

THE EFFECT OF CHANGES IN THE SOCIO-ECONOMIC DEVELOPMENT OF THE PODHALE REGION

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Summary

The quantitative and qualitative dimension of infrastructure determines the pace and level of socio-economic development. Infrastructure investments are of a technical nature, social or institutional. Elements of infrastructure identify the possibilities of developing economic initiatives and attracting external capital, modernizing production growth, including agriculture, living conditions of its inhabitants, and shaping the multifunctional and sustainable development of counties.

The principal purpose of the article is to present a level of technical and social infrastructure development in the districts of Nowy Targ and Tatry, and the evaluation of their impact on the social, and economic development of the Podhale region.

This article presents the literature review, research methodology, socio-economic situation of Podhale, as well as results of empirical analysis on infrastructure potential and impact on the social and economic development of the Podhale region.

Keywords

competitiveness • regional competitiveness • regional development • socio-economic development • regional policy

1. Introduction

Infrastructure is an essential requirement for the socio-economic development. Ensures that ties concerning territorial and create better conditions for doing business [Wojewódzka-Król 1999]. Both the quantity and quality affects satisfaction and the standard of living of the public as well as the causative role of growth and economic development [Brzostowska 2005]. State of progress of the region's infrastructure constitutes a proof of the efficiency of local authorities, the effectiveness of the management of financial resources, as well as the existence of vision development region. Infrastructure investments are of a technical nature, social or institutional. Especially the technical infrastructure and the social development of endogenous potential importance remain, giving the specifics of the region, when deciding on his appeal, and consequently affecting the opportunities or barriers to develop further socio-economic.

The primary purpose of the article is to present a level of technical and social infrastructure development in the districts of Nowy Targ and Tatry as well as the evaluation of their impact on the social and economic development of the Podhale region. In the studies on the level of infrastructure development; following variables were used: the type of facilities and equipment of environmental protection (waste, water supply), roads, gas network, and drainage. Also, social infrastructure – facilities and devices to meet the need of population concerning education, health, and culture. It is these infrastructures that determine about the possibilities of business development initiatives and attracting capital from the outside, the capabilities of the modernization of production, including agricultural, about the living conditions of its people and the formation of multifunctional, sustainable communities.

In the following parts of the article presents a literature review, research methodology, an assessment of the socio-economic situation of the Podhale region, as well as the observational analysis in the field of infrastructure and environmental opportunities in Podhale and potential impact on socio and economic development.

2. Literature review

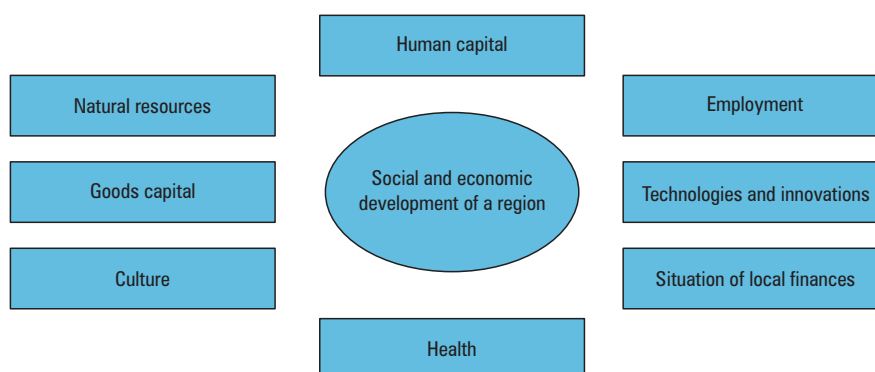
The issue of the development of socio-economic, often taken in the literature of the subject, is complex and profound. The very concept is composed of two elements that are mutually determined. However, performing analysis of the socio-economic development should also make a distinction and systematization of two basic concepts, i.e. economic development, and growth, which in practice often are used interchangeably. Yet, based on economics distinguishes between these concepts because of their different meanings. Economic growth is associated with an increase in quantifiable product per capita, while economic development is a broader concept and means to change various aspects of the level of a person life, some of which are immeasurable [Bartkowiak 2003]. Growth should be so regarded, as a quantitative change; however, the development includes both quantitative and qualitative changes, which can be dealt with regarding procedural or intentional and can lead regions through the process of phase from a lower level to a higher development [Chojnicki 2004].

The result of the socio-economic development is to improve the quality of life of society, its social groups, and individuals. By quality of life means not only availability but also the size of consumption goods and tangible and intangible services. Also, such phenomena as the functioning of the working environment, the home environment, the degree of activity and cooperation of people in the preservation and assimilation of existing and creation of new acquis, cultural, scientific, the extent of freedom of the people, and the state of mental and physical health.

Considering the mutual interdependence between growth and development, it can be assumed that growth is the primary determinant of the presence of economic development, whose consequences are shaping the level and the life of the inhabitants of the region. Thus, regional development is a prerequisite for sufficient but necessary for socio-economic development.

Depending on the type and how the material is presented, local development can be defined in many ways. Modern theories of regional development originated in the two schools of economics – neoclassical and neokeynesian. Regional development concepts can be divided into two primary groups corresponding to the main trends. The neoclassical theories are characterized by features of the doctrine of neo-liberal treating free-market regulatory as an optimal regulatory mechanism. Theories are deriving from the neokeynesian use the intervention as an essential regulatory mechanism, including in the geographical extent. As Z. Strzelecki rightly notes that in practice we are not dealing with one nor the other model present in the pure form. Nevertheless, the scale, directions, and impact of institutions on the course of development in the regions are varied and, above all, dependent on the condition of practical experiences or theories of own development economies [Strzelecki 2011].

According to K. Marks, “economic development is moving changes in society in the quantitative change and qualitative improvement of society, the county, and economy.” But, according to French economist F. Perroux, “economic development is a combination of psychological and social changes of the population, which make it capable of accumulating and increasing their real product.” In turn, in the opinion of S. Marciniaka, “economic development includes the realm of human activity that involves the management, and so the production and distribution of goods and services. Economic growth means change capacity, economic relations, production, structure, and functioning of the economy, consumption and the environment.” The other approach presents L. Wojtasiewicz [Wojtasiewicz 1997], who defines development as a process of positive change of quantitative and qualitative development in the system, considering the important needs, preferences, and hierarchy values. According to R. Brol [Brol 1998] regional development are harmonized and systematic operation of the local community, local authority and other entities operating in the area aimed at creating new and improving existing commercial advantages of the area, creating favorable conditions for the local economy and provide spatial and environmental governance [Brol 1998]. It seems that however, the most relevant definition of regional development gives A.C. Nelson defining, “economic development as a process of change in the regional productivity measured in terms of population, employment, income, and value production. Besides, the economic development also includes social development as the level of health care, welfare, environmental quality or creativity. It seems, regional development can mean sustainable growth level of life of the inhabitation and economic potential in large scale subdivision, which includes: the potential and the economic structure, the natural environment, the standard of life of the inhabitants, and including spatial planning and infrastructure [Benio 1999]. The definition of the concept of development should always be associated with the positive and desirable quantitative changes, quality and structurally specified socio-territorial. Regional development is a socio-economic development that using local resources and factors pursues both local and collective interests. It requires appropriate programming, control, and implementation by local authorities, the national institutions, and sub-regional and regional level.



Source: authors' study

Fig. 1. Areas of socio-economic development

To summarize, the socio-economic development is the process of:

- covering the phenomena that make up the essence of “growth”, “economic development and “social development”,
- positive changes of quantitative-qualitative that increase and improvement of existing and the emergence of new phenomena in the economic sphere, infrastructure, cultural and social.

In the context of the characteristics of the economic development of the region or the country's assessment is subjected to several aspects (Figure 1): physical capital and human, the situation in the budget and the labor market, natural resources, the level of technological innovation, culture, and health.

3. Research Methodology

In the analysis impact of the infrastructure changes on the socio-economic development of the Podhale was used panel data obtained from GUS for the years 2005–2014. As a research entity Nowy Targ sub-region was selected, including countries: nowotarski, tatrzański, suski, which can be considered both for statistical regions (regions NUTS 3), and industrial areas, as having their local governments carry out separate economic goals and development. In the studies, as the test method used the taxonomic method. As criteria for the evaluation of infrastructure accepted:

- a) public roads, a county with a hard surface (in km per 1000 inhabitants);
- b) water supply network (in km per 100 km²);
- c) sewage system (in km per 100 km²);
- d) gas network (in km 100 km²);
- e) the population using waste water treatment plants (in%):

- f) industrial wastewater and residential water treatment (in % wastewater requiring treatment);
- g) housing (number of dwellings per 1000 inhabitants);
- h) the number of population on one entity ambulatory health care;
- i) the number of population for one bed in a general hospital;
- j) the number of persons per 1 ward.

4. Assessment of the changes in the socio-economic situation of Podhale

The level of socio-economic development can be identified with the social and economic situation, which is complex and its characteristics require knowledge of the information on many aspects of both quantitative and qualitative. For a full description of this category, it is proposed the selection of features relating to demographics and health, living conditions, labor market, production activities and services, the information society, economic growth, the financial and environmental conditions. Insertion in the study of all these features depends on the ability to gather reliable, complete, and comparable statistics. The lack of availability of this type of data tends to merge certain themes that characterize similar aspects of research: social and economic. Moreover, this approach has been used in this article, combining diagnostic features in various fields.

Podhale is a region located in southern Poland, in the Malopolska province. Podhale occupies the central part of Podhale, to the South, enters in the Tatra mountains and the northern boundary of the Podhale region are Gorcze. With its reach are following regions: Bialy Dunajec, Bukowina Tatrzańska, Czarny Dunajec, Czorsztyn, Koscielisko, the town of Nowy Targ and its region, Poronin, Raba Wyżna, Szaflary, Szybowice, as well as the town of Zakopane which are in Tatra and Nowy Targ Counties. The area of the Tatra County is one of the smallest in the province and is 427 km². Also, it is almost three times smaller than the area covered by the Nowy Targ county extending over 1474.66 km². The Tatra County is unique in its location, because it is adjacent to Nowy Targ county, and from the east, south and west is country's borders.

The Podhale region is inhabited by about 260,000 people, which constitutes 7.6% of the population. In the Nowy Targ county live 73% of the population, and 26% of the population are concentrated in the Tatra County. The average population density in the Tatra county is 222 people · km⁻², similar to Malopolska province at 212 people · km⁻² but it is significantly higher than the average for the country which is 124 persons · km⁻². The reverse situation is in the Nowy Targ district, where the average population density is 129 people · km⁻², similarly as in the county but much lower than the average of the province (212 people · km⁻²). These indicators show considerable spatial variation. The most populated are Tatra County, while the least is Nowy Targ County. However, the rate of urbanization which is the ratio of the number of people living in cities to the population of a given region in the Nowy Targ County. This figure is quite small and amounts to 29.7%, while in the Tatra County is at the level of the Malopolska province

(49.4%) and is 42.5%. A relatively high level of natural growth also characterizes the population of Podhale – the rate of 2.1/1000 inhabitants is significantly greater than the national index (0,5). High population growth is the result of a high level of birth in 1995 in Nowy Targ County, and a small degree of death 7.91. However, this situation is not the same in both counties. The demographic dynamics rate of live birth to the death toll in the Nowy Targ County was 1.27 and is significantly higher than the average for the province and also higher than the demographic dynamics for the whole country. In Tatra County, however, the natural increase is 34, which corresponds to a natural increase of 0.5 per 1000 inhabitants that are similar to the national rate. Age structure of the population of the region of Podhale is slightly worse than the average for the country. A lower share of pre-working age population characterizes it: 20.8% in the Nowy Targ County and 19.3% in the Tatra county (country – 25,6%), higher in working age: 62.8% in Nowy Targ County and 61.9% in Tatra County (country – 60.1%) and higher in the post-working age: 16.4% in the Nowy Targ County and 18.7% in the Tatra County (country – 14.3%). This means that the image age structure of the population of the Podhale region is spatially varied. The youngest age structure is characterized by the Nowy Targ County, where the share of the post-working age population is at 16.4%, while the highest percentage of the population, in the age of retirement, has the Tatra county.

The indicators on the migration balance in the Nowy Targ and Tatra County are sharply polarized. Favorable demographic process in Tatra County where there is a positive balance of migration expressed indicator 22/1000 inhabitants, is accompanied by a negative balance in the Nowy Targ County 135/1000 population. This movement shows an unequal spatial distribution of migration and a significant drain of the population from the Nowy Targ County. And perhaps it is an expression of the attractiveness of tourist sites of Zakopane and its surroundings. In general, demographic phenomena and demographic processes positively distinguish the Podhale region against the background of the Małopolska province. However, the migration situation is a phenomenon that may have an adverse impact on the development of Podhale region.

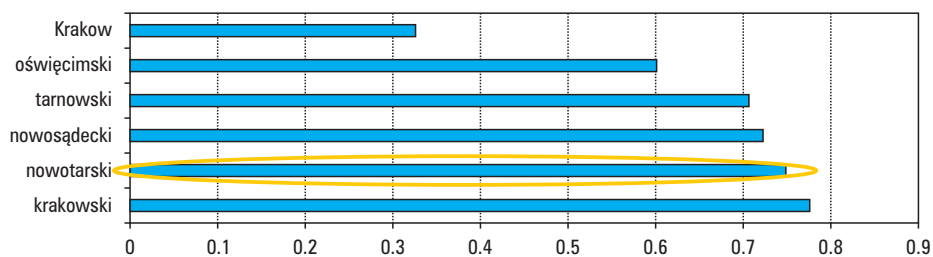
In the Nowy Targ County on 1000 inhabitants 127 people are working, and slightly more 153 in the Tatra County. On the scale of the Małopolska province (222) and the country (232) which is a lot less. In the Nowy Targ County, about 53.7% of all workers are women, and 46.3% are men. Similarly, in the Tatra County, 56.8% are women, and 43.2% are men. The unemployment rate registered in the Nowy Targ County was 10.7% in 2015, and 12.9% in the Tatra County. This is much more than the level of unemployment recorded in the Małopolska province and much more than the unemployment rate registered for the whole Poland. The differences can also be seen in earnings. The average gross monthly salary in the Tatra County is 3520.09 PLN, which corresponds to 84.80% of the average gross monthly salary in Poland. By contrast, in the Nowy Targ County is 3,121,96 PLN, and corresponds to 75.20% of average gross monthly earning in Poland. There are significant differences in these counties among the economically active population. In the Nowy Targ County 9,976 people leaving for

work to other provinces, and 8.643 workers come to work outside the province – so the balance of arrivals and departures is 1.333. However, in Tatrzy County 2.258 people leaving for work to other province, and 2.845 workers come to work from outside the province of 46.7% economically active population of Nowy Targ County in the agricultural sector (agriculture, forestry, hunting and fishing), 16.5% in industry and construction, and 4.4% in the service sector (trade vehicle repair, transport, accommodation and gastronomy, information, and communication). Also, 4.4% work in the financial sector (financial and insurance, and the real estate market). In the Tatra County, there are considerably fewer active people working in the agricultural sector, and this constitutes about 38.4%. Likewise, fewer people work in industry and construction about 6.3%. On the other hand, more and more professionally active people take a job in the services sector and the financial sector at about 11.6%.

The Podhale region is one of the areas of the Małopolska province with a relatively well-developed transport infrastructure and communication. The length of the county roads in total is 392.27 km. (of which 329.7 is in the Nowy Targ County and 62.6 in the Tatra County). Within the region of Podhale international road E 77 Gdańsk-Chyżne (Nowy Targ County). At the same time, four important roads are heading to country borders with Slovakia: Winczarowka-Bobrov (Lipnica Wielka County), Chochołów-Sucha Hora (Czarny Dunajec County) and also Niedzica-Łysa near Dunajec river (Łąpsze Niżne County) and the Jurgow-Podspady border crossing. Despite the relatively high density of road networks, their direct capacity on several sections is insufficient, which adversely affects the availability of certain areas. The concept of modernization in the field of road infrastructure improvement is therefore mainly based on increasing communication accessibility to the tourist areas in the Podhale region, taking into account the improvement of traffic patency and the improvement of access roads to the border crossing points functioning in the county. As a consequence, already taken actions brought to reduce nuisance traffic by creating alternative travel routes significantly. Road network in the region of Podhale also allows direct access from Krakow, Nowy Sącz, and Silesian agglomeration. There is no organized collective transport in the county. Intercity passenger services provide public and private bus lines, while local services are provided by private carriers in the business. This is mainly the case of the Tatra province. Another situation is found in the Nowy Targ County where these services are carried out by organized urban transport.

5. Socio-economic infrastructure of the Podhale region – the results of empirical analysis

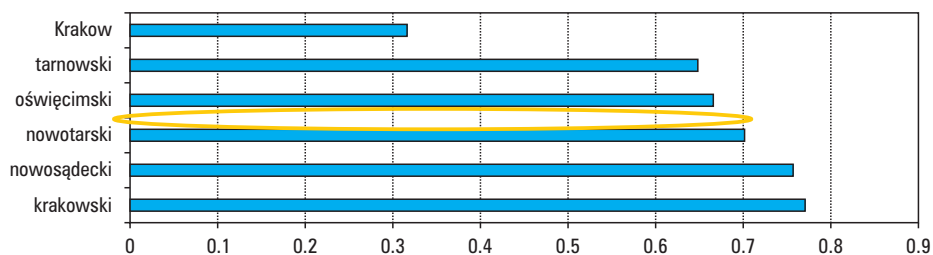
In Figure 2 shows the level of development in the infrastructure in the Małopolska province in relative terms, based on data from 2005. The calculations show that the closest to the standard values of selected infrastructure meters was the city of Krakow, and the weakest level of infrastructure development was characterized by Kraków sub-region. Nowy Targ sub-region was slightly better than the Kraków and was not much worse in respect to the sub-region of Tarnów and Nowy Sącz.



Source: authors' study

Fig. 2. Infrastructure development in Małopolska province in the year 2005

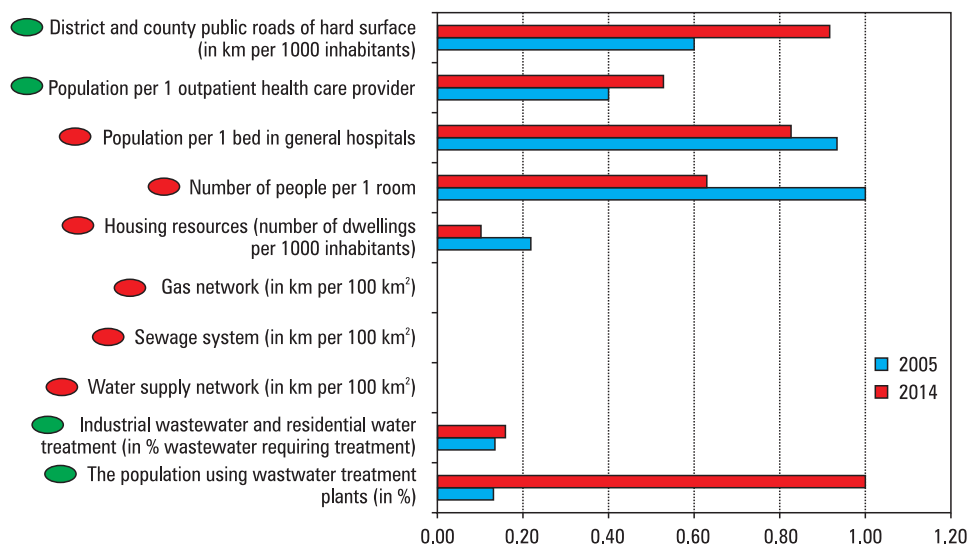
A similar analysis of the level of development of infrastructure in the Małopolska province was carried out in 2014 (Figure 3). Practically after ten years, there has been a distinct change between the various sub-regions. The situation within the city of Krakow, in the Tarnow and Nowy Targ sub-regions, has improved. On the other hand, in comparison to 2005, the sub-regions of Oświęcim and Nowy Sącz recorded worse results, whereas in sub-region in Kraków was practically unchanged. In 2014, there were also significant changes between the sub-regions themselves. It is worth noticing the improve position of the Nowy Targ sub-region regarding level of infrastructure development against other sub-regions of the Małopolska province.



Source: authors' study

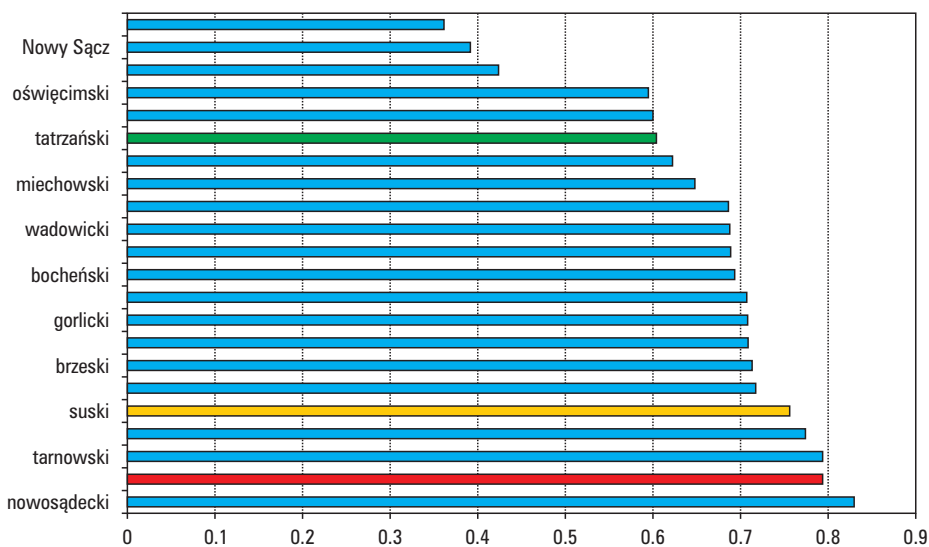
Fig. 3. Infrastructure development in Małopolska province in the year 2014

It is worth analyzing the areas in which Nowy Targ sub-region has improved from infrastructure development. More detailed data is presented in Figure 4. It appears that Nowy Targ sub-region between 2005–2014 the most noticeable improvement in infrastructure has been recorded in the area of public roads and outpatient health care per 1,000 inhabitants, as well as the availability of shared infrastructure and sewage treatment plants the public and businesses. In turn, there was no significant progress in the field of housing, the density of the residence and the gas network, sewerage, and water supply.



Source: authors' study

Fig. 4. Changes in the infrastructure of the Nowy Targ sub-region between 2005–2014



Source: authors' study

Fig. 5. Infrastructure development level in the Małopolska province in the year 2014

In turn, comparing the level of infrastructure development in 2014, among the counties in Małopolska province shown in Figure 5. These data highlight the differ-

ences that occur between districts, not only in the province but also in the region of Podhale. From these analysis shows that in the context of the sub-region of Nowy Targ there is a vast disproportion regarding the level of infrastructure. In the best situation is the Tatry County, which surpassed in this respect only two districts (Oświęcim and Chrzanów), outside the cities of Krakow, Nowy Sącz and Tarnow. In turn, the Tarty County is among the poorest in terms of infrastructural development. Slightly better, placed third of sub-region of Nowy Targ – Suski district, which, however, belongs to the group of counties with small progress in infrastructure.

6. Conclusions

Carried out in the article analysis allowed to formulate the following conclusions. Firstly, in Nowy Targ sub-region, 2005–2014 has seen positive changes in infrastructure in relation to other sub-regions of Małopolska, which focused on such areas as:

- public roads in districts and counties of hard surface (in km for 1000 inhabitants);
- population per 1 outpatient health care provider;
- population using waste water treatment plants (in %);
- industrial and municipal waste water purified (in % of sewage to be treated).

This means that improving the quality of the infrastructure was conducive to the higher socio-economic development of the New Targ sub-region. Secondly, the analysis shows that there are a lot of infrastructure elements, which in the Nowy Targ sub-region are relatively safe level. These include:

- district and counties public roads of hard surface (in km for 1000 inhabitants);
- population per 1 outpatient health care provider;
- population per bed in general hospitals;
- number of people per room.

Thirdly, to achieve the greatest synergistic effects in the socio-economic development of Podhale requires following stimulation of infrastructure:

- stronger dynamics of the development of the water supply network;
- speeding up the development of the sewage network;
- intensify the further development of the gas network;
- supporting the development of the housing;
- to stimulate the population to use the waste water treatment plant.

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