
Identification of Changes in the Determinants of Rural Development in the Context of the Crisis Caused by COVID-19

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Abstract:

Purpose: The article aims to identify changes in the determinants of rural development in the Greater Poland Voivodeship caused by the COVID-19 pandemic.

Design/Methodology/Approach: The study's geographical scope encompasses the Greater Poland Voivodeship, focusing on rural and semi-urban municipalities. Out of all rural and semi-urban municipalities in the Greater Poland Voivodeship, the study was conducted on a sample of 40 municipalities, selected using a stratified sampling method with randomization.

Findings: In the opinion of the respondents, the observed increase in the attractiveness of living in rural areas, valuing the natural environment by rural residents and we observe the weakening of local communities in a pandemic situation.

Practical Implications: The obtained research results are also valuable material for all other people and institutions (politicians, public authorities at various levels, entrepreneurs, representatives of the scientific community) interested in the issues of rural development and additional conditions caused by COVID-19.

Originality/Value: The research presents unique data collected during interviews with local authorities. This made it possible to truly assess the impact of the Covid-19 pandemic on selected development factors. This allows for the implementation of adequate support instruments and better planning of local development tasks.

Keywords: COVID-19, rural areas, local communities, Wielkopolska region.

JEL codes: O210, Q15.

Paper type: Research article.

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1. Introduction

The crisis triggered by the COVID-19 pandemic has been described as the most significant since World War II, directly affecting the majority of countries worldwide. Experts identify areas and industries that have been most affected by its circumstances. Although these effects are widespread, they are observed with varying intensity (Phillipson *et al.*, 2020; Grima *et al.*, 2020; Khan *et al.*, 2020).

This variability reflects the differing potentials of countries and the structures of their economies (such as the share of tourism in GDP). Similarly, this variability extends to the regional and local levels. Institutions such as the OECD emphasize the need for coordination of policies and actions at all levels of governance, from local to regional and national (OECD, 2020).

However, for this to be possible, it is essential to gather information and data on the actual situation at the local level. This will enable the implementation of instruments tailored to specific needs, the proper allocation of resources, and the development of grassroots solutions or the dissemination of existing ones that have proven effective (De Luca *et al.*, 2020).

The proposed study addresses the need to support ongoing activities by disseminating knowledge among entities involved in rural development (local authorities, regional governments, non-governmental organizations) under particularly challenging conditions. It aims to create a platform for knowledge exchange and support for entities engaged in rural development on one hand, and operating under the new circumstances of the COVID-19 pandemic on the other.

The European Committee of the Regions has taken an important part in the discussion on rural areas in Europe. The Committee's opinion addresses the following issues: recognises the problems of rural areas, calls for the search for financial solutions and the strengthening of measures for rural areas, together with proposals for approaches and new initiatives, and identifies the actors involved in development processes (Biczkowski, 2020; Van Huylenbroeck *et al.*, 2007).

As a result, it was pointed out that it is necessary to close the long-term vision of rural areas in the rural agenda as a policy framework for promoted actions (Ahlmeier and Volgmann, 2023; *Opinia Europejskiego Komitetu Regionów – Strategia na rzecz odnowy obszarów wiejskich, 2020 - Yahoo Poland Wyniki wyszukiwania*, n.d.; Rodríguez-Pose, 2018).

The aim of the study was to identify changes in the conditions for the development of rural areas in the Wielkopolska Region, caused by the COVID-19 pandemic. The article consists of: introduction, research methodology, results, as well as conclusions and recommendations.

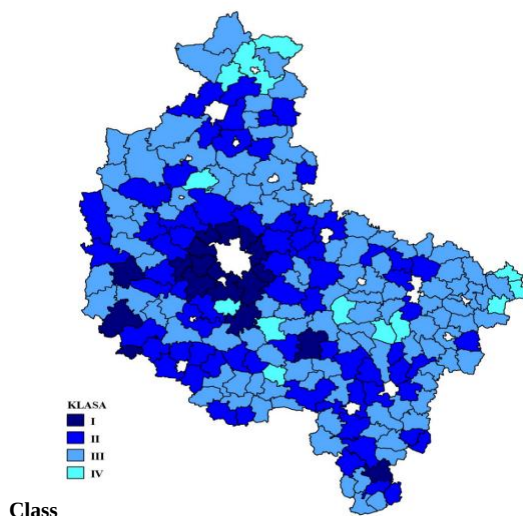
2. Research Methodology

The study employed a variety of research methods appropriate for the implementation of specific tasks. The survey questionnaire was developed using factor analysis, which had been applied in previous research by the author to identify factors influencing rural development in the Greater Poland Voivodeship region.

The author selected the research sample using a synthetic measure of socio-economic development for rural areas in the Greater Poland Voivodeship region, established in her previous studies. Field research (interviews) was conducted using a survey questionnaire and telephone interviews. The study group included representatives of local authorities: mayors, municipal secretaries, or municipal office employees. The study was conducted on a sample of 40 municipalities.

The main study was preceded by pilot studies, which allowed for the verification and refinement of the information-gathering tool (interviews using the survey questionnaire). The obtained research results are presented with consideration of the population potential. Three groups of municipalities with varying population potential were identified: up to 5,000, and 5,000 to 10,000, and above 10,000 residents. Additionally, reference was made to the socio-economic development level of the municipalities from 2019. The variability in the spatial distribution is shown in Figure 1. The adopted class designations are as follows: Class I – very good, Class II – good, Class III – poor (lower average), and Class IV – very poor socio-economic development level of the municipality (see more:.

Figure 1. Spatial differentiation of the development of rural areas in the Wielkopolska province in 2019



Source: Own study.

3. Results

The question about the change in the situation (development conditions) always refers to an assessment at the local scale, meaning the municipality is represented by the representative of a given local government. There are no references here to the socio-economic situation of the country or macroeconomic conditions.

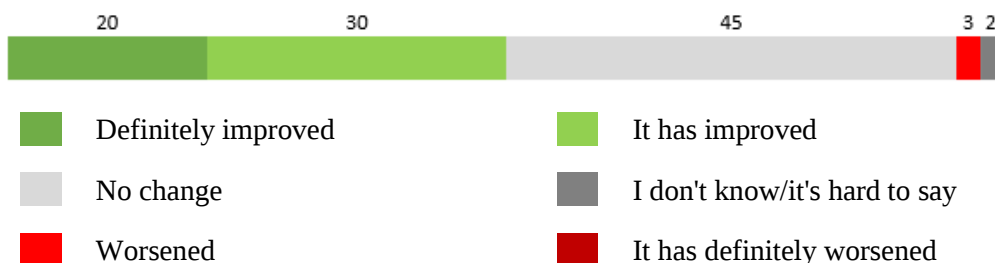
How has the pandemic affected the attractiveness of living in rural areas?

The question about the attractiveness of rural areas as a place to live was used to verify the views on the projected increase in interest in living in rural areas (Barrero *et al.*, 2023; González-Leonardo *et al.*, 2022)

The results of the conducted research show that for 45% of the respondents, the situation did not change as a result of the pandemic, while at the same time, an observed increase in the attractiveness of rural areas was noted (50%) (Figure 1).

Among the discussions, there was also an opinion indicating the maintenance of a high level of attractiveness in municipalities that had such a level prior to the pandemic. Taking into account the population potential, the information indicates that the largest municipalities gained in attractiveness. In the breakdown of responses related to the initial level of development, respondents answers confirm an increase in the attractiveness of the weakest areas. This may provide a positive outlook for strengthening their population potential. In the USA observed the “Donut Effect”, reflecting the hollowing out of city centers and growth of suburban outer rings. Households leaving city centers move to suburbs or rural areas (Ramani and Bloom, 2021)

Figure 1. Changes in the attractiveness of living in a village (municipality)(in %)
Overall



Source: Own research, N=40.

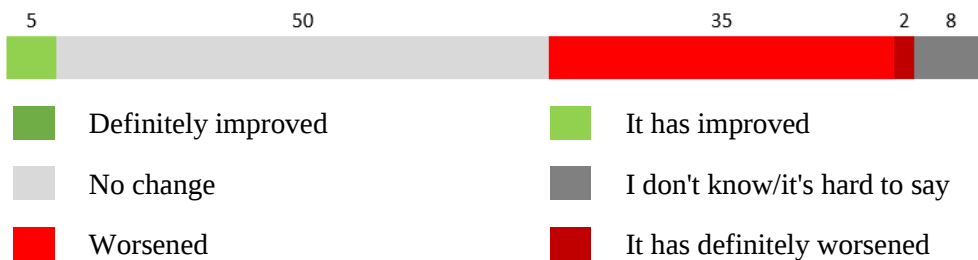
How has the pandemic affected the conditions for conducting business in the municipality?

The results of the conducted research show that 50% of municipal representatives did not observe any changes in this area. Meanwhile, 38% of the respondents noticed a deterioration in the conditions for conducting business, with 3% indicating a significant deterioration. 5% of the respondents noted an improvement in this regard.

The most difficult situation is in municipalities with the lowest population potential, up to 5,000 residents, 67% of the respondents recognized a deterioration in the conditions for conducting business (Figure 2). No responses indicating an improvement were recorded in this group. In the group of the weakest municipalities, there was unanimous agreement that the conditions for conducting business had deteriorated. This means that the pandemic is adding negative reinforcements in areas already struggling with developmental challenges.

Figure 2. Changes in the conditions for conducting business activity in the commune(in %)

Overall



Source: Own research, N=40.

How has the pandemic affected the situation in the local labor market?

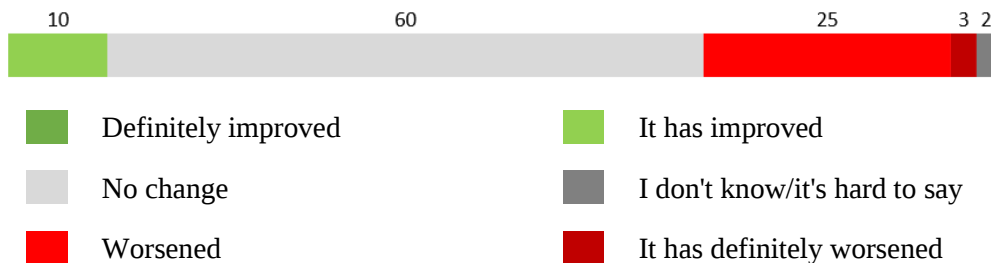
The assessment covered the labor market situation, which corresponds with the possibilities for multifunctional development of municipalities and also affects local finances (reflected in the form of PIT and CIT shares in the local budget). According to the research results, 60% reported no changes in the labor market due to the pandemic. For 28% of respondents, these changes had a negative impact, with the situation worsening or significantly worsening. One in 10 respondents observes positive changes (Figure 3).

In terms of population distribution, the highest number of negative indications (50%) was recorded in the smallest municipalities. Relating the research results to the level of socio-economic development, no changes in the labor market were observed in the group of municipalities with a very high level of development. In the case of municipalities at the opposite end of the spectrum, half reported a worsening labor market situation, while the other half observed no changes. Municipalities with a very strong starting position have strengthened their position in the labor market.

During the research, respondents frequently referred to a situation where the problem is not unemployment or a lack of job opportunities but rather the shortage of workers, which is a troubling issue for local entrepreneurs and farmers running horticultural and orchard farms. Additionally, it was pointed out that this is often low-paid work. The potential impacts of COVID-19 on local labour markets analyzed OECD (“Job Creation and Local Economic Development 2020,” 2020)

Figure 3. *Changes in the pandemic affected the situation in the local labor market?(in %)*

Overall



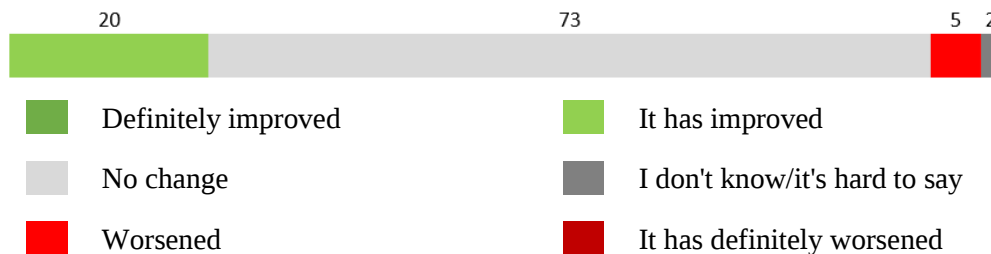
Source: Own research, N=40.

How has the pandemic affected the state of the natural environment in the municipality?

The prevailing opinion among the respondents was that no changes were observed (73%) in the area of the natural environment. A clear improvement was observed by 20% of the respondents. A deterioration in the situation was a rarely occurring phenomenon (5%) (Figure 4). Considering the population potential, a correlation was observed: the smaller the population potential, the fewer changes in the environment, both positive and negative. In the cross-section, due to the level of development, the unanimous lack of changes occurred in the group of the weakest municipalities.

Figure 4. *Changes in the natural environment in the commune (in %)*

Overall



Source: Own research, N=40.

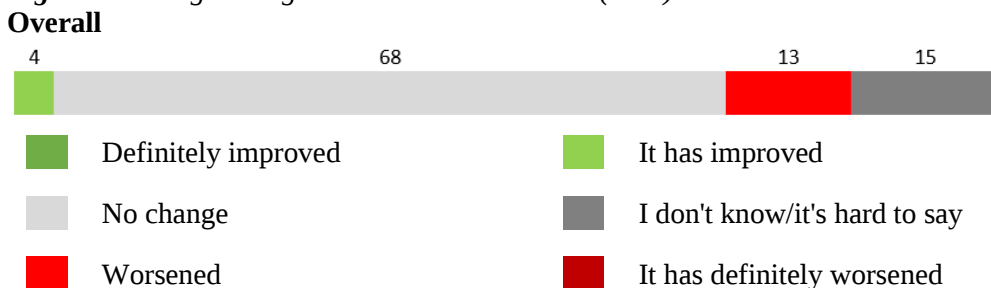
How has the pandemic affected the situation in agriculture?

The assessment of the situation in agriculture by the respondents aligns with the assessment of changes in the natural environment. This is due to the fact that agricultural activity covers a significant area of municipalities (93% for the country), despite its low share in the generated gross product.

According to the research results, 68% do not notice any changes in agriculture caused by the COVID-19 pandemic. For 15%, determining the situation is difficult to make clear indications. A nearly equal group of respondents notices a deterioration in the situation in this area (13%). Only 5% see an improvement due to the crisis. Citing the positive role of agriculture as a sector that, due to its characteristics and connection with the natural cycle, naturally resists crisis phenomena (Figure 5).

In the cross-section of population potential, one can see the regularity according to which the larger the municipality, the stability of the sector is assessed as stronger. However, a deterioration in the situation is observed in each of the defined intervals. Respondents highlighted two issues observed on a local scale. One issue was the lack of seasonal workers for harvesting vegetables and fruits, which posed a real threat to agricultural producers who reported this to local authorities. These issues were present in horticultural and orchard farms. Another pandemic-related issue was the difficulty in selling agricultural products, particularly among farmers supplying products to local markets (restaurants, school and preschool cafeterias, and hotels).

Figure 5. *Changes in agriculture in the commune (in %)*



Source: Own research, $N=40$.

How has the pandemic affected the situation in healthcare?

The healthcare sector is the area that has been most affected by the crisis due to its nature. The need to provide specialized medical care for hospitalized patients, mainly in ICU units, meant that the most burdened services were those working in large cities, and over time, in smaller ones (county hospitals, especially after the establishment of single-purpose hospitals). The second issue is the fact that the starting situation in rural areas was significantly more difficult, which is a

consequence of lower access to both basic and specialized medical care. An additional challenge is the barriers of spatial accessibility, where time isochrones in the early stages of the pandemic were crucial for the course of patient treatment. Particularly in the context of limited access to adapted medical transportation. In the context of the pandemic, the previous healthcare issues in rural areas (though not only there) became much more pronounced.

The question directed to representatives of the surveyed municipalities evaluates the changes in local healthcare (the assessment focused on medical clinics). Nearly three-quarters of the respondents (73%) stated that the situation has worsened or significantly worsened (25%).

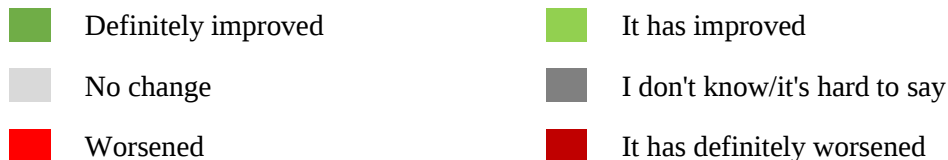
When evaluating the situation in terms of population potential, a pattern can be observed: a more difficult healthcare situation occurs in municipalities with a higher population potential. In the smallest municipalities, half of the respondents described the situation as better (33%) or significantly improved (17%) (Figure 6).

Figure 6. *Changes in the situation in healthcare in the commune (in %)*

Overall



Source: Own research, N=40.



Source: Own research, N=40.

How has the pandemic affected the activities of the cultural center?

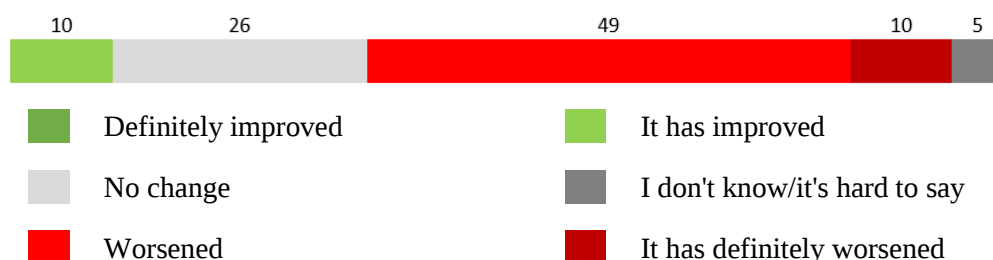
Among the respondents, 59% considered that the situation in culture significantly worsened or slightly worsened. However, one in five respondents did not notice any changes, which was mainly the case in municipalities where the cultural center was not operated. On the other hand, 10% of respondents noticed an improvement. Culture, as a sphere of social life, right after access to healthcare and education, seems to be one of the areas most severely impacted by the effects of the pandemic (Figure 7).

Taking into account the population potential of the surveyed municipalities, a correlation was observed: as the number of residents increases, the severity of changes in the cultural sector also increases.

Considering the opinions of the respondents in relation to the level of development of the municipality, the worst outcomes are observed in units with a low socio-economic development level. The severity of changes in a limited range occurs in the communes of classes of very good and good levels of development. This may be due to the fact that these municipalities possess adaptive capabilities to adjust to new conditions. A completely different situation occurs in units with a very low level of development, which means that the process of returning to a new normal or adapting to the change may have been limited.

Figure 7. Changes in the activity of the community center in the commune (in %)

Overall



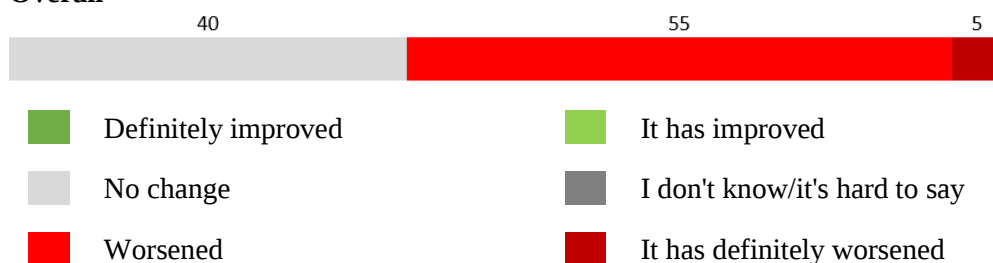
Source: Own research, N=40.

How has the pandemic affected the functioning of sports facilities?

In the opinion of 60% of respondents, the pandemic period worsened or significantly worsened the situation in the municipalities. For the remaining 40%, the state of the pandemic had no impact on the functioning of sports facilities. Respondents pointed to two patterns of observed behaviors. The first is a significant revival and increased interest in returning to sports activities. The second was related to a decrease in the number of members in sports sections or clubs, mainly among youth and children, who, lacking consistency, lost motivation and enthusiasm for continuing training (Figure 8).

Figure 8. Changes in the functioning of sports facilities (in %)

Overall



Source: Own research, N=40.

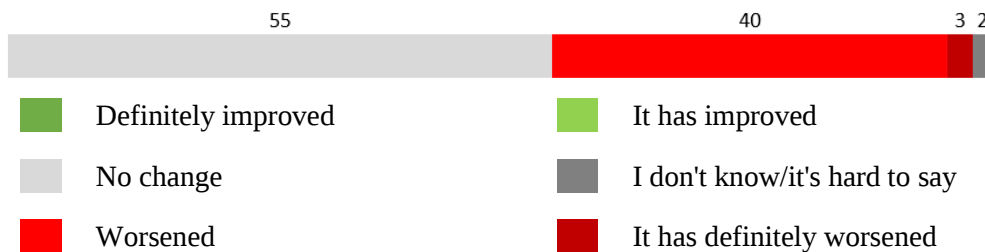
How has the pandemic affected the financial situation of the municipality?

The assessment of the local financial situation, according to the respondents, is quite optimistic, as 55% recognized no impact from the pandemic, while 43% indicated a deterioration or significant deterioration. It is worth noting that regardless of the assessment of the current situation, respondents emphasized very poor budget forecasts for the upcoming year (especially on the side of current revenues) (Figure 9).

When assessing the situation through the lens of population size, the most populous units show the highest stability. Referring to the state of development prior to the pandemic, in this case, units with a good level of development performed the best, while in the others, at a similar level, a deterioration in the situation was recorded (Rice et al., 2020).

Figure 9. *Changes in the situation of local finances in the commune (in %)*

Overall



Source: Own research, N=40.

How has the pandemic affected the activity of local authorities in obtaining external funding?

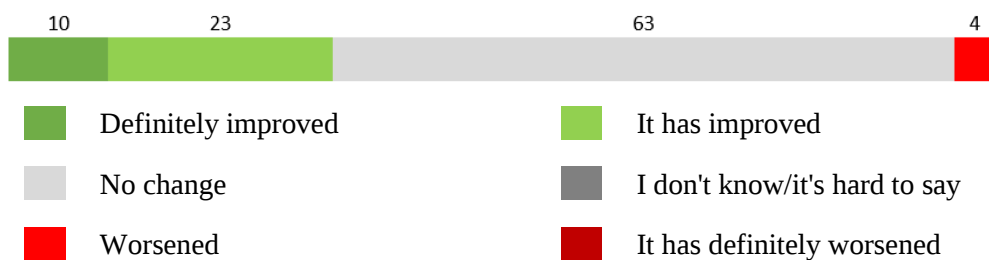
Municipalities can access external funding from various sources, and these funds can be either repayable or non-repayable. A common source of funding for investment projects is financial support from the European Union. According to the respondents, the activity remains at the same level (63%). In the opinion of 33% of respondents, the situation has improved or significantly improved.

On the other hand, 5% of respondents declared a deterioration. Relating the results to the population potential of the surveyed municipalities, we find that the highest activity was observed in the least populous municipalities, where no opinions about a deterioration in the situation were recorded. In municipalities with a very low level of development, activity either increased or remained at the pre-pandemic level (Figure 10).

When assessing the activity of local authorities, respondents unanimously pointed to the shift to virtual platforms or phone contacts, which became the dominant form of communication in the first weeks of the declared pandemic. An interesting conclusion is the fact that in all municipalities cooperation between local government entities has been at the same level or improved.

Figure 10. Changes in the activity in obtaining external funds by local authorities in the commune (in %)

Overall



Source: Own research, N=40.

How do you assess the activity of residents in undertaking community activities in the commune under the influence of a pandemic?

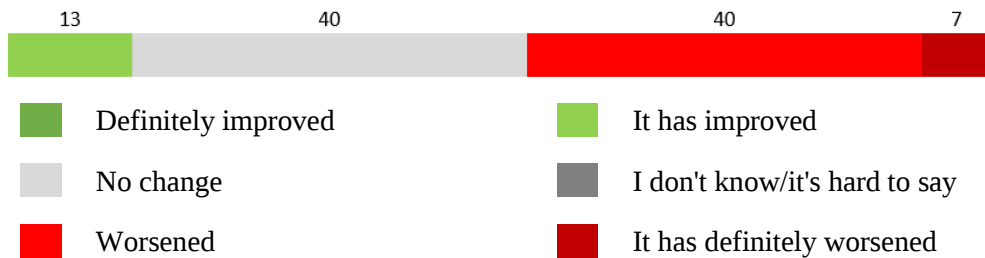
One of the dimensions of socio-economic life that has been hit hard by the pandemic is community life. Understood as active participation in various types of activities, but also initiating various projects, both in the formal and informal format. According to the opinions of representatives of municipalities, opinions were divided fairly evenly 53% considered that the situation has not changed or improved.

The rest (48%) see a deterioration or a significant change in the situation, emphasising the difficulty of returning to a new normality, accompanied by a weakening of the fabric of associations or organisations operating in rural areas. After taking into account the population potential, in the opinion of the respondents, the areas of the smallest municipalities were the most affected (Figure 11)

After taking into account the population potential, in the opinion of the respondents, the areas of the smallest municipalities were the most affected. This may be the result of the specificity of the relationship, and the inability to transfer their activities to the virtual world, which may be associated with lower competencies among residents. The dependence was recognized, according to which the larger the municipality, the more optimistic the picture (Mueller *et al.*, 2021; Peters, 2020).

Figure 11. *Changes in the activity of residents in undertaking community activities in the commune (in %)*

Overall



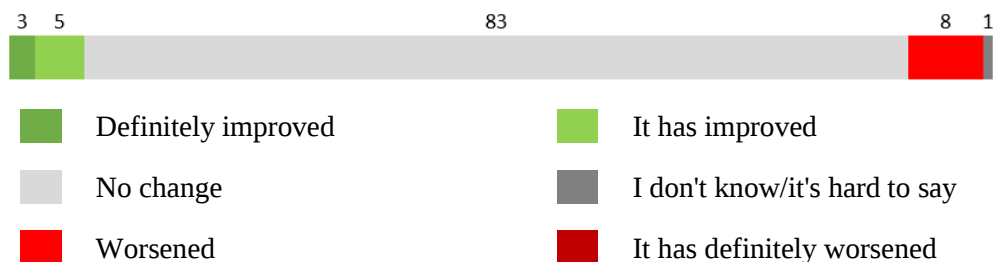
Source: Own research, N=40.

How do you assess the activity of local authorities in cooperation with other local governments under the influence of the pandemic?

The received opinions indicate a positive picture of no change or improvement in the situation (91%). However, after taking into account the size of the commune, the group of the largest municipalities is the most advantageous (Figure 12).

Figure 12. *Changes in the activity of local authorities in cooperation with other local governments (in %)*

Overall



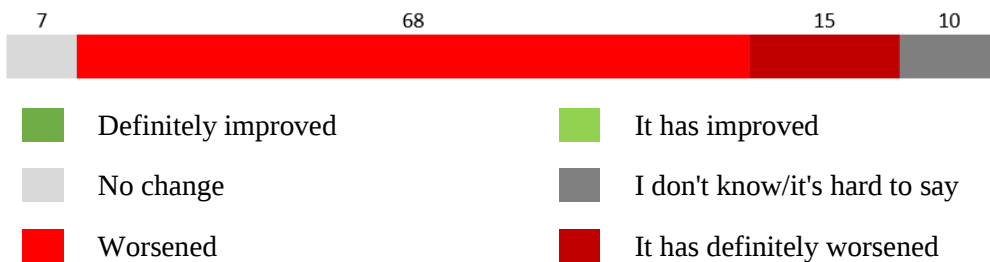
Source: Own research, N=40.

How do you assess education under the influence of a pandemic?

Education next to the situation in health care is an area where, in the opinion of the respondents, there was a deterioration or a significant deterioration (83%). The respondents primarily pointed to two difficulties, the first involved the provision of equipment for the implementation of classes in a new formula, and the second is the quality or effectiveness of education implemented in this formula. At the same time, it was stipulated that the effects are postponed, so one should be conservative in unequivocal judgments.

Figure 13. Changes in education in the commune (in %)

Overall



Source: Own research, N=40.

4. Conclusions and Recommendations

The conducted research allowed to formulate conclusions and recommendations, which are the results of the synthesis of the collected opinions of local authorities or their representatives:

1. In the opinion of the respondents, the observed increase in the attractiveness of living in rural areas, also in less attractive areas so far, is an opportunity to strengthen the population potential. Therefore, it is recommended to develop the commune's space in such a way that it is possible to provide access to public services in the long term, ensuring the vitality of local communities.
2. Valuing the natural environment by rural residents, according to the observation of respondents, can be a starting point for creating attitudes of responsibility for its condition while strengthening local identity. Taking this type of action in the context of weakening local ties can be a reinforcement to build a community in new conditions.
3. Deterioration of access to basic medical care in the opinion of the respondents, along with the difficulty of restoring the services provided, should be included in the area of public discussion along with an attempt to take action for positive reinforcement.
4. The observed difficulty in restoring the functioning of cultural institutions in rural areas may require, in the opinion of the respondents, substantive strengthening, for example in the form of dissemination of good practices in this area.
5. In the opinion of the respondents, we observe the weakening of local communities in a pandemic situation, accompanied by the breakdown of social ties with the enthusiasm of returning to a new normalcy, this may require financial support and well-thought-out actions to integrate and rebuild community life.

Despite the plight of the crisis, “rural areas are winners” in relation to cities. This context primarily refers to the increased attractiveness of rural areas as a place to live, or even an escape to the countryside to seek a place of safety for oneself and family. The countryside, also appears to be a winner as residents, due to their ownership of homes and gardens, enjoyed much greater freedom during the lockdown.

According to the survey results, respondents did not perceive significant changes, both in the area of agriculture and the environment. This may be evidence of a certain resilience of rural areas to the crisis that has occurred.

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