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ANALYSIS OF THE ENTERPRISE SECTOR IN THE POLISH ECONOMY, WITH PARTICULAR EMPHASIS ON THE SME SECTOR

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ABSTRACT

The Polish business sector, and in particular SMEs, is characterized by great diversity in terms of industries, size and level of innovation. After the political transformation in 1989, this sector has undergone a significant evolution, becoming one of the pillars of the country's dynamic economic growth. Enterprises are the core of every economy, playing a fundamental role in shaping competitiveness, dynamics, creating jobs and generating GDP. An in-depth analysis of the Polish business sector, taking into account its size, structure and evolution, allows for a more precise understanding of the mechanisms of economic growth. Particular importance is attributed to the SME sector (micro-, small and medium-sized enterprises), which is the engine of innovation and employment in Poland. Its adaptability and ability to quickly respond to market fluctuations make it a key element of economic stability. In addition, this sector influences the shaping of economic policy through participation in the legislative process and engagement in social dialogue. The condition and development of SMEs are closely linked to investments and the implementation of modern technologies, which consequently translates into increased productivity and competitiveness of the Polish economy on the international stage. The important role of SMEs in the development of local communities cannot be ignored, as they contribute to the creation of new jobs and support social initiatives. Their activities not only strengthen social capital, but also contribute to sustainable development, which guarantees the long-term prosperity of the entire country. This sector also currently shows significant growth potential, especially in areas related to digitalization, green transformation and regional specializations.

Key words: SME sector, Polish economy, analysis.
JEL: L10, L11, L20.

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1. Introduction

Enterprises constitute the bedrock of any modern economy, playing a pivotal role in fostering competitiveness, driving dynamics, creating employment opportunities, and generating Gross Domestic Product. In the specific context of the Polish economy, the sector of small and medium-sized enterprises (SMEs) has undergone a profound evolution since the political transformation of 1989, emerging as a primary pillar of the nation's robust economic growth. The SME sector is particularly significant as it serves as a catalyst for innovation and employment, not only in Poland but across the entire European Union. Its inherent flexibility and capacity to swiftly adapt to market fluctuations position it as a critical element of economic stability. Furthermore, as research indicates, the functioning of these enterprises is heavily influenced by the prevailing economic conditions and the broader business cycle of the state (Ligaj, Pawlos; 2021, p. 61).

Despite their fundamental importance, the Polish SME sector operates within an increasingly complex environment marked by rapid digitalization and global economic shifts. While the existing literature extensively documents the general role of SMEs in developing economies, there is a persistent need for a more nuanced analysis of their trajectory in the immediate post-pandemic period between 2020 and 2023. Recent studies have highlighted that the COVID-19 pandemic significantly impacted the operations of micro, small, and medium-sized enterprises, forcing a re-evaluation of their resilience and strategic adaptability. (Banasik 2023, p. 50). This era is characterized by the dual challenge of recovering from systemic shocks while simultaneously navigating the green and digital transformations.

The primary objective of this article is to identify and analyse the key developmental factors and barriers facing the SME sector in Poland during this turbulent period. Specifically, the study seeks to investigate how the investment activity of Polish SMEs evolved in response to the economic turbulence of the early 2020s and to determine the extent to which high levels of basic digitalization, such as broadband access, translate into the adoption of advanced technologies like Artificial Intelligence. Additionally, the research explores the most significant structural barriers, including complex legal regulations and financial constraints, that currently impede the growth and international competitiveness of these enterprises. By addressing these issues, this paper contributes to the field by providing a synthesized view of post-pandemic structural changes and highlighting the persistent gap between basic digital infrastructure and advanced technological integration.

2. Methodology

To achieve the stated objectives, this study employs a quantitative research design based on secondary data analysis. The research process is structured around a comprehensive review of the latest statistical data and reports provided by key

national institutions, primarily focusing on the period from 2020 to 2024. The fundamental sources of information include the thematic reports on the state of the SME sector published by the Polish Agency for Enterprise Development (PARP) and the official statistical databases of the Central Statistical Office (GUS).

The analysis utilizes several key methodological tools to ensure a rigorous assessment of the sector. Descriptive statistics are used to characterize the size, industry structure, and legal forms of enterprises, while trend analysis is applied to investment expenditures and GDP contribution to identify longitudinal shifts and the impact of external shocks like the COVID-19 pandemic. Furthermore, a comparative method is employed to evaluate innovation levels across different sectors and between various enterprise sizes, ranging from micro-entities to medium-sized companies. This integrated methodological approach provides a data-driven understanding of the current state and future prospects of Polish SMEs within a transborder economic context.

3. Analysis of enterprises in the Polish economy

3.1. The enterprise sector in Poland – size and structure

The SME sector includes micro-, small and medium-sized enterprises operating in the territory of the Republic of Poland. In order to be able to determine the category of an enterprise in a simple way, the European Commission has clearly defined the criteria that form the basis for classifying Polish enterprises as SMEs. Detailed thresholds and ceilings for SMEs in the EU are presented in Table 1.

Table 1. Criteria for classifying companies

Company category	Number of employees	Annual turnover	Annual balance sheet total
Medium	< 250	≤ EUR 50 million	≤ EUR 43 million
Small	< 50	≤ EUR 10 million	≤ EUR 10 million
Micro	< 10	≤ EUR 2 million	≤ EUR 2 million

Source: user guide on SME definitions, (2015). European Commission, p. 11.

Table 1 shows that in order for an entity to be classified as a medium-sized enterprise, it must employ more than 50 and less than 250 employees and show an annual turnover of no more than EUR 50 million or an annual balance sheet total of no more than EUR 43 million. Subsequently, small enterprises include units employing fewer than 50 employees but more than 10. In addition, they must have an annual turnover of no more than EUR 10 million or an annual balance sheet total of up to EUR 10 million. Micro-enterprises, on the other hand, are

characterized by employing fewer than 10 people and achieving an annual turnover of up to EUR 2 million or the same amount in the annual balance sheet total.

The total number of non-financial enterprises in 2023 amounted to 2,349,755 companies and decreased by 0.3% compared to 2022. Figure 1 shows the structure of these entities in 2023.

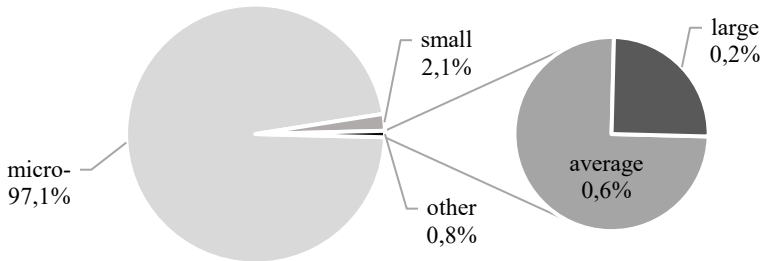

Figure 1. Structure of non-financial enterprises in Poland in 2023

Source: own work based on: Report on the state of the small and medium-sized enterprise sector in Poland (2024). Polish Agency for Enterprise Development (PFR group), p. 6.

As shown in Figure 1, the vast majority are micro-enterprises, which number as many as 2,283,379, which in turn gives a result of 97.10% of all enterprises in Poland. The remaining enterprises are small, accounting for 2.10%, and medium-sized enterprises, accounting for 0.20%. All entities of the SME sector in the Polish economy account for 99.8% of the total, because only 0.20% are large enterprises that are not included in this sector. This proves that this sector is extremely extensive.

Companies run different types of business and operate in different industries. A detailed industry structure of SMEs is presented in Figure 2.

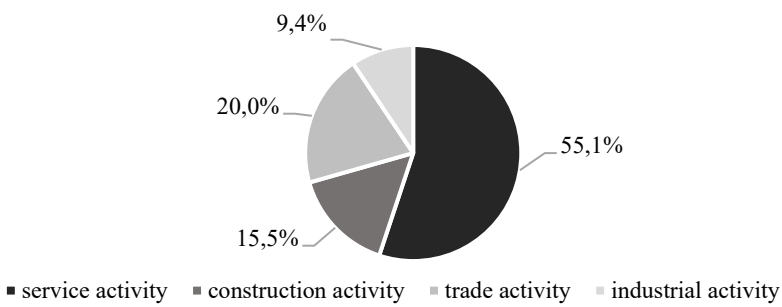

Figure 2. Industry structure of SMEs in Poland in 2023

Source: own work based on: Report on the state of the sector..., op. cit., p. 6.

As shown in Figure 2, the service sector plays a dominant role in the Polish economy, accounting for more than half (55.10%) of the other sectors. Commercial activity is at a similar level (20%), followed by construction activity (15.5%). The smallest share in the industry structure is the industrial sector – 9.4%. The situation is different when it comes to large enterprises. More than half of large entities conduct industrial activity, and a smaller part focus on service activities, trade or construction.

The SME sector can also be classified according to its legal form, where the dominant role is played by natural persons conducting business activity – 86%, of which as many as 99% are micro-enterprises. Legal persons and entities without legal personality constitute only 14% of all enterprises (Report on the state of the small and medium-sized enterprise sector in Poland, 2024).

3.2. Labour market

The corporate sector affects many aspects of the Polish economy. First of all, it plays a key role in creating jobs, which are the main source of employment, and in addition, they have a certain impact on economic and social stability. Figure 3 presents the development of the labour market in Poland in 2023.

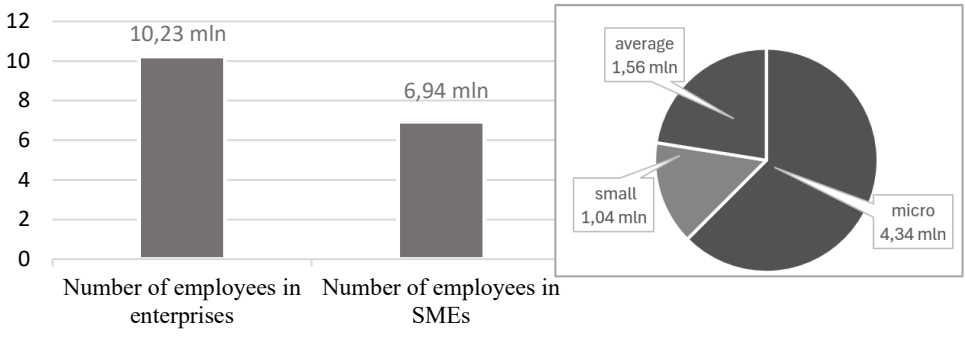

Figure 3. Shaping of the labour market in Poland in 2023

Source: own work based on the Report on the condition of the small sector..., op. cit., p. 7.

The number of employed, i.e. people performing various forms of professional activity, not necessarily related to formal employment, in SMEs accounts for more than half of the number of people working in enterprises, i.e. as many as 6.94 million people. In particular, micro-enterprises employ the largest number – 4.34 million people, which proves that despite their small scale of operations, they are extremely important in the labour market. This was followed by 1.56 million employees in medium-sized enterprises and 1.04 million in small enterprises.

On the other hand, the employed are "persons employed on the basis of an employment relationship for a definite period of time (including seasonal and casual employment) and indefinite, full-time and part-time, employees on individual farms in agriculture, and teachers who are inactive or on sick leave". In this case, the number of employees in enterprises in 2024 amounted to 7.03 million people. The share of the SME sector in the structure of average employment was 55.9%.

3.3. Gross Domestic Product

The SME sector is also responsible for generating a significant part of the Gross Domestic Product (GDP), a measure of "the total value of all goods and services produced in a country, usually over a course or quarter".

According to the latest report published by the Polish Agency for Enterprise Development (PARP) in 2024, the overall share of enterprises in GDP creation in 2021 was 67.9% (a decrease of 3.7 percentage points compared to 2020), of which the SME sector generates as much as 45.3% of Polish GDP (an increase of 1.7 p.p.) tags. (Report on the state of the small and medium-sized enterprise sector in Poland, 2024). Figure 4 presents a detailed share of this sector in shaping the Gross Domestic Product in 2020–2021.

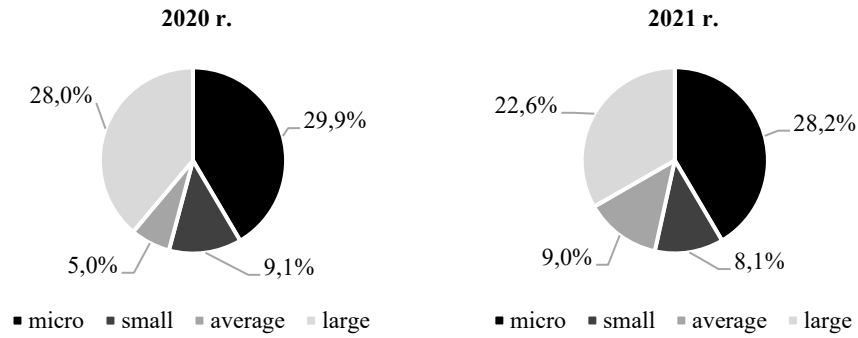

Figure 4. The share of the SME sector in GDP creation in 2020-2021
Source: own work based on the Report on the condition of the small sector..., op. cit., p. 6.

Taking into account the data presented in Figure 4, it is noted that a significant part of this sector is occupied by micro-enterprises, for which the share in GDP creation in 2021 fell by 1.3 percentage points compared to the previous year. This year, there was also a decrease in the case of small enterprises – by 1 percentage point and for large enterprises – by 5.4 percentage points compared to 2020. Only the share of medium-sized enterprises increased by 4 percentage points compared to the previous year.

3.4. Investments

The investment situation in Poland is relatively good. Detailed data are presented in Table 2.

Table 2. Investments in Poland in 2020-2023

Year / Investments in PLN billion	2020	2021	2022	2023
Total expenditure of enterprises	240.6	224.7	250.2	294.7
Capital expenditures	219.9	203.5	225.5	268
Purchase of used fixed assets	20.6	21.2	24.7	26.7
SME expenditures	105.1	99.6	109.65	122.81

Source: own work based on the Report on the state of the small and medium-sized enterprise sector in Poland, (2021, 2022, 2023, 2024). Polish Agency for Enterprise Development (PFR group), p. 7.

The total expenditures of enterprises presented in Table 2 decreased only in 2021 compared to the previous year, which may reflect the impact of the COVID-19 pandemic and numerous restrictions. On the other hand, since 2022, the number of investments has definitely been on an upward trend, reaching almost PLN 300 billion in 2023. A similar situation occurred in the case of the SME sector, which has also been growing since 2022, but at a slightly slower pace than the expenditures incurred by enterprises in general. A comparison of these two variables is presented in Figure 5.

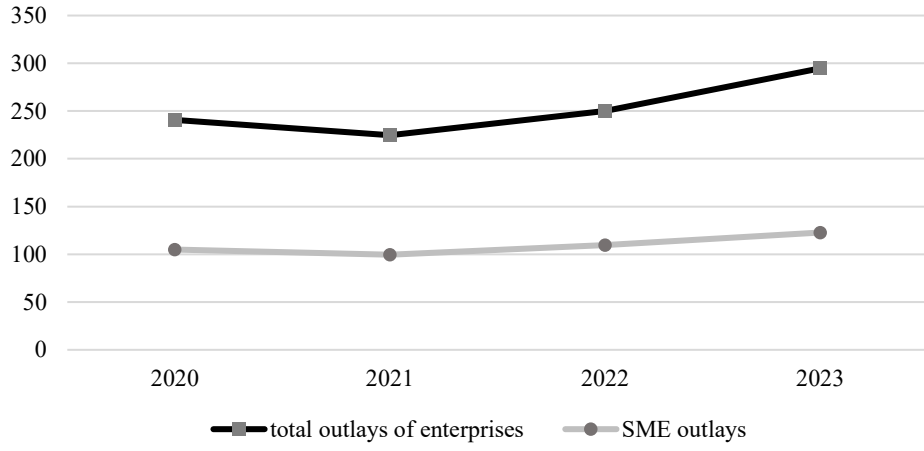

Figure 5. Total enterprise and SME sector expenditures in 2020–2023

Source: own work based on the Report on the state of the small sector..., op. cit., p. 7.

Table 3 provides a summary of data on investments in enterprises, with particular emphasis on the SME sector.

Table 3. Expenditure on property, plant and equipment of enterprises in Poland in 2023

Specification	Total enterprises	Big	SME		
			Micro	Small	Medium
Expenditure on property, plant and equipment, including:	**294 700**	**172 344**	**44 624**	**29 229**	**48 503**
- total capital expenditure	268 044	165 730	35 080	24 416	42 818
- expenses for the purchase of used fixed assets	26 656	6 614	9 544	4 813	5 685

Source: own work based on the Report on the state of the small..., op. cit., p. 7.

As shown in Table 3, the majority of entities making expenditures on property, plant and equipment are large enterprises, in which capital expenditures in 2023 amounted to PLN 165,730, and expenditures on the purchase of used fixed assets – PLN 6,614. Another group incurring high expenditures are micro- and medium-sized enterprises, whose results are in the range of PLN 45,000. The smallest amount of expenditure on property, plant and equipment is incurred by small enterprises – PLN 29,229, including PLN 24,416 for total capital expenditures and PLN 4,813 for expenditures on the purchase of used fixed assets. It is also worth noting that micro-enterprises are the entities in which expenditure on used fixed assets prevails.

3.5. Innovativeness

Businesses, especially those in the technology sector, drive innovation and technological development. They invest in research and development, introducing new products and services to the market, which increases the competitiveness of the Polish economy. According to the latest GUS research, which is illustrated in Figure 6, and does not include micro-enterprises, the innovativeness of enterprises in the service and industrial sector in general in 2020-2022 was at the level of 32.2%. This means that such a percentage of the surveyed entities implemented innovations, which is as much as 11.3 percentage points more than in previous years.

The average innovation rate over the years 2010-2017 was at a similar level, amounting to approx. 15%. Between 2016 and 2021, there were considerable fluctuations. Between 2018 and 2020, the average share of total innovative companies increased by 15.7 percentage points, followed by a decrease of 10.2 percentage points in the following years. Figure 7 shows the share of innovative enterprises in the industrial and service sector in the years 2010–2022.

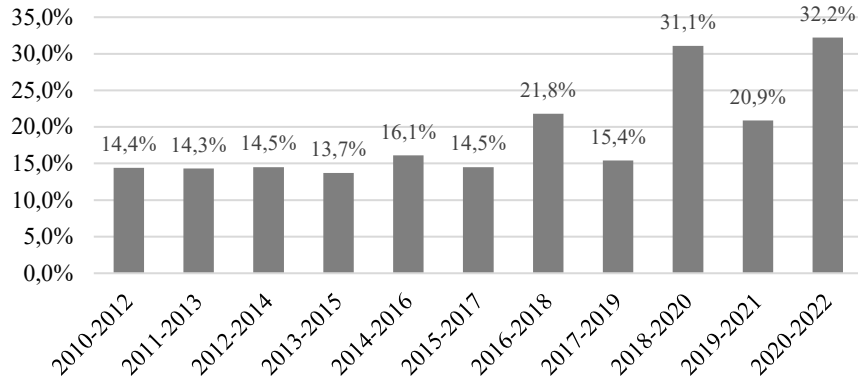

Figure 6. Average share of innovative enterprises in the total number of enterprises in the service and industrial sectors in 2010-2022

Source: own work based on the Report on the state of the small sector..., op. cit., p. 45.

As shown in Figure 7, in recent years the share of innovative enterprises in both the service and industrial sectors has been at a very similar level. The results differed by only 0.1 p.p. The situation was slightly different in previous years, where industrial enterprises gained the upper hand. Only in 2019–2021 did companies from the service sector dominate over the industrial sector, but not by a significant value.

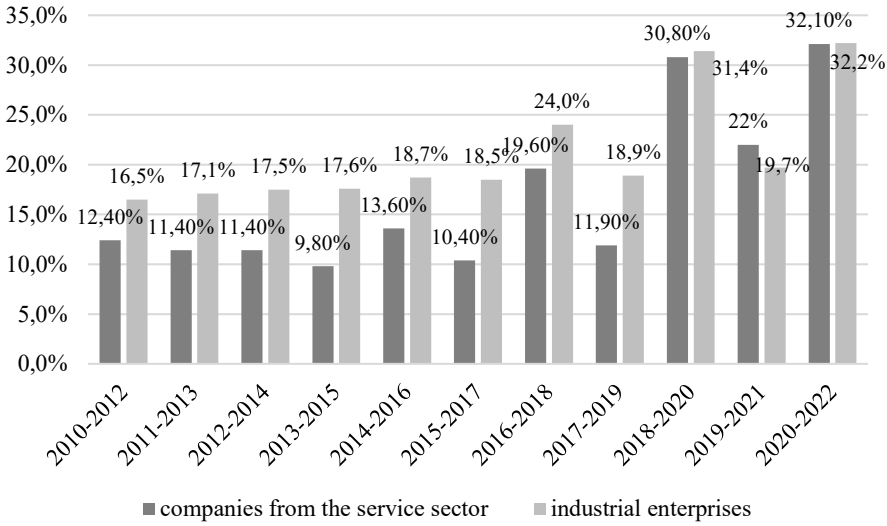

Figure 7. Participation of innovative enterprises in the industrial and service sector in 2010–2022

Source: own work based on the Report on the condition of the small sector..., op. cit., p. 46.

In 2020–2022, the highest percentage of innovative enterprises among industrial enterprises was recorded in the following sections:
- production of pharmaceutical products – 64.7%,
- production of coke and refined petroleum products: 54.8%,
- production of computers, electronic and optical products – 54.1%,
- production of chemicals and chemical products – 49.5%.

On the other hand, clothing production is one of the least innovative industries – 17.2%.

The following sectors of the service sector were characterized by the highest percentage of innovative enterprises:
- insurance, reinsurance and pension funds – 88.9%,
- research and development work – 62.2%,
- production of films, TV programmes and recordings – 61.0%,
- information services – 50.9%.

The least innovative business in this sector is the postal and courier business, with 24.5%.

Figure 8 compares industrial and service enterprises implementing different types of innovation in 2020–2022.

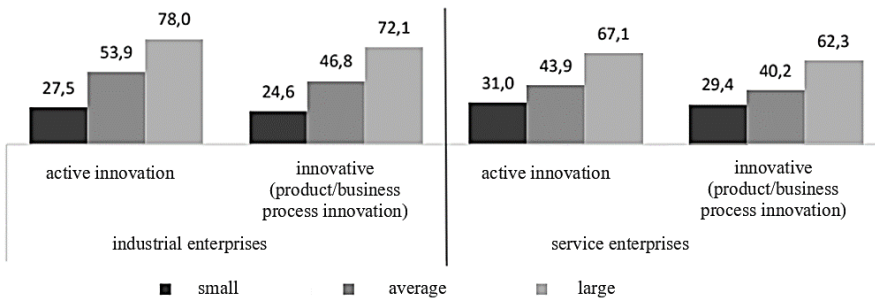

Figure 8. Innovative and innovation-active enterprises in the sector of industrial and service enterprises in 2020–2022 (in %)

Source: own work based on Innovative activity of enterprises in Poland in 2020-2022, (2023). Central Statistical Office (GUS)

As in the case of investments, product and business process innovations were mostly introduced by large enterprises. In industrial enterprises it was 72.1%, while in service enterprises – 62.3%. Digitalisation is one of the key areas where Polish SMEs have made significant progress. As many as 98.7% of companies now have access to broadband Internet and 67.3% have their own website, which is a significant step towards digital transformation. More and more companies are also using social media to communicate with customers – in 2023, it was 47.6% of companies. Artificial intelligence (AI) technologies are also being implemented by Polish SMEs, although still at a relatively low level – only 3.7% of companies

use AI in their business processes. Nevertheless, the growing number of investments in digitalization and innovation indicates a positive trend that can contribute to the further development of the sector.

3.6. Difficulties facing the SME sector

Despite the generally positive indicators, the Polish SME sector operates under significant structural constraints. The primary obstacles include complex legal frameworks, administrative bureaucracy, and persistent limited access to external financing. Empirical data suggests a "credit gap," particularly for micro-enterprises, where difficulty in obtaining bank loans directly hampers investment in advanced technologies. Furthermore, there is a visible "digital paradox": while nearly 98.7% of SMEs have broadband access, only 3.7% utilize Artificial Intelligence in their business processes. This indicates that the barrier is no longer infrastructure, but rather a lack of specialized human capital and the high costs of advanced implementation. Competitive pressure from large corporations, which possess superior financial and technological resources, further necessitates a strategic shift for SMEs toward building unique, niche-based competitive advantages.

3.7. Development trends

The trends for the coming years include investments in eco-innovation and sustainable development, the further development of digitization and automation of various business processes, the development of exports and increasing the share of micro-, small and medium-sized enterprises in foreign markets, as well as greater institutional support and easier access to capital.

The future of the SME sector in Poland looks promising, and entrepreneurs who have the ability to adapt to new challenges and are able to use available support tools have a chance for dynamic development and strengthening their position both in the country and abroad.

4. Conclusions

The analysis of the Polish enterprise sector between 2020 and 2023 reveals a high degree of structural resilience despite significant external shocks. Micro, small, and medium-sized enterprises remain the backbone of the economy, contributing 45.3% to the national GDP and providing the majority of employment. However, this study identifies a critical developmental bottleneck: the transition from basic digitalization to advanced technological integration remains slow. The primary contribution of this research is the identification of the "Digital Integration Gap" in Polish SMEs. While basic digital infrastructure, such as broadband and social media, is nearly universal, the adoption of Industry 4.0 technologies, including AI and advanced automation, remains marginal. This suggests that future economic policies should shift from supporting general digitalization toward targeted incentives for high-tech adoption and R&D activities. To strengthen the

sector's international competitiveness, it is necessary to simplify administrative procedures and improve the transparency of the legal system. The future growth of Polish SMEs will depend not only on their inherent flexibility but also on their ability to overcome capital barriers and successfully navigate the dual green and digital transformations.

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