

Factors influencing students' access to the labor market: A case study of the school of economics, Hanoi university of industry

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Abstract

This study analyzes the factors affecting students' access to the labor market at the School of Economics, Hanoi University of Industry. The research adopts a mixed-method approach, in which qualitative research is used to adjust the measurement scales and research model, while quantitative research is conducted based on 313 valid survey responses and processed using SPSS 27. The results indicate that the research model is statistically significant, and all factors positively influence students' labor market accessibility, with practical experience and soft skills having the strongest effects. Based on these findings, the study highlights the importance of enhancing practical experience and soft skills development to improve students' employability after graduation.

Keywords: Accessibility; Labor Market; students; Hanoi university of industry

1. Introduction

In the context of an increasingly competitive labor market, students' access to employment has become a critical concern for both educational institutions and policymakers. Universities are expected not only to provide academic knowledge but also to equip students with practical skills and competencies required by employers. However, many graduates still face difficulties in securing suitable jobs after graduation. Therefore, identifying the key factors influencing students' access to the labor market is essential. This study aims to examine these factors through a case study at the School of Economics, Hanoi University of Industry, thereby providing implications to improve students' employability.

2. Theoretical background and proposed research model

2.1. Theoretical background

The labor market is defined as a space in which workers supply labor while employers generate hiring demand, with wages serving as the equilibrium price. Institutional factors such as legal frameworks, labor unions, and employment policies play a regulatory role in shaping market dynamics [20,5]. Employment is approached from a multidimensional perspective, encompassing job quantity, income quality, job security, and working conditions [9,15]. These two concepts are complementary. Job-seeking ability reflects individual competence, whereas labor market access emphasizes the ability to overcome barriers in order to obtain suitable employment opportunities [1,6,15,19]. Previous studies indicate that practical experience, social networks, and educational signaling play significant roles in highly competitive labor market contexts. Various theoretical frameworks have been applied, including human capital theory [6], signaling theory [18,3], dual labor market theory [11], organizational culture theory [8,7], and school-to-work transition theory [17,4].

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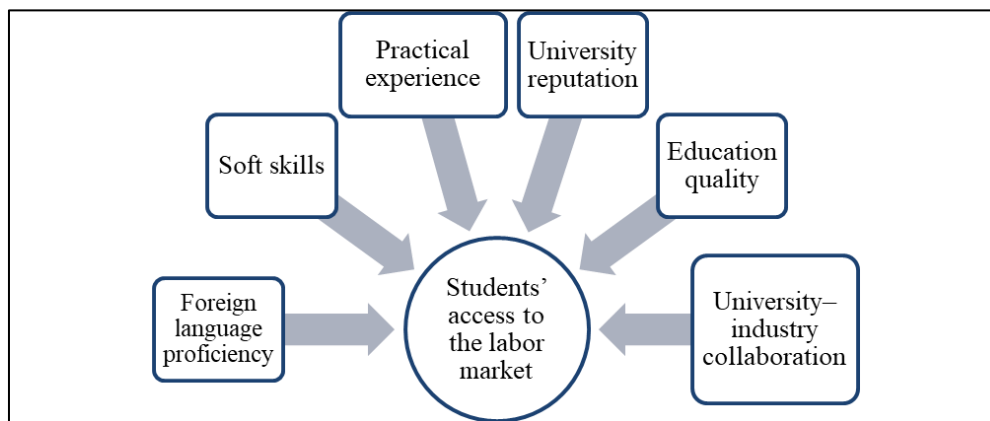
Empirical research suggests that students' access to employment is influenced by multiple factors. Human capital serves as a fundamental foundation, as investments in education, training, and digital skills enhance employment opportunities [6,12,15,27]. In addition, soft skills are considered a key determinant and are often valued more highly than theoretical knowledge [14,16,24,26]. Social capital and professional networks also play a crucial role in expanding access to job-related information [2,21,25]. Furthermore, academic performance and university reputation contribute to improving employability [3,10,18,22,23]. Domestic studies likewise confirm the importance of training quality, soft skills, and university-industry collaboration [23,24,28].

2.2. Research hypotheses

- H1: Foreign language proficiency has a positive effect on students' access to the labor market at the School of Economics, Hanoi University of Industry.
- H2: Soft skills have a positive effect on students' access to the labor market at the School of Economics, Hanoi University of Industry.
- H3: Practical experience has a positive effect on students' access to the labor market at the School of Economics, Hanoi University of Industry.
- H4: University reputation has a positive effect on students' access to the labor market at the School of Economics, Hanoi University of Industry.
- H5: Education quality has a positive effect on students' access to the labor market at the School of Economics, Hanoi University of Industry.
- H6: University-industry collaboration has a positive effect on students' access to the labor market at the School of Economics, Hanoi University of Industry.

2.3. Research model

Building upon previous studies, this research proposes a model that examines the relationships between independent variables, including foreign language proficiency, soft skills, education quality, university reputation, and university-industry collaboration, and the dependent variable, namely students' access to the labor market.



(Source: Developed by the authors)

Figure 1 Proposed Research Model

3. Data and research methodology

The study utilizes both secondary and primary data. Secondary data were collected from prior research to establish the theoretical foundation and develop the proposed model. Primary data were gathered through a survey of students at the School of Economics, Hanoi University of Industry using a structured questionnaire with a five-point Likert scale. A total of 313 valid responses were obtained through a non-probability sampling method.

A mixed-methods approach was employed, combining both qualitative and quantitative research. The qualitative phase was conducted to develop the research model, refine measurement scales, and formulate hypotheses. The quantitative phase was carried out using SPSS 27, including analyses such as Cronbach's Alpha, Exploratory Factor Analysis (EFA), Pearson correlation, and multiple linear regression. In addition, adjusted R^2 , the F-test, the Durbin-Watson statistic, and the Variance Inflation Factor (VIF) were used to evaluate the model and test the underlying assumptions.

4. Results and discussion

4.1. Reliability analysis using cronbach's alpha

Table 1 Results of reliability testing using Cronbach's Alpha

Variables	Number of items	Accepted items	Cronbach's Alpha	Cronbach's Alpha if item deleted	Minimum item-total correlation
Foreign language proficiency	4	4	0.843	0.837	0.588
Soft skills	4	4	0.869	0.855	0.668
Practical experience	4	4	0.826	0.808	0.590
University reputation	4	3	0.682	0.640	0.455
Education quality	4	4	0.899	0.885	0.730
University-industry collaboration	4	4	0.914	0.905	0.757
Students' access to the labor market	6	6	0.907	0.901	0.668

(Source: Authors' analysis)

The reliability test results indicate that all measurement scales have Cronbach's Alpha coefficients greater than 0.7, confirming acceptable internal consistency. The item-total correlation coefficients of all observed variables exceed 0.3; therefore, no variables were removed from the analysis. Although some variables exhibit relatively lower correlations, these values remain within acceptable thresholds and are retained. Furthermore, the Cronbach's Alpha values would decrease if any individual item were removed, suggesting that all items contribute positively to the overall reliability of the scales. Therefore, the measurement scales are considered reliable and suitable for subsequent analyses, including Exploratory Factor Analysis (EFA) and multiple regression.

4.2. Exploratory factor analysis (EFA)

Table 2 Results of exploratory factor analysis (EFA) of observed variables

	Factor					
	1	2	3	4	5	6
HT3	0.855					
HT1	0.823					
HT4	0.820					
HT2	0.797					
CLDT2		0.868				
CLDT4		0.855				
CLDT1		0.828				
CLDT3		0.822				
KNM3			0.802			
KNM2			0.796			
KNM1			0.748			
KNM4			0.656			

NN1				0.847		
NN4				0.833		
NN3				0.732		
NN2				0.644		
KNTT4					0.792	
KNTT3					0.789	
KNTT2					0.737	
KNTT1					0.569	
TH3						0.828
TH2						0.758
TH1						0.750
<i>KMO= 0,871; Sig= 0,000; Total variance explained = 72,045%</i>						

Note: Foreign language proficiency (NN); Soft skills (KNM); Practical experience (KNTT); University reputation (THNT); Education quality (CLDT); University-industry collaboration (HT). (Source: Authors' analysis)

The EFA results indicate that KMO measure is 0.871, confirming the suitability of the data for factor analysis. Bartlett's Test of Sphericity is statistically significant (Sig. = 0.000), indicating that the variables are sufficiently correlated to proceed with factor analysis. The total variance explained reaches 72.045%, demonstrating strong explanatory power of the extracted factors. Additionally, all observed variables have factor loadings greater than 0.4; therefore, no items are removed from the model. Overall, the results suggest a good level of convergent validity, and the extracted factors are consistent with the proposed research model.

4.3. Correlation Analysis

Table 3 Pearson correlation matrix and significance levels among variables

	Students' access to the labor market	Foreign language proficiency	Soft skills	Practical experience	University reputation	Education quality	University-industry collaboration
Students' access to the labor market	1	0.521**	0.731**	0.764**	0.129*	0.432**	0.554**
		<0.001	<0.001	<0.001	0.023	<0.001	<0.001
Foreign language proficiency	0.521**	1	0.475**	0.431**	0.015	0.364**	0.458**
	<0.001		<0.001	<0.001	0.794	<0.001	<0.001
Soft skills	0.731**	0.475**	1	0.615**	0.076	0.376**	0.525**
	<0.001	<0.001		<0.001	0.183	<0.001	<0.001
Practical experience	0.764**	0.431**	0.615**	1	0.074	0.258**	0.465**
	<0.001	<0.001	<0.001		0.190	<0.001	<0.001
University reputation	0.129*	0.015	0.076	0.074	1	0.069	-0.017
	0.023	0.794	0.183	0.190		0.221	0.766
Education quality	0.432**	0.364**	0.376**	0.258**	0.069	1	0.366**
	<0.001	<0.001	<0.001	<0.001	0.221		<0.001

University-industry collaboration	0.554**	0.458**	0.525**	0.465**	-0.017	0.366**	1
	<0.001	<0.001	<0.001	<0.001	0.766	<0.001	

(Source: Authors' analysis)

The Pearson correlation results indicate that all independent variables are significantly associated with the dependent variable (Sig. < 0.05), with most relationships being highly significant (Sig. < 0.001). University reputation shows a weaker correlation compared to the other variables. Among the factors, practical experience and soft skills exhibit the strongest correlations with students' access to the labor market. These are followed by university-industry collaboration and foreign language proficiency. In addition, most independent variables are positively correlated with one another, suggesting a certain degree of association among the explanatory variables. However, university reputation demonstrates relatively weak relationships with the remaining factors.

4.4. Regression Analysis

The regression results indicate that all independent variables are statistically significant (Sig. < 0.05), and no multicollinearity issues are detected (VIF < 2). All regression coefficients are positive, indicating that the independent variables have a positive effect on students' access to the labor market. Among the variables, practical experience has the strongest impact ($\beta = 0.455$). This finding suggests that employers tend to prioritize practical experience and work-related competencies over university reputation, which is consistent with the applied-oriented training approach at Hanoi University of Industry.

Table 4 Regression coefficients of independent variables

		Unstandardized Coefficients		Standardized Coefficients (Beta)	t	Sig	Multicollinearity statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.253	0.165		-1.530	0.127		
	Foreign language proficiency	0.076	0.031	0.089	2.469	0.014	0.675	1.482
	Soft skills	0.281	0.038	0.305	7.376	<0.001	0.509	1.966
	Practical experience	0.453	0.039	0.455	11.741	<0.001	0.578	1.730
	University reputation	0.045	0.021	0.063	2.131	0.034	0.983	1.017
	Education quality	0.117	0.030	0.128	3.866	<0.001	0.789	1.268
	University-industry collaboration	0.098	0.038	0.096	2.577	0.010	0.628	1.593
R ² = 0,734; Adjusted R ² = 0,729; Durbin- Watson= 2,071								

(Source: Authors' analysis)

Standardized Regression Equation:

$$Z(\text{TQ}) = 0.455 \cdot Z(\text{Practical experience}) + 0.305 \cdot Z(\text{Soft skills}) + 0.128 \cdot Z(\text{Education quality}) + 0.096 \cdot Z(\text{University-Industry collaboration}) + 0.089 \cdot Z(\text{Foreign language proficiency}) + 0.063 \cdot Z(\text{University reputation})$$

5. Discussion

This study surveyed 313 students from the School of Economics, Hanoi University of Industry to identify factors influencing students' access to the labor market. The data were analyzed using Cronbach's Alpha, Exploratory Factor Analysis (EFA), Pearson correlation, and multiple linear regression. The results indicate that the measurement scales

are reliable. The EFA extracted six factors with a total variance explained of 72.045%, while the dependent variable accounts for 68.280%. The regression results show that all factors have positive effects on labor market access, and the model explains 72.9% of the variance. Among the variables, practical experience and soft skills exert the strongest influence. The remaining factors, including education quality, university–industry collaboration, foreign language proficiency, and university reputation, also have positive but relatively weaker effects.

6. Conclusions

The findings reveal that students' access to the labor market is influenced by individual competencies, the educational environment, and the level of engagement with enterprises. Among these, practical experience and soft skills play the most critical roles. This study provides a basis for educational institutions to adjust their training programs toward a more practice-oriented and skills-based approach, while also helping students enhance their competitiveness in the labor market.

Recommendations

Based on the findings, several recommendations are proposed to improve students' access to the labor market. For students, it is essential to proactively develop personal competencies by gaining practical experience through internships, part-time jobs, and project participation. At the same time, students should enhance their soft skills, strengthen their professional knowledge, and improve foreign language proficiency in alignment with their career orientation. In addition, developing clear career goals and expanding professional networks with enterprises can facilitate access to job information and improve employability. For universities, it is necessary to innovate training programs toward practical relevance, strengthen experiential learning activities, and enhance collaboration with enterprises. Integrating soft skills training into formal curricula and continuously updating course content based on labor market demands and employer feedback are also essential. Furthermore, improving foreign language training aligned with career orientation, along with strengthening university reputation based on graduate outcomes and employment rates, will contribute to enhancing students' competitiveness.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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