

It Is (Not) All About the Money: An Explorative Analysis of Determinants of Employers' Involvement in Vocational Education and Training in Poland

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Abstract

The article presents an exploratory analysis of the determinants of employers' involvement in the Vocational Education and Training (VET) system in Poland. Starting from the hypothesis that the financial argument is often overused in debate and research, the paper focuses on a complex mosaic of factors extending beyond a simple cost-benefit calculation. The research is based on a systematic qualitative analysis of content collected from a wide range of secondary sources (42 reports and 101 interview transcripts from 2009–2021) and 32 in-depth individual interviews conducted with representatives of the business community, education sector, and researchers in 2020–2021.

The identified determinants are divided into three main groups: economic, institutional, and cultural-cognitive. Although economic factors are the most frequently cited in reports, the analysis indicates that employers' decisions regarding involvement are often made under conditions of uncertainty, using imperfect information or beliefs. Consequently, the 'money argument' is often an assumption or rationalisation, almost

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never a result of a cost-benefit analysis. Institutional determinants, such as frequent changes in education law, and cultural factors, including negative stereotypes about vocational schools and a lack of trust, play a crucial role in discouraging entrepreneurs. The article postulates that understanding involvement requires considering the cognitive frameworks, heuristics, and biases of employers.

Keywords: Vocational Education and Training (VET); Bounded Rationality; Stereotypes; Heuristics; Poland

JEL Classification Codes: D22, D91, I21, P36

'Problems in political economy, economic development, economic history for example, all require an understanding of the mental models and ideologies that have guided choices. It is now time to refocus on the wide range of problems that we have so far ignored that involve strong uncertainty.' (Denzau & North 1994 p. 5)

Introduction: The reasons for investigating determinants of employers' involvement in the vocational education system

For the purpose of this introduction, let us assume that there is a general bias in public debate and research, which keeps us from seeing the role of vocational education and training (VET) and early socialisation in the workplace as one of the 'missing puzzles' in the discussion about capitalism in Poland.

General and higher education are highly valued for developing cognitive skills, much less so for developing practical skills and entrepreneurship. First stage vocational schools and technical schools train more pupils than the secondary general education schools (Humenny et al. 2022), even though vocational education carries a stigma and the quality of education in VET has deficits, as the PISA results show (Sitek 2019). Graduates of vocational schools create businesses and are hired in companies, enabling their operations, growth but also development and innovation. An efficient vocational education system supports building enterprise competitiveness, innovation and strengthens social cohesion (Lund & Karlsen 2020; Preston & Green 2008; Toner & Woolley 2016). The first premise for approaching this topic was that

VET may play a role in economic development, to increase value-added production and create an advantage with high-quality products and services, and there seems to be a lot of untapped potential.

Literature on the labour market and labour relations shows that blue-collar workers operate in secondary segments of the labour market and their interests are neither represented nor protected. The resulting cost advantages attract operations transferred to Poland (Bednarski et al. 2020; Czarzasty 2019; Muszyński 2018). The literature also demonstrates that the vocational education system is a crucial component of every economy and society (Hall & Soskice 2001). A dysfunctional labour market and education system (leaving large groups precarious) can produce ‘redundant people in the service of violence’ (Czarnowski 1936). The second reason for looking at employers’ involvement was the fact that it seems to be located at an intersection of the public and private sector, showing how pieces of an institutional patchwork work in practice.

Finally, the experience of reading reports on VET development and listening to discussions between employers and the education sector led me to an intuition that in the context of determinants of involvement the ‘money argument’ is overused. Some business owners were saying it is good for the business and apprentices are de facto ‘cheap labour’ and others (from the same industry) saying it is all costs and risks. The initial review of reports on the topics revealed that, most of the time, the voiced arguments are repeated, rarely reviewed, or confronted with data.

Workplace training can take the form of a short period of practical training (e.g., 4-6 weeks) and an apprenticeship (dual training). A significant number of employers also engage through other forms of activity (e.g. teacher training, materials/machines donations, school fairs and guidance, workplace visits). Apprenticeship is a long-term relationship, which means in practice formal employment of pupils (with the status of juvenile workers) and combining education with work: spending up to 2-3 days at work and the remaining time at school. Approximately 60% of students attending first stage vocational schools are learning in this form (Humenny et al. 2022 p. 36). Apprenticeship training for technikum pupils is possible, but in practice is not exercised (because of the large general education component).

The primary source of data on employers’ involvement in VET is the study ‘Continuing Vocational Training in Enterprises’. It is conducted by the GUS every five years and also includes information on the percentage of enterprises employing juvenile workers (GUS 2022 p. 29). It is known that between 2005 and 2020, the share of companies employing more than 10 people, which engaged in training youth in-

-company ranged from 4.6% to 8.9% (see table 1 below). The number of juvenile workers training in microenterprises is unknown. However, according to available data, in 2020, there were approximately 120,000 juvenile workers in Poland, while data for small, medium, and large enterprises for 2020 indicate 36,400 juveniles. Therefore, the approximate share of microenterprises in juvenile training is 70%. Although this number is not precise, it gives a general idea of the type of enterprises involved. The results from 2005, 2010, 2015 and 2020 present the following picture of companies' involvement in initial vocational training:

Table 1. Initial vocational training in small, medium and large enterprises by number of employees in 2005–2020 in Poland.

Enterprises by number of employed persons:		Percentage of enterprises providing initial vocational training in total number of enterprises	Percentage of juvenile workers in group of enterprises by size
All enterprises (≥10)	2005	8,9	100
	2010	4,6	100
	2015	7,4	100
	2020	6,4	100
10–49	2005	8,3	52,1
	2010	4,3	50,0
	2015	7,2	61,8
	2020	5,9	52,6
50–249	2005	10,9	32,6
	2010	5,4	30,4
	2015	7,7	22,5
	2020	8,4	26,3
250 i więcej	2005	9,9	15,3
	2010	8,9	19,6
	2015	10,7	15,6
	2020	10,4	21,1

Source: own elaboration based on subsequent GUS data series on “Characteristics of continuing vocational training in enterprises in”

Research structure

The analysis started with analysis of secondary sources, followed by own research – 32 free-form individual in-depth interviews conducted between 2020 and 2021. The language of the sources used was Polish.

The main secondary sources were 42 publications on vocational education and training in Poland published between 2009 and 2021 (listed in Annex) and 101 interviews transcripts from in-depth interviews with employers conducted in BECKER² research project. These interviews were conducted at the turn of 2013 and 2014 in five counties (Giżycko, Głogów, Pruszków, Sępólno, Sokółka) and in four cities with county rights (Poznań, Siemianowice Śląskie, Świnoujście, and Tarnobrzeg), which were deliberately selected to ensure representativeness. Primary sources were 32 free-form individual in-depth interviews with researchers, representatives of employer organizations and the education system.

Secondary data analysis involved identifying the determinants of companies' involvement in vocational education mentioned in the documents, and collecting the relevant statements quoted. As a result, I created a database of 353 statements, primarily from employers and representatives of employer organizations, as well as school principals and teachers. These statements averaged several sentences, sometimes including questions posed by the interviewer. In total, this amounts to 186,898 characters with spaces, which translates to approximately 50 pages of text. Based on this structured database, I began a meta-analysis of the statements, attempting to identify recurring perspectives and narratives on the topic. The resulting text corpus was then subject to systematic qualitative content analysis. The main information about the context of the statement was included in metadata (e.g. organization or position of the speaker, source of statement), each statement was later annotated (coded) using inductive coding approach. The tags used were topical. Finally, the topically relevant statements were analysed to identify narratives (this often required looking at statements in a full text of the interview) and the latent content of the text (e.g. concepts used, valence of vocabulary).

² The name of the research in Polish was 'Badanie ekonomicznych uwarunkowań celów i kierunków alokacji nakładów na edukację realizowanych przez podmioty publiczne i prywatne w Polsce', which can be loosely translated as 'Research on the economic determinants of the goals and directions of allocation of expenditures on education implemented by public and private entities in Poland' – part of the project was focused on employers and the interviews included questions about involvement in VET.

The sources discussed largely present the perspectives of representatives of the school and business communities. The main limitation of this source was the unclear status of the data presented within. To what extent were they a result of methodical reasoning, especially which of them presented an aggregation of opinions and views expressed, to what extent were they interpretations of researchers or artifacts of questionnaire design. This led me to treat these as sources of knowledge about the most widespread beliefs about business-school collaboration.

The initial results were further confronted with selected individuals; for this purpose, I conducted 32 in-depth, free-form interviews with representatives of various backgrounds. The interviews were conducted in a way that allowed for including elements of a cognitive interview, but they had no predetermined structure. The shortest interview lasted 20 minutes, and the longest 2.5 hours. In several cases, the interviews were unplanned; only after the interview was completed and conclusions were written did I approach the interviewees for any additional information and consent to include the material in the research. The interviews were conducted based on my own network of contacts and then using the snowball sampling method.

The research has been conducted with no public funding.

1.1 Results of the review of research on the functioning of the vocational education system and cooperation between schools and enterprises

Research and analyses conducted in Poland since ca. 2010 on vocational schools and their cooperation with the environment allow us to identify the most important determinants of employers' involvement in vocational education. The list of the reports can be found in the annex.

The specific topic of employer involvement is embedded in a more general context of school-employer cooperation. A list of identified barriers to cooperation and factors that facilitate it is presented in the table 2 below.

Table 2. Factors that facilitating cooperation between employers and schools and barriers hindering this cooperation.

Factors facilitating cooperation	Barriers to cooperation
<ul style="list-style-type: none"> – Personal contacts – Continuation of previous cooperation – Clear designation of a person by the school to cooperate with the entrepreneur – Graduates of the given school running or working in enterprises – Financial benefit – Number of medium-sized and large companies in the region – Association of enterprises in craft organizations and guilds – Good market position of the enterprise – Students as workforce for the enterprise – Unmet recruitment needs of enterprises – A good fit of the educational profile to the needs of the labour market – Need/opportunity to improve the entrepreneur's image – High prestige/renown of the school – Altruistic attitudes of entrepreneurs – Proactive attitude of students – Sponsored classes organization 	<ul style="list-style-type: none"> – Lack of systemic solutions for cooperation – Mismatch between the structure of vocational education and local entrepreneurship – Inability to organize internships or apprenticeships at convenient times for entrepreneurs (necessity to adapt to school cycles, low flexibility) – Regulations in force in some industries – e.g., restricting the ability of young people to perform certain tasks – Formal requirements related to the employment of minors (e.g., extensive documentation, insurance, ensuring appropriate care and supervision) – Financial barriers (lack of compensation for material consumption, guarantees of financial security in case of damage caused by student) – Divergence of expectations and motivations of the parties – Negative stereotypes about students among entrepreneurs – Lack of knowledge about the need to complete the necessary formalities and limited knowledge of regulations on the part of entrepreneurs – Lack of trust among entrepreneurs in students (disclosure of secrets)

Source: prepared based on reports, with special reference to: (Fila et al. 2014 pp. 76–106)

The identified barriers to collaboration and the factors that facilitate it remain essentially unchanged over time as a list. However, regulations and initiatives to foster effective organization and funding were implemented over time.

The table reveals the institutional and systemic context of the factors, especially barriers, many of which relate to the lack of an institutional framework within which collaboration could take place or stem from a lack of a universally shared vision/knowledge of these solutions. This is consistent with siloing in administration and points to possible institutional non-complementarity and/or non-coherence (Höpner 2005). Policies and laws originating from various ministries responsible for education, employment, and finance and tax regulations are developed to some extent independently and do not guarantee a complementary set of institutions (at least not for the function of supporting schools and businesses wishing to engage in vocational education). There-

fore, the primary factors guiding employers' actions in this area are economic (interest) and social – e.g., a sense of obligation to the community, friends, etc.

Due to the significant variation in the specificity of the professions in which training takes place and the business profiles of companies, some categories of factors facilitating or hindering cooperation are more prevalent than others. While hard data on the generation of revenue (and more broadly, value creation) through student work is lacking, qualitative data from interviews reveal significant variation in the profitability of student training (Drogosz-Zabłocka & Stasiowski 2016).

Analyses conducted in other countries show that significant differences are also related to the nature of the tasks students/young workers receive, the specific nature of the labour market, and several other factors, such as the level of government support, the size of the enterprise, the form of collaboration (employment, internship/apprenticeship) and its duration (Dionisius et al. 2008; Euwals & Winkelmann 2001; Hasluck & Hogarth 2010; Hoeckel 2008). This is also confirmed by the interviews conducted, for example: students in the catering or tourism industries are quite commonly perceived as 'an extra pair of hands' and 'often independent workers,' while in manufacturing plants they are more often described as 'dependent' and 'requiring constant supervision' (especially considering the risk of costs associated with potential errors).

Further categorization leads to a distinction between factors that are more economic in nature (here: linked to costs, revenues, and resources), institutional ones (mostly formal institutions), and those related to culture, society, and cognitive aspects. The division into categories, along with sample conditions, is presented in the table 3 below. This is intended to be helpful in better organizing the various conditions and capturing the interrelationships between them. This is not an attempt to precisely label individual conditions, but rather group them and create a broader framework for understanding the scope and relations between them.

Table 3. Categorization of the conditions for the involvement of enterprises in vocational education.

Factors group:	Economic	Institutional	Cultural and cognitive
Micro level (enterprise)	<ul style="list-style-type: none"> • Economic situation • Material resources • Human resources • Technological and organizational specificity of the enterprise 	<ul style="list-style-type: none"> • Organizational structure • Internal procedures • Rules for promotion within the enterprise 	<ul style="list-style-type: none"> • Axiological vision of the enterprise • Cognitive and interpretative frameworks, heuristics • Recruitment strategies • Organizational culture
Meso level (immediate environment of the enterprise)	<ul style="list-style-type: none"> • Availability of employees (labour market) • Resources of educational institutions • Salary levels in the relevant profession and labour market segment 	<ul style="list-style-type: none"> • Economic self-government (region, industry) • Social dialogue (local) • Public policy (local government) 	<ul style="list-style-type: none"> • Networking of enterprises • Specific sectoral and regional culture • Traditions/memory of past experiences
Macro level (national, systemic)	<ul style="list-style-type: none"> • Economic situation • Structural changes in the economy 	<ul style="list-style-type: none"> • Education law • labour law • Economic self-government (national) • Social dialogue • Public policy 	<ul style="list-style-type: none"> • Social capital • Culture national, social narratives • stereotypes regarding vocational education

Source: own work.

1.2 Economic determinants of employers' involvement in the training of apprentices in VET in Poland.

Factors related to cost, benefits, and resources are mentioned most often, with only slightly varying intensity in subsequent years (depending on the economic situation outlook). The issue of economic calculations of enterprises and the macroeconomic condition of the economy is frequently raised in reports (Biostat 2019; Sęk et al. 2013; Sztanderska & Grotkowska 2019; Wincenciak 2019). Respondents' statements regarding the determinants of the company's economic calculation are usually mixed and polarised.

This is partly due to the varying benefits and costs associated with engaging in education, depending on the specific nature of the industry and the size of the company.

More objective cost-effectiveness analyses tend to indicate a possibility for an on average positive effect of involvement in student education (Drogosz-Zabłocka & Stasiowski 2016). However, it is not possible to provide a data-based picture of differences between industries, because of the relevance of company size, specific profile of production/service (e.g., food production can be both highly and lowly cost- and knowledge-intensive). Entrepreneurs often frame involvement as a cost rather than an investment, and as an additional activity that does not align with the company's operational goals (Sławecki 2009).

The analysis of the context of the statements in the corpora has shown that the negative assessment of economic value is prevalent among employers who do not cooperate with schools. Opinions indicating benefits are widespread, but they do not necessarily contribute to an overall positive assessment of the net economic outcome of involvement in VET:

'Well, definitely, apprentices; whatever you say about them, they do some work. Hiring an employee instead of an apprentice... is much more expensive.'

'In my case, in the third year, the apprentice did everything I assigned him myself, so he was prepared for the job, almost like a skilled worker.'

'In my industry, in fact, a talented apprentice in the second year, halfway through his apprenticeship, up to two years, does 60% of what I do.'

(employers)

'(...) in the third grade, I have a free skilled worker, a semi-free one, and satisfaction.'

(owner of a microenterprise – production and service)

Employers (including those who speak about the benefits) also clearly recognize the costs associated with the need to additionally involve other company employees in training students:

'I'll take on apprentices, but the children will have occupational health and safety training, health records, and insurance – so the employer doesn't have to worry about it (...). But now these costs are passed on to the employer. I can insure the student, but someone has to reimburse me for that money. Incurring the costs and risking someone getting hurt – why do I need this business?'

'It all comes down to finances, because if I dedicate my time to a student, teach them, I don't work, I don't earn, and then the end of the month comes, there are electricity bills...'
'It doesn't matter that I have two instructors, that I have to prepare two apprentices, because carpentry is specific, there are high-speed machines, it's a split second, and you don't have a finger, an arm. If I put him on the machines in second grade, where he works with another person, that person has to show him how and what. If he doesn't come, it's a waste of time for me, and the company doesn't earn a penny because we have to hire instructors. I have additional responsibilities because I work in a different position. But since I have a teaching degree, I have to be the manager of these apprenticeships. The instructor also has to complete at least a teaching course to learn the profession. In short, the company is subsidizing this business.'

(employers)

Notably, the alternative cost of worker engagement is a reflection of the situation of most micro- and some small enterprises, which simply do not possess the (human) resources to have more tasks assigned and carry on daily operations.

The theme of monetary benefits associated with financing or refinancing education also recurs in conversations and reports. These benefits are judged differently. In statements and studies from the early 2010s, they were relatively more often assessed as too low and not compensating for the costs incurred. Over time, voices have emerged that these amounts represent significant amounts for some employers. It is difficult to assess whether these conditions have become unequivocally more attractive, as the qualitative nature of the interviews precludes drawing such conclusions. However, legal and financial solutions are gradually evolving in response to these voices.

'Financially too – PLN 8,000 was not a small sum of money, and besides, the tax relief earlier was also a certain benefit (...)'

(employer)

The perceived attractiveness of additional financing strongly depends on the labour market situation. When entrepreneurs are unable to find employees, involvement in educational activities is perceived as something necessary. Training students is less likely to be treated as an additional activity (performed for the benefit of society) and is gradually becoming a necessary aspect of the company's operations. It's important to emphasize, however, that we're not talking about a sudden shift in the thinking of employers (who are generally well aware of their staffing needs), but rather a slow shift. Assessing the degree

of this change is beyond the scope of this research because of data limitations, but also because of the time required for such a change. The observation mentioned here is possible only because of the scope of reports analysed: ranging over almost 15 years period (including from data collection for the oldest of the reports analysed to the last interviews). In many cases, the voices of employers stress that apprentices and VET schools graduates are a necessity for survival but also key for company development.

'[...] I don't look at it from a financial perspective, or from any other benefits, or from legal regulations. My goal here is to acquire this employee, this potential employee, because in a few years I'll be in a situation where 70% of my staff will retire, and what will I do? Exactly. I have to prepare for this. Yes, I already need new staff, a team of people who will acquire the required knowledge during this period and then carry out the tasks. So that the company can function properly, and not in such bursts...'

'Well, certainly. My entire staff is made up of vocational school graduates. They stayed with me after vocational school. Some of them even graduated from technical school part-time. I have six of them, but they're good employees, good students.'

(employers)

Quite commonly, employers are not aware of the possibility of receiving funds or refunds related to apprentices training. In some cases, employers do not apply for financial remuneration or tax exemptions at all, even when they are aware of it.

'(...) when it comes to financing and reimbursement, honestly: we don't have time for that. We have completely different things, responsibilities that are more important right now than running around with paperwork for preparation.'

(employee, HR department)

Sometimes costs and benefits (not only financial) are perceived as cancelling each other out.

"[...] well, for now, it's not a cost we need to worry about. If we actually had 10 or 15 such students on vocational training in the kitchen who come to us regularly, we would definitely consider it, because it would be a scale, a percentage. However, these four students who are coming now, we rather treat them as our future (...)"

"I think the costs are not significant in any way, it may be difficult to quantify them directly, but they are not significant in our – in the case of our plant – they are not significant in any way. However, as I said, I mentioned earlier, these people, young people on apprenticeships, perform certain tasks, meaning they contribute to the creation of this

product, to production, to sales, and in the future, they may become employees trained by us, who will continue to work and function in our plant.”

(employers)

Research on labour market segmentation also shows that the perspective of costs incurred by the employer dominates with respect to employees in the secondary segment. As Bednarski et al. (2020 p. 56) write: “In order to eliminate the shortage and attract job candidates, they are not offered working conditions from the primary segment, likely due to concerns about rising production costs. Employers are seeking other ways to address this issue. Primarily, they are collaborating with schools that prepare for work in these professions [own translation]”. In this case, collaborating with schools is perceived as less costly. Perhaps due to the awareness of a persistent shortage of specific skills in the market, employers fear long-term pressure on wages.

Niezależnie od oceny opłacalności, większość przedsiębiorstw nie angażuje się we współpracę ze szkołami. Wynika to z faktu, że kształcenie zawodowe w ramach systemu oświaty nie obejmuje wszystkich występujących na rynku zawodów i stanowisk, a przedsiębiorcy mają tego pełną świadomość. Co więcej, możliwość zaspokojenia potrzeb kadrowych przedsiębiorcy poprzez jego udział w kształceniu wymaga, by profil przedsiębiorstwa odpowiadał zawodom kształconym w pobliskich szkołach. Opłacalność takiego zaangażowania zależy również od poziomu wymaganego nadzoru nad osobą uczącą się oraz możliwości wykonywania przez uczniów pracy przynoszącej wartość, a możliwości te – jak wspomniano wcześniej – są silnie zróżnicowane między branżami.

‘I tak naprawdę rynek nam nie da takich ludzi, których my potrzebujemy do pracy na te stanowiska techniczne (...), więc my po prostu musimy tych ludzi sobie sami dopiero wykształcić.’

(employer)

Some employers partner with schools for the benefit of improving their image and ties to their surroundings. In this way, the company increases its visibility, promotes itself as socially responsible, and can ultimately build its image as a social partner. Entrepreneurs often speak openly about this and are fully aware of the tangible benefits, both image-related and/or marketing-related, of these activities (Fila et al., 2014, p. 84).

‘Q: And what benefits does the company get from such cooperation?’

A: Well, I guess it’s also a live advertisement for our company in schools.’

'Young people practically don't know the market yet, and at this point, if we make an impression on them as a construction company, show them some materials, then in the future, even if they have the choice of working with some materials, at that moment they will have a material they don't know, for example, and they will have products they've already seen, products they're already familiar with.'

(employers)

A review of economic factors shows that they are relevant for employers. That is to say, employers tend to use the “money argument” as one that settles the case. In none of the reports or interviews conducted has there been a clear indication of any cost-benefit analysis that takes into account both sides of the balance in a more-or-less structured way. As a result, it seems that at least to some extent, this is a rationalization or justification, with the use of an economic argument.

Broadly speaking, the economic perspective covers three possible scenarios: (1) the employer does not possess the necessary resources to continue operations and involve in apprentice training or otherwise makes an informed decision based on some estimation (including the costs resulting from regulations and necessary organizational adjustments), (2) the employer makes a decision based on limited knowledge or beliefs, (3) the employer makes a decision based on non-economic factors, e.g. social obligations, personal values or a vision of the functions of the company exceeding the economic dimension.

Although there is no way of indicating the share of cases in which the decision is based on gossip or common knowledge, it seems safe to assume that in most cases the decision is made under uncertainty, using imperfect information or false beliefs. In this article, I will further concentrate on the institutions, heuristics and mental models used by employers. However, the scope of their use will be the subject of future research projects.

1.3 Institutional determinants of employers' involvement in the training of apprentices in VET in Poland.

The possibility of engaging businesses in developing the competencies of vocational school students in Poland is regulated by law – relevant regulations define the scope of cooperation between employers, students, and schools. These formal institutions define the forms of cooperation, employment conditions, requirements related to supervision during learning, the scope of skills to be developed, and also regulate issues

related to contracts concluded between the parties (e.g., the status of a juvenile worker, the necessary elements of a vocational training agreement).

In 2018, a provision in the Education Law (see Journal of Laws of 2017, item 59, as amended) specified the role of employers and other social partners in VET. Article 3, paragraph 1a, states: ‘The education system in the field of vocational education is also supported by employers, employers’ organizations, economic self-governments or other economic organizations, professional associations or self-governments, sectoral councils for competences, and the Program Council for competences referred to in the Act of 9 November 2000 on the establishment of the Polish Agency for Enterprise Development’ (Journal of Laws of 2018, items 110, 650, 1000, and 1669).

This law clearly indicates the relevant institutions and organizations, which are in fact involved in support of the VET system. However, the involvement of employers, employers’ organizations, and self-governments can only be voluntary.

Only when an entrepreneur decides to accept a student for practical vocational training does the law (i.e., the aforementioned regulation on practical vocational training) impose a number of obligations on them, including, in particular:

- ensuring the material conditions for practical vocational training;
- appointing (as appropriate) teachers, practical vocational training instructors, and vocational training supervisors;
- familiarizing students and young people with work organization, work regulations, particularly regarding compliance with work order and discipline, as well as occupational health and safety regulations and principles;
- supervising the course of practical vocational training;
- preparing post-accident documentation in the event of an accident during practical vocational training;
- cooperating with the school or employer;
- notifying the school or employer of any violation of work regulations by a student or young person.

Vocational training is also supported by other labour market institutions that are not part of the vocational training system, in particular: labour market councils (provincial and district), voluntary labour corps, and labour offices.

Accepting a VET student is also associated with concrete funding and/or remuneration for employers. The funding stream that an entrepreneur undertaking vocational training can receive depends on the form of their involvement. It is also crucial whether the person undertaking practical vocational training has the status of a juvenile worker. In the case of training organized by schools, we are always dealing

with the status of a student, and for some of these individuals, also a juvenile worker. Public funding primarily concerns three areas:

- Area 1. Reimbursement of costs related to student care, providing them with clothing and safety equipment;
- Area 2. Co-financing the costs of juvenile education;
- Area 3. Reimbursement of wages paid to juveniles and social security contributions on wages.

Area 1. Reimbursement of costs related to student care, providing them with clothing, and safety equipment.

The governing body (i.e., the local government unit) provides funding for students' practical training with the employer in the following forms:

- Reimbursement to employers of remuneration paid to practical vocational training instructors who conduct classes with students;
- Up to the minimum basic salary of a contract teacher with a diploma from a teacher training college: in 2021, this was approximately PLN 2,600 (in 2015, approximately PLN 1,800).
- Reimbursement to employers of the training allowance for practical vocational training instructors conducting practical classes with students:
 - In an amount not less than 10% of the average monthly salary in the corporate sector, excluding profit bonuses, in the fourth quarter of the previous year, as announced by the President of the Central Statistical Office. In 2021, this was approximately PLN 560 (in 2015, approximately PLN 400).
- Reimbursement to employers for the costs of work clothing, footwear, and personal protective equipment required for a given training position, allocated to students for the duration of practical classes conducted at the employer's premises during a given school year:
 - up to 20% of the average salary: in 2021, this amounted to approximately PLN 1,100 (approximately PLN 800 in 2015).

Area 2. Co-financing the costs of juvenile education.

If the apprentice's vocational training with the employer lasts longer, as is the case during dual education, additional funding may be available for the training of a young employee.

As mentioned earlier, vocational training also includes craftsmanship. Training in a company with a craftsman can take two forms – either school-organized or employer-organized. This depends on, among other things, the method and location of general education and the status of the young employee learning the profession, who may be:

- both a young employee and a student, when the young employee is completing their training at a basic vocational school.
- a juvenile employee who is not a student, when theoretical training is provided outside of school. This formula is much less popular and, in the case of craft businesses, applies only to a small portion of juvenile employees.

When employing juvenile employees and organizing practical vocational training within the enterprise, the employer may also obtain co-financing for the costs of training one person, provided the juvenile passes an examination before the Regional Examination Board (OKE) or the Chamber of Crafts (in the case of craft training), as of 2023, in the amount of:

- PLN 8,081 for 3 years in the case of vocational training;
- PLN 10,000 for 3 years in the case of professions indicated in the previously discussed “Forecast of Demand for Employees in Vocational Education and Training Professions of the Ministry of Education and Science”;
- PLN 254 for each full month in the case of training for a specific job. Area 3. Pursuant to the regulation of the Minister responsible for labour on the reimbursement of wages paid to young workers from the Labour Fund, an employer employing young workers may apply for an agreement to reimburse wages paid to young workers and social security contributions on reimbursed wages.

Area 3. Reimbursement of wages paid to juveniles and social security contributions on wages.

The amount of the reimbursement is limited – it cannot exceed (per young worker) the amount of wages paid to the young worker, as established by law, and the social security contributions paid on that wage, financed by the employer.

The minimum wage for young workers is variable and determined in relation to the average monthly wage in the national economy in the previous quarter. The percentage ratio of the young worker’s wage to the average monthly wage is:

- in the first year of school:
 - since 2019, not less than 5% (in the first quarter of 2022, approx. PLN 283);
 - up to 2019, no less than 4% (in the first quarter of 2015, approx. PLN 158);

- in the second year of study:
 - since 2019, no less than 6% (in the first quarter of 2022, approx. PLN 339);
 - up to 2019, no less than 5% (in the first quarter of 2015, approx. PLN 197);
- in the third year of study:
 - since 2019, no less than 7% (in the first quarter of 2022, approx. PLN 396);
 - up to 2019, no less than 6% (in the first quarter of 2015, approx. PLN 237).

The above-mentioned reimbursements are available if the employer employs minors to work in professions specified in the list of professions published in the provincial official journal and meets the conditions for conducting vocational training in terms of professional and pedagogical requirements specified in the regulations governing vocational training. The regulations also specify limits on the number of minors eligible for reimbursement.

The reimbursement also covers social security costs. It is worth noting that minors employed for vocational training are in an employment relationship and are therefore subject to social security under the same rules as all other employees. Therefore, they are subject to mandatory retirement, disability, sickness, and accident insurance.

The legal environment for schools in Poland is complex due to frequent changes. Regulations regarding vocational education have undergone significant changes between 2011 and 2021. For example, the core curriculum for vocational education, which defines educational objectives, examination requirements, and determines the content of education, was amended in 2012, 2017, and 2019. This causes various difficulties, for example, students beginning their studies in subsequent years are taught according to different curricula. Therefore, students studying construction technicians in different classes at a technical school will follow different curricula and take different exams. This change also introduces additional burdens for businesses that accept them for internships. This situation is not new, as is clearly reflected in the respondents' statements:

'It's another reform... It's always a reform (...).'

(employers' organization)

While in the early 2010s they may have still constituted a 'tight corset restricting movement', following the reforms in 2019, they became less burdensome. During this time, the catalogue of possible forms of cooperation has been expanded, changes have allowed inclusion of skills beyond the core curriculum, and the possibility of

tax exemption for donations to educational institutions. Other notable developments were: the inclusion of benefits paid to students as tax-deductible costs, and increased funding for employers providing training in selected professions. Additionally, the amount of funds for employers increased.

For years, employer involvement in vocational education has remained low. The formal institutions undoubtedly define the general framework for cooperation and introduce regulations relevant in terms of costs and financial remuneration for employers. However, the analysis of interviews indicates that the scale of this phenomenon cannot be explained solely through the lens of formal institutions.

Entrepreneurs often point to the labour-intensive nature of training, communication difficulties with schools, and burdens associated with documentation. These costs stem in part from complex regulations and the frequency of their changes, but also, as indicated by literature analysis and interviews, a lack of generalized trust in entrepreneurs and public institutions. The literature even claims a culture of distrust towards public institutions, the purity of these organizations' intentions, and their efficiency (Gruszevska 2017; Hryniewicz 2007; Sowa 2012).

Institutions of social dialogue and economic self-government are formal institutions, but both the respondents and the literature indicate that they are superficial and have little impact in the area of vocational education (with the significant exception of chambers of crafts). The functions of institutions of social dialogue and economic self-government at the local level are fulfilled in informal networks of connections between private and public entities, often through individual connections (Lewkowicz 2018; Sroka 2009 p. 39). European Social Survey data on generalized trust show that Poles have relatively high distrust levels and low levels of trust in other people, their intentions, and values (Sztabiński et al. 2020).

At the organizational level, there is often a lack of institutions (e.g., separate units or procedures) dedicated to employee development activities. It's also worth noting that employers typically base their HR development strategies on external recruitment (i.e., hiring new employees), so they lack appropriately prepared organizational units dedicated to collaborating with the education and training sector, and in most cases, they also lack departments dedicated to conducting training. (Górniak et al. 2015; Kocór et al. 2012). Also, employers' organizations and employees' organizations generally do not offer significant support in this respect (except chambers of crafts and some economic self-governments), or entrepreneurs do not use such assistance, preferring to rely on individual networks of connections (Sławecki 2009 pp. 174–175).

1.4 Cultural and cognitive determinants of employers' involvement in training of apprentices in VET in Poland.

The cognitive and cultural determinants can be seen as influencing the economic reasoning or rationality (described as bounded rationality, fallacies, or biases) as well as constituting non-economic factors (via embedding in value systems, shared mental models, and/or social relations).

In the late 1950s, James March and Herbert Simon demonstrated that decision-making is a consequence of analysing the situational context. The situational context is created by relationships with other people, which are shaped by cultural institutions, behavioural patterns, and value systems (March & Simon 1964). Entrepreneurs are forced to make decisions under uncertainty and in limited time, which is why they often rely on heuristics. When the number of contextual variables exceeds one's cognitive abilities, people choose the first acceptable option (satisficing) or eliminate options by aspects (Tversky 1972) and base the decisions on readily available, but not necessarily accurate information, such as stereotypes and shared beliefs (Kahneman 2003; Kahneman et al. 1982).

The first area of factors identified is the normative and cognitive determinants, such as the vision of the company's goals and cognitive schemas or shared mental models, as they are sometimes called (Denzau & North 1994). For this article, I categorise them according to subject: (1) vision of the company function and goals; (2) heuristics, biases, and framing; (3) knowledge and beliefs. The second area of factors identified is the relational-contextual ones, which influence the willingness of companies to cooperate. These I categorise as either (4) internal contexts and relations (e.g., organizational culture, human and social capital in the organization) and (5) external contexts and relations (relating to concepts such as social capital, embedding and competition). The proposed categorisation is provisional and serves as a structured presentation of findings.

(1) vision of the company's function and goals

Many employers distance themselves from any social function of the company, treating educational activities as an unnecessary burden, while others perceive them as an integral element of the company's operations and its role in the local community. Especially those not involved in vocational training, entrepreneurs often do not see vocational education and training of youth as an area of their interest or even an area of enterprise activity.

I run a business here; we're involved in production and sales, not charity or social work. I don't have time to deal with young people, and from what I hear, they're nothing but trouble.

(employer)

The hyperbole of the enterprise as an entity that has to focus on survival in difficult market conditions and is concerned (only) with profit is quite common in the statements of entrepreneurs. In the case of a microenterprise, this statement may be a direct reflection of the difficult market conditions and limited resources. Notably, the same situation is sometimes explained with a different rhetoric, presenting more openness and sometimes even regrets about the inability to help the young people, which is why this seems to be a deeper axiological and normative trait of some enterprises. In this strictly economic vision of the enterprise, it is a passive recipient of graduates rather than a company developing its human capital (by training juvenile workers or adults). This attitude influences companies' decisions to engage in vocational training at two stages: at the initial decision stage, when the question is posed: 'Is this within the scope of the company's activities?' and at a later stage: 'Will these activities positively impact the company's operations and results?' or 'Are these activities an acceptable cost?'. This approach is akin to the aspect-by-aspect selection heuristic, in which case the aspect appears to be: "Is this something that companies do?"

In a few conversations, when a term like 'social function of the company' was used, it was associated with the communist times and, as such, given a negative valence. This can be interpreted as an echo of free-market narratives, forming the entrepreneurship and capitalism in Poland after 1990.

On the other end of the spectrum, many small and medium employers have presented a very different vision, often associated with the craftsmanship ethos: clearly indicating the role of cooperation for the common good of the local community or professional excellence. In these examples, it was seen as part of the mission of the company to help workers realize their potential and improve the quality of the services or products. Unsurprisingly, this vision was most often presented by employers already training juvenile workers.

(2) heuristics, biases, and framing

Very often, as a consequence of a given vision, training activities are seen in terms of costs and risks rather than benefits and investments. Entrepreneurs involved in vocational training also clearly perceive benefits and opportunities and tend to stress

them, while non-involved prefer to speak about costs and risks. To some extent, this can be a post-hoc rationalization of choices made, but could very well be an element of a default and relatively consistent perspective of an individual.

Loss and/or risk aversion can lead to the perception of education in terms of costs – or more precisely, it can lead to overestimating costs and underestimating benefits. Entrepreneurs sometimes use a heuristic that involves ignoring the expected value of the benefits obtained, as in:

'I have a certain cost and an uncertain benefit – the decision is simple.'

(employer)

In this situation, the adoption of a specific interpretative framework (framing) of a given situation has a significant impact on the perception of the situation, in particular, viewing it through the prism of benefit or cost categories (Tversky & Kahneman 1986).

The negative stereotype of vocational schools and students plays a significant role. Systemically, stereotyping leads to negative selection of students and staff for vocational schools, but also to a reduced willingness of businesses to accept students. Operating at various levels, the stereotypes become a self-fulfilling prophecy and also exhibit the characteristics of a self-reinforcing mechanism – as a result, the perceived attractiveness of engaging in vocational education deteriorates. The VET pupils and juvenile workers as a group have been called 'unmotivated', 'unable', 'unreliable', 'not interested' or 'with problems', 'of second sort', 'lazy', and even 'stupid'. The VET schools, on the other hand, have a stigma of the 'choices of last resort' and 'nest of pathology', which follows the difficult history of VET, especially the neglect and demise of VET during the first decade after the transformation. To some extent, echoes of related negative stereotypes about public institutions and public administration can also be traced, which dub them 'ineffective', 'bureaucratic', and 'for the most part unnecessary'.

(3) knowledge and beliefs

The beliefs of entrepreneurs influence their behaviour regardless of whether they are supported by analysis, experience, or facts. In the reports and analyses of VET, these factors are not treated as factors per se, meaning they are not treated as (to some extent) independent of factual or experiential knowledge, and as such, they are systematically underestimated.

The interviews have shown that many of the employers have very limited knowledge about the possible support and funding they can receive. For example, the PLN 8 000 or PLN 10 000 for one student training has been met with disbelief in some conversations. This is compatible with one of the most widespread narratives, that the level of state support for employers is ‘too low’ or ‘not enough’, this valuation depends to a large extent on the axiological vision of the company.

One of the most widespread convictions is the one, that taking juvenile workers is ‘bad for the business’ and ‘in general unprofitable’. The main problem in this case is that there is no reliable and accessible data on costs and benefits for employers, which leaves them most vulnerable to ‘anecdotal evidence’ or ‘common knowledge’.

(4) internal contexts and relations

Relationships between workers in a company provide a relevant context for introducing changes or innovations in the workplace, and as such, starting cooperation with a school and taking an apprentice. As one of the respondents put it:

‘We have a good atmosphere here, so if something new comes up, I usually get help or at least some kind of support. We had some problems with the first apprentices, because there were new roles and problems... with one of the youngsters. But it was ok in the end, we managed it somewhat together.’

(workplace instructor, employee)

The quality of relationships in the company will influence, among other things, the willingness to leave a job, take a new task, or help other employees (or students) fulfil their duties. The negative cases of bad relationships did not come up in the interviews, perhaps because of a selection bias or taboo to not air the dirty laundry in public. However, it seems reasonable to assume that the company owners or managers are aware of the spirits and may forgo certain possibilities because of these internal limitations.

The Eurostat data on “Employed persons having a good relationship with their colleagues” [qoe_ewcs_7a1] show that the relations between workers in Poland are self-evaluated relatively low (second lowest average value in EU). This does not necessarily mean that these relationships are actually worse (due to self-stereotypes, international comparisons alone do not constitute a reliable point of reference). Yet, according to Hryniewicz’s organizational research, which points to the farm (*pl. folwark*) roots of or-

ganizational culture in Poland (restituted during the socialist era) and a lower tendency than in Western European countries to prioritize personal obligations over those resulting from group membership (e.g., family or a specific social group). He points to the family-oriented and peer-based collectivism and resulting limited analytical rationality and universalism as a distinctive feature of Polish organizational culture, which results in greater unpredictability of behaviour and less trust (Hryniewicz 2007 pp. 30–47).

The issue of accepting family members and children of close friends for internships and employing them was sometimes mentioned in interviews. As Pawłowski (2015, p. 55) writes: ‘The vocational education system, as noted by all respondents, and particularly strongly emphasized by principals and teachers, often serves the needs not only of employers “as such”, but also of employers who are also the respondents’ parents, close relatives, or their partners. It is clear here that access to some professions is not so much determined by the students’ capital resources (regardless of whether this is cultural, financial, or other resources), but is actually inherited. This observation can be interpreted in various ways. Perhaps some professions require not only the development of skills and knowledge, but also access to a certain work culture, which is a valuable family resource and leaves a noticeable mark on students’ educational choices. On the other hand, we also see that access to some professions can be closely guarded. Assuming that most students possess similar abilities, we can expect that non-meritorious criteria determine the choice of profession.’

(5) external contexts and relations

Enterprise networking refers, for example, to the frequency of collaboration with various groups of entities and the number of contacts between entrepreneurs and employees. It reflects the network concept of social capital. The type and number of connections between enterprises influence their ability to identify opportunities, engage in collaboration, and assess emerging risks and opportunities.

Very often, networking is based on personal relationships between people from different backgrounds, especially in small and medium-sized towns.

*‘ – (...) and how does your institution establish cooperation with entrepreneurs? (...)
– Most often, it’s based on good, let’s say, personal relationships, right. We know each other; it’s a small community, so if someone knows someone, it’s easier to reach out and simply establish that cooperation.’*

'In our case [entrepreneurs], they're our friends, because cooperation isn't enough. It's even a kind of friendship. I'm talking about employers with whom we've been in contact for a long time, and in this project, they were exactly like that. There's even one whose daughter studied here. These are people who visit us, talk, sometimes when there's a live-stock show, they have their own stands, and there's just, like, a mutual friendship. Our students sometimes even receive pocket money [as part of their internships].'

(practical training teacher)

On the other hand, a lack of trust among entrepreneurs stems from concerns about the disclosure of trade secrets and the prospect of working for a competitor. It is widely believed that collaboration based on personal relationships is more lasting than collaboration on a purely formal level (Fila et al. 2014 p. 76).

'In business, trust is paramount. You can't just walk in off the street and ask someone to hire students for internships'

(school principal)

Respondents in the analyzed studies and interview participants expressed concerns about a lack of trust (e.g., the free-rider effect, the transfer of know-how, and poaching). Membership in economic self-government and/or employer organizations should, in principle, reduce the transaction costs associated with collaborating with schools (for example, through cost sharing, organizational intermediation, and support in document preparation) and increase the level of trust between entrepreneurs, reducing beliefs about free-rider effects and employee poaching. And in fact, the aforementioned concerns were less voiced by members of local chambers of crafts and/or commerce or other associations.

In conditions of high trust, one can expect fewer burdens associated with documenting (proving) activities and monitoring contractors/partners. A lack of trust favours the formalization of contracts, increasing the complexity and labour intensity of entering into cooperation. This general lack of trust is also one of the reasons (or justifications) for increased formalization of cooperation on the side of the schools, which are aware of the risks of pupil exploitation at work (typically using them for simple tasks, with limited real opportunities for learning an occupation). On the other hand, the companies have limited trust and understanding of the ways the public sector operates, which is a consequence of different institutional logic (see: Stęchły 2021).

1.5 Conclusions

The results of the undertaken research have given insight into the complex factors that determine employers' engagement in VET. For entrepreneurs who train youth in their company, both personal values, professional ethos, and social relations, as well as financial remuneration, low-cost labour, and future employment, are seen as important reasons for involvement. For entrepreneurs who do not take on apprentices, financial and economic arguments are dominating. Because of the qualitative character and limitations of the representatives, the results obtained need not reflect those in the general population, and no accurate indications of percentages were given for this reason.

Entrepreneurs are guided by reason and make decisions based on available information; their rationality is bounded by the time-constraints and imperfect information/knowledge. The research has shown that decisions on engaging in VET rely on heuristics and are subject to various biases, which have been underestimated so far. Consequently, future research should closely pay attention not only to regulations and objective conditions (e.g., funding schemes) but also to the study of stereotypes, cognitive mechanisms, and heuristics used in decision-making.

Undoubtedly, the employers' decision not to engage is often a consequence of insurmountable constraints resulting from the scale or nature of the business, while the decision to engage is often a rational economic decision, a way to ensure adequate, well-prepared staff in the medium or long term. A shortage of employees with specific specializations is a common and objective reason for engaging in vocational education.

For closing the research gap as well as for practical purposes, an analysis of selected case studies of cooperation, with regard to costs and benefits of taking apprentices, should be undertaken. The group of micro and small companies should be the main focus of such an inquiry. Polish literature lacks good data on this topic, which is key for formulating informed and evidence-based policies, but also needed to provide employers with data to use instead of common knowledge for decision-making.

The interviews confirmed that employers use various heuristics for decision making – these are not unique ways of solving problems but rather social heuristics, i.e., 'collectively constructed and maintained interpretive decision-making frames', which significantly shape economic and non-economic decision-making practices (Beamish & Biggart 2015). The ones encountered most often were elimination by aspect, availability, representativeness heuristics (linked to stereotypes), and satisficing.

Stereotypes of VET students and schools, and also broader convictions on the ineffectiveness of public administration, play a more important role than the lite-

ture suggests. Operating at various levels, the stereotypes become a self-fulfilling prophecy and also exhibit the characteristics of a self-reinforcing mechanism – which is why it is important to distinguish (and if possible address) both the underlying conditions and the overlaying stereotypes and narratives. As (almost) always the case with stereotypes, they carry a grain of truth. The average levels of competence and attitudes of VET students pose a challenge that should be treated with great attention (juvenile workers often have fundamental gaps in their education, and on-average lower cultural capital, lower PISA scores). However, the extent to which this can be attributed to negative selection (and at least to some extent to the stereotypes and aspirations divide) and teaching quality requires further research.

As long as the heuristics and stereotypes remain a mental phenomenon, they remain outside the reach of most research methods (and sources). Stereotypes (or ‘cultural concepts’) and heuristics can be objectified as linguistic phenomena (Bartmiński 2006, 2018) encoding shared mental models. One of the fundamental tools for gaining insight into this sphere is the analysis of the language, text, or speech corpora. In the narrow scope of analysis, it was possible to rely on simple analysis tools, but for larger databases, more advanced natural language processing tools should be used. Using cognitive linguistics for a better understanding of the way institutions work should be tested in further analysis of topics such as social dialogue and discourse around various reforms or selected economic issues, which would be an improvement to the approach known from Shiller’s narrative economics (2020).

On another level, the same approach could also be used to identify and assess the proliferation of various ideologies, understood here after Denzau and North as ‘the shared framework of mental models that groups of individuals possess that provide both an interpretation of the environment and a prescription as to how that environment should be structured’ (1994). It could reveal how competing ideologies are influencing the ‘expression’ of formal institutions, strengthening or weakening them, especially in the context of modern capitalism. An example of this could be public administration ineffectiveness, as a stereotype linked to the ‘New public management’ approach, another one could be the myth (or a norm?) of an entrepreneur who is not embedded in society.

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Annex 1. List of titles of key reports and analyses on vocational education in Poland used in the study.

	Publication title (original polish)	Publication title (own translation)	Year
1)	Badanie kwalifikacji i kompetencji oczekiwanych przez pracodawców od absolwentów kształcenia zawodowego	A Study of the Qualifications and Competencies Expected by Employers from Vocational Education Graduates	2009
2)	Ocena stopnia zainteresowania pracodawców współpracą z placówkami kształcenia zawodowego w zakresie praktycznych form nauczania i przygotowania zawodowego w kontekście wdrażania Działania 9.2 PO KL	An Assessment of Employer Interest in Collaborating with Vocational Education Institutions in Practical Forms of Teaching and Professional Preparation in the Context of Implementing Measure 9.2 of the Human Capital Operational Programme	2010
3)	Badanie funkcjonowania systemu kształcenia zawodowego w Polsce. Raport końcowy	A Study of the Functioning of the Vocational Education System in Poland. Final Report Are Vocational Schools	2011
4)	Zawodne zawodówki? Szkolnictwo zawodowe w opiniach uczniów, nauczycieli i pracodawców	Unsatisfactory? Vocational Education in the Opinions of Students, Teachers, and Employers	2011
5)	Społeczeństwo w drodze do wiedzy. Raport o stanie edukacji 2010	Society on the Path to Knowledge. Report on the State of Education 2010	2011
6)	Jak Cię piszą, tak Cię widzą. Wizerunek medialny szkolnictwa zawodowego w Wielkopolsce	You are seen, as depicted: The Media Image of Vocational Education in Greater Poland	2011
7)	Współpraca pracodawców i organizacji pracodawców ze szkołami zawodowymi – badanie jakościowe w subregionach. Raport końcowy (Mazowieckie)	Collaboration of Employers and Employer Organizations with Vocational Schools – A Qualitative Study in Sub-regions. Final Report (Mazowieckie Voivodeship)	2012
8)	Finansowanie i zarządzanie oświatą przez jednostki samorządu terytorialnego	Financing and Management of Education by Local Government Units	2012
9)	Kontynuacja przemian. Raport o stanie edukacji 2011	Continuing Change. 2011 Education Report	2012
10)	Unowocześnianie metod i form kształcenia zawodowego w Polsce. Diagnoza i oczekiwane kierunki zmian	Modernizing Vocational Education Methods and Forms in Poland. Diagnosis and Expected Directions of Change	2012

	Publication title (original polish)	Publication title (own translation)	Year
11)	Współpraca szkół zawodowych z pracodawcami. Przykładowe rozwiązania	Collaboration between vocational schools and employers. Example solutions	2013
12)	Stan szkolnictwa zawodowego w Polsce – Raport	The State of Vocational Education in Poland – Report	2013
13)	Zarządzanie zasobami ludzkimi w oparciu o kompetencje. Perspektywa uczenia się przez całe życie (IBE)	Competency-Based Human Resource Management: A Lifelong Learning Perspective (IBE)	2013
14)	Umiejętności Polaków – wyniki Międzynarodowego Badania Kompetencji Osób Dorosłych (PIAAC) – Raport (IBE)	Skills of Poles – results of the International Adult Competence Assessment (PIAAC) – Report (IBE)	2013
15)	Koszty edukacji ponadgimnazjalnej i policealnej (IBE)	Costs of upper secondary and post-secondary education (IBE)	2013
16)	Liczą się efekty. Raport o stanie edukacji 2012 (IBE)	Results Matter. Education Report 2012 (IBE)	2013
17)	Ewaluacja działań podejmowanych na rzecz współpracy przedsiębiorstw ze szkołami i placówkami kształcenia zawodowego w ramach realizacji projektów PO KL w województwie świętokrzyskim w kontekście realizacji przyszłej perspektywy finansowej 2014-2020. Raport końcowy	Evaluation of activities undertaken to promote cooperation between enterprises, schools, and vocational education institutions as part of the implementation of the PO KL projects in the Świętokrzyskie Voivodeship in the context of the implementation of the future financial perspective 2014-2020. Final report	2013
18)	Współpraca szkół zawodowych z przedsiębiorcami na przykładzie Działania 9.2 PO KL. Analiza projektów realizowanych w latach 2008-2011	Cooperation between vocational schools and entrepreneurs on the example of Measure 9.2 of the PO KL. Analysis of projects implemented in 2008-2011	2014
19)	Uwarunkowania decyzji edukacyjnych. Wyniki pierwszej rundy badania panelowego gospodarstw domowych. Raport tematyczny z badania. (IBE)	Determinants of educational decisions. Results of the first round of the household panel survey. Thematic report from the study (IBE)	2014
20)	Mobilność społeczna i przestrzenna w kontekście wyborów edukacyjnych. Raport z badania	Social and Spatial Mobility in the Context of Educational Choices: A Research Report	2014
21)	Liczą się nauczyciele. Raport o stanie edukacji 2013 (IBE)	Teachers Matter. Report 2013 (IBE)	2014
22)	Raport końcowy z badania ewaluacyjnego. Diagnoza stanu i perspektyw rozwoju szkolnictwa zawodowego w województwie lubuskim	Final report from the evaluation study. Diagnosis of the state and development prospects of vocational education in the Lubuskie Voivodeship	2015
23)	Diagnoza stanu i potrzeb w zakresie kształcenia zawodowego i ustawicznego w województwie Wielkopolskim.	Diagnosis of the status and needs in the field of vocational and continuing education in the Wielkopolska Voivodeship	2015

	Publication title (original polish)	Publication title (own translation)	Year
24)	Analiza dotycząca poziomu szkolnictwa zawodowego na obszarze województwa Świętokrzyskiego	Analysis of the level of vocational education in the Świętokrzyskie Voivodeship	2015
25)	Habitus zawodowy, współpraca, narracje aktorów społecznych i praca, która nie uszlachetnia. Raport z badania systemu kształcenia zawodowego i jego interesariuszy przy wykorzystaniu metod jakościowych. (IBE)	Professional Habitus, Collaboration, Social Actors' Narratives, and Unenoble Work. A Report on the Qualitative Research of the Vocational Education System and Its Stakeholders (IBE)	2015
26)	Popyt na kompetencje i kwalifikacje oraz ich podaż – wnioski z badań	Demand for and supply of competencies and qualifications – research conclusions	2015
27)	Rynek pracy a kompetencje Polaków – wybrane wyniki badania postPIAAC (IBE)	The labour market and the competences of Poles – selected results of the post-PIAAC (IBE) study	2015
28)	Uwarunkowania decyzji edukacyjnych. Wyniki drugiej rundy badania panelowego gospodarstw domowych (IBE)	Determinants of educational decisions. Results from the second round of the Household Panel Study (IBE)	2015
29)	Prywatne i publiczne wydatki na oświatę. Raport jubileuszowy.	Private and public expenditure on education. Anniversary report	2015
30)	EduMod: Model symulacyjno-prognostyczny polskiej gospodarki uwzględniający zjawiska związane z kapitałem ludzkim. Raport podsumowujący projekt	EduMod: A simulation and forecasting model of the Polish economy, taking into account phenomena related to human capital. Project summary report.	2015
31)	Diagnoza stanu doradztwa edukacyjno-zawodowego w gimnazjach i szkołach ponadgimnazjalnych w relacjach dyrektorów szkół i osób realizujących doradztwo	Diagnosis of the state of educational and career counseling in junior high schools and upper secondary schools in the opinions of school principals and counseling providers	2015
32)	Egzaminy zewnętrzne w polityce i praktyce edukacyjnej. Raport o stanie edukacji 2014 (IBE)	External Examinations in Education Policy and Practice. Education Report 2014 (IBE)	2015
33)	Dynamika przemian w edukacji i diagnoza problemów do rozwiązania (IBE)	Dynamics of changes in education and diagnosis of problems to be solved (IBE)	2015
34)	Diagnoza i plan rozwoju szkolnictwa zawodowego w województwie lubelskim do roku 2025	Diagnosis and development plan for vocational education in the Lublin Voivodeship until 2025	2016
35)	Informacja o wynikach kontroli. System Szkolnictwa Zawodowego (NIK)	Information on audit results. Vocational Education System (NIK)	2016
36)	Analiza potrzeb szkół zawodowych od kątem wyzwań regionalnego rynku pracy. Raport końcowy	Analysis of vocational school needs in light of regional labour market challenges. Final report.	2016
37)	Analiza sytuacji szkolnictwa zawodowego w województwie łódzkim	Analysis of the situation of vocational education in the Lodz Voivodeship	2017

	Publication title (original polish)	Publication title (own translation)	Year
38)	Współpraca szkolnictwa zawodowego z przedsiębiorcami w województwie dolnośląskim	Cooperation between vocational education and entrepreneurs in the Lower Silesian Voivodeship	2019
39)	Zmiany w systemie oświaty. Informacja o wynikach kontroli (NIK)	Changes in the education system. Information on audit results (NIK)	2019
40)	Wykształcenie zawodowe. Perspektywa systemu edukacji i rynku pracy	Vocational Education: A Perspective on the Education System and the labour Market	2019
41)	Elementy strategii rozwoju szkolnictwa zawodowego	Elements of the vocational education development strategy	2020
42)	Badanie terenowe w celu określenia czynników sukcesu w opracowywaniu strategii kształcenia i szkolenia zawodowego na poziomie regionalnym w Polsce. Raport końcowy	Field study to identify success factors in developing vocational education and training strategies at the regional level in Poland. Final report.	2021

