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Introduction

The Department of Regional Economy at the Faculty of Economics, Management and Tourism of Wrocław University of Economics organized yet another scientific conference entitled: "Local and regional economy in theory and practice". It was already the 23rd conference held on 23-25th September 2015 in "Chata za wsią" hotel in Mysłakowice near Jelenia Góra.

The conference was attended by the representatives of national and international scientific circles, regional and local government structures, and also other entities representing business practice and interested in the problems of local and regional economy, as well as PhD students. Over 80 participants of the conference arrived from over 30 national and foreign scientific centres and institutions to present papers and posters.

The subject matter of the conference covered the following areas: local and regional development, local and regional governance, application of quantitative methods in regional studies, partnership in local and regional development, directions of research in local and regional development, cooperation between academic centres and local government units.

The conference contributed to establishing more extensive and stronger relationships, created within the framework of the constructed platform for the exchange of scientific and practical experiences (the conference has been held cyclically since 1992) at the local, regional, national and international forum. The discussions were focused on the dissemination of research results, the exchange of experiences and the establishment of a discussion forum covering both theoretical and practical aspects of local and regional development. They also resulted in more extensive cooperation between academic centres, local government units as well as research and development centres, including the cross-border ones.

The conference is cyclically attended by the representatives of science from Poland and abroad. So far we have hosted e.g. the research workers representing academic centres from Ukraine, the Czech Republic, Italy, Sweden, Germany, Austria, Denmark, Slovakia and also the representatives of business practice, e.g. city presidents and mayors, village heads, county governors, presidents of regional development agencies or of local enterprises, etc.

As a result of the organized conference, the hereby publication presents the collection of thematically selected articles in English covering the broadly understood problems of local and regional economy. Its authors represent the following scientific centres: Warsaw School of Economics, University of Łódź, Gdańsk University of Technology, Koszalin University of Technology, University of Warmia and Mazury in Olsztyn and Wrocław University of Economics.

We are most grateful to the conference participants for the joint meeting and we do hope for further cooperation.

Elżbieta Sobczak, Andrzej Raszkowski, Andrzej Sztando

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PEST ANALYSIS OF PIECHOWICE MUNICIPALITY – POWER AND FUTURE IMPACT DIRECTION OF ENVIRONMENTAL FACTORS

ANALIZA PEST GMINY MIEJSKIEJ PIECHOWICE – SIŁA I PRZYSZŁY KIERUNEK ODDZIAŁYWANIA CZYNNIKÓW OTOCZENIA

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Summary: PEST analysis represents the commonly used tool supporting the analysis of a given entity macro-environmental changes. Within the framework of the conducted analysis the occurring changes can be observed in a broader perspective, avoiding negative phenomena and taking advantage of the occurring developmental opportunities. The study presents the segmentation of environmental factors exerting an impact on the Municipality development, divided into political, economic, socio-cultural and technological factors. The impact power of particular factors on the Municipality development was also assessed (in a three-level scale) along with the anticipated direction of particular factor development (positive, unchanged, negative) in the perspective till 2026 in terms of its influence on the discussed development. The purpose of the study is to present PEST analysis for Piechowice Municipality, taking into account its potential power and future impact directions of the analysed factors on its development.

Keywords: local development, PEST analysis, macro-environment, Piechowice.

Streszczenie: Analiza PEST jest powszechnie stosowanym narzędziem, które pomaga analizować zmiany w makrootoczeniu danego podmiotu. W ramach przeprowadzonej analizy można dostrzec zachodzące zmiany w szerszej perspektywie, wystrzegać się negatywnych zjawisk oraz wykorzystywać pojawiające się szanse rozwojowe. W opracowaniu dokonano segmentacji czynników otoczenia mających wpływ na rozwój gminy w podziale na czynniki polityczne, ekonomiczne, społeczno-kulturowe i technologiczne. Jednocześnie oceniono siłę oddziaływania poszczególnych czynników na rozwój gminy (w trzystopniowej skali) oraz przewidywany kierunek ukształtowania się danego czynnika (pozytywny, bez zmian, negatywny) w perspektywie do roku 2026 pod względem wpływu na ten rozwój. Celem niniejszego opracowania jest przedstawienie analizy PEST dla gminy miejskiej Piechowice, przy uwzględnieniu potencjalnej siły oraz przyszłych kierunków oddziaływania uwzględnionych czynników na jej rozwój.

Słowa kluczowe: rozwój lokalny, analiza PEST, makrootoczenie, Piechowice.

1. Introduction

PEST analysis represents a widely applied tool, which supports diagnosing changes in the macro-environment of a particular entity. Within the framework of the conducted analysis the ongoing transformations can be approached in a broader perspective, eliminate negative phenomena and take advantage of the occurring developmental opportunities. Moreover, they facilitate comprehending environmental impacts on the development of enterprises, NGOs or local government units.

The discussed analysis can represent an interesting and important component of an organization development strategy, significantly enriching its substance. In cases of economic entities it is applied along with Porter's five forces analysis [Porter 1998; Stimson et al. 2006]. The environment is analysed based on political, economic, socio-cultural and technological perspective by selecting factors which exert the strongest impact or can be of significant influence in the future. It is an expert method in which the authors' knowledge, experience and innovative approach are crucial for its efficiency and accuracy [Olmstead 2002]. At this point it should be added that this method is not widely used with reference to local government units, contrary to the related SWOT analysis.

The process of PEST analysis is usually made up of three stages. The first stage is focused on identifying the most important factors of the particular environmental segments by an organization, which have a crucial impact or can significantly influence its operations. The set of analysed factors depends, to a great extent, on the business profile of the studied entity. In the course of the second stage an organization evaluates the impact made by every factor on its functioning. It should be assessed which factors are currently influencing the analysed entity the most, but also the ones which are likely to influence it in the future. The final step covers defining relationships between an organization and its macro-environment. The anticipated trends, which can influence an organization in the future are assigned to particular factors [Allen 2001; Analoui, Karami 2003]. Basically, the analysis is limited to four environmental segments. The "Environment" oriented factor appears individually in some studies, hence the analysis is referred to using PEEST acronym. Sometimes "Legal" environment is also distinguished – PESTEL acronym. PEST analysis is frequently defined as a typical bird view of business, political, social, technological landscape, in which a given organization is operating. The purpose of this method is e.g. to identify the opportunities ingrained in the environment and to prevent potential threats. [Obłój 2007; Basu 2004; McCabe 2010].

Piechowice is a municipality in Jelenia Góra county (covering part of the Karkonosze Mountains and the Izery Mountains and also a part of Jelenia Góra valley) in Lower Silesia region. The city is situated at the altitude of 360-480 m a.s.l., its administrative border reaches the altitude of 1509 m a.s.l., it borders with the following municipalities: Jelenia Góra, Stara Kamienica, Szklarska Poręba and with the Czech Republic. Piechowice received the city status in 1967 and since the beginning it has been consistently manifested in its urban system (e.g.

the construction of residential areas) and the social one (moving away from its agricultural function for the benefit of industry and service oriented one). The upper, central and lower part of the town is situated along the Kamienna River (which resulted in several destructive floods), whereas the residential areas are located along streams and creeks. The foothill and widespread location is manifested in transport problems resulting in the need to provide bus public transport. The city is situated along the national road no. 3 from Świnoujście to Jakuszyce. The national road crosses the regional one no. 366 from Piechowice to Kowary, which is also the city's representative street (Żymierskiego Street). The function of public roads is also played by county roads. The municipality spreads on a relatively extensive area, i.e. 43,22 km^2. The population of Piechowice, as at 31st December 2015, amounted to 6234 residents. The observation of population movement confirms that in the recent years its number is maintained at a stable level. The total number of registered unemployed population in Piechowice was 192 persons in 2015, the number of economic entities, in line with REGON (Official Company Register) was 761 (in 2014). Apart from cultural facilities Piechowice also offers the following attractions: Śnieżne Kotły (eng. Snowy Kettles), Wielki Szyszak (Great Helmet), Wodospad Szklarki (Szklarka Waterfall), Bobrowe Skały (Bobrowe Rocks) and Cicha Dolina (Quiet Valley). A well-developed network of hiking trails and bike paths in the city and its surrounding areas (almost 100 km) offers good conditions to practice various forms of tourism all year round [Raszkowski 2010; Raszkowski 2015b; *Strategia Rozwoju*... 2010].

The purpose of the study is to present PEST analysis for Piechowice Municipality, taking into account its potential strengths and the anticipated directions of the identified factors' impact on its development.

2. PEST analysis of Piechowice Municipality

The presented PEST analysis was developed in the course of expert work while preparing the Strategy of Piechowice Municipality Development for the period 2015--2026 [Raszkowski 2015b]. The analysis itself was based, to a great extent, on the materials provided by the town hall (desk research), the available public statistics, creative brain drain, surveys, study visits and the conducted strategic workshops in the period July-December 2015. Therefore, the final results were influenced by the involvement of municipality residents, representatives of local authorities, entrepreneurs, NGOs and the town hall staff.

The table below demonstrates the segmentation of environmental factors having an impact on the development of Piechowice Municipality divided into political, economic, socio-cultural and technological factors. Simultaneously, the impact power of particular factors on municipality development was assessed (in a three-stage scale) and also the anticipated direction for a particular factor formation (positive ↑, no change →, negative ↓) in the perspective till 2016, in terms of impact exerted on this development.

Table 1. PEST analysis of Piechowice Municipality, main results

Political factors	Impact power on the Municipality development (3-high, 2-average, 1-low)	Forecast direction of factor influence on the Municipality development
Political stability	2	↑
Distribution of European Union structural funds	2	↑
Disagreements between policy makers	2	→
International cooperation	1	↑
Support for regional development	2	→
Tax law	2	↑
Level of decentralization	2	→
Employment law	2	↑
Trade restrictions and tariffs	1	→
Environmental regulations	2	↑
Public administration quality	2	↑
Public private partnership development	1	↑
Possibility of opening and running businesses	3	→
Competitive tendering process	2	↑
Intellectual property protection	1	→
Economic factors	Impact power on the Municipality development (3-high, 2-average, 1-low)	Forecast direction of factor influence on the Municipality development
State of the economy	3	↑
Dynamics of economic growth	3	→
State of public finances	2	↑
Development of the tourism industry	2	↑
Domestic and international economic trends	2	↓
Impact and level of foreign investments	2	↑
Geographical location	3	→
Economic cooperation between Poland and Germany	2	→
Economic cooperation with the Czech Republic	2	↑
Competition by other territorial units	2	↑
Quality of central economic policy	2	→
Average income level	3	→
Impact of globalization	1	→
Labour costs	3	↓
Rate of unemployment	3	↓
Interest rates	1	→
Inflation rate	2	→
Taxation	2	↑
Exchange rates	2	↓

Table 1, cont.

Banking system quality	2	→
Credit accessibility	3	↓
Social security and pension systems	2	→
Socio-cultural factors	Impact power on the Municipality development (3-high, 2-average, 1-low)	Forecast direction of factor influence on the Municipality development
Role of men and women in society	2	↑
Skilled worker immigration	3	→
Immigration of unskilled workers	2	→
Ecological awareness		
Division of wealth in society	1	→
Social inequalities	2	→
Human capital development	2	→
Worker mobility	2	↑
Lifestyle trends	2	↓
Regional creativity	1	↑
Socio-cultural changes	1	↑
Consumer buying mechanism	2	↓
Business ethics	1	↑
Overall people's levels of aspiration	2	↑
Development of Non-Governmental Organizations	2	↑
Influence of media on society	2	↓
Events for society	2	↓
Health and safety	3	↑
Funds for health and social care	3	→
Population growth rate	2	↑
Population ageing	3	↑
Local identity	1	↑
Technological factors	Impact power on the Municipality development (3-high, 2-average, 1-low)	Forecast direction of factor influence on the Municipality development
Transport (technical) infrastructure development	3	→
Funds for Research & Development projects	2	↑
Rate of technological change	1	→
Automation	2	↓
Social media development	2	↑
Innovation development	2	↑
Recent technological developments	1	↑
Access to modern technologies	2	↑
Telework development	1	↑

Source: author's compilation.

Due to the expert nature of the tool used the presented list of indicators should be approached as an open one. PEST analysis can be subject to modifications, redefinitions and changes of particular factors within the framework of further research or the development of subsequent strategic documents by the municipality. The current form of the conducted analysis should be referred to as the starting point, as the first one performed for Piechowice Municipality.

The possibility of starting and running a business was considered as the biggest impact factor in the segment of political ones. The key to such a choice was an assumption that simplifications for future and current entrepreneurs depend on political decisions at the central level. Among factors of average impact power, but of an anticipated increased importance, the following can be listed: access to the European Union structural funds, tax law, labour law, environmental regulations or the quality of public administration. Particular attention should be paid to an effective use of the EU funds in the coming years, as they can influence the municipality development in many areas (e.g. complex revitalization of urban space, projects counteracting unemployment and social exclusion, funds for NGOs' projects). International cooperation was listed among the current examples of low impact factors, however, in this case an upward trend is expected.

The overall state of economy was identified among important economic factors presenting an upward trend. The examples of other high impact factors were as follows: the dynamics of economic growth, average income level, labour costs, unemployment rate, the availability of credits. As it can be inferred, the municipality development is strongly dependent on the general economic situation in the country and in the region. In this situation the potential high sensitivity of the city to macroeconomic changes is negative. Attention should also be paid to the average current and the potential upward trend of tourism sector development, the inflow of direct foreign investments or the economic exchange with the Czech Republic. The level of interest rates and the influence of globalization on municipality development were recognized as the lowest impact factors.

In the segment of socio-cultural factors experienced by the municipality the strongest impact is exerted by health and safety, population aging (upward trend) and economic immigration of qualified workers, but also the resources for health and social care. In general, the problems related to the system of social benefits and care remain important for the municipality residents. The factor with anticipated upward trend related to the general level of human aspirations is an interesting one. It may prove the awareness of combining one's own aspirations with the overall socio-economic level of the municipality [Diamond 2012]. The lowest impact factor is associated with e.g. socio-cultural changes, business ethics or regional creativity. Based on the existing analyses it can be concluded that the users of Piechowice local space concentrate on their everyday duties as well as their health and material situation. They are less interested in national or global processes and trends.

In the last analysed segment of technological factors the primary focus was on the overall transport infrastructure development. Having considered the geographic

location of Piechowice it definitely represents the factor which stimulates socio-economic growth. The development of social media, access to modern technologies and the funds for research and development projects (anticipated upward trends) are also worth emphasizing. Teleworking is not perceived as the high impact factor, however, the growing importance of this factor is expected.

At this point it should be noted that SWOT analysis was also created in the course of the above-mentioned expert work while preparing the Strategy of Piechowice Municipality Development for the period 2015-2026, which is basically a supplementary method for PEST analysis [Kotler et al. 2009]. In this case the results of PEST analysis provide a starting point for presenting both opportunities and threats constituting the core component of SWOT analysis (apart from internal strengths and weaknesses).

Among the major threats of Piechowice Municipality the following were diagnosed, e.g.: high unemployment rate in Jelenia Góra county, competition from other local governments, economic immigration, educational offer unadjusted to labour market requirements, insufficient involvement of the state government in solving local government problems and imposing the growing number of tasks on local governments without adequate financial support. Moreover, unclear legislation, disproportions in socio-economic development of particular Lower Silesian local governments, population aging, natural disasters (mainly floods), problems in cooperation with other self-governments, high tax burden of enterprises and natural persons, high bureaucracy level of public institutions, economic crises and low level of specialist health care were identified as the existing threats faced by Piechowice Municipality.

Taking advantage of the EU funds, tourism development (the Karkonosze Mountains potential, agritourism, local products), the development of local entrepreneurship, the functioning of Jelenia Góra Agglomeration [*Strategia Zintegrowanych*... 2015], location advantages (cooperation with the Czech Republic, Germany), the potential offered by the Karkonosze National Park, cooperation with other local governments and the growing importance of NGO sector [Raszkowski 2015a] are listed as the development opportunities of Piechowice Municipality. Additionally, the following opportunities were also identified: railway connection Jelenia Góra-Piechowice-Szklarska Poręba, the proximity of higher education institutions (Jelenia Góra), the increasing job oriented mobility of population, higher educational aspirations, the growing interest in healthy lifestyle, the developing regional transport infrastructure and the development potential of mountain resorts (Szklarska Poręba, Karpacz) in the Karkonosze Mountains.

3. Conclusions

To sum up the above presented discussion it should be emphasized that the conducted PEST analysis was used to develop the tree of strategic and operational objectives for the strategy of Piechowice development. Apart from the above-mentioned analysis the socio-economic diagnosis, the trees of municipality development problems, SWAT analysis, survey report or the suggested development scenarios were also used. Among the strategic objectives the following were listed: the development of tourism and entrepreneurship, higher quality of the local job market, improved condition of technical infrastructure, municipal space revitalization, human capital development, improvement of natural environment, higher level of public safety and strengthening the municipality brand. Higher life quality of Piechowice Municipality was defined as the horizontal objective.

The periods favourable for stimulating socio-economic growth of the municipality are expected in the coming years. Among major reasons underlying this positive forecast the following are included: the EU funds to be obtained, progressing economic stability in the country or more intense activity of the local community. The development of PEST analysis for Piechowice, apart from its cognitive values, can also function as a significant incentive. Its development process engaged entities and individuals indirectly or directly responsible for the discussed municipality development.

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