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TITLE: **Perception and behavior of Baltic and Finnish companies concerning the employees' training in higher education institutions.**

Abstract:

For more than two decades, one of the hot topics in education has been its collaboration with the labour market. Several concepts and models have been worked out and implemented, and some good practices have been described. In many countries, the HEIs' aim to cooperate with the enterprises is the national requirement, which is also linked with the funding quotas. Nevertheless, one of the leading collaboration areas - employees' training (lifelong learning courses taken from the HEIs) still needs to be developed a lot, in content and amount, to keep up with the enterprises' quickly changing economic environment and changing needs.

The authors carried out a small-scale enterprise survey in the Baltics and Finland to investigate and understand the main trends and factors that lead the companies' decision-making in the Lifelong Learning (LLL) area and collaboration with HEIs. This article aims to clarify the enterprises' expectations and obstacles in LLL collaboration with HEIs to improve and direct further cooperation efforts. It gives recommendations for the HEIs to foster and enhance meaningful partnerships with the enterprises. The results indicate the constant miscommunication in partnership and still existing myths, which lead to (or somewhat hinder) smooth cooperation.

Key words: HEI, university - industry collaboration, triple and quadruple helix, innovation

Introduction:

Collaboration between higher education institutions (HEI) and enterprises has become increasingly significant in recent decades. Various models and best practices have been developed for this collaboration. The term 'triple helix model' is used when discussing cooperation between enterprises, universities, and other parties. In this model, public administration is involved alongside universities and businesses. [1] When society is added to this mix, it is referred to as the 'quadruple helix,' where media- and culture-based audiences are also included. Adding one more dimension results in the 'quintuple helix,' emphasizing the natural environment of society, knowledge production, and innovation in addition to the previous elements [2]. More extensive collaborative networks involving multiple companies and other entities are called innovation hubs or ecosystems [3].

The interaction with enterprises is a crucial theme for the societal and regional impact of HEIs. This collaboration enhances innovations in the national innovation system [3]. HEIs already play a significant role in employees' lifelong learning (LLL). Despite this, there are many areas for improvement in this theme, both quantity and quality. It is essential to ensure a successful collaboration to utilize the advantages of both sides.

This article will present the results of a small-scale enterprise survey conducted in the Baltics and Finland in spring 2023. We aimed to investigate and understand the main trends and factors influencing companies' decision-making in the lifelong learning area and collaboration with higher education institutions. The research data for this article was collected in the spring of 2023 through a survey conducted in Estonia, Finland, Latvia, and Lithuania. The survey was carried out as part of the "Platform for Cooperation Between Schools and Enterprises" project, which receives funding from Nordplus Horizontal. The project is coordinated by the Estonian

Entrepreneurship University of Applied Sciences, and its partners include Vilnius College, RISEBA University of Applied Sciences, Estonian University of Life Sciences, University of Tallinn, Tallinn School of Economics, University of Tartu, South-Eastern Finland University of Applied Science and Mairor AS. Each project partner gathered 20 to 30 responses from their respective countries for this survey. Since most project partners are from Estonia, most respondents also came from there. In total, 195 companies participated in the survey.

The remainder of this article is structured as follows: First, we will explain our theoretical background, which is based on lifelong learning, training and cooperation between companies and higher education institutions. Then, we will present our study, review the main results and provide recommendations for the HEIs to enhance meaningful partnerships with enterprises. The results indicate constant miscommunication in partnerships and existing myths that facilitate or hinder smooth cooperation. We will conclude our findings and outline some suggestions based on our study.

Theoretical background:

Collaboration between companies and HEIs yields a wide range of benefits, positively influencing education, research, and industry practices. These partnerships contribute to both entities' overall growth, competitiveness, and sustainability [4]. Private enterprises collaborate with HEIs to maintain competitiveness in the market, whether by fostering direct innovation or providing training for human resources [5]. Collaboration between companies and Higher Education Institutions (HEIs) is essential for fostering lifelong learning within companies [4]. Lifelong Learning (LLL) is one of the primary forms of how universities can contribute to the industry. Higher education institutions especially have a crucial role in reskilling or upskilling the workforce, directly contributing to the well-being and growth of technology-driven businesses and addressing employee training needs [6]. Collaborative partnerships with educational institutions present the chance to offer a diverse array of learning opportunities for employees [7]. LLL emerges from integrating formal, non-formal, and informal learning, fostering the capacity for continuous, lifelong enhancement of the quality of life [8]. Training and development play a crucial role as tools for the sustainable growth of an organization [9]. In today's dynamic business landscape, having the right employees with the correct qualifications is crucial for a company's survival, success, and competition. Training plays a fundamental role in achieving organizational goals by enhancing the efficiency and competence of the workforce, ultimately contributing to increased productivity [10]. Training holds significance as a means to enhance employee productivity, ultimately influencing the overall performance and effectiveness of the organization [11]. A relevant and practical training program enhances employee skills and boosts a firm's market competitiveness. Training initiatives strengthen employee social capital, leading to a substantial improvement in firm commitment. [12]

University-industry partnerships offer numerous advantages, including access to highly skilled resources, new knowledge, innovation, and tailored solutions for specific problems [13]. Collaboration supports innovation activities and promotes research, innovation, and sustainable development, contributing to regional growth [4][14]. Furthermore, collaboration benefits companies by influencing curricula to meet industry needs, enhancing students' skills and competencies, and facilitating the employment of HEI graduates [15]. This active collaboration creates social capital, serving as a driver for student employment. For

companies, collaboration offers research opportunities, teaching and learning opportunities, financial benefits, access to facilities and resources, and enhanced credibility and reputation. It sparks innovative ideas, supports digital business transformation efforts, and allows small companies to invest in research with tax breaks. [16]

The performance of an organization is strongly positively correlated with the employee's talent, leadership work style, and morale of its employees [17]. To achieve organizational goals and objectives, the firm must implement effective strategies to train and develop its employees [9]. The development of the employee is essential. If some employees need more knowledge, skills, and competencies, it leads to difficulties in accomplishing tasks within stipulated timelines [17]. Training is a crucial tool for enhancing workforce performance, ultimately elevating the value of an organization. However, the organization must balance the benefits of training and the associated expenses. [10]

Besides the importance of HEIs in reskilling and upskilling the workforce [6], the universities' collaboration gain is seen in establishing the innovation ecosystem encompasses entrepreneurs and their organizations (acting as critical innovators and knowledge users), research institutions and universities (acknowledged as the primary knowledge producers), financial institutions (facilitating innovation among enterprises), and various dynamic factors that foster cooperation, mobility, knowledge exchange, and social interactions. Innovation ecosystems play a pivotal role in enhancing innovative entrepreneurship by generating new knowledge, employing novel combinations of existing knowledge, or recombining existing knowledge in innovative ways. [18] The HEIs support knowledge-based processes for both new ventures and existing companies, generating, transferring, and diffusing specialized knowledge. Recognized as sources of graduates with specialized knowledge, universities also contribute ideas, knowledge, and skills for company research and development. Additionally, they play a broader role in shaping local stakeholders' cultural and learning dynamics, promoting sustainable growth. [19] For companies, higher education institutions are an essential source of innovation [20].

For universities, collaboration with industry, as outlined by Evans et al. [16], leads to enhanced research impact, learning opportunities for academics, improved teaching quality, financial benefits, and an enhanced reputation. Academic-industry collaboration provides a balanced approach between applied and basic research, resulting in practical solutions for real-world problems. [16] By integrating upskilling programs into their curriculum offerings, universities provide opportunities for organizations and employees to stay relevant, creating a new market for lifelong learning programs. These innovative programs also challenge educators to stay current in their disciplines and deliver state-of-the-art knowledge. [6] Bolli and Renold [21] confirm that factors such as presenting workplace case studies, conducting workplace surveys, establishing learning contracts, and documenting the learning process enhance universities' positions in developing soft skills. Collaboration indicates a closer connection with the workplace, encouraging students to apply their work experiences in academic settings, incorporating real-world examples into their studies, and integrating newly acquired knowledge from the university into organizational contexts. [21]

Based on the previous researches the forms of collaboration can be divided into five categories: 1) raising the competences of the new and existing workforce (internships, apprenticeship, case-studies for students to solve, hackathons and idea competitions for both

students and companies, scholarship programs, trainings and seminars [16][19][22]; 2) Innovating and commercializing the new products and services (academia tends to lead in innovation and technology, providing a cost-effective avenue for developing concepts, the testing of industry techniques and technologies, aiding in the commercialization process) [16]; 3) bringing labour-market competence directly to the studies (development of the new university courses, co-teaching with specialist from labour market, inviting industry specialists for seminars [14][16]; 4) Sharing facilities (laboratories, auditories for the trainings and seminars, technology, testing and simulation facilities) [16]; 5) making collaborative research (academics and practitioners co-publishing the industry-related publications in international peer-reviewed academic journals, and industry conferences, fostering a dynamic exchange of knowledge and ideas) [5][16].

While the university and the industry acknowledge the relationship's potential, its complexity often poses challenges. It can be perceived as threatening by the organizations involved due to conflicts in values and objectives [23]. Therefore, the barriers to cooperation must be indicated, understood and overcome to reach content-rich collaboration. Based on the previous research [5][24], the main obstacles are finding appropriate contacts in partner organizations, including a lack of awareness regarding potential partner organizations, financial constraints, different organizational cultures - varied motivations, communication methods, time horizons, and levels of bureaucracy and other Internal organizational characteristics—companies necessitate confidentiality for their innovations and technological advancements, leading to concerns about the disclosure of such information. Ineffective communication between parties is a prevalent issue that can impede the development of enduring partnerships, the resolution of cultural differences, and the cultivation of personal relationships and trust [5]. Trust plays a crucial role in reducing both types of barriers, with a company's trust in academic partners shaping its perception of collaboration barriers with universities [24].

Fortunately, there are also some enablers for fostering collaboration between academic institutions and industry practitioners. Meaningful use of the enablers can turn into success factors. As Evans et al. [16] conclude in their research, the main enablers are perceived necessity (eg. Universities are driven to collaborate due to the need to change their image and actively contribute to economic growth, improving reputation and finances or market expectations from the companies' side), comprehensive involvement (more collaboration activities and broader dependence on each other creates a habit of cooperate), initiative taking and proactivity from all partners. One of the success factors of university-industry collaboration is an engagement that entails the interaction between teams consisting of individuals from academia (such as teachers, researchers, and students) and professionals from the business sector. It must be established to facilitate the exchange of creativity, ideas, skills, and personnel to create mutual value over time [23]. Traditional collaboration success factors also apply in university-industry collaboration - trust between parties, including constant aligning of values, mutual understanding and respect, mutual interests and goals, and supportive leadership, including recognition of the value of collaboration.

Research methodology

A quantitative research method was applied to facilitate the analysis of the Baltic and Finnish companies' situations [25]. A working group, including a representative from each university, surveyed the leading partner companies of their university. The workgroup representatives

shared an online link (LimeSurvey) available in three languages - Estonian, Finnish, and English (in Latvia and Lithuania)- to avoid creating a language barrier in the study and to involve local companies in each country. In total, 195 companies responded to the survey - 89 with their main activity in Estonia, 31 in Finland, 12 in Latvia and 46 in Lithuania. Seventeen companies did not link their primary business with one specific country but covered several countries. The sample includes a similar proportion of companies from different size groups. However, there were a few more companies with 10 to 49 employees and 250 or more employees. Around 19% of companies were from Manufacturing. The other largest fields that were represented are Education (10.3%), Agriculture, Forestry and Fishing (9.2%), Construction (7.7%), and Information and Communication (7.2%). Participation in the study was voluntary, informing participants about data privacy and the use of data for the study.

Results

According to survey results, most respondent companies are willing to train their employees. Compared to companies with international business, local companies generally show a lower willingness to teach their employees. Their median willingness score was 3.25 out of 5, compared to 3.5 for multinational companies (Fig. 1).

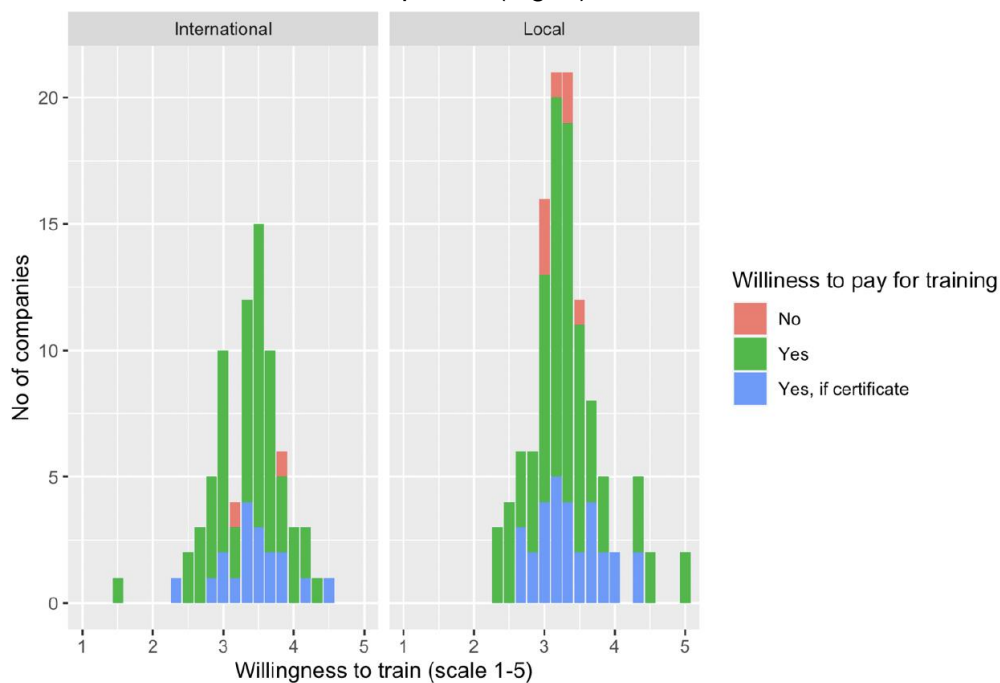


Figure 1. Companies' willingness to educate by willingness to pay and location of business

Based on the answers (Fig.2), it is easier to implement training programs in companies with 250 or more employees (88.2% of all such companies). Companies within other size groups indicate somewhat similar easiness. Still, around 19-20% say training is hard to implement. The ease of implementing training programs among local and international companies is the same. Among Estonian companies, there are proportionally more companies where training programs are easy to implement. Even so, the willingness to train is highest among Lithuanian companies.

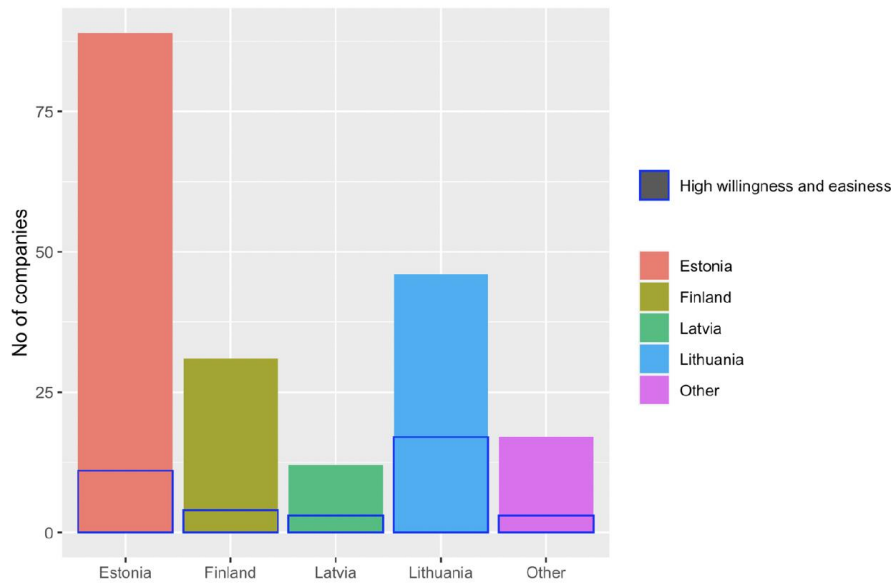


Figure 2. Companies with high willingness and easiness to educate by country

Of the companies with high willingness and ease of training, 48.6% think 25€ per hour for online training is acceptable, and 35.1% think it is too expensive. For face-to-face training, 81.1% consider this price good. This indicates that online training programs should be priced below 25€ per hour to attract more participants among those who are interested in training.

21.7% of companies with fewer than ten employees and 25.5% of companies with 10 to 49 employees indicated that training should occur after working hours. That would mean the training programs for smaller companies may only sometimes succeed when organized during working hours. At the same time, those companies are mainly from Lithuania. Most companies find it acceptable if training programs take place during working hours. Still, some specific smaller companies (up to 49 employees) do not see it fair, but their proportion out of the whole sample is relatively small (7.1%). Thus, training programs in smaller companies should have more flexibility in terms of time.

As Figure 3 shows, the companies use different channels to get information about the available and necessary training. The most preferred is online searching, but social media and personal contacts are also widely used among Estonian companies. Finnish companies' preferences indicate already established connections with the education institutions, showing that the schools are direct partners in finding information.

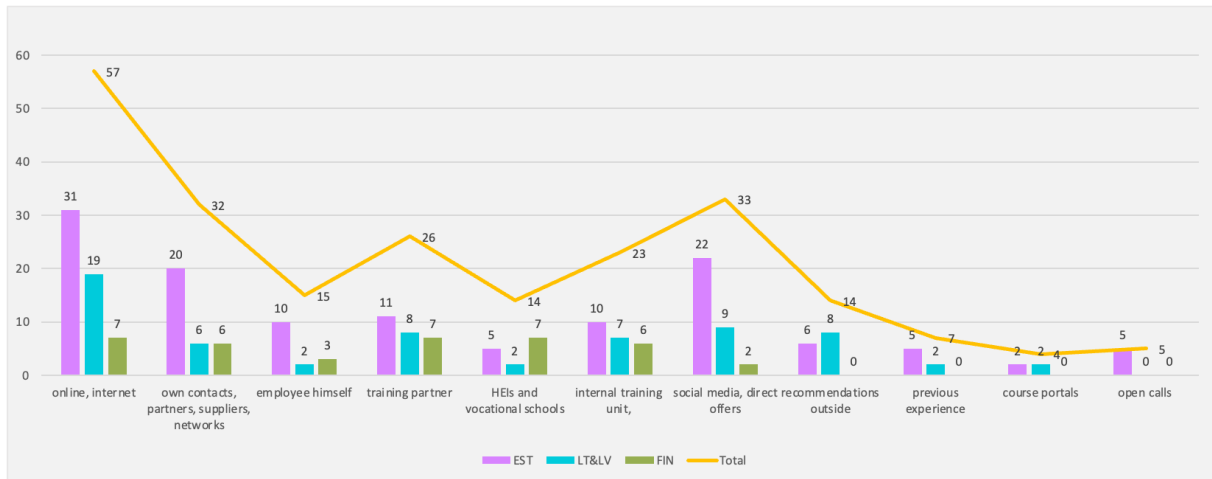


Figure 3. Companies' channels in finding suitable training programmes

Based on the respondents' estimations (statements were given, needed to assess on a scale of 5 (1-not important...5- very important)), the following opinions were prevailing - training programs are an excellent motivational measure, the training is enterprise responsibility, and employees are encouraged to develop themselves.

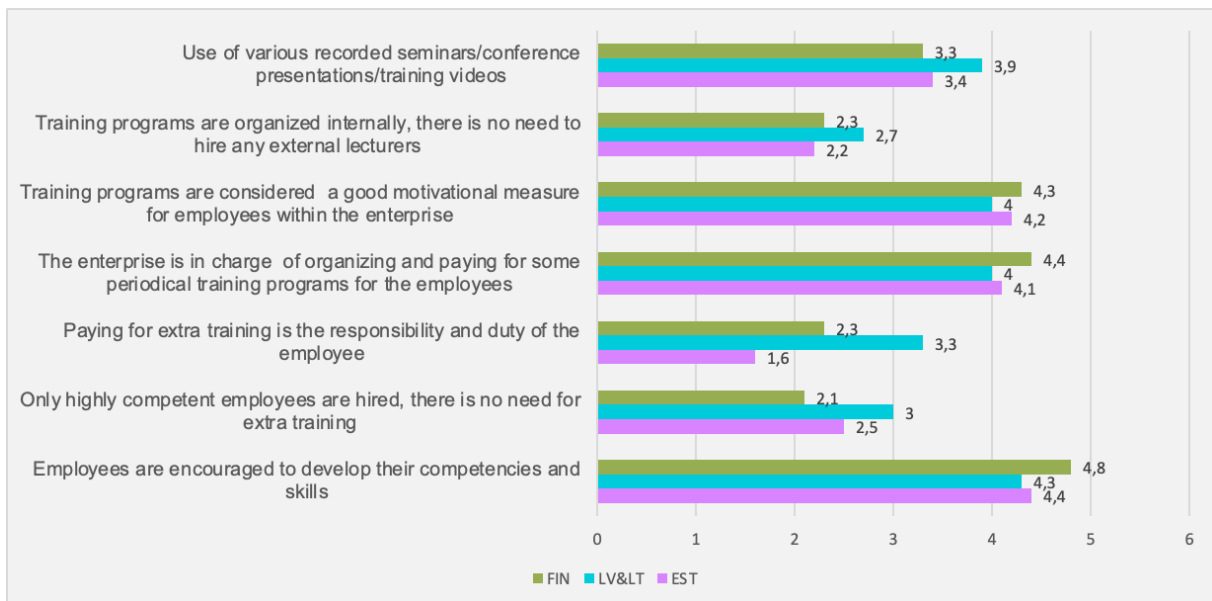


Figure 4. Companies' estimations showing their attitude toward education aspects

When considering the training method (Face-to-face vs online) and the provider of training programs, we can conclude that a bit more than 60% out of the Estonian companies in the sample seem to be very highly interested in face-to-face training programs in national language within their organization, face-to-face training programs in national language within their closest higher education institution, as well as blended training programs and online training programs. Around 50% of Estonian companies indicated interest in different recorded seminars/conference presentations/ training videos. At the same time, lowest interest is in face-to-face training programs abroad in an intercultural environment. Most Finnish companies are not interested in face-to-face training programs abroad in an intercultural climate (only 12.9% of the Finnish companies did). They mostly prefer face-to-face training programs in the national language and online or blended training programs. Latvian companies show high interest in online training and blended programs. Interestingly, they are interested in face-to-

face training programs abroad in an intercultural environment when other countries do not. Generally, companies (except Latvian) show little interest in face-to-face training programs abroad in an intercultural environment.

Respondents were asked to estimate their interest in different collaboration possibilities and services offered by the HEIs. Companies with medium to very high willingness to educate their employees tend to show the most interest in training mediation and registration platforms (finding appropriate courses, training, videos, etc., provided by the educational institutions). The lowest interest was detected for digital solutions to create employee job profiles, collect evidence of their competencies, direct their development via higher education services, and find a scientist from the HEI to work on the company's project team. In the context of different countries, Estonian companies tend to be most interested in training mediation and registration platforms, internship and job mediation e-service (matching places and students, internship portal). Finnish companies show interest in Internship and job mediation e-service, and Latvian companies are involved in the involvement of the company's specialist in the HEI's temporary activities (guest lecturer, supervision, mentoring, member of the defence and other committees, etc.). Lithuanian companies are interested in training mediation and registration platforms, least in Internship mediation e-service. Interestingly, finding a consultant/scientist from the HEI to work on the company's project team finds high interest from Accommodation and Food Service field companies (average score 4.33 out of 5) and Professional, Scientific and Technical area companies (4.00).

The respondents were also asked to name the main success factors they see that are needed to develop university-business cooperation for companies. Answers to the open question were categorized based on the content. In general, companies recommend that there should be a mutual interest to collaborate from both sides, meaning that both parties see the benefit of the collaboration, contribute equally and are motivated. There must be one available and competent contact person/coordinator to communicate on the university side. The company must have the competence and contacts to find the proper scientists or student groups from inside the university, which might be very time-consuming. Lithuanian and Latvian companies emphasized the need for mutual interests and benefits from both partners; Estonian respondents highlighted the necessity for practical and business-oriented tasks and a reasonable level of bureaucracy. Finnish companies expect effectiveness and innovation from university-industry collaboration.

Companies cited numerous obstacles hindering university-business collaboration, ranging from differing time perceptions to resource constraints (time, people, money). Challenges included a disconnect between education and practical application, a need for tangible results, and communication gaps. Additionally, issues like high workload, conflicting interests, the negative reputation of HEIs, and bureaucratic hurdles were highlighted. Overall, the respondents identified a complex landscape of barriers affecting the efficacy of collaboration between universities and businesses. While Finnish companies prioritize practical aspects, Lithuanian and Latvian companies emphasize interpersonal and trust-related issues. On the other hand, Estonian companies point to a combination of management, bureaucratic and coordination problems. Awareness of these country-specific nuances is crucial for promoting practical cooperation between universities and companies in different contexts.

Discussion and conclusions:

Our survey examined companies' perspectives on collaboration with higher education institutions, mainly on education and skill development. Our key findings are that most companies are interested in collaborating with HEIs. There were no significant differences between our target countries, Estonia, Finland, Latvia and Lithuania, in any theme, and the challenges were similar everywhere. Generally, the most interest was shown in course mediation, registration platforms, and internship and job mediation e-services. The companies demonstrate a moderate willingness to train their employees, with a slightly higher inclination among companies engaged in international business activities. Implementing training programs in companies with 250 or more employees is also easier. Training programs in smaller companies should have more flexibility in terms of time. Only a few companies were unwilling to pay for training, even when they received a certificate.

While recognized for its potential, the collaboration between higher education institutions and industry faces significant challenges, such as conflicts in values and objectives [23]. Galán-Muros and Plewa [5] identified challenges in connections, funding, organizational culture, and internal characteristics aligned with the diverse obstacles revealed in our empirical research. The research findings validate and extend the theoretical framework, highlighting commonalities in obstacles such as differing time perceptions, resource limitations, education-practice mismatches, and communication challenges. Notably, issues like finding the right people, financial constraints, and concerns about information disclosure resonate in both theoretical and empirical contexts. Ineffective communication is a prevalent issue that hinders the development of enduring partnerships, impacting partnership development, cultural understanding, and trust, as acknowledged in theoretical and research perspectives. Overcoming these challenges is crucial, and critical enablers for fostering successful collaborations include aligning values and building trust through effective communication and relationship establishment. For companies, it is easier if the HEI has an assigned person to contact and facilitate collaboration. This increases trust and makes regular contact easier.

For both parties, it is worth developing the collaboration because it yields multifaceted benefits across education, research, and industry practices, contributing to both entities' growth, competitiveness, and sustainability. The success of collaboration hinges on engaging teams composed of individuals from academia and business to facilitate the exchange of creativity, ideas, skills, and personnel, ultimately creating mutual value over time. The partnerships foster lifelong learning within companies, address workforce reskilling and upskilling needs, and play a pivotal role in establishing innovation ecosystems that drive entrepreneurial activities and knowledge exchange. Furthermore, collaboration enhances research impact, teaching quality, and financial benefits for HEIs while providing practical solutions for real-world problems and creating opportunities for lifelong learning programs. To ensure beneficial collaboration, it is essential to set clear goals.

Our survey shows collaboration among the target countries and higher education institutions is also necessary and meaningful. The various forms of cooperation, from competence development, innovation, labour-market integration, and facility sharing to collaborative research, showcase the diverse and mutually beneficial nature of these partnerships between HEIs, enterprises and countries. In essence, the research provides tangible evidence supporting the theoretical foundation, emphasizing the need to address conflicts, communication breakdowns, and organizational barriers for successful collaboration between enterprises and HEIs.

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