
Boosting Regional Tourism: The Role of Karlino's 'Energy' Science and Technology Center in Western Pomerania's Growth

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Abstract:

Purpose: This article presents an attempt to determine the importance of the creation of a new tourist attraction in Western Pomerania on the development of tourism in the region.

Design/Methodology/Approach: In 2022 and 2023, at the invitation of the municipality of Karlino, a case study was carried out on the rationale for the creation of the Energia Science and Technology Centre as a new tourist attraction. The paper is based on current data on tourist arrivals in the region, a site visit, documents on the concept of the Energia Science and Technology Centre and archival data on the 1980 natural gas and oil eruption.

Findings: It was concluded that the creation of a new tourist attraction of a cognitive and educational nature based on an authentic historical event is fully justified. A significant number of tourists visiting the neighbouring part of the Polish Baltic coast with Karlino will certainly be interested in the new facility. A prerequisite for the success of the project is the creation of an exhibition that is attractive from the point of view of potential tourists and which refers to contemporary trends in world tourism.

Practical Implications: The article stresses the significance of developing geotourism attraction as a factor of socio-economic development of regions.

Originality/Value: Geotourism attractions outside upland and mountain areas are far less common. The example presented is located near the coastal zone, which is massively visited by tourists. As shown, areas in the hinterland of the coastal zone are rarely visited by tourists. Therefore, the example presented is of particular relevance in the context of attractions of a cognitive-educational nature in an area associated with 3 x S tourism.

Keywords: Tourism potential, Geotourism, regional development.

JEL codes: O13, O44, R11.

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1. Introduction

The basis for tourism development are natural resources and those related to culture and anthropogenic heritage. A region's tourism product is often complemented by 'created resources' that positively contribute to its attractiveness and, in many cases, can also create tourism demand in their own right, such as festivals, theme parks, museums and exhibition facilities.

According to Derek *et al.* (2005) the tourism and leisure function of cities can be seen as a factor in: (1) improving the quality of life of the inhabitants (social aspect), (2) activating the local economy (economic aspect), (3) enriching the image of the city (psychological aspect), (4) revalorising urban space (cultural and spatial aspects).

Therefore, in the activities of the European Union, the support of the tourism policy of self-governmental entities has been important for many years. So far in Poland, the municipalities which have benefited most from tourism development have been coastal cities. Examples of this are, Kołobrzeg, Sopot, Świnoujście and Władysławowo. They were among the 25 wealthiest cities in Poland (Derek *et al.*, 2005).

Moreover, the development of tourism usually also translated into the wealth of the inhabitants, measured by the average income of personal income tax payers. It should be noted that the creation of tourism demand in a specific spatial unit, which has an administrative body, gives the possibility of initiating and coordinating the effects of tourism development. Therefore, more and more cities and municipalities are betting on stimulating inbound tourism, seeing multiple benefits in this action.

Nowadays, the concept of experience economy is being used more and more often in the design of new tourist attractions or products. Currently, the process of consuming goods with the expected quality is becoming secondary, while the importance of experiences and emotions is increasing. Customers are increasingly focusing on the psychological satisfaction that can be derived from consumption. Experience is therefore recognised as a new source of value for customers, as the main cause of their satisfaction.

Thus, experiences, emotions, impressions, emotions, moods, atmospheres become the right product (Stasiak, 2015). Most standard products or services are quickly forgotten by tourists and only unique experiences remain in their memory. Therefore, it is particularly valuable when designing new tourist attractions to create an experience that will remain in the customer's memory for a long time.

One form of modern tourism that is gaining increasing interest among tourists is geotourism. It is a form of cognitive tourism that aims to provide tourists with information about geological objects and processes in an understandable form, as

well as an aesthetic experience by making them appropriately accessible (Słomka *et al.*, 2006; Osadczyk and Osadczyk 2008).

As Migoń (2012) emphasises, what distinguishes geotourism from previous forms of cognitive tourism is an accessible way of conveying information, maintaining factual correctness, influencing the imagination and contributing to a better understanding of natural phenomena and processes.

Geotourism in Poland has so far been commonly associated with mountain and highland areas. This raises a research problem of a cognitive nature. Are there possibilities of practising this form of tourism in the Polish Lowlands? In order to solve this research problem it was decided to use the case study method and to attempt to answer the question using a specific example.

A region where there is a particular need to popularise geotourist assets is the West Pomeranian Voivodeship. The Catalogue of Geotourist Sites in Poland (Słomka *et al.* 2006) lists only three sites in this area (Szmaragdowe Lake in Szczecin and two sections of cliffs on the Baltic coast).

This does not mean, however, that there are few such assets in the area, but rather that they have not been adequately publicised and do not exist in the consciousness of local people or tourists. It should be noted that in Germany's neighbouring Mecklenburg Lake District to the west, which has a similar landscape genesis, a Geopark and Ice Age Trail was established as early as 2002.

Another argument justifying action in this area is that the West Pomeranian Voivodeship is one of the most visited regions in Poland by tourists. More than 3,2 million tourists visited the region in 2019 (GUS, 2020). Research to date confirms that the main motive for tourists to come to West Pomerania is summer recreation at the seaside, while other areas attractive for sightseeing are definitely less visited.

As a result, there is a phenomenon of seasonal and spatial concentration of tourist traffic. This is economically, socially and environmentally disadvantageous (Fernandez-Morales (2003). Efforts to reduce it in regions with a well-established '3 x S' (Sea, Sun, Sand) pattern of tourist arrivals are focused on reorienting and transforming the traditional perception of such areas.

Referring to the presented facts and the idea of sustainable tourism implementing the assumptions of '3 x E' (Entertainment, Exiting, Education), it should be stated that there are serious premises for the development of cognitive tourism, including geotourism, in Western Pomerania. A special interest of a geotouristic nature may be given to ancient and modern mining sites.

A special type of mining facilities are sites connected with borehole exploitation, which mainly concerns oil and gas. One of them is the Daszewo-1 borehole situated

2 km east of Karlino. It is a special place on the map of Poland, where in December 1980 an unprecedented oil eruption took place. The hydrocarbon explosion and subsequent fire caused the destruction of drilling equipment, support facilities and two farms near the well.

Media reports of an oil and gas explosion in Karlino, Pomerania, triggered a wave of sensational speculation. Karlino became famous throughout Poland and was dubbed the 'Polish Kuwait'. It was the largest oil eruption and well fire rescue operation in Poland and, according to opinions at the time, also one of the largest in the world (Habrat, Kunert, 1981).

The municipality of Karlino has for several years been taking steps to use the historic fact of Poland's largest oil and gas eruption to create a new geotourism attraction on a national scale Głabiński (2014). According to Migon (2012), a tourist asset can be an event that is also accessible to tourists in terms of geotourism.

Undoubtedly, the oil and gas eruption in Karlino in 1980 was such an event. As it was not possible to visit the Daszewo-1 well, the site of the actual events, the municipality decided to build a facility where it would be possible to recreate the eruption and the well fire less than 2 km from the site. The project will consist of an outdoor exhibition and a cubicle building with styling reminiscent of the Giant Causeway in County Antrim, Northern Ireland. It will be the first facility of its kind in Poland to emphasise so clearly with its architecture its typically geotouristic character.

The most important problem to be solved is to implement the project in such a way as to stimulate the cognitive interest of millions of tourists visiting the Baltic coast through the preparation of an interesting, interactive exhibition, appropriate interpretation and communication of the often difficult issues concerning the Earth's heritage.

The article aims at:

- Identification of potential tourist market segments interested in the new tourist attraction;
- Determining the impact of the new tourist attraction on the economy of Karlino municipality;
- Discussing of the benefits related to the development of geotourism.

2. Profile of Potential Visitors to the Science and Technology Centre 'Energy'

According to the authors of the report 'Future Traveller Tribes 2030' (doA 20.03.2024), four segments of the travel market will be most important in the near

future: 1/ active senior citizens, 2/ global families, 3/ cosmopolitan, commuting employees and 4/ international executives.

This statement is general and applies to the global tourism market. It needs to be adapted to the geographical location of Karlino as well as the specific regional socio-economic conditions. Therefore, the following categories were taken into account in the analysis of the profile of potential visitors: active senior citizens, modern families, groups of children and schoolchildren. Due to the progressive ageing of the population, this first segment is often seen as the most promising in terms of tourism market development.

2.1 Active Senior Citizens

According to many researchers, modern seniors maintain good health into old age thanks to medical advances (Głabiński, 2020). Moreover, they have at their disposal a considerable amount of free time and sufficient financial resources. Therefore, this social group is considered a market segment of great importance for tourism.

According to Dziedzic and Skalska (2012), the dynamic process of ageing societies is the reason for the growing importance of this part of society for the tourism business. The European Commission's report 'Europe, the best destination for seniors' (2014) states that the number of people over 55 in the EU has exceeded 128 million and represents 25% of the total Community population. In Poland, people 60+ will make up 30% of the population in 2030 (Dziedzic and Skalska 2012).

According to the authors, in the USA there was a doubling of seniors' spending on tourism in the first decade of the 21st century. This is due, among other things, to the fact that retirement is now increasingly seen as the time for the 'longest holiday of one's life', as working is no longer a limiting factor for tourist activity. The carrier of these changes is the group of people born after the Second World War commonly referred to as the 'baby boomers' generation and, in Poland, the baby boom generation.

The most important motives associated with undertaking tourism activities among seniors are the needs for cognition, leisure and maintaining good health and physical condition (Głabiński, 2020; Seweryn 2017).

As research results indicate, the level of tourism consumption of Polish seniors is lower than in Western European countries and the USA, but due to rising living standards and changes in tourism behaviour patterns, this gap will decrease (Alejziak 2012; Głabiński 2020; Kociszewski 2016).

As highlighted by researchers, Polish seniors do not differ from their Western peers in terms of education level, knowledge of new technologies, attitude to health and physical condition or beauty.

The combination of the following facts: 1/ the increasing percentage of elderly people in society, 2/ their increasing financial capabilities and 3/ their interest in exploring tourist attractions, and 4/ maintaining their health and physical condition clearly indicates that seniors should be considered as a very important segment of visitors to the Science and Technology Centre 'Energia' in Karlin in the future.

2.2 Modern Families

Family tourism has a long-standing tradition and today accounts for approximately 30% of the tourism travel market (Delekta *et al.*, 2018). Today, this segment of the tourism market is undergoing major changes (Seweryn, 2015). Families are looking for attractive tourist destinations that offer relaxation and novelty as well as outdoor activities. A certain stereotype, linked to the school year, is summer holidays at the seaside and winter holidays in the mountains.

Families with smaller children tend to holiday in the country for reasons of safety and familiarity with the realities of the holiday destination. Important objectives of family holidays are education through the acquisition of tourism experience including, among other things, having fun in the company of loved ones. It is important to participate in new activities that create positive memories by experiencing emotions together. It is also important for children that family holidays are fun in the company of loved ones.

Taking the Polish Baltic coast as an example, K. Parzych (2009) showed that apart from sunbathing (35% of all indications), swimming (30%), and playing outdoors (about 18%), an important element of a seaside holiday is enjoying natural and cultural tourist attractions (from 17%). In the case of one of the larger seaside tourist centres, Kołobrzeg, as a holiday destination, sightseeing motivations were indicated by up to 23% of respondents.

Modern families are interested in novelties, education through tourism experience and outdoor games, the STC "Energy" offer should also include a thematically linked playground. Especially for younger children, a play and entertainment offer linked to education should be developed. At least part of it should be built according to Walt Disney's principle 'I prefer to entertain with the hope that they will learn well in the process than to teach with the hope that they will have fun in the process'.

Family tourism naturally overlaps with another segment of the tourism market, which is groups of children and young people.

2.3 Groups of Schoolchildren and Adolescents

Research on the tourism and sightseeing movement of children and young people has been conducted by the author in the West Pomeranian Voivodeship for more

than 20 years. They allow him to conclude that this social group creates a significant part of tourist traffic in the region (Głabiński 2008; 2010). The tourist traffic of children and young people is related to two basic forms. One is related to the delivery of the curriculum during the school year in forms delivered outside the school premises.

Expectations of teaching staff with regard to school trips include (Herman, Naramski, and Szromek 2015):

- providing opportunities for students to acquire new experiences and skills,
- expanding general knowledge,
- creating opportunities for pupils to apply the knowledge they have gained in practice,
- expanding pupils' thematic knowledge in one or more subjects,
- providing participants with entertainment,
- show a real picture of the issues discussed in class.

In summary, the most important feature of an expected school trip programme should be the creation of conditions that enable pupils to expand their knowledge and apply it in practice.

This observation is crucial for the development of potential programmes for school trips to the future Science and Technology Centre Energy. Particular emphasis should be placed on linking the proposed activities with opportunities to put the knowledge and skills acquired into practice.

The second form of tourism for children and young people is leisure activities organised during summer and winter holidays. This type of tourism event is of a completely different nature as its main purpose is recreation and not the implementation of a school-educational programme. Thus, the objectives of participation in this type of tourism event are also completely different, and therefore the expected offer should be primarily recreational rather than educational. Of course, elements of learning through recreation are desirable, but the attractiveness of leisure activities should be emphasised in the foreground.

In conclusion, the segment of organised groups of children and adolescents may well be the core collective of potential visitors to the STC Energy, alongside the elderly.

3. Linking the CNiT 'Energy' to the Tourist Attractions of the Region (Product Networking)

The district of Białogard, to which Karlino belongs, is located at a historically strategic intersection of trade and pilgrimage routes from the Middle Ages. These included the Salt Route, which transported barrels of salt from Kołobrzeg (where the

valuable mineral was extracted by evaporating brine) southwards to Greater Poland and on to southern Europe.

The route of Otto of Bamberg's Christianising mission also led through this area, who completed his first pilgrimage through Pomerania in 1124 in Białogard, and also pilgrims travelled this way to the sanctuary on Góra Chełmska near Koszalin and in the other direction - towards Western Europe and the great sanctuaries in Rome and Santiago de Compostela. Currently, a revitalised route of the Pomeranian Way of St James - a European Cultural Route recognised and certified by the Council of Europe - runs through the county (Duda, 2014).

The creation of the Centre can be regarded as the creation of a new tourism product in the region. Its functioning could be an important factor influencing the widely understood regional development of the central and eastern part of the West Pomeranian Voivodeship.

The effectiveness of the socio-economic impact of the STC Energy on the region would be much greater if the initiative were incorporated into a network of existing or future tourist attractions and products. It was found that the determinants of the development of a tourism (network) product of a region are (PARP 2006):

- proper shaping of the local environment, including tangible and intangible elements (e.g., infrastructural development and entrepreneurship, but also culture, customs, traditions, etc.) through the creation of competitive and attractive tourism products,
- proper awareness on the part of the local community of the benefits and dangers of tourism development, as well as of its possibilities in terms of formulating and solving local development problems,
- to develop the capacity of local actors to create a variety of local community organisations that make development a function of the diverse activities of the dispersed actors in the regional economy, grouping together around an accepted and understood tourism development programme,
- to launch adaptation measures in the region in those activities and sectors of the economy that are complementary to the tourism economy such as industry, commerce, transport, communications, culture and the arts, finance, insurance, environmental protection, science and education, and crafts, local economy.

4. Impact of Inbound Tourism on the Local Economy of the Municipality of Karlino in Connection with the Project to Build the Science and Technology Centre 'Energy'

Most of the richest municipalities in Poland base their income on the so-called 'location pension'. In the opinion of Budner (2007), the best sources of municipalities' own income are businesses operating in their area and tourism. As

this author underlines, income related to tourism concerns mainly coastal and mountain areas.

The situation of Karlino and nearby seaside towns resembles in this respect somewhat the position of the village of Białka in relation to Bukowina Tatrzańska. The latter has for many years had a well-established position as a tourist destination and a well-known ski station, while Białka has always been more of an agricultural and holiday village through which tourists passed en masse on their way to Bukowina.

The situation only fundamentally changed after 2000, when a group of local investors started building a modern ski station (Krzesiwo and Mika 2011). Since then, Białka's tourist and paratourist infrastructure has changed fundamentally, and the town has become a local centre for winter as well as summer tourism (chairlifts, thermal baths, development of hotel facilities). An impulse to change this situation needed the agreement of the inhabitants and the local government.

Karlino has its own land asset, which is its favourable location at the confluence of two rivers - the Parsęta and the Radew, its attractive landscape, interesting architecture, but above all the historical event, i.e. the oil and gas eruption of 1980 and the firefighting operation associated with it. However, an impulse is needed to take advantage of this situation, as in the case of Białka, so that tourists not only pass through Karlino en masse, but also stop here and enjoy the attractions of the town.

Unfortunately, it is not possible to make a precise estimate of the expenses which could be allocated to tourist services in the municipality. However, it is possible to identify two basic types of visitors to Karlino and the related possible expenses concerning them:

1/ tourists, i.e., people who stay in Karlino for at least one night and therefore use the local accommodation facilities (accommodation, meals, fees for local attractions, entrance fees).

2/ 'day visitors', sometimes also called 'excursionists', who do not stay overnight in the municipality (only fees for the use of attractions, entrance tickets and catering services).

Taking into account the geographical location of Karlino and the conditions presented above, it should be assumed that tourist arrivals in the municipality will be mainly 'excursionists', and to a much lesser extent tourists.

Of course, another issue is the question of income generated by entities cooperating with the STC Energy on its premises (catering, souvenirs) and other companies located in Karlino and the whole municipality. In addition, there could be training, conferences or courses, which would pay for the rental of lecture rooms or exhibition space.

5. Conclusion

The creation of the Science and Technology Centre would undoubtedly have an impact on the entire local economy. It would be associated with the inflow of new money to the municipality from the arrival of people living outside the area (both foreigners and people who are residents of the country but coming from another locality).

The economic effects of visitor spending are not only the emergence of new demand in the region, but also the inflow of new capital and/or the retention of local capital in the region. Both phenomena enable the creation of new jobs, which should consequently increase the income of the population.

In turn, the increase in individual incomes and increased turnover of economic units means higher tax revenues for local budgets. Previous research carried out in this area shows that tourism stimulates economic activity, creates additional economic activity, activates other sectors (e.g. construction, industry, agriculture, services), influences the real estate market, inspires and often even forces infrastructure development.

The only chance to keep, at least for a few hours, a tourist in the area of the commune of Karlino is to create a unique and original tourist product, the importance of which will go far beyond the borders of the region (Duda, Głabiński, Szostak 2019).

Due to the proximity of a much more developed tourist space, which is undoubtedly the Baltic Sea coastal zone, it becomes important, among others, for the municipality of Karlino to take action to create an alternative for tourists resting on the beaches. The Science and Technology Centre 'Energy' could be just such an alternative.

Taking into account the presented circumstances and assumptions concerning the Centre of Science and Technology 'Energy', it should be stated that the creation of a facility of this type is by all means justified. The idea of setting it up is in line with trends in world tourism, above all the proposals to change the formula of trips, the aim of which is not only leisure and entertainment, but also outdoor activities and education combined with recreation.

References:

- Alejziak, W. 2012, *Determinanty i zróżnicowanie społeczne aktywności turystycznej*. Studia i Monografie nr 56. AWF, Kraków.
- Budner, W.W. 2007. Czynniki lokalizacji inwestycji a możliwości rozwoju ekonomicznego gmin w Polsce. *Acta Scientiarum Polonorum Administratio Locorum*, 6(3), 43-58.

- Delekta, A., Kurek, S., Mróz F., Rettinger R., Ziółkowska-Weiss K., Żemła M. 2018. Rodziny z dziećmi jako konsumenci na rynku turystycznym – wyzwania badawcze. *Folia Turistica*, 48, 117-135.
- Derek, M., Kowalczyk, A., Swianiewicz, P. 2005. Wpływ turystyki na sytuację finansową i rozwój miast w Polsce (na przykładzie miast średniej wielkości). *Prace i Studia Geograficzne*, 35, 199-217.
- Duda, T. 2014. Waloryzacja i analiza potencjału turystyczno-kulturowego zachodniopomorskiej części Pomorskiej Drogi Świętego Jakuba. *Turystyka Kulturowa* 12, 71-97.
- Duda, T., Głabiński, Z., Szostak, D. 2019. Raport z analizy potencjału turystyczno-kulturowego powiatu białogardzkiego. *Turystyka Kulturowa*, 5, 133-152.
- Dziedzic, E., Skalska, T. 2012. Ekonomiczne uwarunkowania rozwoju usług turystycznych w Polsce. Stowarzyszenie na Rzecz Badania. Rozwoju i Promocji Turystyki. Warszawa.
- Fernandez-Morales, A. 2003. Decomposing Seasonal Concentration. *Annals of Tourism Research*, Vol. 30, No. 4, 942-956.
- Głabiński, Z. 2008. Szkolny ruch turystyczno-krajoznawczy jako czynnik kształtowania tożsamości regionalnej na przykładzie województwa zachodniopomorskiego. *Forum Turystyki Regionów*, Szczecin.
- Głabiński, Z. 2010. Tsunami on the Baltic Sea: how to get knowledge about one's own region. 10th annual EOE Conference. Encountering, Experiencing and Exploring Nature in Education. European Institute for Outdoor Adventure Education and Experiential Learning, 44-50.
- Głabiński, Z. 2010. Kształtowanie jakości produktu turystyki dzieci i młodzieży jako czynnik ożywienia gospodarczego obszaru. *Acta Oeconomia Scientiarum Polonorum*. (4), 111-120.
- Głabiński, Z. 2014. The Science and Technology Centre “Energy” in Karlino – the project of a new geotourist attraction in Western Pomerania. *Geotourism*, 37(2), 45-54.
- Głabiński, Z. 2020. Czynniki wpływające na aktywność turystyczną polskich seniorów w świetle opinii słuchaczy uniwersytetów trzeciego wieku. Bogucki Wydawnictwo Naukowe, Poznań, 1-220.
- Herman, K., Naramski, M., Szromek, A.R. 2015. Potrzeby turystyczne szkół podstawowych i ponadpodstawowych oraz ich znaczenie w kreowaniu produktów turystycznych. *Zeszyty Naukowe. Organizacja i Zarządzanie. Politechnika Śląska*, 82(1940), 73-87.
- Kunert, W., Habrat, S. 1981. Akcja ratownicza dla opanowania erupcji i pożaru ropy naftowej i gazu ziemnego na wiertni Daszewo - 1. *Bezpieczeństwo Pracy w Górnictwie*. WUG. Nr 3. ss. 20-27.
- Krzesiwo, K., Mika, M. 2011. Ocena atrakcyjności turystycznej stacji narciarskich w świetle zagadnienia ich konkurencyjności-studium porównawcze Szczyrku i Białki Tatrzańskiej. *Prace Geograficzne*, (125), 95-110.
- PARP. 2006. Współpraca warunkiem prawidłowego rozwoju produktu turystycznego. *Turystyka Wspólna Sprawa. Materiały dla uczestników*.
- Parzych, K. 2011. Wybrane cechy ruchu turystycznego w Kołobrzegu w świetle wyników pomiaru ruchu turystycznego. *Słupskie Prace Geograficzne* nr 8.
- Seweryn, R. 2015. Podróżujące rodziny, czyli jak towarzystwo dzieci różnicuje zachowania konsumentów turystów. *Marketing i Zarządzanie*, (38), 149-159.
- Seweryn, R. 2017. Pokolenie Baby Boomers na rynku turystycznym na przykładzie odwiedzających Kraków. *Marketing i Zarządzanie*, 48(2), 105-116.

- Słomka, T., Kicińska-Świdorska, A., Doktor, M., Joniec, A. 2006. Katalog obiektów geoturystycznych, AGH, Kraków.
- Stasiak, A. 2015. Triada doświadczeń turystycznych i efekt „wow!” podstawą kreowania nowoczesnej oferty turystycznej. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu* 379, 332-347.