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Special economic zones (SEZ) in the crisis caused by the COVID-19 pandemic[1]

Abstract

The aim of the publication is to analyse and evaluate the functioning of special economic zones in Poland, focusing in particular on the capital invested in the zones and on the creation of new jobs. This publication addresses the subject of special economic zones in Poland and the conditions for their functioning. The article focuses on the structure of capital invested in the zones, the number of workers and industry specialisation. Special attention was paid to issues related to the functioning of SEZs in Poland in the conditions of the global crisis caused by the COVID-19 pandemic.

Keywords: special economic zones, economic crisis, socio-economic development
JEL Classification Codes: R10, R12.

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Introduction

The introduction of restrictions in the wake of the COVID-19 outbreak resulted in a massive economic shock. The coronavirus pandemic substantially hindered the operations of many businesses. In order to limit the number of cases of the disease, the state authorities decided on a partial freeze of the economy, i.e., a significant limitation of the activities of enterprises, including the temporary suspension of operations of companies working under conditions of increased risk of the spread of the SARS-Cov-2 virus. Month after month, the reactions of enterprises, adapting to the changed conditions of operation, resulted in deepening declines in variables describing economic activity.

With the support of special economic zones, whose primary objective is to provide favourable conditions for investing in a given region, many small and medium-sized enterprises can contribute to combating the negative effects of COVID-19. The creation of special economic zones in Poland was a response to the negative effects of the economic transformation process, particularly with regard to the increase in unemployment and the growing phenomenon of regional disparities in the level of socio-economic development. Special economic zones, which aim to boost regional development by, for example, attracting new investment, developing exports, and creating new jobs can also create effective innovative tools to combat the coronavirus pandemic. The activities of SEZs show how, in the times of the COVID-19 pandemic, one can actively seek solutions to protect the Polish economy and support the enterprises operating in the respective zones.

The aim of the publication is to analyse and evaluate the functioning of special economic zones in Poland, focusing in particular on the capital invested in the zones and on the creation of new jobs. This work attempts to answer the question of how special economic zones functioned during the economic crisis caused by the COVID-19 pandemic. The research hypothesis formulated in this paper is that special economic zones (SEZs) stimulate the regional development of the areas where they are located. The method of critical analysis of the subject literature and the method of quantitative analysis applicable to the analysis of statistical data are used in this article. The time span of the considerations presented covers the years 2017–2020. The source materials needed for the analysis were obtained from the resources of the Ministry of Economic Development, Labour, and Technology and the Local Data Bank. The source basis is also the analysis of the source literature related to the above-mentioned issues.

Special economic zones as the instrument of regional development

The crisis triggered by the COVID-19 pandemic, through its global scope and serious consequences for societies and economies, has disrupted the lives and functioning of societies in countries and regions in an unprecedented way [see: Kudełko, Wałachowski, Żmija, 2020].

The negative effects of the pandemic differ territorially and, as in the case of sections and branches of the economy, are not uniform for all the regions. The reform of the territorial-administrative system carried out in Poland initiated a process of far-reaching changes in the regional development management system and the role of territorial self-government in stimulating socio-economic development of the regions. In the literature, regional development is often described as irreversible quantitative and qualitative changes aimed at achieving a sustainable increase in the socio-economic and cultural potential of a region [Kudełko, 2005, p. 57]. As A. Klasik and F. Kuźnik indicate, regional development should be understood as sustained growth of three elements: the economic potential of regions, their competitive strength and the level and quality of life of their inhabitants, contributing to the development of the entire national community [2001, p. 21]. The process is economic in nature, involving the transformation of regional factors and resources (internal and external) into goods and services [Korenik, 2011, p. 75]. The primary aim of the process is to achieve economic growth. Pursuant to the provisions of the Act of 5 June 1998 on voivodship self-government, Journal of Laws 2013, item 595, as amended, the voivodship self-government has a statutory obligation to conduct development policy. This should be understood as deliberate actions by public authorities aimed at the socio-economic development of regions [Kudełko, 2006, p. 39]. Regional policy, as a component of the economic policy of the state, constitutes the largest and most specialised system of public intervention [Potoczek, 2000, p. 66]. Its principal aim is to optimise economic development, which generally causes spatial polarisation in the standard of living of the inhabitants, so that it serves to achieve the objectives of sustainable social development and maintain a high quality of life [Markowski, 1996, p. 11].

The increase in social awareness and the need to adapt to EU requirements determine the structure of investments carried out by local governments, which concern environmental protection, road infrastructure, research and development centres, etc. The active policy of supporting entrepreneurs in a given area directly determines the development of technical infrastructure. For the economy to grow, innovative and entrepreneurial attitudes are essential. Their formation depends to a large extent on the cultural environment, the perception of entrepreneurs, and institutional support enabling the exploitation of market opportunities. A. Klasik points out that not all regions are able to cope with competition and use competitive strategies effectively. According to him, this especially applies to weak regions with low competitive strength – regions that are a long way behind the strongest regions that drive the economy [2002, p. 31]. As noted by S. Korenik [2000, pp. 181–182], the fastest way to influence the economic development of a region is to locate a large investment in this area. Creating the conditions for a concentration of business entities capable of exploiting the potential of a given place is a guarantee for sustainable, independent, and long-term development of the region. It is worth noting that companies often form clusters when undertaking their activities in order to maximise the external benefits of a location. Interrelated companies concentrate their location in the so-called industrial districts. The originator of the above-mentioned concept was A. Marshall, who defined the observed clusters of small crafts companies as concentrations of specialised industry in a certain location, emphasising at the same time the phenomenon of the benefits of agglomeration and organisation of enterprises connected by vertical cooperation in the geographical aspect and strongly competing within the same sectors [Ryśnik, 2008, p. 33]. The specialisation within industrial districts also contributes to the emergence of a local cultural identity and business climate, understood as a common good that supports and stimulates the development of a district's internal economic activities. According to G. Becattini, an industrial district is a social and territorial unit characterised by the active presence of a community of people and a population of enterprises in a specific geographical and historical area. Within the district, contrary to other types of environments such as industrial cities, there tends to be a perfect osmosis between the local community and businesses [Grzeszczak, 1999, pp. 37–38]. Conversely, R. Coppelin in his definition of an industrial district drew attention to the specialisation of small and medium-sized enterprises which form a network of links within a single industrial district. Through specialisation, they can be competitive outside their home region (district). It would be impossible to outline all the existing definitions of A. Marshall's industrial district. It is worth noting, however, that the authors of these definitions unanimously point out the benefits for economic entities of the concentration of specialised industries within specific areas. These benefits are, for example, participation in regional knowledge resources and labour markets, low transport costs, access to specialised service infrastructure and specialised sales, and supply networks. The evolution of A. Marshall's industrial district is presented in the literature as the first of M. Porter's cluster formation phases. The new analysis of districts allows us to go beyond the classical consideration of the agglomeration phenomenon – the focus shifts to the problem of resource creation and the capture of a district's innovative capacity.

In view of the aforementioned issues, special economic zones have become one of the ways of boosting the economic activity of selected areas by concentrating economic operations and thus creating conditions for the emergence of the so-called development poles of regions. In the light of the theory of development poles, economic development has a polarised character, which manifests itself in the fact that the forming development forces cause a concentration of economic activities in selected areas in a space. As noted by F. Perroux, growth does not become apparent everywhere at once; it manifests itself with variable intensity in the form of growth points or poles; it spreads through different channels and with variable final effects on the economy as a whole [Dziemianowicz, Szlachta, Szmigiel-Rawska, 2011, p. 15]. It should be noted that it is not only the place itself that plays the role of a kind of drive but the large enterprise or set of enterprises located in a given area with different production potential. Transferring the theory of growth poles to regional studies has made it possible to observe the effects of the relationship between a pole and its surroundings.

In the light of the above-mentioned premises, studies were undertaken on the subject of one of the instruments for stimulating regional development, i.e., special economic zones (SEZs). It is worth stressing here that the creation of special economic zones in Poland was a response to the negative effects of the economic transformation process, particularly with regard to the increase in unemployment and the growing phenomenon of regional disparities in the level of socio-economic development.

Functioning of special economic zones in Poland during the crisis caused by the COVID-19 pandemic

The vulnerability of regional economies to crises depends on their resilience to disruption. The economic crisis caused by the outbreak of the COVID-19 pandemic is the greatest one in recent decades, affecting virtually all countries in the world. The adverse effects of the coronavirus pandemic are territorially diverse and are not uniform for all voivodships, counties and municipalities. The territorial scale of the crisis depends on at least three factors: the presence of outbreaks, i.e., the geographical concentration of those sick; the economic structure and its vulnerability to shocks; and the territorial unit's resilience to crises (capacity to respond). Since the beginning of the pandemic, local government units had the best knowledge of the local situation regarding the outbreaks of the disease, the need for medical supplies in public facilities or other social needs [more in: Kudełko, Wałachowski, Żmija, 2020]. With the support of special economic zones, whose primary objective is to provide favourable conditions for investing in a given region, many small and medium-sized enterprises can contribute to combating the negative effects of COVID-19. Special economic zones are one of the instruments for carrying out regional policy in Poland, and their aim is to stimulate the country's regional development [Kudełko, 2006, p. 42]. Under current legislation, a special economic zone (SEZ) is an administratively separate part of the Polish territory where entrepreneurs carrying out new investments may benefit from regional aid in the form of exemption from income tax for income generated by activities specified in the permit. There are currently 14 special economic zones in Poland. By virtue of the Act on support for new investments of 10.05.2018, it is no longer possible to change the borders and the area of special economic zones. Under the current wording of Article 5a, section 1 of the Act on Special Economic Zones, it is only permitted to merge or abolish a zone before the period of the zone establishment expires. Special economic zones will operate until the end of 2026. The last change to the borders of a special economic zone took place in 2019 and concerned the Kraków SEZ. Thus, at the end of 2020, as in the previous year, special economic zones included land located in 186 cities and 311 municipalities. At present, the total area of the zones in Poland is 22,949.5 ha, comprising developed and undeveloped land.

Developed land includes the area occupied by entrepreneurs holding a permission to conduct business within the zone or a decision on support issued under the Act on support for new investments, as well as land occupied for technical infrastructure. The locations and size of individual special economic zones are shown in Table 1.

Table 1. Location and area of individual special economic zones as at the end of 2020

Pos.	Zone	Location (voivodship)	Zone area (in ha)	Developed land (in ha)	Undeveloped land (in ha)	Rate of land development as of the end of 2020 (in %)	Rate of land development as of the end of 2019 (in %)
1	Kamienna Góra	dolnośląskie, wielkopolskie	540.8285	271.3054	269.5231	50.16	50.52
2	Katowice	małopolskie, opolskie, śląskie	2,749.3570	2,086.2890	663.0680	75.88	71.61
3	Kostrzyn-Słubice	lubuskie, wielkopolskie, zachodniopomorskie	2,248.9669	1,492.2876	756.6793	66.35	63.03
4	Kraków	małopolskie, podkarpackie, świętokrzyskie	1,015.6129	683.3924	332.2205	67.29	65.08
5	Legnica	dolnośląskie, lubuskie	1,361.3405	484.0404	877.3001	35.56	33.46
6	Łódź	łódzkie, mazowieckie, wielkopolskie	1,764.8946	1,232.3999	532.4947	69.83	67.20
7	Mielec	lubelskie, małopolskie, podkarpackie, śląskie, zachodniopomorskie	1,723.9743	1,415.4288	308.5455	82.10	80.46
8	Pomeranian	kujawsko-pomorskie, lubelskie, pomorskie, wielkopolskie, zachodniopomorskie	2,246.2929	1,621.6678	624.6251	72.19	71.07
9	Słupsk	pomorskie, zachodniopomorskie	910.1585	410.7120	499.4465	45.13	41.10
10	Starachowice	lubelskie, łódzkie, mazowieckie, opolskie, świętokrzyskie	707.9814	468.7145	239.2669	66.20	65.92
11	Suwałki	mazowieckie, podlaskie, warmińsko-mazurskie	662.9506	487.1300	175.8206	73.48	71.82
12	Tarnobrzeg	dolnośląskie, lubelskie, podkarpackie, podlaskie, mazowieckie, świętokrzyskie	1,877.9531	1,506.3007	371.6524	80.21	78.10
13	Wałbrzych	dolnośląskie, lubuskie, opolskie, wielkopolskie	3,774.5461	2,198.7939	1,575.7522	58.25	56.87
14	Warmia-Mazury	mazowieckie, warmińsko-mazurskie	1,364.6770	995.6266	369.0515	72.96	72.08

Source: Ministry of Economic Development, Labour, and Technology (2021). *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych* [*Information on the implementation of the Act on Special Economic Zones*], Warszawa.

At the end of 2020, the total area of the zones was developed at 66.90%. The highest degree of land development was observed in the Mielec SEZ (82.10%) and the Tarnobrzeg SEZ (80.21%). The lowest percentage of land development was in the Legnica SEZ (35.56%). Comparing the above figures with those for 2019, the area of developed land increased by 494.75 hectares, an increase of 2.16% compared to the previous year. The highest increase took place in the Katowice SEZ and amounted to nearly 117.56 ha. A decrease in developed land was recorded in the Kamienna Góra SEZ and amounted to less than 2 ha. The increase in the degree of land development, with the simultaneous withdrawal of the zone instrument was possible thanks to the use of the zone areas for investments covered by decisions on support under the Act on support for new investments.

Over the years, the rules for granting aid in the zones have changed, with the most significant modifications resulting from EU regulations on granting state aid, in particular concerning regional investment aid. This has been reflected in the functioning of several aid schemes for the zones in the past. The rules for the use of public aid by entrepreneurs with permits issued until the end of 2000 had been negotiated with the European Commission and are set out in the Act of 2 October 2003 amending the Act on Special Economic Zones and certain other acts (Journal of Laws, item 1840, as amended). In turn, entrepreneurs with permits granted after 1 January 2001 benefit from public aid in the form of tax exemptions on terms fully in line with EU law in force on the date a given permit was issued. An important element in the functioning of SEZs are the incentives offered to investors. These can be divided into financial and non-financial ones. The most important of these include:

- The possibility of taking advantage of a tax credit that exempts the entrepreneur from paying income tax. The exemption in question relates to the income derived from business activities conducted in the SEZ on the basis of the relevant permit.
- State aid is limited by the amount of eligible expenditure incurred by the entrepreneur and the intensity of the aid, which depends on the area where the enterprise is carried out and the size of the enterprise. In principle, state aid is incompatible with the internal market as it distorts competition. Therefore, it can be granted as an exception and on a strictly defined basis. State aid is supervised by the European Commission, to which Member States must notify their intention to grant such aid.
- Exemption from property tax. Most often granted as *de minimis* aid – exempt from notification to the European Commission. *De minimis* aid does not affect trade between Member States and, therefore, does not threaten or distort competition. The rules on granting *de minimis* aid are set out in Commission Regulation (EU) No. 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to *de minimis* aid (Official Journal of the EU L 352 of 24.12.2013). The total amount of *de minimis* aid for a single beneficiary must not exceed the equivalent of EUR 200,000 gross over a period of 3 calendar years, or EUR 100,000 for undertakings performing road freight transport.
- Assistance in servicing investors.
- Economic programmes for the promotion of entrepreneurship in protected and declining industries.

It is worth noting here that tax exemptions in special economic zones not only contribute to an increase in investment and the creation of new jobs but also have a negative impact on state and local government budgets.

According to the Act on support for new investments, special economic zones were replaced by a support instrument in the form of tax exemption for entrepreneurs implementing investment projects throughout Poland. As a consequence of the above, no permit was issued in 2020. The last permit was issued in June 2019 and related to the Tarnobrzeg Special Economic Zone. As a result of the changes in the functioning of special economic zones, more businesses can benefit from tax incentives for investors. The key changes include:

- Tax incentives available nationwide, in areas where economic activity is allowed.
- Conditions for obtaining tax exemption depend on the size of the company and the unemployment rate in a given county.
- Required capital expenditure adapted to the capabilities of enterprises, depending on the size of the enterprise.
- Preference for investments in medium-sized cities that are losing their economic and social functions.
- Preference to undertakings that influence the competitiveness and innovativeness of regional economies and, as a result, the economic development of Poland.
- Preference decisions are issued for a limited period of time – normally between 10 and 15 years. However, the higher the state aid permitted by the European Union for a region, the longer the possible exemption period. The new law did not introduce changes to acquired rights for investments already operating in SEZs.
- The companies that manage the zones play a new role in attracting investment. They are the main point of contact in the region for investor service, and they are regional coordinators for public aid in the area of the tax exemption instrument and government grants.

Table 2. Investment and industry specialisation in individual special economic zones

Pos.	Zone	Number of valid permits as at the end of 2020	Leading industry	Country of origin of the capital
1	Kamienna Góra	58	printing, automotive, ceramics	Germany, Belgium, Poland
2	Katowice	334	automotive, food, glass products	USA, Italy, Japan, Poland, Germany, Switzerland
3	Kostrzyn-Słubice	166	automotive, paper, timber, food	Italy, Spain, Poland, Germany, United Kingdom, Sweden
4	Kraków	159	IT, electronics, automotive, printing	Poland, USA, Germany, Japan
5	Legnica	88	automotive, metal, furniture	the Netherlands, Germany, France, Japan, USA
6	Łódź	211	cosmetics, household products, food	the Netherlands, USA, Italy, Germany
7	Mielec	253	aviation, automotive, wood processing, furniture, electromechanical	USA, Germany, Austria, Poland, Sweden
8	Pomeranian	152	electronics, paper, plastics, tyre manufacturing	Belgium, the Netherlands, Japan, USA, France, Poland
9	Słupsk	85	window and door manufacture, fish and fish processing, production of car windows	Poland, Italy, Cyprus
10	Starachowice	66	ceramics, metal, building materials, chemicals, office supplies	Poland, Spain, France, Switzerland
11	Suwałki	89	metal, wood, plastics, construction	Poland, Germany, Denmark, Austria
12	Tarnobrzeg	195	pharmaceutical, electronics, printing	South Korea, Germany, Poland, Japan

Pos.	Zone	Number of valid permits as at the end of 2020	Leading industry	Country of origin of the capital
13	Wałbrzych	326	automotive, household products, plastics, chemical	Japan, Sweden, France, USA, the Netherlands, Germany
14	Warmia-Mazury	107	tyre manufacture, electronic and optical products, furniture, metal	France, Switzerland, South Korea, Germany

Source: own elaboration based on data from the Ministry of Development, Labour, and Technology (2021).

Table 2 shows the number of valid permits and industry specialisation in each special economic zone. The leading industry for capital invested in special economic zones is the automotive sector. Investments in this industry are primarily located in the Legnica, Katowice and Wałbrzych SEZs. This is followed by investments in plastics production and the chemical industry. The third place in terms of industry specialisation is taken by investments in the electronics sector, which can be found in the Pomeranian and Tarnobrzeg SEZs.

There was an overall decrease in the number of valid permits to 2,289 in 2020. This was due to the expiry of the Special Economic Zones instrument and the lack of new permits to operate in the zones, while at the same time a significant number of permits granted to entrepreneurs in previous years were excluded from legal transactions. The largest number of valid permits belonged to companies operating in the Katowice zone (334), followed by the Wałbrzych zone (326), the Mielec zone (253), the Łódź zone (211) and the Tarnobrzeg zone (195). Entities operating in these five zones accounted for 57.6% of all the permits valid at the end of 2020, so this share barely changed from 2019, when it was 57.2%. The total number of permits issued from the beginning of the operation of the zones until the end of 2020 was 4,302, of which 2013 were excluded from legal transactions due to withdrawal, expiry, annulment, or revocation. In 2020, 107 permits expired, which is over 27% less than in 2019.

Table 3 presents the number of issued and valid permits for each year. The sharpest drop in the total number of valid permits was recorded in the Katowice (down by 19), Pomeranian (down by 15) and Tarnobrzeg (down by 13) zones. In three zones – Kamienna Góra, Legnica and Słupsk – the number of valid permits decreased by only one. Due to the entry into force of the Act on support for new investments, introducing an aid instrument in the form of a tax exemption for entrepreneurs implementing investment projects throughout Poland in place of special economic zones, only one permit was issued in 2019 – for operations in the Tarnobrzeg zone. In contrast, 264 permits to conduct business were issued in 2018, with 260 permits remaining valid at the end of the year, representing 10.2% of the total valid permits. Compared to 2017, the number of permits granted was down by nearly 25.0%. The greatest number of permits was granted to entrepreneurs in the following zones: Katowice (39), Wałbrzych (37), Mielec, and Tarnobrzeg (32 permits each). These zones accounted for almost 54% of the valid permits issued in 2018. A decrease in the total number of permits was recorded only in the Kraków zone.

Table 3. Number of permits issued and valid permits between 2017 and 2020

Pos.	Zone	31.12.2017		31.12.2018		31.12.2019		31.12.2020
		cumulatively	issued in 2017	cumulatively	issued in 2018	cumulatively	issued in 2019	cumulatively
1	Kamienna Góra	60	4	62	3	59	0	58
2	Katowice	329	56	364	39	353	0	334
3	Kostrzyn-Słubice	180	23	186	11	175	0	166
4	Kraków	189	20	179	9	168	0	159
5	Legnica	86	12	93	9	89	0	88
6	Łódź	209	26	228	22	219	0	211
7	Mielec	268	47	284	32	260	0	253
8	Pomeranian	173	36	188	16	167	0	152
9	Słupsk	79	9	86	9	86	0	85
10	Starachowice	56	5	68	11	68	0	66
11	Suwałki	92	15	106	19	96	0	89
12	Tarnobrzeg	195	24	221	32	208	1	195
13	Wałbrzych	315	33	343	37	329	0	326
14	Warmia-Mazury	118	36	127	11	115	0	107
	TOTAL	**2,349**	**346**	**2,535**	**260**	**2,392**	**1**	**2,289**

Source: Ministry of Economic Development, Labour, and Technology (2021). *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych* [*Information on the implementation of the Act on Special Economic Zones*]. Warszawa.

Table 4 shows the cumulative value of capital invested between 2017 and 2020 by entities with valid permits at the end of the relevant year. In 2020, as in previous years, the highest share in the cumulative value of investments was recorded in the Wałbrzych SEZ (20.94%), Katowice SEZ (19.02%) and Łódź SEZ (10.53%), while the lowest in the Słupsk SEZ (1.56%) and Starachowice SEZ (1.61%). On the other hand, the highest investment dynamics in 2020 were recorded in the Tarnobrzeg SEZ, where capital expenditures increased by 26.13% compared to 2019. The Katowice (up by 23.75%), Pomeranian (up by 13.06%) and Wałbrzych (up by 10.03%) SEZs also recorded relatively high investment growth. None of the zones recorded a decline in cumulative investment value in 2020. Entrepreneurs conducting business on the basis of the permits that were valid as of 31 December 2019 incurred capital expenditure of PLN 132 billion. Compared to 2018, investments increased by almost PLN 12.8 billion, or 10.74%. In 2019, the highest share in the cumulative value of investments was recorded in the Wałbrzych SEZ (21.04%), Katowice SEZ (16.99%) and Łódź SEZ (11.52%), while the lowest in the Słupsk SEZ (1.66%) and Starachowice SEZ (1.68%). The highest investment dynamics in 2019 were recorded in the Warmia-Mazury SEZ, where capital expenditures increased by 48.54% compared to 2018. As of the end of 2018, investors incurred capital expenditure of PLN 119.2 billion since the creation of the zones. Compared to 2017, investments increased by more than PLN 12.6 billion, or 11.85%.

Table 4. Capital expenditures incurred in PLN million (cumulative at the year-end)

Pos.	Zone	2017	2018	2019	2020	Share in total expenditure in 2020 (%)	Overall dynamics (previous year = 100%)		
							2018/2017	2019/2018	2020/2019
1	Kamienna Góra	2,557.3	2701.9	2,916.40	3,017.02	2.07	105.66	107.94	103.45
2	Katowice	16,605.1	19305.5	22,427.16	27,753.21	19.02	116.26	116.17	123.75
3	Kostrzyn-Słubice	7,133.4	8099.0	8,408.43	8,745.07	6.00	113.54	103.82	104.00
4	Kraków	4,240.4	4,176.2	4,699.03	4,945.35	3.39	98.48	112.52	105.24
5	Legnica	5,131.8	6,308.7	6,898.01	7,136.31	4.89	122.93	109.34	103.45
6	Łódź	13,318.7	14,266.2	15,206.44	15,365.47	10.53	107.11	106.59	101.05
7	Mielec	7,838.1	9,523.6	11,069.14	11,736.58	8.05	121.50	116.23	106.03
8	Pomeranian	10,481.6	11,158.8	11,475.67	12,974.57	8.89	106.46	102.84	113.06
9	Słupsk	1,592.3	1,964.4	2,191.70	2,282.31	1.56	123.37	111.57	104.13
10	Starachowice	1,790.9	2,089.8	2,221.17	2,351.19	1.61	116.69	106.28	105.85
11	Suwałki	2,500.1	2,877.8	3,042.94	3,187.72	2.19	115.11	105.74	104.76
12	Tarnobrzeg	7,470.7	8,486.8	7,839.52	9,888.33	6.78	113.60	92.37	126.13
13	Wałbrzych	22,789.5	24,213.5	27,768.64	30,554.28	20.95	106.69	114.21	110.03
14	Warmia-Mazury	3,124.6	3,929.2	5,836.31	5,943.57	4.07	125.75	148.54	101.84

Source: Ministry of Economic Development, Labour, and Technology (2021). *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych* [*Information on the implementation of the Act on Special Economic Zones*]. Warszawa.

Businesses operating in the zones employed a total of 385,091 workers at the end of 2020, of which over 64.5% were new jobs. The total employment in the zones decreased by over 2.9 thousand in 2020 compared to 2019, i.e., by 0.76%. The highest growth in the total employment was recorded in the Starachowice zone, where the number of new jobs increased by 4.1%. A similar situation was observed in the Suwałki SEZ, where employment increased by 3.3%, and in the Kraków SEZ, with the dynamics of 103.2. The employment dynamics above 100 was also recorded in the Słupsk SEZ and Wałbrzych SEZ. In the remaining zones, the employment dynamics was below 100, which means that the total employment at the end of 2020 decreased compared to 2019. The sharpest decline was recorded in the Warmia-Mazury SEZ, where the total employment fell by 7.6%. Investors operating in the zones employed a total of 388,014 people at the end of 2019, of which almost 64% were new jobs, i.e., jobs created by entrepreneurs as a result of new investments after obtaining the permit. Compared to 2018, the total employment in companies with a permit to operate in the zones increased by more than 8.9 thousand, i.e., by 2.4%. The highest growth in the total employment occurred in the Słupsk zone with an increase of 12.7%. The Tarnobrzeg zone also stood out in this respect, with the employment dynamics of 110.9. It was followed by the Kraków, Suwałki and Łódź SEZs with increases of 6.2%, 5.7%, and 4.0%, respectively. In the Mielec, Pomeranian, and Starachowice zones, the employment dynamics was below 100, which means that the total employment at the end of 2019 was lower than in 2018. The sharpest decline was recorded in the Starachowice zone, where employment fell by almost 6.7%.

Table 5. New and maintained jobs in individual special economic zones in 2017–2020

Pos.	Zone	31.12.2017			31.12.2018			31.12.2019			31.12.2020			Overall dynamics (previous year = 100%)		
		Total	Maintained	New	Total	Maintained	New	Total	Maintained	New	Total	Maintained	New	2018/2017	2019/2018	2020/2019
1	Kamienna Góra	7,530	832	6,698	7,586	925	6,661	7,652	926	6,727	7,596	925	6,671	100.7	100.9	99.3
2	Katowice	64,481	30,463	34,018	68,913	29,282	39,631	70,124	29,151	40,973	69,803	27,627	42,176	106.9	101.8	99.5
3	Kostrzyn-Słubice	32,400	14,248	18,152	34,769	14,260	20,509	34,958	14,264	20,694	34,429	13,359	21,070	107.3	100.5	98.5
4	Kraków	29,580	13,641	15,939	30,178	13,544	16,634	32,056	13,044	19,012	33,077	13,003	20,074	102.0	106.2	103.2
5	Legnica	15,294	6,088	9,206	16,065	5,451	10,614	16,177	5,694	10,483	16,099	5,685	10,414	105.0	100.7	99.5
6	Łódź	33,401	8,525	24,876	34,331	8,503	25,828	35,710	9,042	26,668	35,215	9,045	26,170	102.8	104.0	98.6
7	Mielec	34,992	16,830	18,162	39,685	18,292	21,393	39,157	16,394	22,763	37,415	16,026	21,389	113.4	98.7	95.6
8	Pomeranian	24,893	10,201	14,692	27,774	10,640	17,134	27,693	10,625	17,068	27,611	10,627	16,984	111.6	99.7	99.7
9	Słupsk	3,478	1,063	2,415	3,941	1,521	2,420	4,442	1,722	2,720	4,524	1,695	2,829	113.3	112.7	101.8
10	Starachowice	6,829	4,184	2,645	7,995	3,930	4,065	7,461	2,983	4,478	7,769	3,019	4,750	117.1	93.3	104.1
11	Suwałki	8,336	3,441	4,895	8,730	3,437	5,293	9,230	3,973	5,257	9,531	4,185	5,346	104.7	105.7	103.3
12	Tarnobrzeg	20,740	6,928	13,812	23,600	7,483	16,157	26,206	7,014	10,192	25,577	6,995	18,582	114.0	110.9	97.6
13	Wałbrzych	50,268	10,829	39,439	54,101	13,410	40,691	55,610	13,835	41,775	56,546	14,423	42,312	107.6	102.8	101.7
14	Warmia-Mazury	20,778	12,706	8,072	21,362	12,710	8,652	21,538	11,676	9,862	19,898	9,956	9,942	102.8	100.8	92.4

Source: Ministry of Economic Development, Labour, and Technology (2021). *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych* [*Information on the implementation of the Act on Special Economic Zones*]. Warszawa.

The decline in the number of new jobs was a result of employment fluctuations among entrepreneurs with valid business permits in the zones. The number of new jobs increased by 10.6% in 2018 compared to 2017, which corresponds to an increase of almost 22.7 thousand jobs. In absolute figures, the largest increase in new jobs compared to 2017 was observed in the Katowice zone, amounting to over 5.6 thousand jobs. A large increase was also recorded in the Mielec zone, where over 3.2 thousand new jobs were created in 2018. Only the Kamienna Góra zone recorded a decrease in the number of new jobs.

It should be noted that despite numerous concerns about the COVID-19 pandemic, 2020 saw growth in special economic zones. A total of 369 decisions (15 more than in 2019) worth over PLN 15.1 billion with the declaration of 5,888 new jobs were issued in 2020 under the instrument to support investors as a replacement for the existing special economic zones, i.e., the Polish Investment Zone. Compared to 2019, the number of projects in 2020 increased by 4%. At the same time, the existing employment commitments of entrepreneurs within the Polish Investment Zone were maintained. Entrepreneurs in the zone fulfilled their commitments and maintained their reported employment. Compared to 2019, the value of investments decreased by 2%, but the number of projects at the Polish Investment Zone increased by 4% in 2020. This shows a stable growth. According to the Polish Investment and Trade Agency, by the end of 2020 almost 200 investment projects were managed, the total value of which was almost 10% higher than in the previous year, amounting to over EUR 8.5 billion (i.e., nearly PLN 40 billion). In terms of investment value, the largest investors are South Korea and the United States. It is worth noting that in the projects located in the Polish Investment Zone in the first half of 2020, Polish companies were responsible for 75% of the total number of investments.

The following table shows the cumulative effects of SEZ activities per hectare of land used for permitted activities as of the end of 2020.

In 2020, the area used by entrepreneurs with permits was almost 9,091.49 ha – 276.74 ha less than in 2019. In 13 zones, the area used for activities requiring permits decreased. The extent of this decrease varied and ranged from 2.38 ha in the Suwałki zone to 55.2 ha in the Warmia-Mazury zone. The only zone where the area used for zone activity increased was the Legnica zone. At the end of 2020, the area amounted to 345.51 ha, which was 16.54 ha larger than in 2019. In 2020, PLN 16.05 million in capital expenditure were made and 42 jobs were created per every 1 ha of land developed by investors with a permit to operate in the zones. Compared to 2019, the average value of capital expenditure per 1 ha was higher by PLN 1.96 million, while the average for the number of jobs did not change.

In terms of capital expenditure per 1 ha, the Katowice SEZ achieved the best result. It invested PLN 25.29 million per 1 ha of developed land. It is followed by the Legnica, Kamienna Góra, and Łódź SEZs with the capital expenditure exceeding PLN 20 million. The highest increase compared to 2019 was recorded in the following zones: Katowice (of PLN 5.05 million), Tarnobrzeg (of PLN 3.5 million), and Wałbrzych (of PLN 1.94 million). A decrease in the average value of investments per 1 ha took place in the Legnica SEZ. The capital expenditure in this zone decreased by PLN 0.32 million (from PLN 20.97 million to PLN 20.65 million).

In terms of employment per 1 ha, the best performance was recorded in the Kraków SEZ (69 FTEs), Katowice SEZ (64 FTEs), and Mielec SEZ (59 FTEs). The highest increase in jobs per 1 ha compared to 2019 was observed in the Starachowice SEZ (by 4 FTEs) and Kraków SEZ (by 3 FTEs). In the Kostrzyn-Słubice and Suwałki zones the average increased by 2 jobs, while in the Kamienna Góra, Katowice, Łódź, Pomeranian, Słupsk, and Wałbrzych zones it increased by 1 job. The average number of jobs per 1 ha decreased in the Legnica SEZ (by 2 jobs) and the Mielec SEZ (by 1 job). In the Wałbrzych and Warmia-Mazury SEZs this indicator did not change.

Table 6. Effects per hectare of land used for permitted activities (as at the end of 2020)

Pos.	Zone	Areas occupied by entrepreneurs working under permit (ha)	Capital expenditure per 1 ha (in PLN million)	Jobs per 1 ha
1	Kamienna Góra	149.2620	20.21	51
2	Katowice	1,097.4730	25.29	64
3	Kostrzyn-Słubice	804.0703	10.88	43
4	Kraków	476.3029	10.38	69
5	Legnica	345.5119	20.65	47
6	Łódź	767.1741	20.03	46
7	Mielec	631.2070	18.59	59
8	Pomeranian	1,122.9573	11.55	25
9	Słupsk	228.9804	9.97	20
10	Starachowice	183.0844	12.84	42
11	Suwałki	273.4596	11.66	35
12	Tarnobrzeg	669.8441	14.76	38
13	Wałbrzych	1,708.6412	17.88	33
14	Warmia-Mazury	633.5180	9.38	31
TOTAL		**9,091.4862**	**16.05**	**42**

Source: own elaboration based on data from the Ministry of Development, Labour, and Technology.

Summary

The activities of the SEZs show how, in the times of the COVID-19 pandemic, one can actively seek solutions to protect the Polish economy and support the enterprises operating in the respective zones. Special economic zones are an important tool for regional development. The main effects of their establishment are the inflow of new capital investments and the creation of new jobs. It should be noted that 2020 was characterised by lower dynamics of variables describing the effects of special economic zones compared to previous years. The dynamics of capital expenditure and new jobs was positive, but only in the case of investment spending the increase exceeded 10%. On the other hand, the dynamics of total employment was negative.

The economic effects of each zone are largely determined by the geographical location of the areas and the associated level of development of socio-economic infrastructure, as well as the availability of skilled human resources. The zones that are among the top performers in terms of the number of permits issued, the value of investments and the number of jobs created are located in the western, southern, and central parts of Poland. Individual zones have proven to be resistant to the negative effects of the crisis to varying degrees. This may be related to the size of individual zones, the degree of their development and their technical infrastructure.

The introduction of a new support instrument based on the special economic zones, but also applied outside their territory, and the simultaneous abolition of the special economic zones instrument meant that no changes were made to the territory and boundaries of the special economic zones. At the same time, these measures helped to maintain the existing obligations of entrepreneurs with regard to the maintenance of declared jobs. Despite the negative impact of the economic downturn caused by the COVID-19 pandemic, it must be emphasised that the zones experienced positive phenomena throughout the study period, which testifies to the growth of each special economic zone. Despite numerous concerns about the COVID-19 pandemic, 2020 saw growth trends in special economic zones.

References

Reviewed publications

1. Brol, R. (2016). Rozwój regionalny – zakres pojęciowy [Regional Development – Conceptual Range of Terms]. In: D. Strahl (Ed.), *Metody oceny rozwoju regionalnego [Methods for Assessing Regional Development]*. Wrocław: Wydawnictwo Akademii Ekonomicznej we Wrocławiu.
2. Chmiel, J. (1997). Małe i średnie przedsiębiorstwa a rozwój regionów [Small and Medium-Sized Enterprises and Regional Development]. *Studia i Prace*, 243. Warszawa: Zakład Badań Statystyczno-Ekonomicznych GUS i PAN.
3. Dziemianowicz, W., Szlachta, J., Szmigiel-Rawska, K. (2011). *Subregionalne bieguny wzrostu w Polsce [Sub-Regional Growth Centres in Poland]*. Warszawa: Uniwersytet Warszawski.
4. Grzeszczak, J. (1999). *Bieguny wzrostu a formy przestrzeni spolaryzowanej [Growth Centres and Forms of Polarised Space]*. Wrocław: Wydawnictwo Continuo.
5. Hausner, J., Kudłacz, T., Szlachta, J. (1998). *Identyfikacja nowych problemów rozwoju regionalnego Polski [Identification of New Problems with Poland's Regional Development]*. Warszawa: Wydawnictwo Naukowe PWN.
6. Klasik, A. (2002). *Strategie regionalne. Formułowanie i wprowadzanie w życie [Regional Strategies. Formulation and Implementation]*. Katowice: Wyd. AE.
7. Klasik, A., Kuźnik, F. (2001). Konkurencyjny rozwój regionów w Europie [Competitive Development of Regions in Europe]. In: Z. Szymla (Ed.), *Konkurencyjność miast i regionów [Competitiveness of Cities and Regions]*. Kraków: Akademia Ekonomiczna w Krakowie.

8. Korenik, S. (2011). *Region ekonomiczny w nowych realiach społeczno-gospodarczych [Economic Region in the New Socioeconomic Reality]*. Warszawa: CeDeWu.
9. Korenik, S. (2000). Rola małej i średniej przedsiębiorczości w rozwoju lokalnym (rozwiązania funkcjonujące w Polsce) [The Role of Small and Average Entrepreneurship in Local Development (Solutions which Function in Poland)]. In: *Gospodarka lokalna w teorii i praktyce*, 850. Wrocław: Prace Naukowe Akademii Ekonomicznej we Wrocławiu.
10. Kudełko, J. (2006). Efekty funkcjonowania specjalnych stref ekonomicznych w Polsce jako instrumentu polityki regionalnej [Effects of the Functioning of Special Economic Zones in Poland as Regional Policy Instruments]. *Zeszyty Naukowe AE w Krakowie*, 709.
11. Kudełko, J., Szmigiel, K., Żmija, D. (2020). *Społeczno-gospodarczy rozwój gmin wiejskich. Dynamika i zróżnicowanie rozwoju na przykładzie województwa małopolskiego [Socioeconomic Development of Rural Communes. Dynamics and Diversification of Development Based on the Example of the Małopolska Province]*. Kraków: Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie.
12. Kudełko, J., Wałachowski, K., Żmija D. (2020). *Gospodarka regionalna w obliczu kryzysu wywołanego pandemią COVID-19 [Regional Economy during the Crisis Caused by the COVID-19 Pandemic]*. Warszawa: Wydawnictwo Difin.
13. Kudłacz, T., Mazur, S., Pyszkowski, A. (2004). *Podstawowe elementy strategii rozwoju regionalnego [Basic Elements of the Regional Development Strategy]*. A study commissioned by Rządowe Centrum Studiów Strategicznych. Warszawa–Kraków.
14. Markowski, T. (1996). Od konkurencji zasobów do konkurencji regionów [From Resource Competition to Region Competition]. In: *Regionalne i lokalne uwarunkowania i czynniki restrukturyzacji gospodarki Polski. Wzrost konkurencyjności regionów [Regional and Local Conditions and Factors of the Restructuring of Poland's Economy]*. Łódź: Friedrich Ebert-Stiftung.
15. Nelec, W., Prusek, A. (2006). Funkcje państwa i specjalnych stref ekonomicznych w Polsce w zakresie innowacyjności i konkurencyjności gospodarki [Functions of State and Special Economic Zones in Poland in Terms of Innovation and Competitiveness of the Economy]. *Zeszyty Naukowe AE w Krakowie*, 709.
16. Pilarska, Cz. (2009). *Specjalne strefy ekonomiczne w Polsce [Special Economic Zones in Poland]*. Kraków: Uniwersytet Ekonomiczny w Krakowie.
17. Potoczek, A. (2000). *Współczesne problemy rozwoju lokalnego i regionalnego [Contemporary Problems of Local and Regional Development]*. Włocławek: Wyższa Szkoła Humanistyczno-Ekonomiczna we Włocławku.
18. Ryśnik, J. (2008). *Czynniki pozaekonomiczne funkcjonowania dystryktów przemysłowych (rozprawa doktorska) [Non-Economic Factors of the Functioning of Industrial Districts (doctoral dissertation)]*. Wrocław: Politechnika Wrocławska. Retrieved from: www.dbc.wroc.pl/Content/3091.
19. Skica, T. (2008). Instrumenty wspierania przedsiębiorczości przez samorząd terytorialny (na przykładzie woj. podkarpackiego) [Instruments to Support Entrepreneurship used by Local Governments (Based on the Example of the Podkarpacie Provnce)]. *Samorząd Terytorialny*, 1–2.

Legal acts

1. Ministerstwo Rozwoju, Pracy i Technologii (2021). *Informacja o realizacji ustawy o specjalnych strefach ekonomicznych [Information on the Implementation of the Act on Special Economic Zones]*. Warszawa.
2. Nowelizacja Ustawy o specjalnych strefach ekonomicznych, Dz.U. 2000 Nr 117, poz. 1228 [Amendment to the Polish Act on Special Economic Zones, Journal of Laws of 2000, No. 117, item 1228].
3. Ustawa z dnia 20.10.1994 r. o specjalnych strefach ekonomicznych, Dz.U. 2007 Nr 42, poz. 173 [Polish Act on Special Economic Zones of 20 October 1994, consolidated text, Journal of Laws of 2007, No. 42, item 273].
4. Ustawa z dnia 30.05.2008 r. o zmianie Ustawy o specjalnych strefach ekonomicznych, Dz. U. Nr 118, poz. 746 [Polish Act of 30 May 2008 amending the Act on Special Economic Zones, Journal of Laws No. 118, item 746].
5. Ustawa z dnia 30.06.2000 r. o warunkach dopuszczalności i nadzorowaniu pomocy publicznej dla przedsiębiorców, Dz.U. 2000, Nr 60, poz. 704 [Polish Act on the Conditions of Admission and Supervision of Public Aid for Businesses of 30 June 2000, Journal of Laws of 2000, No. 60, item 704].
6. Ustawa z dnia 10.05.2018 r. o wspieraniu nowych inwestycji, Dz.U. 2018, poz. 1162 [Polish Act on the Support of New Investments of 10 May 2018, Journal of Laws of 2018, item 1162].