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THE NEET PROBLEM IN THE SILESIAN VOIVODESHIP IN THE CONTEXT OF ENERGY TRANSITION

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Purpose: This article analyzes the NEET phenomenon in the Silesian Voivodeship in the context of the ongoing energy transition. It identifies factors influencing young people's withdrawal from education, employment, and training, examines how the energy transition affects youth labor market integration programs. The study also explores measures that may support the employability of young people in the region.
Design/methodology/approach: The article employs a critical literature review and quantitative statistical methods based on data from the Local Data Bank of the Central Statistical Office. An analysis of trends and dynamics enabled the identification of changes in the study area. The study also incorporates secondary data analysis and a qualitative assessment of regional labor market conditions.
Findings: The analysis indicates that the NEET phenomenon in the Silesian Voivodeship results from a variety of determinants, including family, individual, and socioeconomic ones. A key issue is the mismatch between young people's skills and labor market demands, particularly in the context of the energy transition. At the same time, targeted education and training programs can facilitate entry into the labor market and help reduce early school leaving.
Research limitations/implications: The identified limitations stem primarily from the imperfections of the statistical data. On this basis, it is difficult to clearly determine the causes of early school leaving, non-participation in training, and unemployment. Further research is recommended, including in-depth individual interviews, to more precisely identify the underlying sources of the problem.
Practical implications: The findings highlight the need for coordinated educational, social, and economic policies. Cooperation among schools, employers, and local authorities is essential to adapt educational systems to labor market needs. Internship and training programs focused on renewable energy and innovation sectors may support both employers and young workers.
Social implications: Reducing the NEET phenomenon may strengthen social integration, improve quality of life, and support local community development while enhancing the region's capacity for energy transition.
Originality/value: The article links the NEET phenomenon with energy transition challenges, identifying specific risks and opportunities for young people in the Silesian Voivodeship.
Keywords: NEET, youth, labor market, Silesian Voivodeship, energy transformation.
Category of the paper: Research paper.

1. Introduction

The stability of economic structures is largely dependent on economic equilibrium, and its disruption poses a serious threat to the functioning of the labor market, manifesting itself, among other things, in rising unemployment rates. Unemployment among young people just entering the labor market is a particularly disturbing phenomenon. Early withdrawal from education, a lack of motivation to undertake training, and abandonment of professional activity contribute to the NEET (Not in Education, Employment, or Training) problem. The literature indicates that the consequences of NEET can often be more harmful than the effects of general unemployment, both socially and macroeconomically (Balcerowicz-Szkutnik, Wąsowicz, 2017).

The NEET problem is particularly significant because it affects economies, entire communities, and individuals. Young people lacking professional experience or a full education face a range of challenges that may, in the long term, hinder their ability to function in the labor market. Therefore, deepening our understanding of the reasons why young people choose to leave education, training, and employment is crucial for education and labor market policy, at both the local, regional, and national levels.

In the Silesian Voivodeship, the NEET problem is gaining additional significance due to the ongoing energy transition. The process of abandoning traditional industries, such as mining, while simultaneously developing new, sustainable economic sectors is important from an ecological perspective, but it also creates numerous social and professional challenges, including for young people (Kiewra, Szpor, Witamewski-Baltvilks, 2019). Lack of adequate preparation for the new labor market requirements can exacerbate the phenomenon of professional inactivity and increase the risk of youth remaining in the NEET group. In this context, supporting young people in acquiring competencies that meet the needs of an economy based on innovation and green technologies becomes crucial. At the same time, there is a research gap in the literature regarding the analysis of the NEET problem in the regional context of the energy transition. To date, the way changes in the employment structure in the Silesian Voivodeship impact the scale and nature of this phenomenon has not been fully explored, justifying the need for further research in this area.

The aim of this article is to analyze the NEET phenomenon in the Silesian Voivodeship in the context of the ongoing energy transition. The study focuses on identifying socioeconomic factors that may influence young people's decisions to leave education, training, and work, as well as on determining how the energy transition process may both exacerbate the NEET problem and create new career opportunities for the younger generation.

2. Characteristics of the NEET Phenomenon and Counteracting Measures

When analyzing the contemporary labor market, attention should be paid to the NEET (Not in Education, Employment, or Training) phenomenon, which is a growing socioeconomic challenge. It affects young people who remain outside the sphere of education and employment. (Muster, 2020, p. 135). In most European Union countries, this problem requires urgent intervention, as its scale is becoming dangerously high. Furthermore, due to statistical limitations and imperfect indicators, the actual number of people belonging to this group may be significantly higher than official data. Therefore, to properly address the NEET problem, a simple analysis of employment and unemployment rates is not enough. It is necessary to distinguish the complex social, economic, and individual conditions that young people encounter in the contemporary labor market. The literature attempts to formulate the causes of the emergence and persistence of this phenomenon (Serafin-Juszczak, 2014, p. 45).

The NEET group comprises young people who neither study nor work. They are often supported by their parents, and sometimes engage in illegal activities. Not engaging in education and work can be both a conscious decision by an individual and a consequence of structural constraints in the labor market. The NEET phenomenon is a significant problem in the contemporary market economy, with significant macroeconomic consequences (Szymańska, 2025, p. 301). Persistent long-term unemployment and the limited effectiveness of support measures for young people entering the labor market indicate the need for systematic monitoring and counteracting this problem.

The fundamental characteristic of the NEET category is a complete lack of engagement in education and employment. This group is highly diverse, preventing it from being treated as a homogeneous group. It includes both highly educated individuals and those who left education early, without completing a full, or sometimes even basic, education. A common characteristic among members of this group is a lack of motivation to seek appropriate employment and a reluctance to continue education or further training. A difficulty in researching the NEET phenomenon stems from the fact that some young people who do not engage in employment or participate in education are not included in official statistics. Difficulties in defining the NEET group limit the possibility of formulating conclusions and recommendations for preventive measures (Muster, 2020, p. 146). However, it is still possible to create and implement effective programs aimed at minimizing the risk of the NEET problem worsening. Szymańska (2025, p. 303) distinguishes at least a dozen existing models and programmes of support for NEET youth, adapted to the specificity of national and local socio-economic systems.

Table 1.
Models of support for NEET youth in Europe

Model	Country	Description	Program Name
Universal	Sweden, Finland	extensive social benefits system that supports young people in their education and professional integration processes	Ohjaamo, Navigator, Ung Framtid, and Young Future
Employment-focused	Austria, France, Germany	focused approach to youth activation in the labor market	Spacelab, Emplois d'Avenir, Jobs for Future, Plus JA – Jugend in Arbeit Plus, and Youth in Work Plus
Liberal:	Ireland	individual independence plays a key role, and social support is strictly dependent on income	VTOS – Vocational Training Opportunities Scheme
Sub-protective	Italy, Spain	strong role of the family combined with low levels of social protection from the state	Dote Unica Lavoro (DUL), Unified Employment Endowment, and PICE – Programa Integral de Cualificación y Comprehensive Qualification and Employment Programme
Transitional	Poland, Slovakia	combines features of liberal and sub-protective models	Idea for Yourself, Equal on the Labor Market, Awaken Your Potential, Activation Action, I Bet on the Future, and Absolventska Prax – Graduate Practice

Source: own study based on (Szymańska, 2025, p. 303).

The above overview indicates that approaches to supporting NEETs vary and are highly dependent on the social policies and labor market structure of a given country. However, common to all models is the pursuit of improving the integration of young people into both the education system and the labor market.

The NEET problem has both micro- and macroeconomic dimensions (Skórska, 2016). From a microeconomic perspective, factors contributing to the problem include family difficulties such as parental divorce, caregiver unemployment, low income, and various social dysfunctions. Particularly vulnerable are individuals with chronic illnesses, disabilities, early parenting experiences, addictions, or migrant status (Rahmani et al., 2024, p. 2). Young people who exhibit early adaptation problems, difficulties adhering to social norms, or a lack of engagement in the educational process also fall into the NEET group (Barszcz, 2019, pp. 106-107).

From a macroeconomic perspective, the NEET problem intensifies during periods of economic slowdown, when young people become more vulnerable to job loss and difficulties entering the labor market. In the Silesian Voivodeship, a risk factor is the ongoing energy transition, which is leading to significant structural changes in the region's economy. The shift from traditional industrial sectors to industries related to renewable energy sources often requires specific qualifications and skills from future employees (Drobniak et al., 2022, p. 165). Therefore, the lack of adequate preparation for these changes may lead to a deepening problem of youth professional inactivity and perpetuate the NEET problem in the Silesian Voivodeship.

3. The NEET phenomenon in the Silesian Voivodeship and the energy transformation

In line with the European Green Deal, the European Union aims to achieve climate neutrality by 2050. This goal requires the transformation of all key economic sectors, including energy, agriculture, transport, construction, and selected industries such as steel, cement, ICT, textiles, and chemicals (European Parliament and Council of the EU, 2021). In Poland, the Silesian Voivodeship plays a significant role in the national energy sector. This region is characterized by a high level of industrialization and significant diversification of economic activities, including heavy industry, automotive production, the technology sector, and advanced services. The Silesian Voivodeship's share in Poland's gross domestic product, approximately 13%, also confirms its significant role in the country's economic structure (Janikowska, Kulczycka, 2025, p. 152). The process of deep energy transformation, although necessary due to the need for environmental protection and long-term development, generates a number of serious socio-economic and cultural challenges. Of significance here are, among other things, issues related to labor market restructuring, changes in professional and regional identity, as well as social tensions stemming from job insecurity. These changes can lead to the phenomenon of disadvantage, i.e., the gradual marginalization of specific social groups or areas. The NEET problem is also deepening, taking on a specific form in the Silesian Voivodeship, as it is determined by both historical factors and the contemporary importance of industry and the dynamics of the ongoing energy transformation. The identity of the Silesian Voivodeship's community is deeply rooted in the coal industry (Pepłowska et al., 2024, p. 173). For many residents, the transition away from coal and the closure of mines means a loss of professional stability and identity, which, combined with economic uncertainty, increases the risk of social marginalization. These changes affect both mature individuals and young people entering the labor market, who must navigate a new reality completely different from that of their parents and grandparents. The transformation process simultaneously requires intensive adaptation of the labor market, in particular the retraining of workers previously associated with mining and related sectors (Cappellano et al., 2023). The challenge is significant because, beyond the miners themselves, it also affects a broad range of services, whose operation was and continues to be dependent on the mining industry. Failure to adapt skills to the requirements of a green economy can lead to increased structural unemployment. In these conditions, the NEET phenomenon is particularly acute among young people from peripheral areas, where employment and professional development opportunities are limited. The lack of attractive career paths promotes migration and exclusion from the labor market and education system. The consequences of these processes are multidimensional and include: deterioration of socioeconomic conditions, limited development opportunities, and an increased risk of mental health problems. NEET status is associated with lower well-being, social exclusion, higher

unemployment, the risk of criminal behavior and mental health problems, including suicide attempts.

An analysis of NEET determinants in the Silesian Voivodeship in the context of the energy transition allows us to identify both macroeconomic and microeconomic factors that shape the scale of youth inactivity. Key macroeconomic determinants include the aforementioned changes in the voivodeship's economic structure, which has traditionally been strongly dependent on heavy industry and mining (Frankowski, Mazurkiewicz, 2020, p. 9). Failure to adapt to new labor market requirements increases the risk of becoming NEET. This problem is particularly acute among individuals who left education early and did not undertake vocational training. The following figures present the percentage of NEETs in the Silesian Voivodeship and across Poland between 2010 and 2024. Young people are divided into two age groups: 15-24 and 25-29, according to data provided by the Central Statistical Office.

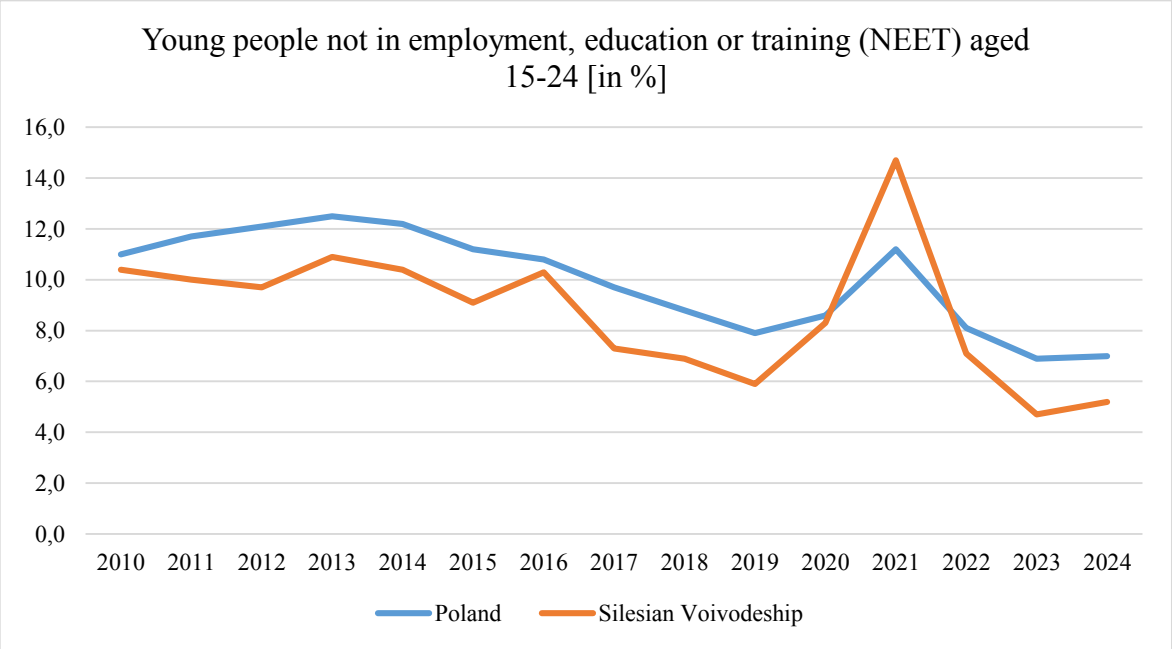


Figure 1. NEET aged 15-24 [in %] in Poland and the Silesian Voivodeship in 2010-2024.

Source: Own study based on Central Statistical Office data (access: 12.02.2026).

The figure indicates that during the period under review, from 2010 to 2024, the percentage of young people in the NEET group was slightly lower in the Silesian Voivodeship than the national average. The exception was 2021, when the NEET rate in the Silesian Voivodeship increased to nearly 15%, while the national average was approximately 3.5 percentage points lower. The increase in the NEET rate during this period was undoubtedly a consequence of the COVID-19 pandemic.

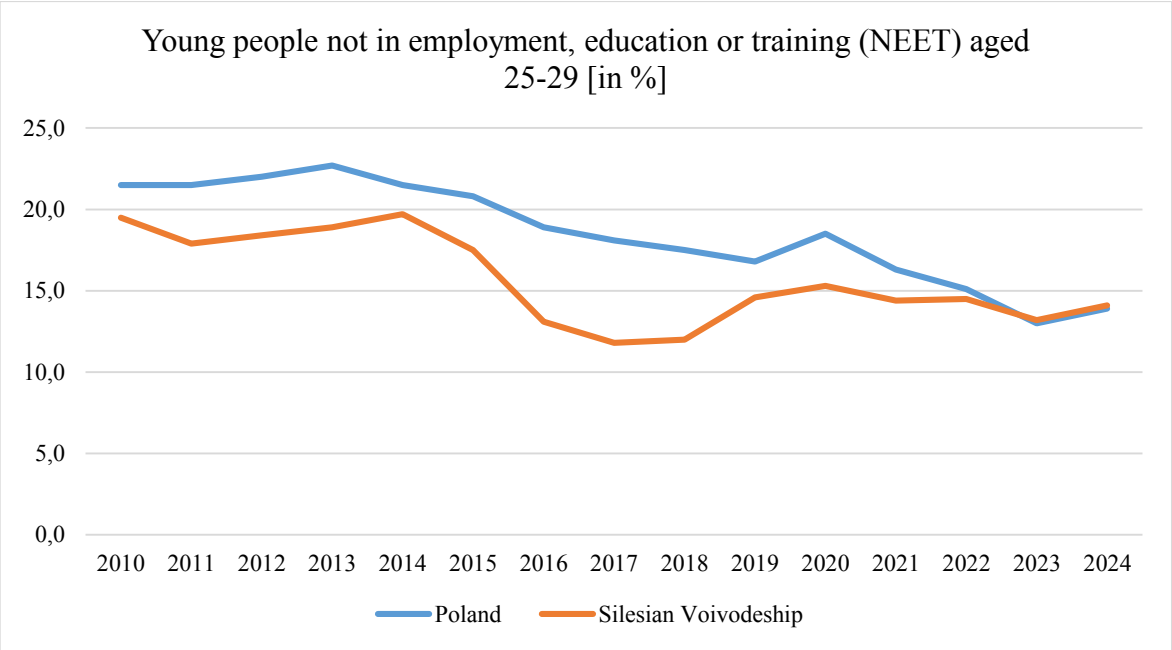


Figure 2. NEET aged 25-29 [in %] in Poland and the Silesian Voivodeship in 2010-2024.

Source: Own study based on Central Statistical Office data (access: 12.02.2026).

The percentage of NEET individuals aged 25-29 is higher than among previously analyzed younger individuals, both for the Silesian Voivodeship and for Poland as a whole. In the analyzed voivodeship, the NEET rate in this age group exceeds the national level by 0.2 percentage points in 2023 and 2024. Statistics Poland (GUS) data indicate that individuals aged 25-29 are at greater risk of NEET status. Based on data for the 25-29 age group, chain-based indices were calculated for selected shorter time periods, reflecting the direction of observed changes. Due to the variability of the NEET rate during the analyzed period, manifesting itself through alternating increases and decreases, conducting the study without appropriate division into shorter time periods would be inappropriate.

Table 2.

Rate of change of NEETs aged 25-29 [in %] in Poland and the Silesian Voivodeship in 2010-2024

Year	Poland	Silesian Voivodeship	Poland			Silesian Voivodeship		
			2010-2013	2013-2019	2020-2023	2011-2014	2014-2017	2017-2020
2010	21,5	19,5						
2011	21,5	17,9	1,00					
2012	22,0	18,4	1,02326			1,02793		
2013	22,7	18,9	1,03182			1,02717		
2014	21,5	19,7		0,94714		1,04233		
2015	20,8	17,5		0,96744			0,88832	
2016	18,9	13,1		0,90865			0,74857	
2017	18,1	11,8		0,95767			0,90076	
2018	17,5	12,0		0,96685				1,01695
2019	16,8	14,6		0,96000				1,21667
2020	18,5	15,3						1,04795
2021	16,3	14,4			0,88108			

Cont. table 2.

2022	15,1	14,5			0,92638			
2023	13,0	13,2			0,86093			
2024	13,9	14,1						
geometric mean			1,01827	0,95107	0,88905	1,03245	0,84296	1,09044
rate of change			1,83%	-4,89%	-11,10%	3,25%	-15,70%	9,04%

Source: Own study based on Central Statistical Office data (access: 12.02.2026).

The rate of change determined for the periods presented in the table allows us to observe a downward trend in the NEET rate for Poland. In the Silesian Voivodeship, the NEET rate showed greater volatility, falling by nearly 16% in the 2014-2017 period, and increasing by approximately 9% in the subsequent 2017-2020 period. Factors contributing to the NEET problem in the Silesian Voivodeship are diverse. Undoubtedly, at the macroeconomic level, the energy transition may contribute to the deepening of the NEET phenomenon. However, at the microeconomic level, familial and social factors are among the most important contributing factors. Young people from low-income families, those experiencing unemployment of one or both parents, divorce, or other family difficulties, are at risk. Such conditions can limit both motivation and opportunities for education and employment.

A significant determinant of NEET in the Silesian Voivodeship is the misalignment of the education and vocational training system with the current needs of the labor market. Furthermore, limited access to apprenticeships, internships, and specialized courses impacts the ability to gain professional experience, which is crucial for finding employment after graduation. Equally important are young people's attitudes toward education and work. A lack of motivation to continue learning, low awareness of one's strengths, and a reluctance to take proactive steps toward employment contribute to the perpetuation of the NEET status. Unfortunately, long-term NEET status can lead to pathological phenomena such as addiction, conflicts with the law, and social isolation (Krause, 106, p. 71). A lack of educational and professional activity at a young age also increases the likelihood of unfavorable socioeconomic patterns persisting into adulthood, hindering social and financial advancement and overall functioning. In the Silesian Voivodeship, the NEET problem can further impact the region's stability, particularly in cities and municipalities traditionally dependent on heavy industry. The transformation is causing a reduction in some jobs and increasing economic uncertainty, which may also lead to a lack of professional activity among young people. The deepening NEET problem in the Silesian Voivodeship during the energy transition is leading to unfavorable changes through:

a) a reduced supply of qualified labor,

b) a reduction in the voivodeship's productivity and innovation,

c) an increase in public spending to support early school leavers and unemployed people,

d) a reduction in tax revenues and a reduction in young people's consumption potential,

e) an increase in radical attitudes and views among young people,

f) an increase in social problems and conflicts with the law (Muster, 2020).

The energy transition in the Silesian Voivodeship further highlights the lack of currently required competencies among young people and leads to underutilization of existing potential. This leads to a growing NEET problem, which in turn limits the region's economic development opportunities.

4. Recommendations regarding the NEET phenomenon in the Silesian Voivodeship

The NEET phenomenon, due to its multidimensional impact on both individuals and the economy, requires a comprehensive approach in educational, social, and labor market policy. Analysis of the determinants and consequences of the problem indicates the need to implement measures focused on three main areas: education, professional activation, and social support. A key element in counteracting the NEET phenomenon is the introduction of career guidance mechanisms at an early stage of education (European Commission, EACEA, Eurydice, Cedefop, 2014, p. 11). Such measures should include:

a) improving educational and career guidance programs in secondary schools (Górka, 2015, p. 35),
b) facilitating young people's access to information about opportunities for further education and professional development (European Commission, 2010, p. 6),
c) supporting the selection of an educational path that aligns with students' aptitudes and interests while also responding to their external circumstances (Smolbik-Jęczmień, 2017, p. 107).

Additionally, early educational support should include promoting entrepreneurial attitudes, initiative, and independent problem-solving. This allows for increased adaptability, strengthening potential, and self-confidence among young people in the dynamically changing Silesian Voivodeship. To effectively combat the NEET problem, young people must be given the opportunity to gain professional experience. Therefore, efforts should focus on offering young people internships, apprenticeships, and industry-specific courses and training, during which they have the opportunity to gain knowledge and experience. Equally important is the creation of programs for cooperation between schools and universities and employers to ensure that education meets the actual needs of the labor market. Such solutions allow for the gradual integration of young people into the labor market, simultaneously reducing the risk of professional exclusion and increasing their mobility and adaptability to new industries. The NEET problem often stems from family problems, therefore, supporting young people from low-income families by providing access to scholarships and social programs can significantly reduce the spread of the phenomenon. In the Silesian Voivodeship, the number of young people facing difficult circumstances may increase significantly due to layoffs related to

mine closures. Social marginalization of young people can be avoided through individual support in education and employment. In the Silesian Voivodeship, due to the energy transition process, tailored support programs should be developed, the situation of young people should be assessed on an ongoing basis, and cooperation between the business community and schools should be developed. This could help limit and even reduce the NEET problem in the Silesian Voivodeship.

5. Summary

The NEET problem, which affects young people who remain outside the sphere of education and employment, is one of the most serious challenges facing the contemporary labor market. In the Silesian Voivodeship, the NEET problem is gaining significant significance in the context of the ongoing energy transformation. The process of abandoning traditional industrial sectors, closing mines, and simultaneously developing industries based on renewable energy sources and modern technologies requires new competencies and skills from many current and future employees. A lack of preparation for changes in the labor market structure in the voivodeship may increase the risk of professional inactivity and the perpetuation of the NEET problem. The factors behind the NEET problem in the Silesian Voivodeship are related to the lack of access to appropriate training and support, which translates into the perpetuation of social and economic disadvantage. It should be noted that a long-term high NEET rate may further hinder the development of new economic sectors, slow the region's adaptation to the requirements of sustainable development, and limit the effectiveness of the energy transformation process. Regardless of the ongoing transformation, the consequences of the NEET phenomenon are multidimensional. Economically, they include increased youth unemployment, declining household income, and underutilization of human capital. Socially, they lead to the marginalization of youth, deepening inequalities, and perpetuating professional inactivity and social exclusion. Demographically and spatially, they result in increased migration of young people in search of work and the depopulation of peripheral areas. In turn, educationally and professionally, they are associated with exclusion from the education and training system, difficulties in re-entering the labor market, and the perpetuation of skills mismatches.

In the long term, the NEET phenomenon in the Silesian Voivodeship may lead to a slowdown in regional development, weakening social cohesion, and increasing the burden on social policy and the labor market, making it a serious challenge accompanying the energy transition.

Effectively reducing the NEET phenomenon in the Silesian Voivodeship requires an integrated approach, combining education, development of professional skills, and social support. These actions should be aimed at increasing youth motivation to continue their education and professional activity, developing their skills, and integrating them into the regional labor market, particularly in the context of the ongoing energy transition. A recommended direction for further research is to analyze the effectiveness of educational programs aimed at young people and to conduct in-depth research on practices in this area, implemented in regions similar to the Silesian Voivodeship, which are so severely affected by the energy transition. In summary, the NEET problem in the Silesian Voivodeship is complex, and reducing it requires coordinated action at the educational, social, and economic levels. Although the energy transition poses numerous challenges, it also creates a range of opportunities. Therefore, it is crucial that regional policy and local actions are focused on youth activation, skill development, and integration with the transformation processes. This will help mitigate the negative effects of NEET and leverage the potential of the young generation in the development of the voivodeship.

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