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PROFITABILITY ASSESSMENT OF SAILING PROJECTS IN WEST POMERANIA ON THE EXAMPLE OF THE DARŁOWO MUNICIPALITY

Abstract: The main objective of the article was to assess the profitability of sailing investments realized in West Pomerania. Achieving this goal made it possible to answer the question about the purposefulness of using sailing tourism for local development. Both primary and secondary sources were used in the article. Research findings have shown that sailing facilities may generate income. Port municipalities benefit from tax revenues. Sailing expenses provide money for the local economy, stimulating the development of enterprises. Sailing tourism thus becomes an important aspect of local economy development of West Pomerania. The profitability of sailing investment depends on the volume of tourist traffic. Maintaining it on a high level requires promotional activities. A change in the construction of sailing facilities should be considered. Expanding the scope of provided services, as well as cooperation of the public institutions, the private sector, and the world of science, could potentially increase the attractiveness of West Pomerania as far as sailing is concerned.

Key words: local development, sailing tourism, investment profitability.

INTRODUCTION

Nautical tourism in European countries has been treated as a key element of regional and local development (Durydiwka 2013, Guzik and Ostrowska 2013). The development of sailing takes place on various latitudes and in different climatic conditions. The construction and equipment of sailing facilities – harbors and marinas – as well as the scope of associated services show a large variation (Luković 2012). The aforementioned conditions influence the volume of sailing traffic and as a result also the profitability of sailing investments and benefits for the local economy.

An essential element that makes possible the provision of sailing services is the infrastructure, the basic element of harbors and marinas (Mazurkiewicz 2010)²⁶. Infrastructural investments are characterized by a high capital intensity. The benefits from their operations are either spread over a long period of time or non-existent. For this reason, infrastructural projects very often show negative profitability for the beneficiaries, which means that the net income does not cover the investment costs (Brzozowska 2006). Therefore, the main initiator of infrastructural investments is the public sector. The lack of profitability is not, nonetheless, a premise to discontinue investments (Fabrycky at al.), since the main objective of the public sector is to cater to the collective needs of the local communities. In the case of public entities, investment projects cannot generate income understood as financial flows related to the direct investment operations. Investment objects, however, have a broad spectrum of impact on the local economy. They stimulate the development of local entrepreneurship and increase the demand for new jobs (Ławińska 2014).

Among the experts on the subject, opinions on the purposefulness of development of sailing tourism in Poland are divided (Szwichtenberg 2001, Kowalska 2010, Łapko 2015). Possessing natural assets for sailing creates a chance for port municipalities. Basing the development on sailing tourism is all the more justified, as coastal regions in most cases classify as rural areas. They are characterized by an above-average unemployment rate, which is a result of the lack of large urban centers – especially in the central coastal strip – as well as their agricultural character, and a deep

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²⁶ The main components of marinas and harbors are: piers, approach fairways, docks, energy, water, and sanitary networks, yacht lifting equipment, parking spaces, rest and refreshment rooms.



regression of fishery (Kaup 2010). On the other hand, however, the short tourist season and the high capital intensity of the sailing infrastructure raises the question about the validity of the development of nautical tourism.

The main purpose of this article is to assess sailing investments realized in West Pomerania. The analysis of investment profitability will be conducted from the perspective of a marina operator, a beneficiary of the investment, and the local community²⁷. Reaching our objective will allow to answer the question about the purposefulness of using sailing tourism in local development.

Due to the research material at our disposal and the limitations in access to statistical data, research was narrowed to the marina in Darłowo, whose construction was part of the West Pomerania Sailing Route project – a network of tourist ports in West Pomerania. However, in the majority of coastal municipalities the conditions for the development of sailing are similar. Thus, the conclusions can likely be applied to all of them.

It should be pointed out that in both Polish and foreign literature the economic aspects of the development of nautical tourism have not been thoroughly researched yet (Mańkowski 2008, Łapko 2015). There is, therefore, a gap in knowledge, and the author of the following article will attempt at filling it.

The choice of the subject matter for this article is all the more justified since the intensive development of sailing infrastructure, which took a few years (Heflich 2011), has been completed²⁸. It is possible to preliminarily assess the investment activities.

Both primary and secondary sources were used in the article. The literature on the subject and numerous publications and scientific studies have been consulted. Research was conducted in the form of in-depth interviews with representatives of small seaports. Especially valuable data were obtained from the manager of the Darłowo Seaport Management (ZPM). On the basis of collected material, comparative and cause-and-effect analyses of the occurring phenomena were conducted.

SPECIFICS AND ASSESSMENT OF THE PROFITABILITY OF INFRASTRUCTURAL PROJECTS

Among the basic methods of assessing the profitability of infrastructural projects are financial analysis and economic analysis (Drobniak 2008). Financial analysis is conducted from the perspective of the beneficiary and serves to establish the financial flows related directly to the functioning of the investment. It takes into account the size of investment outlays and the profitability of the investment – rate of return on the operational level. Economic analysis, on the other hand, determines the importance of the project for the local community (Zarzecki 2007). It thus corrects the financial analysis as far as financial flows connected with the operations of business entities, employees' salaries, and tax revenues are concerned. The main indicators used in the assessment of profitability of infrastructural projects by means of financial and economic analyses are: the financial and economic net present value. With the use of these NPVs, it is possible to calculate financial flows to be generated by the project in the reference period, for the beneficiary and for the local community accordingly. The discount rate used in the formula allows to express the future financial flows as present value.

Hereby article to rating of financial profitability of marina in Darłowo used a break-even point method. Her appointment has required of the financial profitability of an investment - FNPV/C. An

²⁷ In West Pomerania, sailing facilities are usually operated by Seaport Authorities – municipal entities, while local governments are the investment beneficiaries.

²⁸ The investment process with the aim of expanding the sailing infrastructure within the "West Pomerania Sailing Route" project covered the years 2010-2015, and within "The Żuławy Loop" project – 2010-2014. The majority of sailing infrastructure in Poland was built/modernized as part of these two projects.



account of source of investment financing (PLN 1 200 000 000)- assets of Darłowo municipality (PLN 500 000 000) and EU subsidy (PLN 700 000 000) - in calculations take FNCP/C index in variant without EU subsidy and in variant with union funds. To illustrate benefits, which generates marina for local economy estimated the size of the tax revenue of the municipality's budget of nautical activities and the amount of tourism's expenditure. Estimation of the size of tax revenue needed to take of two indicators: the share of revenue from sailing in the budget of the ZPM Darłowo and tax revenues the port sector in the budget of the municipality. Based on earlier study assumed was adopted a constant value of the second indicator at the level of 4 %. When estimating amount of tourist spending was necessary to the knowledge of the data about the number of sailors visiting the port and their average expenditure per day of stay. Based on the number of calls to the yacht port and information obtained in the course of the research, it was found that the average time a yacht in the harbor is 4 nights and the average number of sailors on the unit it's 3 perso. Information about average tourism expenditures with share on foreign and domestic sailors as established on the base of statistic data published by Ministry of Sport and Tourism.

ASSESSMENT OF PROFITABILITY OF THE YACHT MARINA IN DARŁOWO AND IDENTIFICATION OF BENEFITS FROM THE DEVELOPMENT OF SAILING TOURISM FOR THE LOCAL COMMUNITY

Demonstrating the profitability of a yacht marina for a port operator – ZPM Darłowo, requires an analysis of the operator's financial situation. For the first four years of its operation, from 2013 to 2016, the marina was profitable on the operational level (Table 1). This means that the revenue from the port fees paid by sailors exceeded the costs of ongoing maintenance of the facility. From the operational point of view, the investment was a profitable venture.

Table 1. Profitability of the yacht marina in Darłowo (in thousands of zlotys) for the port operator in the period 2013-2017

Characteristics	Years							Total
	Pre-investment period		Post-investment period					
	2011	2012	2013	2014	2015	2016	2017	
Number of yacht callings	200-250		445	533	672	562	483	2695
Revenues	23.8	21.3	105.7	159.7	174.3	151.6	100.3	691.6
Costs	n.d	n.d	67.0	79.2	81.6	110.7	138.7	366.5
Income	n.d	n.d	38.7	80.5	92.7	40.9	-38.4	214.4

Source: Own study on the basis of data from ZPM Darłowo.

The main revenue-generating factor was the increasing interest of sailors in the Darłowo port, which was confirmed by statistics (Table 1). The number of yacht callings at the marina – the only available indicator of sailing traffic – shows a rising trend. An especially intense growth of sailing traffic and thus a rise in profitability occurred in the first years after the marina started operating, i.e. 2013-2015 (Nowaczyk 2015). This would confirm the importance of the infrastructure in the development of nautical tourism. However, in the last two years of the research period: 2016-2017²⁹, there was a decrease in sailing traffic. This was reflected in the decrease in income. At the same time, maintenance costs began to rise. As a result, in 2017 the yacht marina generated losses for the first time.

²⁹ Due to the end of the sailing season in September, it was possible to draw up a financial summary before the end of the calendar year 2017.

The main cause of the worsening financial situation of the marina was the discontinuation of marketing activities. This is confirmed by the analysis of national composition of sailors visiting the Darłowo port. In the recent years, there has been a radical drop in the number of yachts from Germany, which had previously been the largest group of vessels calling at the Darłowo marina. Foreign sailors are especially sensitive to advertising and promotional campaigns. For Polish sailors, especially the residents, the yacht marina in Darłowo is a place they visit frequently and regularly. In the case of local sailors, there has been no decrease in interest in this particular port.

Another cause behind the decrease in income was the steady increase in the maintenance costs, which was connected with the deteriorating technical condition of the infrastructure, mainly the piers. Several years of use showed that the choice of lightweight, wooden piers in a seaport exposed to adverse weather conditions had not been a good choice. After a few years of operation, the piers required not only emergency repairs, but often some major renovations.

A much more difficult task than determining the current profitability of the investment is establishing its profitability in the reference period³⁰. This is caused by the short period of the facility's operation and significant fluctuations in income, which practically make it impossible to forecast financial flows. Due to the aforementioned obstacles, only the BEP has been established, i.e. the point at which total cost equals total revenue. On the basis of FNPV – Financial Net Present Value³¹ in variant with subsidy – it was calculated that the yacht marina in Darłowo will prove to be a profitable investment if it generates a yearly average income of at least PLN 69,000. Data presented in Table 1 show that only in the years 2014-2015 the generated income guaranteed a return on investment. In the entire analyzed period: 2013-2017, the yearly average income was PLN 42,000, so (significantly) below the BEP. Considering that in the following years the maintenance costs will grow, only a significant increase in sailing traffic and/or increase in tourist expenses could guarantee income which might cover the initial investment costs. While FNPV in variant without UE subsidy – and so taking into account the total value of investment in the amount of PLN 1 200 000 – return on investment is made at the average annual profitability of the facility at a much higher level, namely at PLN 166 000. In any of the examined years, port's operator didn't reach so a high income.

Income from the port fee is not the only benefit for the Darłowo municipality. Numerous branches of local economy are connected with sailing tourism, e.g. the transport sector, catering and hotel services. In the port area, entrepreneurs offer the possibility of chartering yachts. The M&W Darłowo shipyard deals with repairs and maintenance of sailing equipment. The yacht marina offers services connected with underwater maintenance of yachts, and there are diving trips organized for the sailors.

Local businesses which provide sailing services generate tax income for the port municipality. To determine its precise amount is not an easy task. There are no official statistical data on the tax income from nautical tourism. Moreover, for the majority of entities providing sailing services is only one of many areas of activity. In this case a size of tax incomes to cities budget estimate in indirect method with taking into account of importance of sailing activity for port and port's sector for municipality. Accumulated value of tax incomes in the years 2013-2016 amounted to almost PLN 650,000, so it exceeded the value of investment outlays of Darłowo municipality. Return on investment from tax revenue alone occurred after almost four years.

The situation may look different if we take into account the profitability of the yacht marina. In the entire period 2013-2016, the marina's operational profitability was at the level of PLN 214,400, thus increasing the benefits from the construction of the facility for the municipality. However, the

³⁰ In the feasibility study for the project "West Pomerania Sailing Route," a fifteen-year reference period was assumed, for which financial flows were calculated.

³¹ In accordance with the guidelines of the European Commission for projects financed from structural funds and the EU Cohesion Fund for the years 2007-2013, the discount rate was established at 5.0 % (POT 2010).



positive perception of the marina's operation could be altered due to the diminishing intensity of sailing traffic and the decreasing profitability and tax revenue. It is, however, difficult to imagine that the tax revenue along with the net profit would not cover the initial investment outlays.

Table 2. Method of assessing tax revenues from sailing tourism (in thousands of zlotys) in the budget of the Darłowo municipality in the years 2013-2016

Time range	The amount of revenue of ZPM Darłowo (thousands of zlotys)	Revenue of ZPM Darłowo from the servicing of sailing traffic (thousands of zlotys)	The share of revenue from servicing of sailing traffic in the total revenue of ZPM Darłowo	The adopted for the calculations share of tax revenue of the port sector in the budgets of port municipalities	The size of tax revenues from sailing tourism in the local budget (thousands of zlotys)
2013	2,797	106	4%	4%	81
2014	2,050	160	8%	4%	162
2015	4,250	174	4%	4%	97
2016	1,253	152	12%	4%	302
Total	10,350	592	6%	4%	642

Source: Own study on the basis of data of ZPM Darłowo, Darłowo City Hall, and Pluciński (2001), Matczak (2016).

Finally, the estimation of net economic benefits for the local economy from the development of sailing tourism remains (tab. 3.). On it measure to take a size of sailing's expenditures, which in the years 2013-2016 exceeded the sum of PLN 5,000,000. Considering that the majority of sailing services is provided by local businesses, the major part of the estimated amount will penetrate into the local economic cycle.

After taking into account the financial flows of the yacht marina's operator, the tax revenues, and the sailing expenses, it can be concluded (recognizing the imperfection of the calculations) that the development of sailing infrastructure generates net profit for the local economy.

Table 3. Estimate value of sailors' spendings (in thousands of zlotys) in Darłowo municipality in the years 2013-2016

Years	Number of yacht callings	Number of yacht callings divided into:		The average time of stay in the marina (days)	Number of sailors per vessel	Sailors' spendings (thousands of zlotys)		Expenses total (thousands of zlotys)
		domestic	foreign			Domestic	Foreign	
2013	445	163	282	4	3	311	813	1,124
2014	553	145	408	4	3	139	1,023	1,162
2015	672	191	481	4	3	209	1,501	1,710
2016	562	213	349	4	3	250	1,081	1,331
Total	2,232	712	1,520	4	3	909	3,337	5,327

Legend: Domestic, Foreign - average spendings of tourists per one day of stay in Poland in the years 2013-2016 were: for domestic tourists – PLN 159, PLN 80, PLN 91, PLN 98; for foreign tourists – USD 76/PLN 240 (USD/PLN = 3.16 zł), USD 66/PLN 209 (USD/PLN = 3.16 zł), USD 69/PLN 260 (USD/PLN = 3.77 zł), USD 66/PLN 258 (USD/PLN = 3.91 zł).

Source: own study on the basis of: data from ZPM Darłowo and *Charakterystyka przyjazdów do Polski w latach 2013-2016*, Ministry of Sport and Tourism, Warsaw; *Charakterystyka krajowych i zagranicznych podróży mieszkańców Polski w latach 2013-2016*, Ministry of Sport and Tourism, Warsaw; currency exchange rates from NBP (National Bank of Poland).



SUGGESTIONS OF ACTIVITIES INCREASING THE PROFITABILITY OF THE SAILING INFRASTRUCTURE IN THE MUNICIPALITIES OF WEST POMERANIA

The profitability of sailing facilities depends on the relation of investment outlays to net income. Using lightweight constructions in the yacht marina in Darłowo significantly lowered the investment costs. At the same time, it accelerated the process of deterioration and thus increased maintenance costs already in the first years of operation. It begs the question of whether it would not be better to use a traditional way of constructing sailing facilities, with concrete piers. Undoubtedly the investment costs would rise, but the constructions would be more solid.

On the other hand, income generated by a yacht marina depends on the volume of sailing traffic. In the years 2016-2017, a falling interest of sailors in the marina was mainly caused by the discontinuation of promotional activities. Therefore, an intensive promotion of the marina is recommended with the use of simple marketing tools such as publishing guidebooks, folders, and sailing maps. The target group should especially include foreign sailors. In the long run, the promotional campaign should be strengthened by introducing a system of permanent categorization or joining one of the international yacht marinas associations (Łapko 2015).

An improvement in the marina's profitability should also be sought in the expansion of the scope of provided services. The Darłowo port should include in its offer the possibility of winterizing and storing yachts, and providing vessels with fuel. Equipping the port with a playground and parking space with access to water and electricity will make it more attractive for families sailing on yachts and tourists traveling in campers. In the area of entertainment and educational activities, we can name: organization of sailing and motorboat events, trainings, and conferences. Furthermore, creating local sailing clubs could attract young people and get them interested in sailing. Additionally, what should be considered is supplementing the sailing infrastructure with a preferably all-year accommodation, catering, and recreational base. When it comes to providing tourist attractions unrelated to sailing tourism or even tourism in general – which is practiced in bigger yacht marinas in Europe³² – it could limit the seasonality of sailing traffic (Pełta Żuławska (24)/2017, Lewczuk 2014).

Public institutions and private entities should be involved in the realization of the aforementioned activities (Gorynia and Jankowska 2008). The public sector can support the development of sailing tourism through expanding the infrastructure, as well as promoting sailing facilities and sailing conditions. These actions will increase the attractiveness of providing services by private businesses. The world of science could provide information on the needs of potential customers and new trends in tourism, and so it should be invited to cooperate in order to indicate proper directions of development of sailing tourism.

CONCLUSION

The conducted research has demonstrated that the expansion of sailing infrastructure in West Pomerania might stimulate the volume of sailing traffic. Its sufficient scale could then, in turn, generate net profit for port operators. In the article, the profitability of sailing investments for a port municipality has been demonstrated. Tourist expenses support the development of local entrepreneurship, which leads to the increase in tax revenues. Local economy benefits from the development of sailing tourism. The income from tourism is put into circulation of the local economy. Owing to this, new business operators offering sailing services appear on the market, while the existing ones expand their scope of activity.

³² For instance, the marina in the German city of Kröslin, apart from the typical sailing infrastructure with 500 yacht berths, is also equipped with expanded complementary facilities, among these are: three restaurants, a spa, houses on the water, a post office, a shipyard, 500 winter yacht berths, a hair salon, a mall, apartments on land, a massage salon, a gas station, a playground, a barbecue spot, a gift shop, a conference room, a bank.



The benefits from the development of sailing infrastructure are not given once and for all. It is vital to promote the sailing facilities, especially to foreign sailors. Discontinuation of promotion could potentially reduce the profitability of ports and yacht marinas or expose their operators to losses. Increase in profitability of sailing facilities can be achieved through expansion of the scope of provided services. Sailors should be attracted to ports not only by the natural conditions and surroundings, but also by accommodation, catering, and entertainment base and other tourist attractions. Cooperation between public institutions, business entities, and the science world can increase the sailors' interest in sailing facilities. While investing in the development of sailing infrastructure, the durability of its various components should be taken into account. The example of Darłowo shows that opting for lightweight constructions in a seaport is not the optimal solution.

Considering the risks and taking into account the postulates related to the development of sailing tourism, it can be stated that Sailing tourism becomes important aspect of development of local economy of West Pomerania.

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