Enhancing Employability Excellence: Perceptions of the Importance of Skills by Employers and Alumni

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ABSTRACT

Purpose: This study explores the alignment of higher education with labour market demands in Uzbekistan, focusing on the gap between skills offered by public Higher Educational Institutions (HEIs) and those required by employers.

Methodology/Approach: The methodology employed in this research includes a survey assessing employers' and alumni's perceptions of skill importance and performance, utilising Importance-Performance Analysis (IPA) and hierarchical cluster analysis to categorise skills and identify perception gaps.

Findings: The findings reveal a pronounced misalignment in the perceived importance and actual performance of skills, especially in the areas of digital literacy and entrepreneurship. This misalignment is further accentuated by cultural factors, generational differences, and the evolving Uzbek economy.

Research Limitation/implication: Amidst a backdrop of educational reforms and increasing competition from private and foreign universities, this research employs a survey-based importance-performance analysis and cluster analysis to gauge employer and alumni perceptions of 65 skills.

Originality/Value of paper: This misalignment is further accentuated by cultural factors, generational differences, and the evolving Uzbek economy.

Category: Research paper

Keywords: employability; higher educational institutions; skills gap; EntreComp; importance-performance analysis; cluster analysis.

Research Areas: quality management; strategic quality management

1 INTRODUCTION

This research addresses the pressing need for higher educational institutions (HEIs) to align their programmes with labour market demands, especially in the context of ongoing reforms in Uzbekistan, including the establishment of private and foreign universities. With the number of HEIs steadily increasing, public HEIs face competition, necessitating a proactive approach to their future prospects. This research focuses on the growing gap between the skills offered by public HEIs and those required by employers. Public HEIs often rely on traditional teaching methods, while employers seek graduates with skills aligned with modern technologies.

To bridge this gap, the study conducts a survey of employers' and alumni's perceptions regarding the importance of groups of skills and graduates' performance in these dimensions. This research adopts the importance-performance analysis methodology and cluster analysis. The survey, based on the methodology of the TRIGGER project (Paier, 2021) of the Erasmus Plus program of the EU, applies importance-performance analysis to assess perceptions of employers and alumni on 65 skills.

1.1 Theoretical background

Employability and skills are two strongly interlinked concepts that have received considerable attention in the context of higher education and the labour market. Employability refers to the ability of graduates to find and keep a suitable job that matches their qualifications and aspirations (Hillage and Pollard, 1998), while skills refer to the skills, knowledge, abilities and qualities of alumni that enable them to perform effectively in their professional roles (De Guzman and Choi, 2013; Varheast and Van der Velden, 2013). Employability and skills are influenced by a variety of factors, such as personal characteristics, learning outcomes, work experience, social networks and external conditions. Therefore, it is important to understand how these factors affect the employability and skills of alumni and how they can be improved through changes in higher education, appropriate interventions and policies (Yorke, 2006).

While academic qualifications and technical skills remain important determinants of employability, skills increasingly play a key role in shaping an individual's career prospects. Soft skills such as communication, teamwork, problem-solving, adaptability and emotional intelligence, alongside hard skills such as digital literacy, data analysis and technical proficiency, have risen to the fore as prerequisites for gaining and entering the labour market (Finch et al., 2016; McGuinness, Pouliakas, and Redmond, 2018). Hence, employability, initially associated with educational preparation for the labour market, has evolved into a broader concept encompassing individuals' knowledge, skills, and aptitudes used to secure and maintain employment, reflecting a societal shift to viewing unemployment as an individual issue (Brown, Hesketh, and Williams 2004). This transition is further fuelled by demographic shifts, emerging technologies, and

societal changes, highlighting the increasing significance of employability skills within the twenty-first-century economy (Yarnall and Remold, 2019).

Employers emphasise the significance of positive personal qualities such as responsibility and self-discipline, adaptability and flexibility, working independently, willingness to learn, entrepreneurship, taking responsibility for professional growth, etc. (Bacigalupo et al., 2016; Yarnall and Remold, 2019). This emphasis is contrasted by the perceptions of undergraduates, who often regard these employability skills as secondary to academic or technical knowledge (Jackson, 2016).

Discrepancies in perceptions about employability skills between employers and alumni have been already studied in education and human resource management literature (Artess, Hooley, and Mellors-Bourne, 2017). Expectancy-Value Theory offers a lens to understand these variances, suggesting that motivation to develop skills is influenced by the anticipated success and perceived value of these skills (Wigfield and Eccles, 2000). Employers, recognising the critical role of employability skills in business contexts, are motivated to seek and nurture talents possessing these abilities. In contrast, undergraduates may undervalue these skills, perceiving them as intangible and less critical than technical competencies, which leads to lower investment in developing such skills (Tomlinson, 2017). We deduct that employers hold employability skills in high regard, both in terms of expectancy and value. They might view these skills as indispensable contributors to organisational productivity, innovation, and competitiveness. Furthermore, employers see these skills as adaptable and transferrable, suitable for addressing various contexts and challenges within their businesses.

Undergraduates often view employability skills as vague and less important compared to their academic or technical knowledge. These skills, seen as intangible and difficult to measure, may not seem as crucial, leading to a lower motivation among students to develop and demonstrate them in their educational paths (Hora, 2019). This difference in attitudes creates a noticeable misalignment between the expectations of employers and those of students and alumni. Employers might feel that graduates lack key skills for the job market, while graduates may feel undervalued, believing that employers don't recognise or reward their employability skills.

There is also an information gap. Employers generally have a clearer picture of the market's skill demands, whereas students often depend on academic advice and may not fully grasp industry requirements. This asymmetry in information, along with generational differences in values and expectations, can lead to divergent views on what skills are important. For example, some industries might emphasise technical abilities, while others prioritise interpersonal skills like communication and teamwork (Hora, 2019). These elements combined offer insight into this complex issue, highlighting the need for better alignment and understanding between the educational system and the job market. These factors and concepts provide a starting point for understanding this phenomenon.

1.2 Higher Education Challenges in Uzbekistan: Key Research Questions

The importance of this research work stems from the needs of higher educational institutions to meet the demand of the labour market in order to excel in competitive market conditions. Current reforms in Uzbekistan, especially permission of implementing private and foreign universities, is providing competitive environment in the higher education sector in the country, urging public HEIs to be more alert about their future. As of January 2021, Uzbekistan had 130 HEIs, comprising 96 public, 9 private, and 25 foreign institutions. This number increased to 162 by June 2022, with a notable rise in private and foreign entities. This trend is exemplified in the Namangan region, where the number of HEIs surged from 3 in early 2021 to 8 by late 2022, including 3 new private universities. This rapid expansion, particularly in private institutions, underscores a greater agility in adapting to market needs—a responsiveness that public universities have yet to fully embrace, particularly in terms of aligning their curricula with the evolving demands of the labour market.

A significant disconnect exists between the skillsets offered by public HEIs and those demanded by employers. A case in point is the prevalent use of modern technologies in the business sector, a practice not adequately mirrored in the education imparted at many public HEIs, which often remains rooted in more traditional methodologies. This research aims to bridge this gap through a comprehensive audit of employers' and alumni's perceptions concerning vital skills and graduates' performance in these areas. The intention is to utilise survey results to refine and update curricular offerings in relevant disciplines.

This study pioneers the application of importance-performance analysis (IPA) in the Uzbek educational context. This methodological approach, inspired by the TRIGGER project under the Erasmus Plus program of the EU, has not been previously employed by Uzbek HEIs. Key research questions guiding this study include:

1. What are the essential employability skills valued by employers, and how do perceptions of these skills differ between employers and alumni?
2. What factors contribute to the disparity in the perceived importance of employability skills between employers and alumni, and how does this affect the transition from education to the labour market in Uzbekistan?
3. Are there identifiable clusters of employability skills where the differences in perception between employers and alumni are particularly marked? How can skills be effectively categorised based on the importance and performance assessments of both employers and alumni?

2 METHODOLOGY

This study employs a comprehensive methodology to analyse and categorise employability skills based on their perceived importance and performance as viewed by employers and alumni. The methodology integrates data collection, preprocessing, and importance-performance analysis (IPA), culminating in hierarchical clustering. The IPA approach, inspired by Martilla and James' use of IPA in marketing (Martilla and James, 1977), is adapted to explore two primary axes: the differing perceptions of employers and alumni, and the importance-performance matrix of various skills.

The research utilises a structured questionnaire developed in line with the Entrepreneurship Competence Framework and other relevant entrepreneurship studies. The questionnaire encompasses 65 different skills, segmented into seven categories: Ideas, Resources, Actions, Digital Skills, Financial Skills, Marketing, and Innovation Management. Additionally, it includes eight demographic questions pertaining to the respondents' professional background. Each skill is evaluated on a five-point Likert scale, ranging from 1 (not at all important) to 5 (very important). This scale facilitates a nuanced assessment of each skill's perceived importance and performance.

Importance-Performance Analysis (IPA) is a method to evaluate and improve various aspects of business and service industries. When applied to the context of skills evaluated by employers and alumni, IPA involves a two-dimensional approach. The importance dimension assesses the perceived value of a skill. Employers rate a skill based on its relevance to job performance and business success, while alumni rate it based on its impact on their educational and professional development. The performance dimension evaluates the actual proficiency in a skill. Employers judge the skill level seen in employees or candidates, and alumni consider how well their education or training equipped them with these skills.

In 2022, the IPA methodology was applied using a sample that included interviews with 94 employers and 101 alumni, focusing specifically on their perspectives regarding 65 diverse skills across the two primary dimensions of the study. Skills that are rated high in importance but low in performance might indicate areas where educational institutions need to focus more. Conversely, skills that score high in performance but low in importance might suggest areas where resources could be reallocated. By comparing and contrasting the perspectives of employers (who can articulate current industry needs) and alumni (who can provide insight into the applicability of their learned skills), IPA can help educational institutions align their curriculums more effectively with the demands of the job market.

Data collection was conducted across four prominent Uzbekistani HEIs: Termez State University, Namangan Institute of Engineering and Technology, Jizzakh Polytechnic Institute, and Tashkent Institute of Railway Engineers, partners in the TRIGGER project. The selected institutions aim to offer a diverse and representative sample of Uzbekistan's higher education landscape, emphasising the

prevalence of intra- and interregional linkages (Klasová et al., 2019) among respondents within the university's region.

A key element of the methodology is the hierarchical cluster analysis, a statistical used to group a set of objects (in this case, skills) in such a way that objects in the same group (cluster) are more similar to each other than to those in other groups. It's called 'hierarchical' because it builds a hierarchy of clusters. The optimal number of four clusters was determined using the elbow method, ensuring a robust and meaningful categorisation of the skills. Mean values are calculated for each attribute for importance and performance separately. Once the skills are clustered, the average (mean) importance rating for each skill within a cluster is calculated. This helps in understanding the overall importance of each cluster of skills. A scatterplot is used to visually compare how employers and alumni rate the importance of each skill. On this plot, one axis represents the importance ratings by employers, and the other represents those by alumni. Each point on the scatterplot corresponds to a skill. This visual representation helps identify patterns, similarities, and discrepancies in how different groups perceive the importance of various skills.

The skills under investigation are categorised under three dimensions of the EntreComp framework—Ideas, Resources, Actions—and four additional dimensions—Digital Skills, Financial Skills, Marketing Skills, and Skills in Innovation Management. The comprehensive questionnaire also includes demographic queries to contextualise the responses. Altogether, 65 different skills are studied and categorised as follows: The questionnaire was developed based on the Entrepreneurship Competence Framework and other studies on entrepreneurship (Bacigalupo et al., 2016).

1. Ideas: These are the skills related to generating, developing, and evaluating ideas and opportunities for value creation. They include creativity, innovation, critical thinking, and vision.
2. Resources: These are the skills related to mobilising and managing the resources needed to turn ideas into action. They include self-awareness, self-efficacy, resilience, and resourcefulness.
3. Actions: These are the skills related to initiating, planning, and implementing processes that create value. They include initiative, independence, goal-setting, decision-making, and collaboration.
4. Digital skills: These are the skills related to using digital technologies and data for value creation. They include digital literacy, digital marketing, automation, and artificial intelligence.
5. Financial skills: These are the skills related to understanding and managing the financial aspects of value creation. They include financial literacy, financial analysis, cash flow management, and budgeting.

6. Marketing: These are the skills related to communicating and promoting the value created to the target audience. They include persuasion, negotiation, sales, customer loyalty, and branding.
7. Innovation management: These are the skills related to designing and managing innovation processes and projects. They include innovation strategy, market analysis, project management, knowledge management, and stakeholder management.

All items were presented with a five-point Likert scale anchored with 1 = not at all important to 5 = very important. The list of all skills is provided in the Appendix.

Hierarchical cluster analysis is used to group similar data points or observations into clusters or categories based on their similarity or dissimilarity. In the context of our research on employability skills, hierarchical cluster analysis is applied to group all 65 skills based on their perceived importance and performance by employers and alumni. Four clusters were chosen based on the elbow method.

Results:

Based on a survey of employers and alumni of four universities in Uzbekistan, we are able to analyse the perceived importance and performance of several categories of skills, including entrepreneurial skills as defined by EntreComp among employers and alumni.

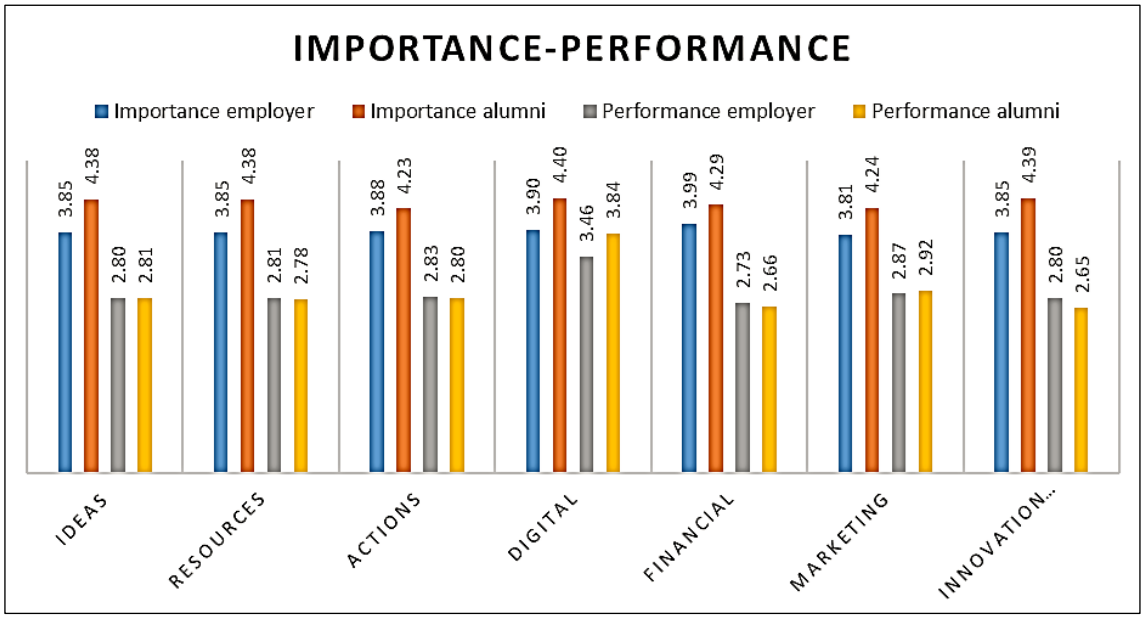

Figure 1 – Importance-performance view on categories of skills by employers and alumni

(Source: average values of skills by categories, authors' calculations based on survey data.)

While both employers and alumni recognise the high importance of employability skills, especially in areas like Digital and Financial skills, the actual performance in these skills is rated lower by both groups. This suggests a common perception gap between the importance attributed to these skills and the actual proficiency,

highlighting the need for targeted skill development and education to bridge this gap.

There is a significant difference in perception between employers and alumni regarding the importance of entrepreneurship skills, namely in the areas of Ideas, Resources, and Actions. Employers tend to place slightly lower importance on these skills compared to alumni. Despite this difference in perception, both groups agree that the performance of graduates in these skills is relatively low; This suggests that there may be a disconnect between what employers expect in terms of entrepreneurship skills and what graduates are actually equipped with. Uzbekistan has a collectivist culture, so teamwork and collaboration skills are prioritised over individual entrepreneurship.

We can interpret these gaps, the emphasis is primarily on academic or technical skills in Uzbekistan, and entrepreneurship skills may not be given the same level of importance. This could lead to lower expectations among alumni regarding the relevance of entrepreneurship skills. Cultural norms regarding career paths and job stability, employer-employee relationships prevail as traditional, and entrepreneurialism of employees is not expected. On the other hand, different generations within Uzbekistan may have varying attitudes towards entrepreneurship, with younger generations potentially being more entrepreneurial-minded than older ones.

The data highlights that digital skills are perceived as both highly important and well-performed by graduates, setting them apart from other skill categories in this particular context. Graduates are perceived to perform exceptionally well in digital skills, with significantly higher performance ratings compared to other skill categories. The distinctiveness of digital skills in this context could be attributed to several factors, such as the increasing reliance on technology in various industries and the perception that these skills are more straightforward to teach and assess. This distinction underscores the evolving nature of skills required in today's job market, where digital proficiency plays a central role.

We have previously explored various skill categories. We are now focusing on a comprehensive analysis of all 65 skills, identifying those that are considered most important and identifying areas where there are clear gaps between employers' and graduates' perceptions. We first perform a descriptive analysis to provide an overview of the critical skills making difference. Cluster analysis of individual skills will help identify groups or clusters of skills that exhibit similar patterns of importance and performance, regardless of the category to which they belong.

Table 1 – The most highlighted skills and their categories

Rank	Category	Skills	Imp. empl.	Perf. empl.	Impe. alum.	Perf. alum.	Max	Min	Max -Min
46	Digital	Deploying digital media, apps or web-based tools for marketing.	3.8	3.4	4.7	4.0	4.7	3.4	1.4
48	Digital	Understanding and using information from the web and other digital sources to identify customer needs.	4.0	3.6	4.7	3.9	4.7	3.6	1.1
20	Ideas	Getting and managing the material, non-material and digital resources needed to turn ideas into action.	4.0	2.6	4.6	2.8	4.6	2.6	2.0
62	Innovation	Analysing the market potentials of ideas and concepts for new products, processes and services.	4.0	2.6	4.6	2.5	4.6	2.5	2.1
60	Marketing	Building relationships of trust with clients and partners.	4.1	3.0	4.6	2.9	4.6	2.9	1.7
6	Ideas	Exploring and experimenting with innovative approaches.	4.0	2.8	4.5	2.9	4.5	2.8	1.8
35	Actions	Adapting to unforeseen changes.	3.9	2.8	4.5	2.8	4.5	2.8	1.8
2	Ideas	Uncovering the needs of customers and other stakeholders.	4.1	2.6	4.5	2.8	4.5	2.6	1.9
4	Ideas	Developing ideas and opportunities to create value.	3.7	2.6	4.5	2.8	4.5	2.6	1.9
8	Ideas	Judging what value is in social, cultural and economic terms.	3.8	3.0	4.5	3.0	4.5	3.0	1.5
16	Resources	Believing in one‘s own ability to influence the course of events, despite uncertainty, setbacks and temporary failures.	3.8	3.1	4.5	2.6	4.5	2.6	1.9
27	Resources	Getting the support needed to achieve valuable outcomes.	3.9	3.0	4,.5	2.8	4.5	2.8	1.7
28	Resources	Demonstrating effective communication, persuasion and negotiation.	4.,0	3.0	4.5	2.9	4.5	2.9	1.6
39	Actions	Working together and cooperate with others to develop ideas and turn them into action.	4.0	2.7	4.5	2.8	4.5	2.7	1.8
10	Ideas	Identifying suitable ways of making the most out new ideas.	4.0	2.9	4.5	2.9	4.5	2.9	1.6
24	Resources	Planning, putting in place and evaluating financial decisions over time.	3.8	2.7	4.5	3.0	4.5	2.7	1.8

Rank	Category	Skills	Imp. empl.	Perf. empl.	Impe. alum.	Perf. alum.	Max	Min	Max -Min
33	Actions	Setting long-, medium- and short-term goals.	3.8	2.8	4.5	2.8	4.5	2.8	1.7
51	Financial	Drawing conclusions and deriving potential courses of action from balance sheets.	3.7	2.5	4.5	2.6	4.5	2.5	1.9

Source: Skills out of 65 skills considered. Authors' calculations based on survey data.

Both employers and alumni prioritise specific competencies they deem essential for current and future employees. To analyse these preferences, categorical data analysis was employed, yielding the findings summarised in Table 2.

Table 2 – The most valued competencies

Competencies of Importance	Possible Reasons for High Importance
Digital Competency and Understanding Customer Needs	Emphasis on digital skills and utilising digital data for marketing and customer insights.
Resource Management and Market Analysis for Innovation	Importance of resource management for innovation and assessing market opportunities.
Trust Building and Embracing Innovative Approaches	Recognising the significance of trust in relationships and encouraging innovation.
Adaptability and Identifying Customer/Stakeholder Needs	Need for adaptability in dynamic environments and understanding customer/stakeholder needs.
Idea Development and Value Evaluation in All Aspects	Promoting innovative idea development and evaluating value in social, cultural, and economic terms.

Source: categorical data analysis

On the other hand, both employers and alumni hold a similar view regarding the least important competencies. Notably, the declining significance of competencies related to financial data processing and balance sheet analysis aligns with theoretical insights, suggesting that these skills may decrease in importance, partly due to automation trends. Similarly, the reduced emphasis on specific sales techniques and client persuasion can be explained by cultural values in Uzbekistan, such as humility and modesty, discouraging overt persuasive tactics in sales. Moreover, the collectivist culture in Uzbekistan fosters an environment where leadership and independent decision-making and risk management may not be expected from employees, reflecting the influence of cultural norms and values on competency prioritisation. Likewise, the decreased emphasis on independent reflection on successes and failures, as well as the learning process, can be

attributed to the cultural and organisational characteristics that shape expectations within the Uzbek business landscape.

In the last part, the clustering of the skills is done, so as to understand better proximity of skills, overcoming the standard categories of the skills (Table 1 and Appendix). The main focus is not on importance, but performance, in similar or different view of the employers and alumni.

Table 3 – Cluster mean values

Cluster	Importance employers	Performance employers	Importance alumni	Performance alumni
1	3.895	2.913	4.348	2.799
2	4.048	2.742	4.394	2.745
3	3.715	2.742	4.220	2.775
4	3.900	3.464	4.400	3.836

Source: Authors' calculations based on survey data analysis

Based on the importance and performance scores, we can give names to these clusters as follows:

Cluster 1 – Moderate Significance (black colour): Competencies in this cluster have moderate importance scores and may require attention for improvement in practical application. Competencies in this cluster encompass managing resources, planning financial decisions, setting goals, analysing market potentials, and developing better solutions.

Cluster 2 – High-Value Competencies (red colour): This cluster includes competencies related to digital skills, understanding customer needs, building relationships of trust, exploring innovative approaches, and adapting to unforeseen changes.

Cluster 3 – Lower Priority (green colour): This cluster contains competencies that are perceived as less important and may need development in both importance and performance. These competencies are related to handling fast-moving situations, learning with others, reflecting on successes and failures, and acting independently to achieve goals.

Cluster 4 – Specialised Competencies (blue colour): Competencies in this cluster are both highly valued and effectively demonstrated, indicating a strong alignment between expectations and performance. This cluster involves knowledge of automation and artificial intelligence, software apps, and digital tools for collaboration, managing cash flow, and calculating costs and margins.

The final scatterplot is a visual representation that provides valuable insights into the performance of skills based on the comparison of performance viewed by the employers and alumni. Skills are numbered according to rank in the Appendix and colour-coded based on their cluster affiliation.

The scatterplot differentiates between the perspectives of employers and alumni regarding performance of the alumni. We observe a distinct pattern among skills represented by the blue cluster, which falls under specialised competencies. These skills are notably positioned in the top-right corner of the scatterplot. However, it is important to highlight a noteworthy disparity: alumni tend to rate these blue cluster skills significantly higher in importance compared to how employers assess them.

On the other hand, skills categorised within the green cluster, considered less prioritised, receive the lowest performance ratings by both groups. This finding underscores the consensus between employers and alumni regarding the lower significance and performance of these skills. These skills often encompass interpersonal and soft skills indicating a potential for growth in the recognition of these skills in Uzbekistan's job market, aligning with global trends that highlight the importance of interpersonal skills in the workplace. A contrasting observation can be made for the black cluster, characterised by moderate significance. Here, skills demonstrate a better performance, and intriguingly, alumni tend to rate their performance higher than employers do.

Perhaps one of the more concerning findings pertains to the skills within the red cluster, which are highly rated in terms of importance. Surprisingly, their performance is relatively low in areas related to responsibility and empathy, as exemplified by skills such as acting responsibly (skill 13) or uncovering the needs of customers and other stakeholders (skill 2).

Alumni exhibit higher confidence in their Marketing skills, as evidenced by their own high-performance ratings, yet employers tend to rate these skills less favourably. In contrast, alumni acknowledge their need for improvement in Financial skills, a perspective that aligns with employers' evaluations.

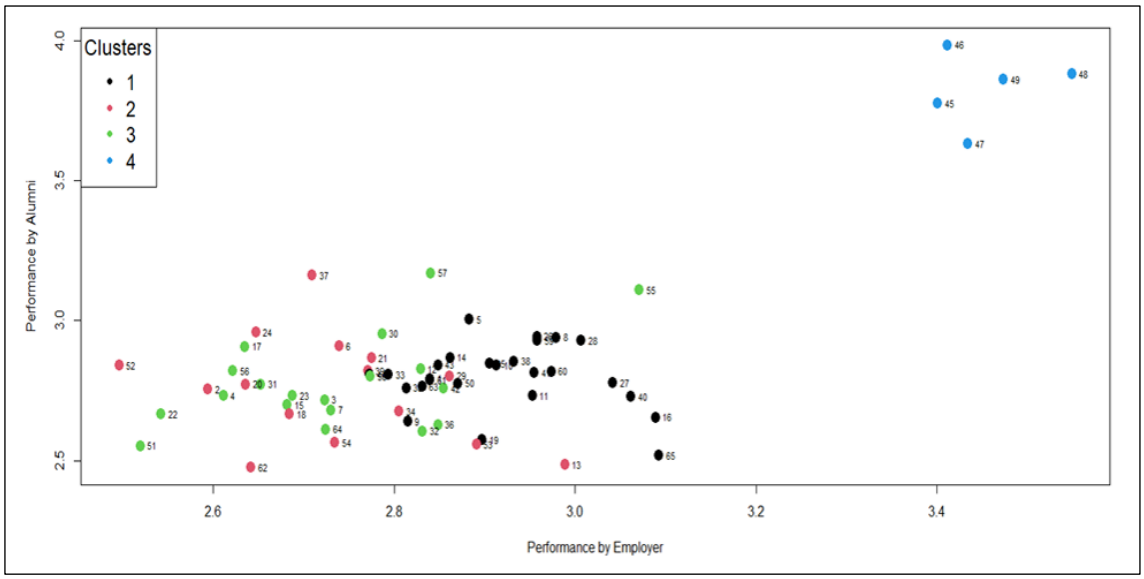

Figure 2 – Scatterplot for Performance by Employer vs. Perfomance by Alumni

3 DISCUSSION AND CONCLUSIONS

In a comprehensive survey conducted across four universities in Uzbekistan, both employers and alumni acknowledge the paramount importance of employability skills. Notably, both employers and alumni in Uzbekistan prioritise practical skills, especially those related to digital proficiency, marketing, adaptability, and financial planning. Digital skills stand out in this context as both highly important and well-performed by graduates. Their proficiency in digital skills is notably higher compared to other skill categories, reflecting the growing reliance on technology across various industries. This distinction underscores the evolving nature of skills demanded in today's job market, where digital proficiency holds a central role.

This aligns with the practical and hands-on approach often valued in business environments. Skills related to effective communication, persuasion, and negotiation have lower importance ratings. This could be because Uzbekistan's business culture may prioritise technical competence and practical skills over soft skills. Leadership skills, such as effective leadership and inspiring stakeholders, also have lower importance ratings. This may be due to the traditional hierarchical structure in some Uzbek organisations, where leadership is often centralised. Consequently, there may be less emphasis on developing leadership skills at all levels. Similarly, skills related to taking initiative for value creation and acting independently to achieve goals also have lower ratings. This may be due to cultural norms and organisational structures that prefer a more structured and hierarchical approach to decision-making.

Uzbekistan, with its unique cultural and educational heritage, differs significantly from Western educational paradigms. In Uzbekistan, there is often a stronger emphasis on traditional teaching methods and rote learning, as opposed to the more application-oriented and critical thinking-focused approaches prevalent in Western education systems. Hence, cultural factors also come into play, as Uzbekistan boasts a collectivist culture, where teamwork and collaboration skills are highly prioritised over individual entrepreneurship. This emphasis on academic or technical skills within the culture may contribute to lower expectations among alumni concerning the relevance of entrepreneurship skills. Additionally, traditional norms surrounding career paths and job stability, along with the prevalent employer-employee relationships, may deter the development of an entrepreneurial spirit among employees. Furthermore, generational differences within Uzbekistan might influence attitudes toward entrepreneurship, with younger generations possibly displaying a more entrepreneurial mindset than their older counterparts.

The economic and industrial landscapes in Uzbekistan are distinct from those in Europe and the USA. Uzbekistan's economy has been transitioning from predominantly agriculture-based to more diverse sectors, including technology and manufacturing. However, this transition is at a different stage compared to the

more developed economies of the West. Therefore, the skills deemed critical by employers in Uzbekistan might reflect an emerging market's needs, which are different from the often service-oriented economies of Europe or the USA.

The Expectancy-Value Theory posits that motivation and behaviour are influenced by the expected outcome and the value placed on that outcome. Employers, understanding the practical demands of the job market, place higher value and expectation on practical and technical skills. Alumni, on the other hand, may not fully recognise the immediate applicability and necessity of these skills, which can be attributed to a lack of exposure to real-world industry demands. There is a clear information asymmetry between employers and alumni. Employers have direct, practical insights into the skills needed in the workforce, especially in technical fields, while alumni's knowledge is primarily academic or theoretical. This gap in information leads to differing perceptions of skill importance and performance. The predominance of technical fields in the study area adds another layer to the skills gap. Technical industries often demand a specific set of skills, including both hard technical skills and soft skills applied in a technical context.

By applying concepts from Expectancy-Value Theory, it becomes evident that a significant reorientation of HEI curricula is necessary. This reorientation should encompass curriculum reform that integrates practical skills and industry engagement, an update of teaching methodologies to include more critical thinking and problem-solving, and a stronger alignment of educational outputs with the evolving needs of Uzbekistan's job market. Recognising and addressing these unique features of the Uzbek context is essential for enhancing employability excellence in the region.

APPENDIX – List of skills and their average importance and performance ratings as evaluated by employers and alumni.

Rank	Category	Skills	Imp. empl.	Perf. empl.	Impe. alum.	Perf. alum.
1	Ideas	Identifying, creating and seizing opportunities.	4.0	2.8	4.3	2.8
2		Uncovering the needs of customers and other stakeholders.	4.1	2.6	4.5	2.8
3		Analysing the contexts where value can be created.	3.7	2.8	4.2	2.7
4		Developing ideas and opportunities to create value.	3.7	2.6	4.5	2.8
5		Developing better solutions to existing and new challenges.	3.9	2.9	4.4	3.0
6		Exploring and experiment with innovative approaches.	4.0	2.8	4.5	2.9
7		Developing a vision to turn ideas into action.	3.8	2.7	4.3	2.7
8		Judging what value is in social, cultural and economic terms.	3.8	3.0	4.5	3.0
9		Recognising the potential an idea has for creating value.	3.8	2.8	4.2	2.7
10		Identifying suitable ways of making the most out new ideas.	4.0	2.9	4.5	2.9
11		Assessing the consequences of ideas that bring value on the target community, the market, society and the environment.	3.7	2.9	4.4	2.7
12		Reflecting on how sustainable long-term social, cultural and economic goals are.	3.7	2.8	4.3	2.8
13		Acting responsible.	4.2	3.0	4.4	2.5
14	Resources	Reflecting on your needs, aspirations and wants in the short, medium and long term.	3.7	2.9	4.4	2.9
15		Identifying and assess one's own individual and group strengths and weaknesses.	3.7	2.7	4.3	2.7
16		Believing in one's own ability to influence the course of events, despite uncertainty, setbacks and temporary failures.	3.8	3.1	4.5	2.6
17		Being determined to turn ideas into action and satisfy one's own need to achieve.	3.7	2.6	4.2	2.9

Rank	Category	Skills	Imp. empl.	Perf. empl.	Impe. alum.	Perf. alum.
18		Being prepared to be patient and keep trying to achieve long-term individual or group aims.	4.0	2.7	4.4	2.6
19		Being resilient under pressure, adversity, and temporary failure.	3.9	2.9	4.3	2.6
20		Getting and managing the material, non-material and digital resources needed to turn ideas into action.	4.0	2.6	4.6	2.8
21		Making the most of limited resources.	4.1	2.8	4.4	2.8
22		Getting and managing the competences needed at any stage, including technical, legal, tax and digital competences through suitable partnerships, networking, outsourcing and crowd-sourcing.	3.8	2.5	4.2	2.6
23		Estimating the cost of turning an idea into a value-creating activity.	3.7	2.7	4.2	2.7
24		Planning, putting in place and evaluating financial decisions over time.	3.8	2.7	4.5	3.0
25		Managing financing to make sure my value-creating activity can last over the long term.	3.9	2.9	4.3	2.9
26		Inspiring and enthusing relevant stakeholders.	3.9	3.0	4.3	2.9
27		Getting the support needed to achieve valuable outcomes.	3.9	3.0	4.5	2.8
28		Demonstrating effective communication, persuasion and negotiation.	4.0	3.0	4.5	2.9
29		Demonstrating effective leadership.	4.1	2.9	4.2	2.8
30	Actions	Initiating processes that create value.	3.5	2.8	3.9	3.0
31		Taking up challenges.	3.7	2.7	4.4	2.8
32		Acting and working independently to achieve goals, stick to intentions and carry out planned tasks.	3.6	2.8	4.1	2.6
33		Setting long-, medium- and short-term goals.	3.8	2.8	4.5	2.8
34		Defining priorities and action plans.	4.1	2.8	4.1	2.7
35		Adapting to unforeseen changes.	3.9	2.8	4.5	2.8

Rank	Category	Skills	Imp. empl.	Perf. empl.	Impe. alum.	Perf. alum.
36		Making decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes.	3.8	2.9	3.9	2.6
37		Testing ideas and prototypes from the early stages to reduce risks of failing.	4.0	2.7	4.3	3.1
38		Handling fast-moving situations promptly and flexibly.	4.0	2.9	4.2	2.9
39		Working together and cooperate with others to develop ideas and turn them into action.	4.0	2.7	4.5	2.8
40		Networking with others to organise skills and expertise needed for goal attainment.	4.0	3.1	4.3	2.7
41		Solving conflicts and facing up to competition positively when necessary.	4.1	3.0	4.3	2.8
42		Using any initiative for value creation as a learning opportunity.	3.7	2.9	4.2	2.7
43		Learning with others, including peers and mentors.	3.9	2.8	4.3	2.8
44		Reflecting and learning from both success and failure (your own and other people's).	4.0	2.8	4.1	2.8
45	Digital	Using data and information from digital environments to assess the potential of ideas.	3.7	3.4	4.1	3.8
46		Deploying digital media, apps or web-based tools for marketing.	3.8	3.4	4.7	4.0
47		Using knowledge on automation and artificial intelligence for improving products, processes and services.	3.8	3.5	4.2	3.6
48		Understanding and using information from the web and other digital sources to identify customer needs.	4.0	3.6	4.7	3.9
49		Using software apps and digital tools for managing collaboration with teams and partners.	4.1	3.5	4.2	3.9
50	Financial	Knowing how to read and analyse a balance sheet.	3.9	2.9	4.2	2.7
51		Drawing conclusions and deriving potential courses of action from balance sheets.	3.7	2.5	4.5	2.6

Rank	Category	Skills	Imp. empl.	Perf. empl.	Impe. alum.	Perf. alum.
52		Managing cash flow.	4.1	2.5	4.2	2.9
53		Identifying and meeting the organisation's financial needs in the short and long term	4.0	2.9	4.4	2.5
54		Calculating costs, cost prices, and margins.	4.2	2.7	4.2	2.6
55	Marketing	Deploying sales arguments with a view to persuading clients to buy.	3.7	3.0	4.0	3.1
56		Negotiating while using specific techniques	3.7	2.6	4.4	2.8
57		Developing commercial strategies and means whereby to attract new clients	3.7	2.8	4.2	3.1
58		Using specific techniques to encourage client loyalty.	3.6	2.8	4.1	2.8
59		Creating a positive image of the firm, promoting an ethical image of the firm.	4.0	3.0	4.2	2.9
60		Building relationships of trust with clients and partners.	4.1	3.0	4.6	2.9
61	Innovation management	Developing innovation strategies.	3.9	2.8	4.3	2.8
62		Analysing the market potentials of ideas and concepts for new products, processes and services.	4.0	2.6	4.6	2.5
63		Planning, implementing and controlling innovation processes with project management methods.	3.9	2.8	4.3	2.7
64		Selecting and applying methods for the exchange of ideas and knowledge in the innovation process.	3.8	2.7	4.4	2.6
65		Managing collaboration between customers, suppliers and development partners in the innovation process.	3.7	3.0	4.3	2.5

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