufficient funds for new development. In relation to the representatives of the municipality, it should be stressed that they have adopted many bold and innovative solutions in the form of creating specialised organisations focused on the preparation of projects for the redevelopment of the territory and on securing their financing (obtaining subsidies). In relation to the representatives of the municipality, it should be stressed that they have adopted many bold and innovative solutions, for example, in the form of creating specialised organisations focused on the preparation of projects for the redevelopment of the territory and on securing their financing (obtaining subsidies). The cooperation of actors from different hierarchical levels was identified as the most important factor in the successful redevelopment of the former state farm. Successful cooperation between local actors from the peripheral shrinking region and actors at the central level (ministries, bank top management) was developed, which helped in solving the debts incurred by the previous agricultural business and in obtaining subsidy money from both EU and national sources for the new development. From the perspective of the creation of successful cooperation of actors from different hierarchical levels, it was very important to overcome the prejudices that actors from peripheral rural shrinking regions have towards actors from central (core) regions and vice versa. In this context, the role of the actor from the regional level (specifically—the project manager from Ostrava property sales company), who acted as a negotiator and mediator of the potential conflicts between actors from the shrinking region and actors from the central level, appears to be very important. The creation of a Local Action Group Pobeskydí was important for the dissemination of know-how to the immediate surroundings of the studied municipality Třanovice and the transfer of experience to other rural regions within the Moravian-Silesian Region and other regions of the Czech Republic was ensured with the help of School of Rural Renewal. In terms of achieving the goals of the revitalisation project, public–private partnerships at the regional and local level were important in terms of collaboration between local government, private investors, and specially formed non-profit organisations. At the municipal level, long-term relationships between local actors played a key positive role, which was reflected in the political stability of municipal government performance over several electoral periods. For successful brownfield regeneration to be implemented in the case study area of the

shrinking region, a robust network of actors at different hierarchical levels had to be created (see Figure 15).

In the context of the new findings from the shrinking regions examined in this paper, it is interesting to compare them with knowledge from some other brownfield sites that have been revitalised in the conditions of successfully developing regions. In wealthier regions, there is not as much scarcity of investment capital as in shrinking regions, and so some post-agricultural brownfield sites can be revitalised with only one source of private capital [35], and in other sites, redevelopment has been secured through a public–private partnership, but private capital entered the site only as the operator of the new facility in the later stages of the whole process [26]. For this reason, in successfully developing regions, networks of actors are being created at both a local and regional level. On the other hand, in the conditions of the shrinking region, there is usually a lack of financial capital for revitalisation, and it is thus necessary to create an effective networking of actors at the central level of power and, at the same time, to ensure multi-source financing of the whole revitalisation process through public–private partnership. Successful networking of actors at multiple hierarchical levels (central, regional and local) creates the suitable conditions for the development of the good governance [12], and it is necessary for the right path from passivity toward entrepreneurship [49], which is important for the creation of applicable knowledge [17], leading to the successful redevelopment of the post-agricultural brownfields. Regarding the comparison of redevelopment barriers, similar types of barriers such as a poor technical state, complicated property relationship and environmental burdens are found in both successful developing regions [26] and shrinking regions, but the starting position of the studied brownfield in the shrinking region was worse due to economic and environmental debts on buildings and land that had to be solved in complicated ways.

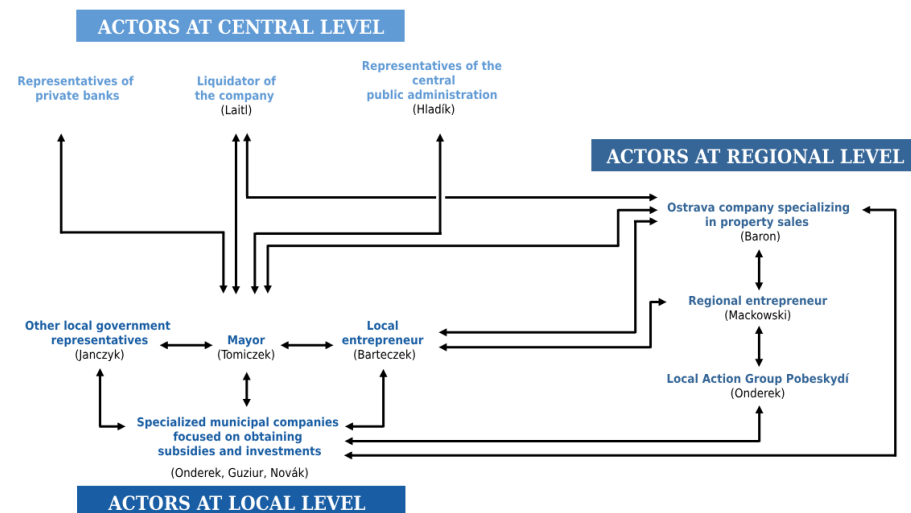


Figure 15. Selected main communication axes between actors related to the revitalisation process in the case study location; data—[63,64], authors’ own processing.

The findings from the research conducted may be important for stakeholders addressing the regeneration of post-agricultural brownfields in other shrinking regions, as they show that a local initiative leading to the creation of a large network of collaborating actors can in some cases overcome poor initial development potential. Not all experiences are easily transferable because the redevelopment in the case study area took place in an era of economic prosperity and disappearing border barriers related to trade and business activities between EU member states; however, in recent years, there have been renewed border closures and restrictions on the free movement of goods and people between EU member states due to the spread of disease or problems with emigration. The attention of future research could be focused on international comparative studies that could examine case locations of selected transformed post-agricultural brownfields from various post-socialist

countries of Central Europe (e.g., former East Germany, the Czech Republic, Hungary), and it would be interesting to also focus on some abolished large-scale farms in traditional democratic countries (e.g., France, the Netherlands, etc.), where the end of agricultural production occurred in connection with the pressure to improve the living conditions of farmed animals or the spread of new eating habits in part of the population (vegetarianism and veganism). It would be appropriate to examine the transformation of agricultural areas on the territory of EU member states in relation to changes in the common agricultural policy and the setting of its subsidy rules. From the point of view of future research in the case study area, it would be interesting to evaluate the results of the revitalisation from the perspective of women (for example, by means of a questionnaire survey), because the main leaders of the entire redevelopment process were male actors.

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