

## THE WARMIA-MAZURY SPECIAL ECONOMIC ZONE AS A REASON FOR A REVIVAL OF THE LOCAL LABOUR MARKET

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### Abstract

This article presents the results of studies of the impact of the Special Economic Zone on the situation in the labour market in the Warmińsko-Mazurskie voivodeship. Changes in the number of employees employed by economic entities operating in the Zone as well as changes in the indicators of economic activity of the population in the poviats of the voivodeship were analysed. Data collected during the empirical research showed no impact of the Zone on the improvement of the situation in the local (powiat) labour market.

### WARMIŃSKO-MAZURSKA SPECJALNA STREFA EKONOMICZNA JAKO ŹRÓDŁO OŻYWIENIA NA LOKALNYM RYNKU PRACY

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**Słowa kluczowe:** specjalna strefa ekonomiczna, rynek pracy, stopa bezrobocia.

## Abstrakt

W artykule przedstawiono rezultaty badań dotyczących oceny wpływu specjalnej strefy ekonomicznej na sytuację na rynku pracy w województwie warmińsko-mazurskim. Analizy prowadzono pod kątem zmian liczby pracowników zatrudnianych w podmiotach gospodarczych działających na terenie strefy oraz zmian wskaźników aktywności ekonomicznej ludności w powiatach województwa. Na podstawie zgromadzonego w postępowaniu badawczym materiału empirycznego wykazano brak oddziaływania strefy na poprawę sytuacji na lokalnym (powiatowym) rynku pracy.

## Introduction

The notion of a “Special Economic Zone” (SEZ) has no single definition in the literature of the subject. It is most frequently associated with a separate administrative area with economic operators operating under more preferential conditions than those applicable to entities operating outside it (GRUBEL 1982, p. 40, *Specjalne strefy...* 2000, p. 17, LIZIŃSKA, KISIEL 2008, p. 11, AMBROZIAK 2009, pp. 66, 67, FAROLE 2011, p. 23). Such preferential conditions for the operation of those entities include, i.e. public aid in various forms, e.g. through tax exemptions or relief. Therefore, they can be considered a form of state intervention in the principle of free competition.

Special Economic Zones are present in developing countries and in countries at a relatively high level of development. In both of those types of countries, SEZs are supposed to contribute to resolving specific economic and social problems. In developing countries, it is usually about reviving a local economy by, among other things, attracting investors (including direct foreign investments), introducing new technologies, creating new jobs and increasing the employment rate. Whereas in countries even with a strong economic position, Special Economic Zones are created in order to eliminate regulatory restrictions and barriers to trade, to get rid of an inefficient administration and to “revive selected urban or rural areas”. All of the above-mentioned reasons are done for potential investors (*Specjalne strefy...* 2011, p. 30).

The operation of Special Economic Zones in Poland is governed by Article 3 of the Act of 1994 (Act of 20 October 1994 on Special Economic Zones...) which stipulates that “a Special Economic Zone may be created in order to accelerate the economic growth of part of the country, in particular, by:

- developing specific areas of economic activity;
- developing new technical and technological solutions and their application in national economies;
- developing exports;
- increasing the competitiveness of products manufactured and services rendered;
- using the existing industrial assets and economic infrastructure adequately;

– creating new jobs;  
– using unexploited natural resources adequately and in a sustainable manner.”

When Poland was preparing to join the EU, the said act was subjected to amendment in order to eliminate discrepancies between domestic regulations and EU regulations. It was chiefly about eliminating unclear criteria for “geographical allocation of public aid for entrepreneurs and rules for the operation of Polish Special Economic Zones, and particularly the following: limits of permissible public aid, conditions for providing operating aid, problems related to aid for sensitive sectors, and the possibility to provide export assistance (CIEŚLEWICZ 2009, p. 318). Those issues were addressed by introducing two new laws in June and November 2000 (Act of 30 June 2000 on Conditions..., Act of 16 November 2000 amending the Act on Special Economic Zones...).

From a methodical perspective, analysing the efficiency of Special Economic Zones brings about numerous problems which need to be resolved prior to formulating research assumptions. Those problems arise from the interdisciplinary nature of the notion under analysis, thus from its various definitions. In economic theory, this notion is accurately defined and correctly interpreted by researchers, but in reality there is no such accuracy. It is often the case that efficiency is presented interchangeably or synonymously with effectiveness, performance or the economy of action.

Further explanation is needed as to which type of efficiency is being described. For example, making it clear whether the evaluation is about economic efficiency (evaluating i.e. greater budget inflows), technical efficiency (evaluating i.e. the introduction of new technologies in the region), praxeological efficiency (evaluating i.e. the efficiency of action) or about social efficiency reflected by, for instance, a decrease in unemployment by creating new jobs and increasing the employment rate.

There are positive and negative aspects in the literature of the subject. For example, ENGMAN et al. (2007, pp. 22–34), SIUDAK and WĄTOREK (2011, pp. 151–169) perform a balance of benefits and costs. PASTUSIAK et al. (2014, p. 4) also draw attention to economic benefits. The benefits in the form of export development and the transfer of new technologies are indicated by BLADOCHA (2008, p. 122) and AMBROZIAK (2009b, p. 395). GRYZKA (2009, p. 32), AMBROZIAK (2009b, p. 378–382, 395) and TYPA (2016, p. 23–37), however, notice an increase in foreign investment and in cooperative relations with suppliers from European Union countries. The positive impact of SEZ on employment growth and the reduction of unemployment rates are indicated by CICHA-NAZARCZUK and NAZARCZUK (2017, pp. 173–185).

The source of critical opinions about the functioning of special economic zones are mainly inequalities in the competition of business entities, loss of revenue due to tax exemptions and the regional stratification resulting from locating zones in areas which have a relatively high development level. Among others,

these issues are highlighted by GRYCZKA (2009, p. 32), AMBROZIAK (2009b, p. 417), PRZYBYŁA (2010, p. 255), NELEC and PRUSEK (2006, p. 29) and WARZAŁA (2013, p. 3).

In addition to selectively quoted positive and critical opinions, in the Polish literature on the subject there are also studies of comprehensive assessments of the operational effectiveness of the special economic zones. Among others, in recent years such studies have been presented by CIŻKOWICZ et al. (2014, pp. 17–29), PAWLISZCZY (2015, pp. 253–266), ŻMINDA and others (2016, pp. 54–69), PASTUSIAK et al. (2016, pp. 97–136) and LICHOTA (2016, pp. 99–130).

## Research Assumptions

The subject of research on the effectiveness of the operation of Special Economic Zones is determined by the evaluation criteria adopted, for example, the following may be evaluated: the number of permits granted to conduct economic activities in the Zone, the capital expenditures spent by entrepreneurs for development activities, the amount of revenues earned by individual entities, the utilisation (exploitation) of the land area of the Zone, the quantity of public aid provided to entrepreneurs operating in the Zone or even the number of jobs and the employment rate.

As far as employability is concerned, a number of variables can be evaluated in terms of efficiency; these include e.g. the number of created and retained jobs, the number of employees, the number of jobs created as part of foreign direct investments (FDI), the costs of creating and/or retaining 1 new job in the Zone, the ratio of actual employment to employment specified in the permit, the number of employees in the Zone and the unemployment rate, the number of employees in the Zone and GDP per capita in the regions and sub-regions (poviats/municipalities) or the number of jobs created outside the Zone in connection with the launch of 1 job in the Zone. In the context of this last evaluation parameter, individual researchers use different conversion factors resulting from the so-called multiplier effect. In the Polish literature on the subject, the following conversion factors are given: 1.348<sup>1</sup> (DOMAŃSKI et al. 2005, p. 129), 1.5 (AMBROZIAK 2009b, p. 326), 0.5 (NAHOTKO 2003, p. 183), and 1.05–1.10 (HNATYSZYN-DZIKOWSKA 2005, pp. 35, 36, AMBROZIAK 2009b, pp. 352, 353).

In this article, an attempt was made to evaluate social efficiency (which also translates into economic efficiency) using the criterion of employability. Thus, the aim was to evaluate the efficiency of the operation of the Warmia-Mazury Special Economic Zone in terms of its impact on the local labour market reflected by the number of employees and the values of the basic measures

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<sup>1</sup> e.g. conversion factor 1.348 means that every 1000 jobs in the zone generate about 348 further jobs in cooperating entities operating outside the given zone.

of the labour market, i.e. the activity rate, employment rate and unemployment rate. The subject of the research was therefore unemployment rates in the sub-regions of the Zone as well as employment in entities operating in the Warmia-Mazury Special Economic Zone in 2010–2015.

Research problems were formulated as a general question: “does the operation of economic operators in the Warmia-Mazury SEZ result in increasing the number of employees?” and the following specific questions:

- what did employment in the SEZ in 2010–2015 look like?
- how much capital expenditures were spent in the SEZ in 2010–2015?
- did investments made by entrepreneurs operating in Special Economic Zones contribute to increased employment?
- did the operation of entities affect the situation on the labour market?

To achieve the aim of the research and answer the specific questions, the following hypothesis was put forward: the operation of the Special Economic Zone has had a positive effect on the labour market in the Warmińsko-Mazurskie voivodeship, which is reflected by increased employment and lower unemployment rates in the individual sub-zones.

The analyses performed were secondary studies based on the information contained in *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych*, published in the reports of the Ministry of Economy (for 2010–2014) and the Ministry of Development (for 2015).

## Research Results

The starting point of analytical studies on the number of employees employed by economic operators operating in Special Economic Zones is comparisons of retained jobs and new jobs. Table 1 presents the number of such jobs in the Warmia-Mazury Special Economic Zone over the period of time from 2010 to 2015.

Table 1

Jobs in the Warmia-Mazury SEZ

Type of job	Years					
	2010	2011	2012	2013	2014	2015
Retained jobs	4,963	4,896	4,392	5,022	6,703	7,890
New jobs	5,595	7,239	8,224	8,041	8,292	9,465
Total	10,558	12,135	12,616	13,063	14,995	17,355
Dynamics of changes (previous year=100%)	100.0	114.9	104.0	103.5	114.8	115.7

Source: own study on the basis of *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia: 2010, 2011, 2012, 2013, 2014* (Ministerstwo Gospodarki 2011, 2012, 2013, 2014, 2015), and *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia 2015* (Ministerstwo Rozwoju 2016).

The information presented in the table shows that from 2010 to 2015 in the Warmia-Mazury SEZ there were 6,797 jobs created in total (almost 3,000 so-called retained jobs and almost 3,900 new ones). It is assumed statistically that such a number of people were employed, but it does not need to reflect reality; for instance, at a manufacturing facility working two or three shifts, two or three people (not just one person) could be at the same post.

Economic operators operating in the Zone invest in new undertakings which bring new jobs over time. When assessing efficiency in terms of employment, comparisons of capital expenditures and the number of employees could be of interest. Detailed changes in both of those variables in 2010–2015 are presented in Figure 1.

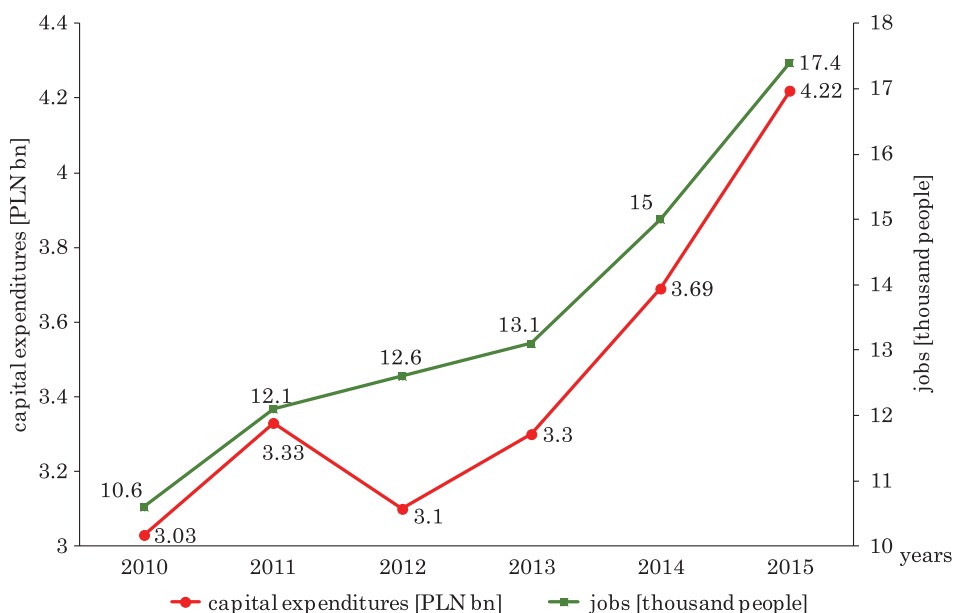


Fig. 1. Capital expenditures and jobs in the Warmia-Mazury SEZ

Source: own study on the basis of *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia 2010, 2011, 2012, 2013, 2014* (Ministerstwo Gospodarki 2011, 2012, 2013, 2014, 2015) and *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych – stan na 31 grudnia 2015* (Ministerstwo Rozwoju 2016).

Based on the data shown, it may be concluded that over the period of time under analysis, almost PLN 21 billion was invested in the Warmia-Mazury SEZ. When comparing years, one may note that, except for 2012, in each subsequent year entrepreneurs contributed more funds to the development of their businesses. Synchronously, increases in capital expenditures resulted in increases in the number of employees.

During the studies, it was also attempted to determine the impact of the Zone on basic measures of the labour market. It is not an easy task since Special Economic Zones do not work exclusively in such an administrative area as a voivodeship. It is also the case in the Warmia-Mazury SEZ, where entities located in the poviats of Mława, Ostrołęka, and Płońsk as well as in the municipalities of Ciechanów, Pomiechówek, and Zakroczym (which administratively are part of the Mazowieckie voivodeship) also operate. Therefore, the possible impact of a given zone cannot be analysed and the results are assigned solely to one administrative area – a voivodeship. When evaluating the situation in the Warmińsko-Mazurskie voivodeship, the values of indicators of economic activity of the population in the poviats of the voivodeships where the entities registered in the Zone operate were compared with the values of analogous indicators in the poviats where there are no entities operating in the Zone. The obtained results are summarised in Tables 2, 3 and 4.

Table 2  
Rate of unemployment in the poviats of the Warmińsko-Mazurskie voivodeship

Powiat	Years						2010–2015
	2010	2011	2012	2013	2014	2015	
Bartoszycki	31.0	29.0	29.8	30.2	27.7	24.4	6.6
Braniewski	30.9	29.6	31.5	32.8	29.0	27.2	3.7
Działdowski	23.8	23.4	26.0	26.2	23.3	20.8	3.0
Elbląski	25.4	23.3	28.2	28.9	26.0	22.9	2.5
Elcki	24.5	22.8	26.9	26.0	22.3	19.1	5.4
Giżycki	18.9	13.8	18.8	19.6	17.2	16.0	2.9
Goldapski	22.0	21.2	25.2	24.6	20.9	19.1	2.9
Iławski	11.2	10.8	13.2	12.2	8.9	7.3	3.9
Kętrzyński	28.3	27.1	30.2	31.1	30.1	27.4	0.9
Lidzbarski	26.1	25.0	25.1	27.5	24.8	22.2	3.9
Mraǳowski	22.1	17.3	23.3	22.9	19.6	17.5	4.6
Nidzicki	19.5	18.2	23.0	22.2	17.7	14.8	4.7
Nowomiejski	20.0	19.4	22.4	23.6	19.3	14.6	5.4
Olecki	21.1	19.8	23.1	23.2	20.7	18.5	2.6
Olsztyński	20.3	18.7	22.0	22.8	19.9	17.5	2.8
Ostródzki	21.8	20.6	23.8	24.3	20.4	16.4	5.4
Piski	31.5	30.3	30.9	33.6	29.2	26.8	4.7
Szczygieński	26.3	23.3	26.0	25.3	22.2	17.3	9.0
Węgorzewski	26.9	23.3	30.3	30.6	27.7	24.6	2.3

poviats where there are no entities registered in the Warmia-Mazury SEZ

poviats where there are entities registered in the Warmia-Mazury SEZ

Source: *Rate of unemployment in the poviats of the Warmińsko-Mazurskie voivodeship*,

<http://olsztyn.stat.gov.pl/statystyczne-vademecum-samorzadawca> (access: 3.05.2017).

Table 3

The activity rate in the poviats of the Warmińsko-Mazurskie voivodeship

Powiat	Years						2010–2015
	2010	2011	2012	2013	2014	2015	
Bartoszycki	39.9	39.8	39.2	38.0	37.3	37.4	2.5
Braniewski	34.4	36.2	36.1	37.0	35.3	35.2	−0.8
Działdowski	40.6	41.3	41.7	42.4	40.7	40.8	−0.2
Elbląski	37.5	36.0	36.4	39.4	37.1	37.9	−0.4
Elcki	40.2	40.9	41.3	40.9	40.0	40.1	0.1
Giżycki	35.6	34.4	34.7	34.2	32.1	33.0	2.6
Goldapski	34.7	36.3	36.4	37.2	36.1	36.1	1.4
Iławski	41.2	42.2	41.8	41.5	40.4	40.3	0.9
Kętrzyński	38.3	38.7	38.6	38.3	36.4	37.4	0.9
Lidzbarski	37.9	37.5	38.1	38.6	36.4	37.2	0.7
Mrańkowski	35.5	36.0	36.1	35.6	34.5	35.1	0.4
Nidzicki	34.6	35.2	35.4	35.9	34.3	34.8	−0.2
Nowomiejski	32.7	33.4	33.2	34.9	33.0	33.6	−0.9
Olecki	42.3	43.0	43.6	44.7	43.2	43.5	−1.2
Olsztyński	31.9	31.7	33.4	33.9	32.8	33.2	−1.3
Ostródzki	39.6	40.1	40.7	41.3	39.1	39.4	0.2
Piski	38.0	37.7	37.3	37.4	35.5	36.8	1.2
Szczygieński	38.8	37.9	38.1	38.2	36.5	37.3	1.5
Węgorzewski	32.7	32.8	33.1	33.5	32.3	32.6	0.1

poviats where there are no entities registered in the Warmia-Mazury SEZ

poviats where there are entities registered in the Warmia-Mazury SEZ

Source: *The activity rate*, <http://www.polskawliczbach.pl/Powiaty> (access: 9.05.2018).

For many years, the Warmińsko-Mazurskie voivodeship has been one of the regions with the highest unemployment rates. Between 2010 and 2015, a substantial decrease in the unemployment rates in all the poviats of the voivodeship was noted. The largest decrease was noted in the powiat of Szczytno, which does not belong to the Warmia-Mazury SEZ. The next three places, with decreases by 5.4–6.6 pp, are occupied by three poviats (Bartoszyce, Nowe Miasto Lubawskie, and Ostróda), where entities registered in the Zone operate, and by one powiat outside of the Zone (Elk). Two other poviats (Nidzica and Pisz) with a significant decrease in the unemployment rates (by 4.7 pp) are also not registered in the Zone. When generalising about the changes in the unemployment rates, one may note that over the period of time under analysis, the average decreases are



at a similar level, i.e. 4.0 pp for the poviats registered in the Zone and 4.12 pp for other poviats.

Table 4  
The employment rate in the poviats of the Warmińsko-Mazurskie voivodeship

Powiat	Lata						2010–2015
	2010	2011	2012	2013	2014	2015	
Bartoszycki	22.1	22.1	21.7	22.0	21.4	21.4	0.7
Braniewski	18.5	20.3	19.3	19.3	20.0	20.2	-1.7
Działdowski	26.7	27.5	26.4	26.8	27.1	26.8	-0.1
Elbląski	22.9	21.8	21.2	23.0	22.9	22.9	0.0
Ełcki	26.8	27.2	26.6	26.7	28.0	28.1	-1.3
Giżycki	25.3	25.5	24.8	23.9	23.5	24.0	1.3
Gołdapski	22.9	23.7	22.6	23.4	24.6	24.1	-1.2
Hański	34.5	34.6	33.9	34.2	35.1	35.3	-0.8
Kętrzyński	23.7	23.3	22.7	22.1	21.3	21.8	1.9
Lidzbarski	23.2	23.1	24.0	22.9	23.0	23.2	0.0
Mrańkowski	25.9	26.6	25.8	25.7	26.5	26.5	-0.6
Nidzicki	24.7	24.8	23.8	24.5	25.5	24.8	-0.1
Nowomiejski	21.2	20.7	20.2	20.7	21.7	21.6	-0.4
Olecki	28.8	29.2	29.0	29.7	30.3	30.5	-1.7
Olsztyński	56.7	57.2	55.7	56.9	57.7	57.9	-1.2
Ostródzki	27.9	27.8	27.4	27.7	28.0	28.4	-0.5
Piski	21.4	20.4	21.5	20.2	21.0	21.0	0.4
Szczygieński	24.3	23.7	23.9	24.2	24.6	24.3	0.0
Węgorzewski	18.4	18.1	17.5	17.4	18.1	18.6	-0.2

poviats where there are no entities registered in the Warmia-Mazury SEZ

poviats where there are entities registered in the Warmia-Mazury SEZ

Source: *The employment rate*, <http://www.polskawliczbach.pl/Powiaty> (access: 9.05.2018).

The activity rate was changing at a similar level in “zonal” poviats (one increased by 0.8 pp and another decreased by 0.7 pp) and in those poviats which are not in the zone (increases of 1.2 pp and decreases of 0.6 pp). Similar dependencies occurred in the values of the employment rate. In poviats operating in the zone, increases of 1.3 pp and decreases of 0.7 pp were recorded. In poviats not covered by the zone area, increases of 1.05 pp, and decreases of 0.9 pp were recorded, respectively.

## Conclusions

On the basis of the analyses carried out and the empirical data gathered during the research, it may be concluded that the hypothesis is disproven. In addition, it can be concluded that in 2010–2015 there was a regular increase in the number of retained jobs and new jobs, which translated into an increase in the number of new employees. Simultaneously, the following pattern was noted: increased capital expenditures resulted in a greater number of retained jobs and new jobs. It was also concluded that the unemployment rates fell in all poviats of the Warmińsko-Mazurskie voivodeship, though the average decline was nearly identical (about 4 pp) in the poviats registered in the Zone and in other poviats. This situation may suggest that the “presence” of the Special Economic Zone affects the situation in the labour market neither positively nor negatively. This is reflected by the values of the activity rate, employment rate and unemployment rate in the region (cities, poviats, and municipalities in the Warmińsko-Mazurskie voivodeship).

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