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The Role of Employability Skills and University Support towards Employability: A Mediation of Self-efficacy

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Abstract

The study aims to delve into the factors influencing self-perceived employability among university students in Vietnam, while also scrutinizing potential gender disparities in these determinants. Employing a cross-sectional design, the research employs structural equation modeling to analyze data gathered from 306 students across various academic disciplines. The study evaluates constructs including perception of employability skills, perception of university support, self-efficacy, and self-perception of employability. Furthermore, a multigroup analysis is conducted to discern any variations in the relationships between these constructs across genders. Results from the structural equation modeling unveil noteworthy gender differences in these relationships. Specifically, while the perception of employability skills significantly impacts the self-perception of employability among males, self-efficacy emerges as a more influential predictor among females. Additionally, the multigroup analysis suggests that the influence of perception of university support on self-perception of employability remains consistent across genders. Nonetheless, a slight gender discrepancy is observed in the relationship between perception of employability skills and self-efficacy, prompting further exploration. These findings illuminate the intricate interplay of employability-related factors and gender in shaping students' perceptions of their employability. The study advocates for tailored interventions that account for these gender-specific influences to enhance employability outcomes among university students.

Keywords: employability; employability skills; self-efficacy; Vietnam

1. Introduction

In today's globally competitive knowledge economy, where change is a constant, the importance of employability is widely acknowledged by policymakers and scholars (Peeters et al., 2019; Farashah et al., 2023). Employability has become a global priority for policymakers, who must adapt education policies to address global skill mismatches and large-scale unemployment (Singh & Ehlers, 2020; Petruzziello et al., 2023). The primary drivers of these challenges are the Industrial Revolution 4.0 and Globalization 4.0, which are causing structural shifts in labor markets (Schwab, 2017). Consequently, employability has garnered significant attention from recruiters, higher education institutions (HEIs), and employees. HEIs must prepare students for jobs that do not yet exist, technologies that have yet to be invented, and problems that have not yet been identified (Kumar, 2007). Solving the employment crisis and lowering the unemployment rate is a significant challenge for countries worldwide, especially with the rapid development of new technologies such as artificial intelligence and automation, and the exceedingly tricky environment of the COVID-19 outbreak

(Römgens et al., 2020). The rapid advancements in technology, new business models, expanded globalization, and the increased demand for productivity, creativity, and flexibility have heightened scholarly interest in employability in the 21st century (De Vos et al., 2021; Ren et al., 2024). Once in the labor market, graduates must continue developing their employability to secure and maintain employment (Akkermans et al., 2013). Economic, political, and social pressures thus compel policymakers and higher education professionals to prioritize employability in their strategic agendas. This focus has intensified since the 2008 economic crisis, which impacted public funding for higher education and exacerbated graduates' challenges in connecting with the globally competitive labor market (Pegg et al., 2012; Artess et al., 2017). The topic of employability has garnered significant scholarly attention, building on a rich history (Forrier et al., 2015). Employability has been defined in various, yet often related, ways by researchers from different academic backgrounds (Forrier & Sels, 2003; Thijssen et al., 2008). Despite these diverse approaches, a common criticism is that the concept of employability is vague and lacks clear, specific meaning. Consequently, several authors from different disciplines have emphasized the need for more unified definitions and integrated conceptual frameworks for employability (Helyer & Lee, 2014; Smith et al., 2016; Peeters et al., 2019).

Employability is a critical concern for university students worldwide, influencing their career prospects and overall professional development (Rothwell & Rothwell, 2017; Harari et al., 2023). In the context of higher education, self-perceived employability, or how students perceive their own employability skills and job prospects, has emerged as an essential area of study. Strong employability not only enables individuals to secure and maintain employment but also enhances their opportunities in both internal and external job markets (Forrier & Sels, 2003). Despite HEIs aiming to prepare graduates for professional careers, global skill mismatches and large-scale unemployment persist (Weerathunga & Mallawarachchi, 2020). Understanding the determinants of self-perceived employability is particularly important in developing countries like Vietnam, where economic and social conditions present unique challenges and opportunities for young graduates (Ho et al., 2023).

Previous studies on employability have some limitations, often ignoring contextual factors and focusing solely on individual characteristics. Additionally, most research has been conducted in Western or developed countries, which may not fully apply to other contexts. Factors affecting employability can vary significantly between countries. Due to the complexity of the concept of employability, previous studies have primarily focused on theoretical models, with quantitative studies becoming more common only in recent years. This study fills this gap by investigating the key determinants of self-perceived employability among Vietnamese university students, with a particular focus on gender differences. The significance of this study lies not only in its contribution to the academic literature on employability but also in its practical implications. By identifying the factors that most strongly influence students' perceptions of their employability, the research can inform the development of targeted interventions and support programs. These initiatives can help bridge the gap between education and employment, ensuring that graduates are better prepared to meet the demands of the job market and succeed in their careers.

2. Literature Review and Hypotheses Development

2.1. Self-perception of Employability

In the context of the 4.0 technology revolution, employability has become a focal point for policymakers and researchers. The concept is multifaceted, with numerous interpretations that often share common elements. According to Yorke (2006) and the Confederation of British Industry (2009), employability encompasses providing students with the traits, skills, and knowledge necessary to secure and excel in employment, benefiting themselves, the workforce, the community, and the economy. Rothwell (2015) examined employability from four perspectives: political, educational, human resource management, and personal. Rothwell argued that the first three perspectives have limitations and emphasized the importance of the personal perspective, which focuses on an individual's ability to find and pursue suitable employment. This perspective includes three critical approaches: competence-based employability, individual attributes-based employability, and self-perception of employability (Han & Geng, 2023). The self-perception approach offers

a multidimensional view of employability, considering both internal factors, such as an individual's assessment of their capabilities and talents, and external factors, such as labor market conditions and the relevance of their qualifications. In this study, self-perception of employability is defined as each student's perception of their ability to be selected by employers for roles that match their capabilities, benefiting themselves, their employers, and the labor market (McLean et al., 2023).

This study focuses on students' self-perception of employability and draws from studies at the micro and meso levels, excluding the macro level. At the micro level, Römgens et al. (2020) demonstrated that definitions of employability depend on an individual's perceived competence to seek and maintain employment throughout their career. Higher education research prepares students for the uncertainties and challenges they will face in their careers, while workplace learning involves developing knowledge, skills, and attitudes that contribute to effective labor market performance. Räty et al. (2020) found that both historical positioning and self-efficacy positively influence students' perceptions of their employability. At the meso level, Rothwell and Rothwell (2017) indicated that employability depends on personal and professional traits assessed both internally and externally to the labor market. Alvarez-Gonzalez et al. (2017) expanded on this by including factors related to the university and society. In Vietnam, Hung and Phuong (2019) research is particularly notable for examining how students perceive employability and the relationship between job skills and employability from the students' perspective.

2.2. Perception Employability Skills

Perception of employability skills involves understanding the competencies and attributes that make an individual attractive to employers. The twenty-first-century skill framework, widely adopted by the OECD, the European Union, the United States, and Australia, identifies essential skills such as collaboration, ICT literacy, social and cultural skills, creativity, critical thinking, and problem-solving (Ahonen & Kinnunen, 2015). Researchers propose a range of skills that affect employability, including connecting (Paladan, 2015; Izquierdo et al., 2005), communicating (Wiechetek & Širca, 2013), confidence (Bautista et al., 2007), teamwork (Wiechetek & Širca, 2013), learning (Asonitou, 2015), and decision-making (Izquierdo et al., 2005). Pereira (2015) investigates the alignment between employability skills and their effectiveness in recruitment, selection, and utilization, identifying ten essential competencies that contribute to successful employment. Communication skills are paramount, encompassing the ability to listen actively, articulate and present ideas clearly, persuade others, and negotiate effectively. Personal skills such as self-confidence, a positive attitude, and a strong work ethic are also crucial. Additionally, interpersonal skills are important for working collaboratively within teams, managing conflicts, and networking effectively. Intercultural skills, including proficiency in multiple languages and the ability to work in culturally diverse teams, further enhance employability. Learning skills, characterized by independent learning, curiosity, and a drive for continuous learning, are vital. Entrepreneurial skills, which involve flexibility, opportunity-seeking, and risk-taking, are essential for adapting to dynamic environments. Thinking skills, such as critical, analytical, and strategic thinking, are necessary for effective problem-solving and decision-making. Proficiency in information, media, and technology skills, including the ability to acquire and process information, is increasingly important. Virtual collaboration skills, which involve working productively within virtual teams and environments, are crucial in a digital landscape. Finally, technical skills related to specific professional fields are necessary for accomplishing specialized tasks. Research by Pool (2017), and Hung and Phuong (2019) shows that valuing job skills positively affects students' perceptions of their employability. Properly assessing and developing these skills can significantly enhance students' chances of success in recruitment and improve their self-efficacy (Pool & Sewell, 2007). Therefore, this study proposes the following hypotheses:

H1a: Perception of employability skills has a positive effect on self-perception of employability.
H1b: Perception of employability skills has a positive effect on self-efficacy.

2.3. Perception University Support

Perception of university support encompasses how students and stakeholders view the effectiveness and availability of resources and services provided by universities to enhance student success and well-being. Effective university support systems are crucial for fostering a positive educational experience and helping students achieve their academic and personal goals. Numerous studies suggest that research on employability should consider external factors, not just individual factors (Gamboa, Lerin, Botella & Silla, 2007; Rothwell & Arnold, 2007; Rothwell, Herbert & Rothwell, 2008; Thijssen, Van der Heijden & Rocco, 2008; Rothwell, Jewell & Hardie, 2009). According to Alvarez-Gonzalez (2017), external factors include organizational factors, such as university support, and social factors, related to the labor market. Motivation to enter higher education often involves gaining deep knowledge in a specific field, achieving higher qualifications, and securing good job opportunities, as better-educated individuals typically have superior job prospects (Johnes, 2006; Han & Geng, 2023). However, the employability of many students is hindered by inadequate preparation (Walter et al., 2006). Previous studies have suggested that some universities have supportive policies that promote students' job-seeking activities, such as technology transfer offices, expert advisory services (Mian, 1996), material resources (Mian, 1997), and university investment funds (Lerner, 2004). To increase employability, it is necessary to enhance the curriculum by providing hands-on or "learning by doing" experiences, including opportunities for students to conduct feasibility studies and develop simulation plans (Cox et al., 2002). Additionally, universities are creating supportive environments by providing resources such as networks of experts and alumni who can offer specialist knowledge and clear career orientation (Kraaijenbrink et al., 2010). However, empirical studies identifying supportive factors in universities remain limited (Walter et al., 2006). Although universities can assist in many aspects measured objectively, it is essential to assess their impact on students' perceptions (Kraaijenbrink et al., 2010). University support can enhance cognition by improving students' knowledge, building confidence, and promoting self-efficacy (Krueger & Brazeal, 1994). Thus, university programs and support systems may play a crucial role in enhancing students' employability. The activities and outcome standards set by universities help students develop personal qualities and provide connections with potential employers and job support (Mourshed et al., 2013). Therefore, this study proposes the following hypotheses:

H2a: Perception of university support has a positive effect on self-perception of employability.
H2b: Perception of university support has a positive effect on self-efficacy.

2.4. Self-efficacy

Self-efficacy is initially defined as an individual's belief in their ability to perform a particular behavior (Bandura, 1977). This concept has evolved and been applied to various contexts to reflect one's ability to organize and execute actions to achieve specific goals (Bandura, 1982; Bandura, 2000). It is distinct from other concepts like self-concept, self-esteem, and outcome expectations, enhancing the prediction of academic and achievement-related outcomes (Zimmerman, 2000). Self-concept encompasses broader self-perceptions (Schunk, 1991), whereas self-efficacy is about belief in achieving specific tasks (Bong & Skaalvik, 2003). Self-esteem involves an emotional evaluation of oneself, while self-efficacy assesses task-specific abilities (Gist & Mitchell, 1992). The relationship between self-efficacy and outcome expectations remains complex (Williams, 2010). Outcome expectation refers to the estimated likelihood of success, considering potential gains and losses (Eccles & Wigfield, 2002), while self-efficacy pertains to the confidence in performing the task (Bandura, 1977). In essence, self-efficacy is an individual's confidence in their ability to handle specific situations, such as finding a suitable job (Wittekind et al., 2010). Research shows that high self-efficacy correlates with better performance in both professional (Kim et al., 2015) and academic settings (Chou & Shen, 2012). Individuals with high self-efficacy tend to effectively showcase their skills and qualities in job searches (Onyishi et al., 2015). Thus, enhancing self-efficacy is a key strategy for improving employability (Qenani et al., 2014). Self-efficacy serves two roles: (1) as an independent variable directly influencing employability, and (2) as a mediating variable assessing the impact of other factors on students' employability (Alvarez-Gonzalez et al., 2017). Acquiring work skills boosts self-efficacy, increasing confidence in interviews and making a positive impression on employers (Pool, 2017; Pool & Sewell, 2007). Employers may consider qualifications and

internship experience. University support in granting degrees and providing professional practice opportunities enhances self-efficacy and employability (Pool, 2017; Trivedi, 2016; Basalt et al., 2020). Therefore, this study proposes the following hypotheses:

H4: Self-efficacy mediates the relationship between perception of employability skills and self-perception of employability.
H5: Self-efficacy mediates the relationship between perception of university support and self-perception of employability.
H3: Self-efficacy has a positive effect on self-perception of employability.

Additionally, Räty et al. (2020) highlight the influence of gender on perceived employability, noting that males often have a stronger sense of their employability than females. However, the male participation rate in the study was significantly lower than that of females, which might affect representativeness. Marsh (1989) found that boys generally have higher confidence in their abilities from primary school onwards. Hung and Phuong (2019) research in Vietnam also identified gender differences in the perception of job skills' importance. Thus, this study uses gender as a moderator to examine how different factors influence students' self-perception of employability. The following hypothesis is proposed:

H6: There is a difference in the impact of the three factors on self-perception of employability between males and females.

Figure 1 presents the research model.

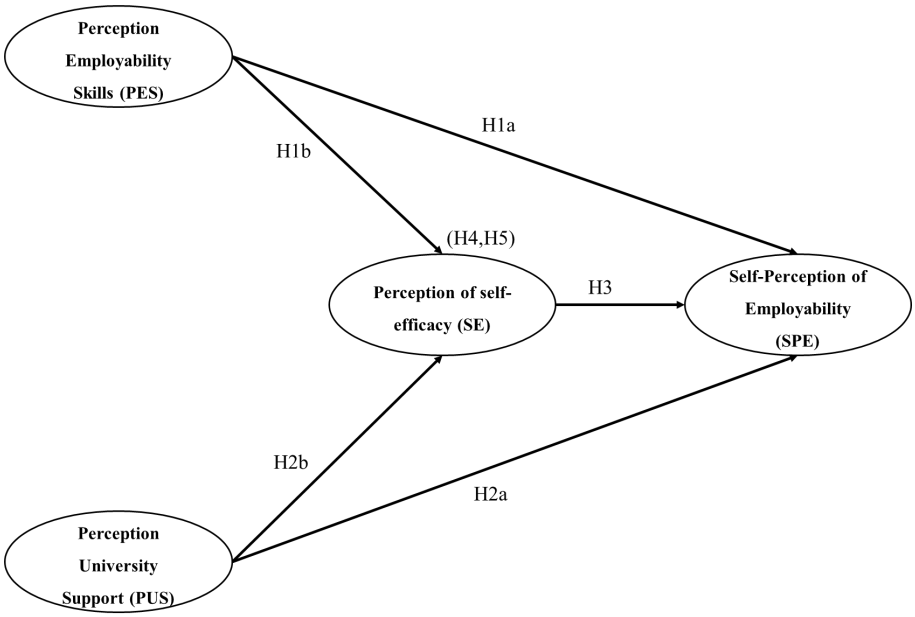

Figure 1. Research model.

3. Methodology

The study collected data from current university 306 students in Vietnam between December 2023 and April 2024 using an online survey. This method ensured accessibility and convenience for participants. All factors were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Specifically, perceived employability skills were assessed using 10 items adapted from Pereira (2015), perception of university support was measured with 6 items adapted from Saeed et al. (2015), self-efficacy was evaluated using 8 items adapted from Chen et al. (2001), and self-perceived employability was gauged with 6 items adapted from Vargas et al. (2018). For data analysis, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed due to its robustness in handling complex models and small to medium-sized samples, as well as its ability to assess both measurement and structural models simultaneously (Hair et al., 2019). The

survey design incorporated the adapted measurement items for the constructs under study. The online survey was distributed to students across various universities in Vietnam, with participants being informed about the study's purpose and the confidentiality of their responses. The data analysis involved evaluating the measurement model for reliability and validity, followed by an assessment of the structural model to test the hypothesized relationships among constructs. This methodological approach provides a comprehensive understanding of the factors influencing self-perceived employability among university students in Vietnam, with a particular focus on gender differences. The use of well-established measurement scales ensures the reliability and validity of the constructs, while the application of PLS-SEM allows for a detailed analysis of the relationships between these factors.

4. Results

The demographic information provided in the Table 1 outlines the distribution of participants by gender, study year, and field of education. The sample consists of 132 male participants (43.14%) and 174 female participants (56.86%), indicating a higher proportion of females. Regarding the year of study, the majority of participants are in their third year, totaling 155 individuals (50.65%). This is followed by 60 participants in their second year (19.61%), 53 participants in their fourth year (17.32%), 25 freshly enrolled first-year students (8.17%), and 13 participants categorized as others (4.25%), who may be beyond the fourth year or in non-standard academic progressions. In terms of the field of education, 128 participants (41.83%) are studying in the fields of Science, Engineering, and Computer, making it the largest group. This is closely followed by 116 participants (37.91%) in Business and Management. The remaining 62 participants (20.26%) are enrolled in other fields of education.

Table 1. Demographic profile (n-306).

	Frequency	Percentage
Gender		
Male	132	43.14%
Female	174	56.86%
Study year		
Fresh enrolled	25	8.17%
2nd year	60	19.61%
3rd year	155	50.65%
4th year	53	17.32%
Others	13	4.25%
Field of education		
Business & Management	116	37.91%
Science, Engineering & Computer	128	41.83%
Others	62	20.26%

Table 2 evaluates the measurement model for various constructs using Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE). The item loading for each construct above 0.7 met the threshold. For the construct of Perception Employability Skills (PES), Cronbach's Alpha is 0.78, Composite Reliability is 0.925, and AVE is 0.607. These values exceed the commonly accepted thresholds (Cronbach's Alpha > 0.7, Composite Reliability > 0.7, AVE > 0.5), indicating that PES has good internal consistency, reliability, and convergent validity. Similarly, the Perception University Support (PUS) construct shows a Cronbach's Alpha of 0.908, Composite Reliability of 0.866, and AVE of 0.618. These metrics confirm that PUS demonstrates strong internal consistency, reliability, and convergent validity. The Self-efficacy (SE) construct has a Cronbach's Alpha of 0.726, Composite Reliability of 0.922, and AVE of 0.598. These values indicate that SE also has good internal consistency, reliability, and convergent validity. Lastly, the Self-Perception of Employability (SPE) construct exhibits a Cronbach's Alpha of 0.893, Composite Reliability of 0.901, and AVE of 0.603. These metrics suggest that SPE has excellent internal consistency, reliability, and convergent validity.

Table 2. Measurement model.

Construct	Loadings	Cronbach's Alpha	Composite reliability	Average Variance Extracted (AVE)
Perception Employability Skills (PES)		0.78	0.925	0.607
PES1: Communication skills (ability to listen, express and present ideas, ability to persuade, to negotiate etc.)	0.774			
PES2: Personal skills (self - confidence, positive attitude, strong work ethics etc.)	0.82			
PES3: Interpersonal skills (ability to work in a team, ability to manage conflicts, networking etc.)	0.700			
PES4: Intercultural skills (command of more than one language, work in culturally diverse teams etc.)	0.821			
PES5: Learning skills (ability to learn independently; curiosity and drive for continuous learning etc.)	0.708			
PES7: Thinking skills (critical, analytical, strategic thinking etc.)	0.791			
PES8: Information, media and technology skills (ability to obtain and process information)	0.831			
PES10: Technical skills (professional field related skills to accomplish specific tasks etc.)	0.782			
Perception University Support (PUS)		0.908	0.866	0.618
PUS2: My university provides documents and projects on related fields	0.81			
PUS3: My university offers internship programs	0.802			
PUS4: My university offers a bachelor's or master's degree in the career that I target	0.782			
PUS5: My university organizes seminars on recruitment, career orientation, job fairs	0.747			
Self-efficacy (SE)		0.726	0.922	0.598
SE1: I will be able to achieve most of the goals that I have set for myself	0.753			
SE2: When facing difficult tasks, I am certain that I will accomplish them	0.816			
SE3: In general, I think that I can obtain outcomes that are important to me	0.762			
SE4: I believe I can succeed at most any endeavor to which I set my mind	0.759			
SE5: I will be able to successfully overcome many challenges	0.827			
SE6: I am confident that I can perform effectively on many different tasks	0.751			
SE7: Compared to other people, I can do most tasks very well	0.749			
SE8: Even when things are tough, I can perform quite well	0.764			
Self-Perception of Employability (SPE)		0.893	0.901	0.603
SPE1: My chosen subject(s) rank(s) highly in terms of social status	0.724			
SPE2: People in the career I am aiming for are in high demand in the external labor market	0.794			
SPE3: My degree is seen as leading to a specific career that is generally perceived as highly desirable	0.803			
SPE4: There is generally a strong demand for graduates at the present time	0.784			
SPE5: There are plenty of job vacancies in the geographical area where I am looking	0.797			
SPE6: I can easily find out about opportunities in my chosen field	0.753			

Table 3 illustrates the discriminant validity of the constructs using the Fornell-Larcker criterion, which assesses whether constructs that are supposed to be distinct are indeed different from one another. Each construct's discriminant validity is determined by comparing the square root of its Average Variance Extracted (AVE) to the correlation coefficients with other constructs. The diagonal elements represent the square root of AVE for each construct, while off-diagonal elements show correlation coefficients between constructs. For instance, Perception Employability Skills (PES) has a square root of AVE of 0.779, greater than its correlations with Perception University Support (PUS) (0.426), Self-efficacy (SE) (0.383), and Self-Perception of Employability

(SPE) (0.382), indicating good discriminant validity. Similarly, all other constructs—PUS, SE, and SPE—exhibit square roots of AVE greater than their correlations with other constructs, confirming their distinctiveness and fulfilling the criterion for discriminant validity.

Table 3. Discriminant validity (Fornell-larcker criterion).

	(1)	(2)	(3)	(4)
(1) Perception Employability Skills	0.779			
(2) Perception University Support	0.426	0.786		
(3) Self-efficacy	0.383	0.409	0.773	
(4) Self-Perception of Employability	0.382	0.400	0.561	0.776

Table 4 presents the path coefficients (β) for various hypothesized relationships in a structural equation model, highlighting differences between the full sample, male sample, and female sample. The analysis reveals several key findings for each hypothesis. For H1a, which posits that the perception of employability skills positively influences self-perception of employability, the hypothesis is accepted for the full sample ($\beta = 0.147$, $p < 0.05$) and for males ($\beta = 0.404$, $p < 0.01$), but it is rejected for females ($\beta = 0.002$, not significant). For H1b, which posits that the perception of employability skills positively influences self-efficacy, the hypothesis is accepted for the full sample ($\beta = 0.256$, $p < 0.01$) and for males ($\beta = 0.394$, $p < 0.01$), but it is rejected for females ($\beta = 0.141$, not significant). For H2a, which posits that the perception of university support positively influences self-perception of employability, the hypothesis is accepted for the full sample ($\beta = 0.157$, $p < 0.01$) and for females ($\beta = 0.184$, $p < 0.05$), but it is rejected for males ($\beta = 0.115$, not significant). For H2b, which posits that the perception of university support positively influences self-efficacy, the hypothesis is accepted for the full sample ($\beta = 0.300$, $p < 0.01$), for males ($\beta = 0.250$, $p < 0.01$), and for females ($\beta = 0.332$, $p < 0.01$). For H3, which posits that self-efficacy positively influences self-perception of employability, the hypothesis is accepted for the full sample ($\beta = 0.440$, $p < 0.01$), for males ($\beta = 0.276$, $p < 0.01$), and for females ($\beta = 0.529$, $p < 0.01$). For H4, which posits that the perception of employability skills indirectly influences self-perception of employability through self-efficacy, the hypothesis is accepted for the full sample ($\beta = 0.112$, $p < 0.01$) and for males ($\beta = 0.109$, $p < 0.05$), but it is rejected for females ($\beta = 0.075$, not significant). For H5, which posits that the perception of university support indirectly influences self-perception of employability through self-efficacy, the hypothesis is accepted for the full sample ($\beta = 0.132$, $p < 0.01$) and for females ($\beta = 0.175$, $p < 0.01$), but it is rejected for males ($\beta = 0.069$, not significant). Thus, perceptions of employability skills and university support generally enhance self-perception of employability and self-efficacy, with some variations across gender. Self-efficacy emerges as a critical mediator, especially influencing females' self-perception of employability.

Figure 2, Figure 3 and Figure 4 show the R-squared values across different sample groups. Path coefficients are indicated on the arrow lines, with significance values in brackets. R-squared values are shown within circles, and T-values are associated with construct items. In the full sample, Self-efficacy explains 22.1% of the variance in Self-Perception of Employability, while the latter accounts for 36.6% of variance. Among males, Self-efficacy has a stronger explanatory power, explaining 31.4% of the variance in Self-Perception of Employability, which itself explains 44.1% of its variance. Conversely, in the female sample, Self-efficacy's explanatory power is slightly lower at 16.6%, with Self-Perception of Employability explaining 39.0% of its variance.

Table 4. Path coefficients.

Paths	Full sample (β)	Male sample (β)	Female sample (β)	Hypothesis
Perception Employability Skills → Self-Perception of Employability	0.147**	0.404***	0.002	H1a
Perception Employability Skills → Self-efficacy	0.256***	0.394***	0.141	H1b
Perception University Support → Self-Perception of Employability	0.157***	0.115	0.184**	H2a
Perception University Support → Self-efficacy	0.300***	0.250***	0.332***	H2b
Self-efficacy → Self-Perception of Employability	0.440***	0.276***	0.529***	H3
Perception Employability Skills → Self-efficacy → Self-Perception of Employability	0.112***	0.109**	0.075	H4
Perception University Support → Self-efficacy → Self-Perception of Employability	0.132***	0.069	0.175***	H5

*Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$*

Table 5 presents findings from a multigroup analysis. Notably, the relationship between PES and SPE appears stronger for males, indicated by a significant negative difference of -0.402. Conversely, the link between SE and SPE emerges as stronger for females, with a significant positive difference of 0.253. However, no substantial gender differences are found in the relationships between PUS and SPE or PUS and SE, as indicated by nonsignificant differences. The relationship between PES and SE shows a marginally significant difference, hinting at a potential gender disparity that warrants further examination.

Table 5. Multigroup analysis.

Relationships	Path difference (Female - Male)	Two-side significance (Female - Male)
Perception Employability Skills → Self-Perception of Employability	-0.402	0.000
Perception Employability Skills → Self-efficacy	-0.253	0.077
Perception University Support → Self-Perception of Employability	0.069	0.540
Perception University Support → Self-efficacy	0.081	0.554
Self-efficacy → Self-Perception of Employability	0.253	0.027

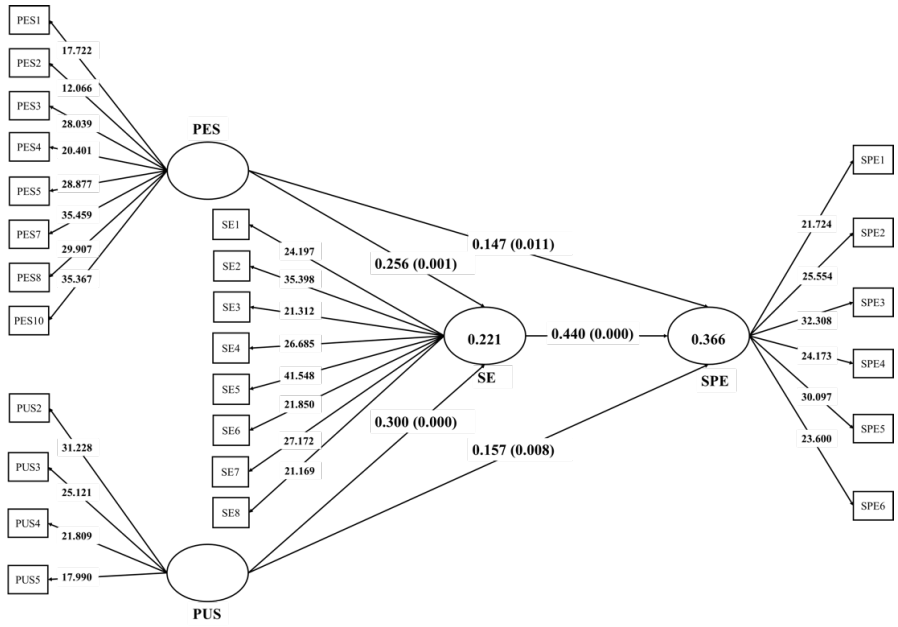

Figure 2. Result model for self-perception of employability of university students (Full Sample).

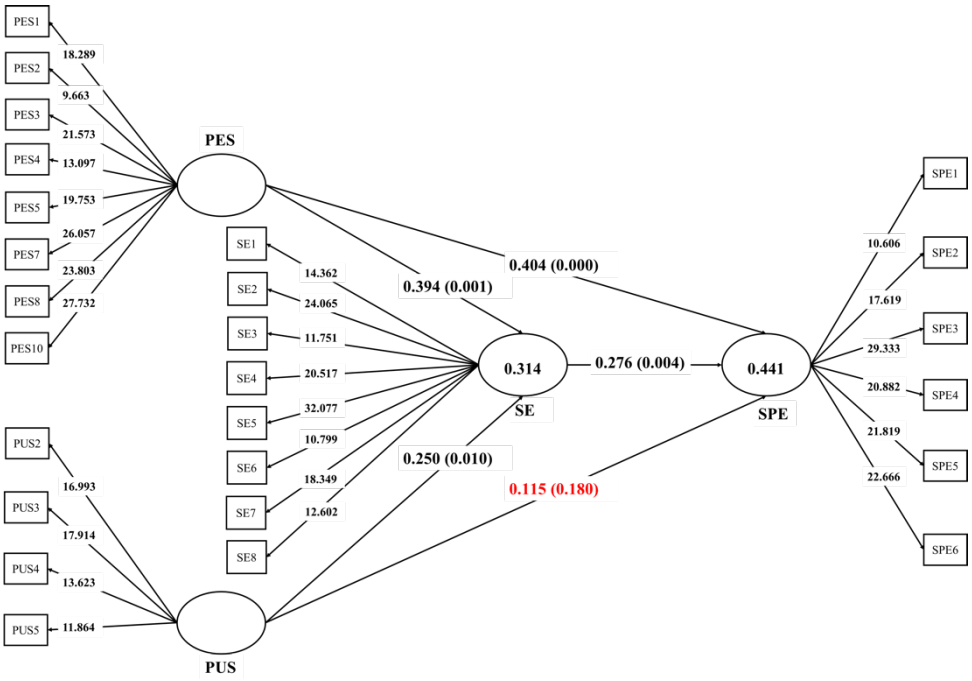

Figure 3. Result model for self-perception of employability of male students.

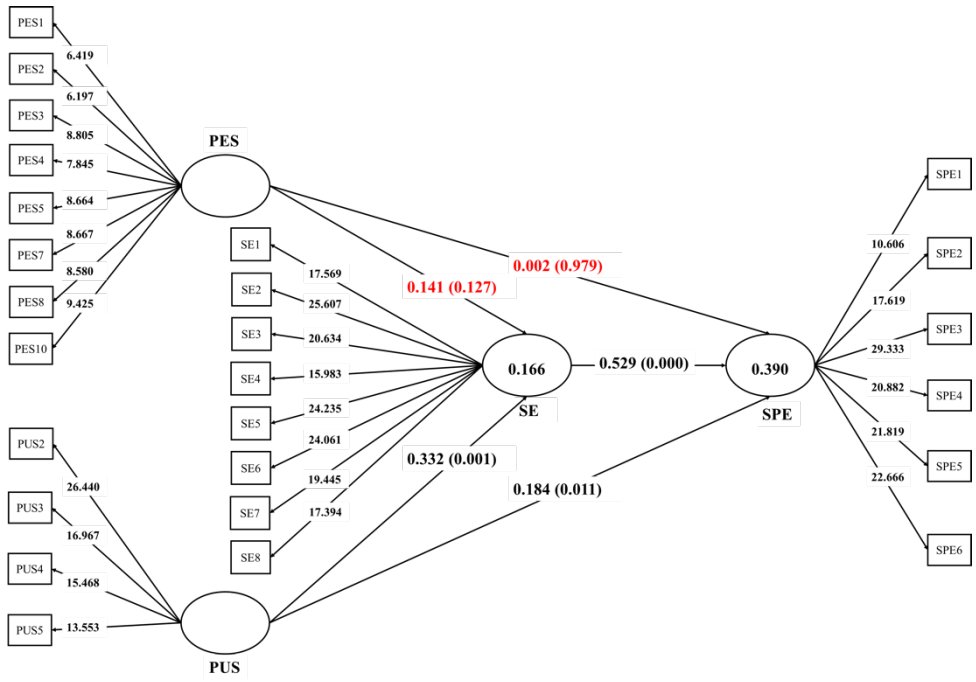

Figure 4. Result model for self-perception of employability of female students.

5. Discussion

This study used a structural model to examine university students' opinions about their employability in the Vietnamese market, providing a comprehensive understanding of the relationship between various factors and self-perception regarding recruitment. By including both human and contextual factors, and examining direct and indirect interactions, the research offers a more thorough model suitable for the Vietnamese context. Firstly, the perception of employability skills positively impacts students' perceived employability. This finding aligns with previous research by Pool & Sewell (2007) and Pool (2017), emphasizing the importance of generic skills in graduate employability. Students in both developed and developing countries, including Vietnam, must recognize the value of employability skills to enhance their job prospects. Skills such as teamwork, conflict resolution, networking, and information processing are critical for employability. Universities should focus on developing these skills to help students gain confidence in their abilities and improve their employability. Secondly, university support significantly contributes to students' perceptions of employability. This finding is consistent with Alvarez-Gonzalez et al. (2017), highlighting the role of universities in providing a positive learning environment, appropriate training programs, and networking opportunities. Universities should continue to focus on career orientation and providing practical experiences that meet employer needs, ensuring students are well-prepared for the competitive job market. Thirdly, self-efficacy emerged as a crucial factor in enhancing students' employability awareness. High self-efficacy increases the likelihood of securing employment, as supported by previous studies (e.g., Pool & Sewell, 2007; Kim et al., 2015). Students with high self-efficacy can better assess their abilities, promote their skills, and identify suitable career paths. Universities should implement programs that boost students' confidence and self-efficacy, helping them to overcome weaknesses and stand out to potential employers.

The study also revealed gender differences in the factors affecting employability perceptions. Male students' self-perception of employability is more influenced by employability skills, while female students are more impacted by self-efficacy. This finding is consistent with previous research (e.g., Räty et al., 2020; Marsh, 1989) and highlights the need for gender-specific interventions. Female students in Vietnam and other Asian countries face additional societal pressures and physical limitations, making it essential to focus on boosting their self-efficacy and confidence.

The study has several practical implications. Educational institutions should develop gender-sensitive strategies to address the distinct needs of male and female students (Harari et al., 2023). For male students, skill-based training programs are essential, while female students would benefit from mentorship and

confidence-building initiatives. Universities must continue to provide robust support structures, including career counseling and academic advising, to ensure all students feel supported in their career development. Policymakers should consider these gender dynamics when designing employability strategies, fostering an inclusive environment that promotes career success for all students (Petruzziello et al., 2023). This study has certain limitations, including the reliance on self-reported surveys and a cross-sectional design, which may introduce biases and limit causal inferences. The focus on Vietnamese university students may also limit generalizability. Future research should consider longitudinal designs and qualitative methods to gain deeper insights into the dynamic relationships between employability factors and gender over time. Comparative studies across different cultural settings would provide a broader perspective on how cultural factors influence employability perceptions. Additionally, including perspectives from universities and employers would offer a more holistic view of the employability landscape.

Thus, this study highlights the complex interplay of employability-related factors and gender in shaping students' perceptions of their employability. Tailored interventions that address gender-specific influences are crucial for enhancing employability outcomes among university students. Policymakers and educators should consider these gender dynamics when designing strategies to support students' transition into the workforce, fostering an inclusive environment that promotes career success for all students.

6. Conclusion

This study unveils the factors shaping how university students in Vietnam perceive their employability, with attention to gender differences. Notably, male students' employability perception is closely linked to their skills, while female students' confidence hinges more on their self-efficacy. These findings underscore the importance of tailored interventions to address the distinct needs of male and female students, ultimately bolstering their prospects in the job market. Going forward, policymakers and educators should factor in these gender dynamics when formulating strategies to guide students in their career pursuits. Moving forward, policymakers, educators, and career advisors should consider these gender dynamics when designing programs and initiatives aimed at supporting students in their career development. Tailored interventions that address the unique challenges and aspirations of both male and female students can play a crucial role in enhancing their readiness for the job market. By fostering an inclusive and supportive environment that acknowledges and accommodates gender differences, educational institutions can better equip their students for success in their future careers. This study relied on self-reported surveys and had a cross-sectional design, limiting causal inference and generalizability beyond the sample. Future studies could employ longitudinal designs and qualitative methods to explore the dynamic interplay between employability factors and gender across diverse cultural contexts, and evaluate tailored interventions to enhance employability outcomes among students.

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