

**Factors Affecting the Perceived Employability of Agricultural Students at Lorestan University: An Application of the Modified CareerEDGE Model**

Fatemeh Rahimi<sup>1\*</sup>, Saeed Gholamrezai<sup>1</sup>, and Afshin Sardareh<sup>1</sup>

**Abstract**

One of the key concerns of higher education institutions is the professional status and employability of students. Therefore, the concept of student employability has become the center of attention and needs to be examined. This study aimed to investigate the factors affecting the perceived employability of agricultural students at Lorestan University. To achieve this purpose, the modified CareerEDGE model was used. The statistical population of the study was agricultural students at Lorestan University. A proportionally allocated multi-stage stratified sample of 270 students was selected. Data were collected using a questionnaire developed from the relevant literature. The content validity of the instrument was rigorously assessed by a panel of subject-matter experts, consisting of faculty members from the Faculty of Agriculture at Lorestan University, representing diverse academic disciplines. Following their feedback, the questionnaire was refined to ensure its relevance to the agricultural context. The pilot study, conducted with 30 respondents, demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients ranging from 0.715 to 0.833. A comparative analysis of structural models revealed that the direct effects model provides a more robust and parsimonious explanation of perceived employability than the mediation model. This conclusion is supported by the direct model's superior explanatory power ( $R^2 = 0.516$ ) and the non-significant mediating role of self-efficacy, indicating that the exogenous constructs are associated with perceived employability primarily through direct pathways. The findings provide educational policies and suggestions for improving students' employability.

**Keywords:** College students, CareerEDGE Model, Lorestan University, Perceived employability.

**Introduction**

Higher education is vital for human resource development and national progress (Baroroh et al., 2024), fostering holistic growth through enhanced knowledge, skills, and attitudes (Chankseliani

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<sup>1</sup> Department of Agricultural Economics and Rural Development, Faculty of Agriculture, Lorestan University, Khorramabad, Islamic Republic of Iran.

\*Corresponding author; e-mail: rahimi.fa@lu.ac.ir

et al., 2021). Universities, as engines of economic, social, and cultural advancement (Amini et al., 2014), train specialized human resources via research and service (Agasisti & Bertoletti, 2022; Ekrami et al., 2023), equipping them with industry-specific skills and preparing them for lifelong learning (Raybould & Wilkins, 2005; Mokhtar et al., 2022). Nonetheless, ensuring graduate employability remains a key higher education challenge (Alibaygi et al., 2013; Wujema et al., 2022).

Despite high global tertiary employment, Iran struggles with severe structural challenges and graduate unemployment (Pouratashi & Zamani, 2019; Omidifar & Narimani, 2026). This gap is pronounced in Lorestan's vital agricultural sector, where an 11.1% unemployment rate—exceeding Iran's 7.6% (Statistical Centre of Iran, 2026)—highlights a critical mismatch between academic training and the technology-driven skills needed by modern agri-enterprises (e.g., precision farming, agribusiness entrepreneurship). This study thus investigates factors influencing agricultural student perceived employability (PE) in Lorestan to bridge this gap.

Employability is a multidimensional construct, generally defined as an individual's capacity to gain and sustain employment by leveraging professional and personal competencies (Hinton, 2012; Mokhtar et al., 2022). Specifically, PE denotes a subjective assessment of one's job assets—including knowledge, skills, and attributes—that facilitate navigating the labor market and realizing professional potential (Dacre Pool et al., 2014; Wujema et al., 2022). Ultimately, it reflects the ability to align personal competencies with evolving market requirements to secure sustainable employment.

Despite the significance of graduate employability, empirical research is limited (Dacre Pool et al., 2014; Wujema et al., 2022). While models like USEM, DOTS, and GET exist (Wujema et al., 2022), the CareerEDGE framework (Dacre Pool & Sewell, 2007) offers the most comprehensive approach to understanding its developmental mechanisms.

Research on PE in the Middle East and South Asia has explored institutional quality (Pouratashi & Zamani, 2019; Omidifar & Narimani, 2026), psychological capital (Herdem, 2019; Moghaddas et al., 2025), and socio-familial contexts (El-Kassem et al., 2018; Ergün & Şeşen, 2021), with some studies comparing discipline-specific determinants (Bakari & Khoso, 2017). However, integrated frameworks like CareerEDGE remain under-researched, particularly within the agricultural sector in this region. Existing studies often focus on isolated components rather than the holistic structure needed to map labor market transitions. This study addresses this gap by

applying the CareerEDGE model to evaluate agricultural students' employability, offering a structured framework for regional and international comparison.

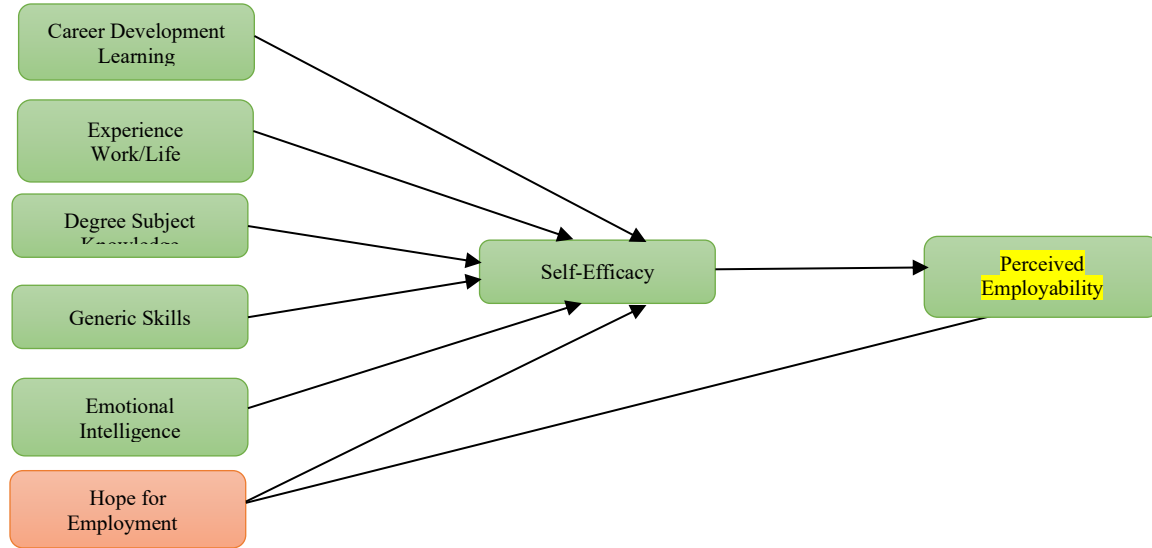
The CareerEDGE model posits that Perceived Employability (PE) emerges from five interconnected elements: Career Development Learning (CDL), Experience Work/Life (EWL), Degree Subject Knowledge (DSK), Generic Skills (GS), and Emotional Intelligence (EI) (Dacre Pool et al., 2014). These elements are crucial for graduates to realize their potential and build resilience (Dacre Pool & Sewell, 2007; Dacre-Pool, 2020), with engagement in all five constructs enhancing the likelihood of positive employability outcomes (Sewell & Dacre-Pool, 2010; Wujema et al., 2022).

CDL comprises organized curricular activities that foster self-awareness, continuous learning, and career decision-making (Dacre Pool & Sewell, 2007; Wujema et al., 2022). CDL enables students to identify market opportunities, present their expertise, align career paths with personal interests, and navigate evolving professional landscapes, such as AI integration (Dacre Pool & Sewell, 2007; Dacre-Pool, 2020). EWL involves acquiring practical knowledge and social capital through work placements, community participation, and networking, both within and beyond higher education (Dacre Pool & Sewell, 2007; Wujema et al., 2022). DSK signifies in-depth disciplinary learning and qualifications in a specific field, expected to enhance career prospects (Dacre Pool & Sewell, 2007; Wujema et al., 2022). GS, known as soft or transferable skills, are essential competencies applicable across academic and professional contexts (Raybould & Wilkins, 2005; Dacre Pool & Sewell, 2007; Wujema et al., 2022). EI is crucial for employability potential (Dacre Pool & Sewell, 2007) and a central determinant of PE (Dacre-Pool, 2020). It involves recognizing, understanding, and managing emotions in oneself and others, fostering effective interpersonal relationships (Dacre Pool & Sewell, 2007; Wujema et al., 2022). Higher EI is linked to improved psychological well-being, workplace relationships, decision-making, and overall success (Wujema et al., 2022), with individuals showing greater self-motivation and relationship-building capabilities (Dacre Pool & Sewell, 2007). SE is an individual's belief in their ability to manage future situations (Dacre Pool & Sewell, 2007) and mobilize the motivation, resources, and actions needed to meet demands (Wujema et al., 2022). Efficacy beliefs shape thoughts, feelings, and actions, aiding in acquiring employment-related skills (Dacre Pool & Sewell, 2007; Wujema et al., 2022). Empirical evidence consistently demonstrates that all five constructs significantly enhance both SE and PE (Dacre Pool & Sewell, 2007; Dacre Pool et al., 2014; Dacre-Pool, 2020; Wujema et al., 2022). SE is a key

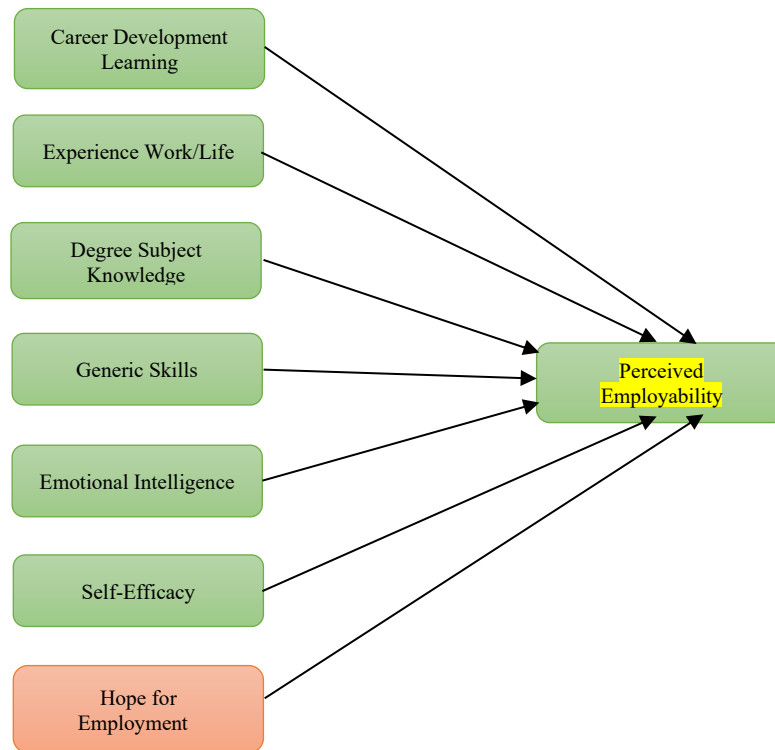
component within the CareerEDGE model (Dacre Pool et al., 2014; Wujema et al., 2022). Indeed, SE acts as a mediator, indirectly impacting PE by transmitting the effects of CDL, EWL, DSK, GS, and EI (Chow et al., 2019; Abd Rahmali et al. 2025a; Abd Rahmali et al. 2025b; Mohd Amin et al., 2025; Bhattacharya and Chawla 2026). Empirical evidence consistently shows SE has a positive and significant effect on PE (Dacre Pool & Sewell, 2007; Dacre Pool et al., 2014; Bakari & Khoso, 2017; Dacre-Pool, 2020; Wujema et al., 2022). Therefore, this study evaluates both the direct and indirect effects of SE on PE.

#### Hope for Employment

Hope for Employment (HE) is a cognitive-motivational construct essential for career and life development (Ngai et al., 2022). It comprises goals, pathways (goal-achievement strategies), and agency (motivation to pursue them) (Bakari & Khoso, 2017; Hong & Choi, 2013). As the capacity to identify viable pathways and initiate goal-directed actions (Hirschi et al., 2015; Jia et al., 2022), HE is a fundamental dispositional attribute of employability (Kasler et al., 2017). Unlike SE, which focuses on cognitive appraisals of capabilities (Bandura, 1995), HE involves a dynamic interplay between cognitive and affective states (Kleka et al., 2024). High HE correlates with superior academic performance, psychological adjustment, and perseverance (Quiroz, 2017; Kleka et al., 2024). Empirical evidence positions HE as a significant predictor of PE (Hinton, 2012; Bakari & Khoso, 2017; Kasler et al., 2017; Ayala Calvo & Manzano García, 2021; Ma, 2021; Hlatywayo & Chinyamurindi, 2025) and a positive influence on SE (Hirschi et al. 2015; Valero et al. 2015; Kasler et al. 2017; Yang et al. 2020; Hlatywayo and Chinyamurindi 2025). These foundations inform the proposed modified CareerEDGE model (Figures 1 and 2).



**Figure 1.** The conceptual model of the mediating role of self-efficacy in the modified CareerEDGE model.



**Figure 2.** The conceptual model of the direct effects in the modified CareerEDGE model.

**Research Method**

This study employed a quantitative survey design. The target population consisted of 838 students from the Faculty of Agriculture at Lorestan University, Iran. Although the Krejcie and Morgan (1970) table indicated a minimum sample size of 265, this study specifically targeted final-year students nearing labor market entry to ensure representative data. Utilizing multi-stage stratified sampling proportional to size—stratified by academic major and degree level (Bachelor’s, Master’s, and PhD)—270 valid questionnaires were collected. The population and sample distribution are presented in Table 1. The measurement instrument was developed based on a comprehensive literature review of the modified CareerEDGE constructs, utilizing a five-point Likert scale (Table 2). Content validity was confirmed by a panel of subject-matter experts, consisting of faculty members from the Faculty of Agriculture at Lorestan University, leading to contextual adjustments. A pilot study established satisfactory internal consistency, with Cronbach’s alpha coefficients ranging from 0.715 to 0.833. In the main study, construct reliability and convergent validity were confirmed using composite reliability (CR) and average variance extracted (AVE) (Tables 3 and 4). Hypotheses were tested using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS4. This predictive, variance-based approach was selected because: (a) it is highly suited for theory development and predictive modeling (Hair Jr et al., 2021); (b) it effectively manages complex structural models with multiple latent constructs and mediating pathways without requiring strict multivariate normality (Hair et al., 2020); and it accommodates both reflective and formative indicators inherent in the CareerEDGE model, while offering robust validation tools such as PLSpredict and bootstrapping (Shmueli et al., 2016; Hair et al., 2021).

**Table 1.** Population and Sample Size Distribution across Academic Departments and Levels.

| Educational Department                              | Academic Level  |             |                 |             |                 |             |
|-----------------------------------------------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|
|                                                     | Bachelor's      |             | Master's        |             | PhD             |             |
|                                                     | Population Size | Sample Size | Population Size | Sample Size | Population Size | Sample Size |
| Plant Production and Genetics Engineering           | 51              | 16          | 33              | 11          | 33              | 11          |
| Animal Science                                      | 36              | 12          | 22              | 7           | 20              | 6           |
| Horticultural Science                               | 47              | 15          | 25              | 8           | 23              | 7           |
| Water Sciences and Engineering                      | 52              | 17          | 11              | 4           | 17              | 5           |
| Plant Protection                                    | 44              | 14          | 24              | 8           | 15              | 5           |
| Soil Science and Engineering                        | 51              | 16          | 2               | 2           | 17              | 5           |
| Forestry                                            | 38              | 12          | 20              | 6           | 13              | 4           |
| Rangeland and Watershed Management                  | 43              | 14          | 8               | 3           | 15              | 5           |
| Agricultural Economics and Rural Development        | -               | -           | 22              | 7           | -               | -           |
| Environmental Science and Engineering and Fisheries | 111             | 36          | -               | -           | -               | -           |
| Biosystems Mechanical Engineering                   | 45              | 14          | -               | -           | -               | -           |
| Total                                               | 518             | 166         | 167             | 56          | 153             | 48          |
| Total population size                               | 838             |             |                 |             |                 |             |
| Total sample size                                   | 270             |             |                 |             |                 |             |

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**Table 2.** Constructs included in the research questionnaire.

| Constructs | Statements                                                                                                        | References                                                                    |
|------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| CDL        | To what extent do you agree with the following statements?                                                        | Sewell and Dacre-Pool, 2010; Dacre Pool et al., 2014; Yawson and Yamoah, 2023 |
|            | I have a clear vision of my future career path after graduation.                                                  |                                                                               |
|            | I am aware of the specific requirements needed to succeed in my desired career.                                   |                                                                               |
|            | I know how to access relevant information about my field of interest.                                             |                                                                               |
|            | I understand which types of work align well with my personality.                                                  |                                                                               |
| EWL        | Beyond financial earnings, I have a clear understanding of my career expectations.                                | Sewell and Dacre-Pool, 2010; Dacre Pool et al., 2014; Yawson and Yamoah, 2023 |
|            | I possess a significant amount of relevant work experience.                                                       |                                                                               |
| DSK        | I am capable of effectively articulating the relevance of my academic and work experience to potential employers. | Sewell and Dacre-Pool, 2010; Yawson and Yamoah, 2023                          |
|            | I consider myself a high-achieving student in my field of study.                                                  |                                                                               |
|            | I am satisfied with my overall academic performance.                                                              |                                                                               |
| GS         | My academic performance is well-aligned with my professional aspirations.                                         | Dacre-Pool, 2010; Dacre Pool et al., 2014; Sewell et al., 2023                |
|            | I am highly effective at working within a team environment.                                                       |                                                                               |
|            | I possess strong problem-solving skills.                                                                          |                                                                               |
|            | I am willing to take full responsibility for my decisions.                                                        |                                                                               |
|            | I am adept at generating innovative ideas.                                                                        |                                                                               |
|            | I can easily adapt to new work environments.                                                                      |                                                                               |
|            | I quickly grasp the key requirements of new job roles.                                                            |                                                                               |

|    |                                                                                                  |                                                                                       |
|----|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| EI | I am skilled at accurately perceiving the emotions of others.                                    | Sewell and Dacre-Pool, 2010; Dacre-Pool et al., 2014; Yawson and Yamoah, 2023         |
|    | I am aware of my own emotions at any given time.                                                 |                                                                                       |
|    | I am able to adapt my behavior to interact effectively with diverse individuals.                 |                                                                                       |
|    | I have a strong understanding of different personality styles.                                   |                                                                                       |
|    | I am committed to fulfilling my promises and responsibilities.                                   |                                                                                       |
|    | I am capable of building effective professional relationships with faculty and university staff. |                                                                                       |
| SE | I am confident in my ability to achieve the goals I set for myself.                              | Fishbein and Ajzen, 2011                                                              |
|    | I believe I can succeed in a wide range of professional roles.                                   |                                                                                       |
|    | I am capable of overcoming professional challenges.                                              |                                                                                       |
|    | I am confident in my ability to perform job tasks effectively.                                   |                                                                                       |
|    | I can maintain high performance even in demanding work situations.                               |                                                                                       |
| HE | I possess the skills and abilities necessary to secure and maintain a desirable job.             | Hinton, 2012; Hong and Choi, 2013; Hong et al., 2015; Quiroz, 2017; Hong et al., 2021 |
|    | I am confident in my ability to achieve my career-related goals.                                 |                                                                                       |
|    | The training I have received has been instrumental in pursuing my desired career.                |                                                                                       |
|    | I have a concrete plan for securing a high-quality job.                                          |                                                                                       |
|    | There are multiple pathways to achieving success in my chosen profession.                        |                                                                                       |
|    | I am capable of identifying diverse pathways to landing my preferred job.                        |                                                                                       |
|    | I know the necessary steps to take to achieve my desired career.                                 |                                                                                       |
|    | I am aware of the actions required to succeed in my desired career.                              |                                                                                       |
|    | I expect to apply my knowledge and expertise in my future workplace.                             |                                                                                       |
|    | When I look to the future, I have a clear vision of my professional life.                        |                                                                                       |
| PE | I have set specific goals to reach my desired career.                                            | Van Dam, 2004; Hinton, 2012; Hong and Choi, 2013; Quiroz, 2017                        |
|    | The location of this university offers exceptional career opportunities for me.                  |                                                                                       |
|    | Employers specifically target this university for recruitment.                                   |                                                                                       |
|    | My university holds a prominent reputation in my field of study.                                 |                                                                                       |
|    | The labor market demand for my field of study is favorable.                                      |                                                                                       |
|    | This degree enables me to secure a high-quality job.                                             |                                                                                       |
|    | I have easy access to information about the labor market in my field.                            |                                                                                       |
|    | My skills and competencies are well-aligned with current employer requirements.                  |                                                                                       |
|    | My academic studies have provided me with valuable vocational skills.                            |                                                                                       |
|    | I would recommend studying at this university to my peers.                                       |                                                                                       |
|    | I am very satisfied with my choice of this university.                                           |                                                                                       |
|    | I am genuinely committed to this university and its future success.                              |                                                                                       |
|    | This university has been the optimal choice for my academic career.                              |                                                                                       |
|    | I actively seek out career opportunities related to my field of study.                           |                                                                                       |

## Results

Descriptive statistics revealed that the majority of respondents were female (64.7%), while 35.3% were male. The average age of the respondents was 25 years (SD = 6.83). Regarding family background, 59.4% of the participants reported a family history of self-employment, whereas 40.6% did not. In terms of professional preparation, 29.6% of respondents had participated in entrepreneurship courses, while 70.4% had not. Furthermore, 57.2% of respondents indicated that they had friends who became employed through agriculture-related studies, whereas 42.8% did not. Finally, 55% of the participants expressed having plans for self-employment collaboration with their peers after graduation, while 45% did not.

To investigate factors influencing students' PE at Lorestan University, PLS-SEM was employed via SmartPLS<sub>4</sub>. Given the study's prediction-oriented objectives and complex mediating pathways, PLS-SEM is highly appropriate. All constructs were specified as reflective. The algorithm was set to 3,000 iterations (stop criterion  $10^{-7}$ ) and significance was assessed via bootstrapping (5,000 subsamples; BCa confidence intervals; two-tailed). The analysis followed the standard two-stage evaluation of measurement and structural models.

## Measurement model

Convergent and discriminant validity were assessed to ensure measurement quality. Convergent validity was confirmed, as all factor loadings exceeded the 0.60 threshold, and AVE values for all constructs surpassed 0.50. Furthermore, internal consistency was validated, with Cronbach's alpha and composite reliability (CR) values exceeding 0.70 (Tables 3 and 4).

**Table 3.** Constructs validity and reliability indices for the mediation model.

| Latent construct | Indicator | Indicator loading | Cronbach's alpha | AVE   | CR (rho-a) | CR (rho-c) |
|------------------|-----------|-------------------|------------------|-------|------------|------------|
| CDL              | CDL1      | 0.740             | 0.825            | 0.588 | 0.834      | 0.877      |
|                  | CDL2      | 0.823             |                  |       |            |            |
|                  | CDL3      | 0.719             |                  |       |            |            |
|                  | CDL4      | 0.798             |                  |       |            |            |
|                  | CDL5      | 0.750             |                  |       |            |            |
| EWL              | EWL1      | 0.894             | 0.703            | 0.770 | 0.710      | 0.870      |
|                  | EWL2      | 0.861             |                  |       |            |            |
| DSK              | DSK1      | 0.844             | 0.818            | 0.731 | 0.844      | 0.890      |
|                  | DSK2      | 0.837             |                  |       |            |            |
|                  | DSK3      | 0.882             |                  |       |            |            |
| GS               | GS1       | 0.657             | 0.802            | 0.501 | 0.807      | 0.858      |
|                  | GS2       | 0.724             |                  |       |            |            |
|                  | GS3       | 0.695             |                  |       |            |            |
|                  | GS4       | 0.713             |                  |       |            |            |
|                  | GS5       | 0.722             |                  |       |            |            |
|                  | GS6       | 0.735             |                  |       |            |            |
| EI               | EI1       | 0.766             | 0.801            | 0.503 | 0.814      | 0.857      |
|                  | EI2       | 0.800             |                  |       |            |            |
|                  | EI3       | 0.650             |                  |       |            |            |
|                  | EI4       | 0.705             |                  |       |            |            |
|                  | EI5       | 0.709             |                  |       |            |            |
|                  | EI6       | 0.606             |                  |       |            |            |
| HE               | HE1       | 0.776             | 0.908            | 0.522 | 0.909      | 0.923      |
|                  | HE2       | 0.684             |                  |       |            |            |
|                  | HE3       | 0.729             |                  |       |            |            |
|                  | HE4       | 0.724             |                  |       |            |            |
|                  | HE5       | 0.699             |                  |       |            |            |
|                  | HE6       | 0.641             |                  |       |            |            |
|                  | HE7       | 0.698             |                  |       |            |            |
|                  | HE8       | 0.766             |                  |       |            |            |
|                  | HE9       | 0.786             |                  |       |            |            |
|                  | HE10      | 0.761             |                  |       |            |            |
|                  | HE11      | 0.669             |                  |       |            |            |
| SE               | SE1       | 0.770             | 0.880            | 0.678 | 0.833      | 0.913      |
|                  | SE2       | 0.772             |                  |       |            |            |
|                  | SE3       | 0.869             |                  |       |            |            |
|                  | SE4       | 0.875             |                  |       |            |            |
|                  | SE5       | 0.824             |                  |       |            |            |
| PE               | PE1       | 0.753             | 0.918            | 0.506 | 0.925      | 0.930      |
|                  | PE2       | 0.676             |                  |       |            |            |
|                  | PE3       | 0.661             |                  |       |            |            |
|                  | PE4       | 0.641             |                  |       |            |            |
|                  | PE5       | 0.725             |                  |       |            |            |
|                  | PE6       | 0.717             |                  |       |            |            |
|                  | PE7       | 0.645             |                  |       |            |            |
|                  | PE8       | 0.640             |                  |       |            |            |
|                  | PE9       | 0.776             |                  |       |            |            |
|                  | PE10      | 0.805             |                  |       |            |            |
|                  | PE11      | 0.796             |                  |       |            |            |
|                  | PE12      | 0.762             |                  |       |            |            |
|                  | PE13      | 0.610             |                  |       |            |            |

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**Table 4.** Constructs validity and reliability indices for the direct effects model.

| Latent construct | Indicator | Indicator loading | Cronbach's alpha | AVE   | CR (rho-a) | CR (rho-c) |
|------------------|-----------|-------------------|------------------|-------|------------|------------|
| CDL              | CDL1      | 0.788             | 0.825            | 0.586 | 0.841      | 0.876      |
|                  | CDL2      | 0.823             |                  |       |            |            |
|                  | CDL3      | 0.749             |                  |       |            |            |
|                  | CDL4      | 0.746             |                  |       |            |            |
|                  | CDL5      | 0.718             |                  |       |            |            |
| EWL              | EWL1      | 0.828             | 0.703            | 0.766 | 0.764      | 0.867      |
|                  | EWL2      | 0.920             |                  |       |            |            |
| DSK              | DSK1      | 0.853             | 0.818            | 0.729 | 0.857      | 0.890      |
|                  | DSK2      | 0.878             |                  |       |            |            |
|                  | DSK3      | 0.830             |                  |       |            |            |
| GS               | GS1       | 0.678             | 0.802            | 0.501 | 0.808      | 0.857      |
|                  | GS2       | 0.747             |                  |       |            |            |
|                  | GS3       | 0.696             |                  |       |            |            |
|                  | GS4       | 0.671             |                  |       |            |            |
|                  | GS5       | 0.695             |                  |       |            |            |
|                  | GS6       | 0.757             |                  |       |            |            |
| EI               | EI1       | 0.765             | 0.801            | 0.502 | 0.829      | 0.857      |
|                  | EI2       | 0.819             |                  |       |            |            |
|                  | EI3       | 0.662             |                  |       |            |            |
|                  | EI4       | 0.711             |                  |       |            |            |
|                  | EI5       | 0.665             |                  |       |            |            |
|                  | EI6       | 0.610             |                  |       |            |            |
| HE               | HE1       | 0.662             | 0.908            | 0.520 | 0.918      | 0.922      |
|                  | HE2       | 0.683             |                  |       |            |            |
|                  | HE3       | 0.674             |                  |       |            |            |
|                  | HE4       | 0.684             |                  |       |            |            |
|                  | HE5       | 0.763             |                  |       |            |            |
|                  | HE6       | 0.792             |                  |       |            |            |
|                  | HE7       | 0.771             |                  |       |            |            |
|                  | HE8       | 0.778             |                  |       |            |            |
|                  | HE9       | 0.661             |                  |       |            |            |
|                  | HE10      | 0.733             |                  |       |            |            |
|                  | HE11      | 0.712             |                  |       |            |            |
| SE               | SE1       | 0.773             | 0.880            | 0.678 | 0.881      | 0.913      |
|                  | SE2       | 0.781             |                  |       |            |            |
|                  | SE3       | 0.866             |                  |       |            |            |
|                  | SE4       | 0.871             |                  |       |            |            |
|                  | SE5       | 0.820             |                  |       |            |            |
| PE               | PE1       | 0.759             | 0.918            | 0.506 | 0.922      | 0.930      |
|                  | PE2       | 0.682             |                  |       |            |            |
|                  | PE3       | 0.668             |                  |       |            |            |
|                  | PE4       | 0.637             |                  |       |            |            |
|                  | PE5       | 0.720             |                  |       |            |            |
|                  | PE6       | 0.708             |                  |       |            |            |
|                  | PE7       | 0.642             |                  |       |            |            |
|                  | PE8       | 0.661             |                  |       |            |            |
|                  | PE9       | 0.779             |                  |       |            |            |
|                  | PE10      | 0.807             |                  |       |            |            |
|                  | PE11      | 0.790             |                  |       |            |            |
|                  | PE12      | 0.760             |                  |       |            |            |
|                  | PE13      | 0.603             |                  |       |            |            |

Discriminant validity was assessed using the Fornell–Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. As shown in Tables 5 and 6, the square root of AVE for each construct exceeded its inter-construct correlations, confirming discriminant validity.

**Table 5.** Fornell–Larcker index for the mediation model

| constructs | CDL          | DSK          | EI           | PE           | EWL          | GS           | HE           | SE           |
|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CDL        | <b>0.767</b> |              |              |              |              |              |              |              |
| DSK        | 0.443        | <b>0.855</b> |              |              |              |              |              |              |
| EI         | 0.355        | 0.330        | <b>0.709</b> |              |              |              |              |              |
| PE         | 0.574        | 0.532        | 0.279        | <b>0.711</b> |              |              |              |              |
| EWL        | 0.420        | 0.217        | 0.178        | 0.352        | <b>0.878</b> |              |              |              |
| GS         | 0.514        | 0.553        | 0.631        | 0.402        | 0.366        | <b>0.708</b> |              |              |
| HE         | 0.633        | 0.422        | 0.371        | 0.570        | 0.291        | 0.443        | <b>0.722</b> |              |
| SE         | 0.547        | 0.425        | 0.498        | 0.419        | 0.311        | 0.579        | 0.716        | <b>0.823</b> |

**Table 6.** Fornell–Larcker index for the direct effects model.

| constructs | CDL          | DSK          | EI           | PE           | EWL          | GS           | HE           | SE           |
|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CDL        | <b>0.765</b> |              |              |              |              |              |              |              |
| DSK        | 0.454        | <b>0.854</b> |              |              |              |              |              |              |
| EI         | 0.339        | 0.329        | <b>0.709</b> |              |              |              |              |              |
| PE         | 0.593        | 0.552        | 0.283        | <b>0.712</b> |              |              |              |              |
| EWL        | 0.421        | 0.232        | 0.184        | 0.372        | <b>0.875</b> |              |              |              |
| GS         | 0.498        | 0.550        | 0.624        | 0.409        | 0.375        | <b>0.708</b> |              |              |
| HE         | 0.636        | 0.427        | 0.367        | 0.581        | 0.297        | 0.438        | <b>0.721</b> |              |
| SE         | 0.538        | 0.415        | 0.497        | 0.413        | 0.305        | 0.571        | 0.704        | <b>0.823</b> |

In addition, all HTMT values were below the recommended threshold of 0.90 for conceptually similar constructs, further supporting the distinctiveness of the latent variables in both models (Table 7).

**Table 7.** Heterotrait–Monotrait (HTMT) ratio of correlations for the mediation model and the direct effects model.

| constructs | CDL   | DSK   | EI    | PE    | EWL   | GS    | HF    | SE |
|------------|-------|-------|-------|-------|-------|-------|-------|----|
| CDL        |       |       |       |       |       |       |       |    |
| DSK        | 0.532 |       |       |       |       |       |       |    |
| EI         | 0.425 | 0.387 |       |       |       |       |       |    |
| PE         | 0.652 | 0.603 | 0.308 |       |       |       |       |    |
| EWL        | 0.548 | 0.282 | 0.235 | 0.446 |       |       |       |    |
| GS         | 0.628 | 0.680 | 0.785 | 0.456 | 0.492 |       |       |    |
| HE         | 0.725 | 0.475 | 0.421 | 0.602 | 0.361 | 0.508 |       |    |
| SE         | 0.629 | 0.486 | 0.579 | 0.446 | 0.394 | 0.678 | 0.791 |    |

### Structural model

The structural model was evaluated based on path coefficients, coefficients of determination ( $R^2$ ), and predictive relevance ( $Q^2$ ). To ensure the stability of parameter estimates, potential multicollinearity was assessed via inner Variance Inflation Factor (VIF) values. As shown in Table 8, all VIF values for both the direct-effect and mediation models remained below the conservative

threshold of 3.3 (Kock, 2015), confirming the absence of multicollinearity. Consequently, the non-significant direct path in the mediation model can be confidently attributed to a full mediation effect rather than statistical collinearity.

**Table 8.** VIF values for the mediation and direct-effect models.

| Mediation Model           |                            |           | Direct-effect Model       |                            |           |
|---------------------------|----------------------------|-----------|---------------------------|----------------------------|-----------|
| Exogenous latent variable | Endogenous latent variable | Inner VIF | Exogenous latent variable | Endogenous latent variable | Inner VIF |
| CDL                       | SE                         | 2.038     | CDL                       | PE                         | 2.033     |
| DSK                       | SE                         | 1.557     | DSK                       | PE                         | 1.567     |
| EI                        | SE                         | 1.713     | EI                        | PE                         | 1.745     |
| EWL                       | SE                         | 1.276     | EWL                       | PE                         | 1.286     |
| GS                        | SE                         | 2.421     | GS                        | PE                         | 2.482     |
| HE                        | PE                         | 2.055     | HE                        | PE                         | 2.479     |
| HE                        | SE                         | 1.791     | SE                        | PE                         | 2.469     |
| SE                        | PE                         | 2.055     |                           |                            |           |

Table 9 reports the mediation-model path coefficients. EI ( $\beta = 0.143$ ,  $p < 0.05$ ), GS ( $\beta = 0.219$ ,  $p < 0.01$ ), and HE ( $\beta = 0.535$ ,  $p < 0.01$ ) positively predicted SE, whereas CDL ( $\beta = 0.025$ ), DSK ( $\beta = 0.012$ ), and EWL ( $\beta = 0.036$ ) did not ( $p > 0.05$ ). Only HE positively predicted PE ( $\beta = 0.555$ ,  $p < 0.01$ ); the effect of SE was nonsignificant ( $\beta = 0.021$ ,  $p > 0.05$ ). Accordingly, none of the indirect effects through SE was significant ( $p > 0.05$ ), rejecting the proposed mediation effects.

Table 10 presents the direct-effects model. CDL ( $\beta = 0.249$ ), DSK ( $\beta = 0.328$ ), EWL ( $\beta = 0.140$ ), and HE ( $\beta = 0.340$ ) positively predicted PE ( $p < 0.01$ ), whereas SE had a significant negative effect ( $\beta = -0.131$ ,  $p < 0.05$ ). The direct effects of EI ( $\beta = 0.030$ ) and GS ( $\beta = -0.041$ ) were nonsignificant ( $p > 0.05$ ).

**Table 9.** Structural model path coefficients for the mediation model.

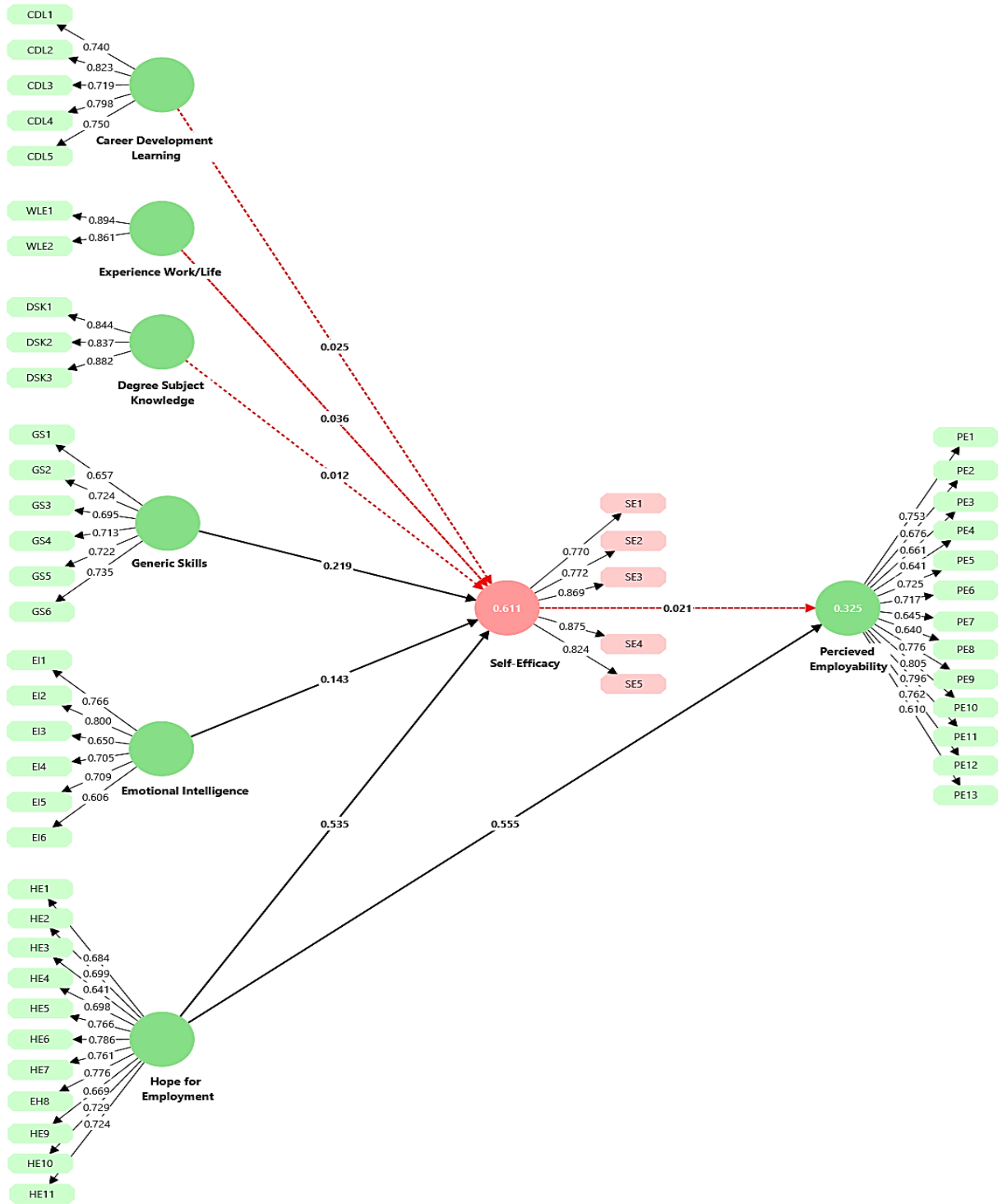
| No | Structural path |           | Beta  | Std error | T-value | p-value | Decision      |
|----|-----------------|-----------|-------|-----------|---------|---------|---------------|
| 1  | CDL             | → SE      | 0.025 | 0.059     | 0.421   | 0.673   | Not supported |
| 2  | DSK             | → SE      | 0.012 | 0.053     | 0.225   | 0.822   | Not supported |
| 3  | EI              | → SE      | 0.143 | 0.062     | 2.314   | 0.021   | Supported     |
| 4  | EWL             | → SE      | 0.036 | 0.052     | 0.701   | 0.483   | Not supported |
| 5  | GS              | → SE      | 0.219 | 0.068     | 3.231   | 0.001   | Supported     |
| 6  | HE              | → SE      | 0.535 | 0.070     | 7.698   | 0.0001  | Supported     |
| 7  | HE              | → PE      | 0.555 | 0.081     | 6.876   | 0.0001  | Supported     |
| 8  | SE              | → PE      | 0.021 | 0.084     | 0.248   | 0.804   | Not supported |
| 9  | GS              | → SE → PE | 0.005 | 0.020     | 0.230   | 0.818   | Not supported |
| 10 | HE              | → SE → PE | 0.011 | 0.045     | 0.245   | 0.806   | Not supported |
| 11 | CDL             | → SE → PE | 0.001 | 0.006     | 0.091   | 0.927   | Not supported |
| 12 | DSK             | → SE → PE | 0.001 | 0.005     | 0.053   | 0.958   | Not supported |
| 13 | EI              | → SE → PE | 0.003 | 0.013     | 0.232   | 0.816   | Not supported |
| 14 | EWL             | → SE → PE | 0.001 | 0.005     | 0.140   | 0.888   | Not supported |

**Table 10. Structural model path coefficients for the direct effects model.**

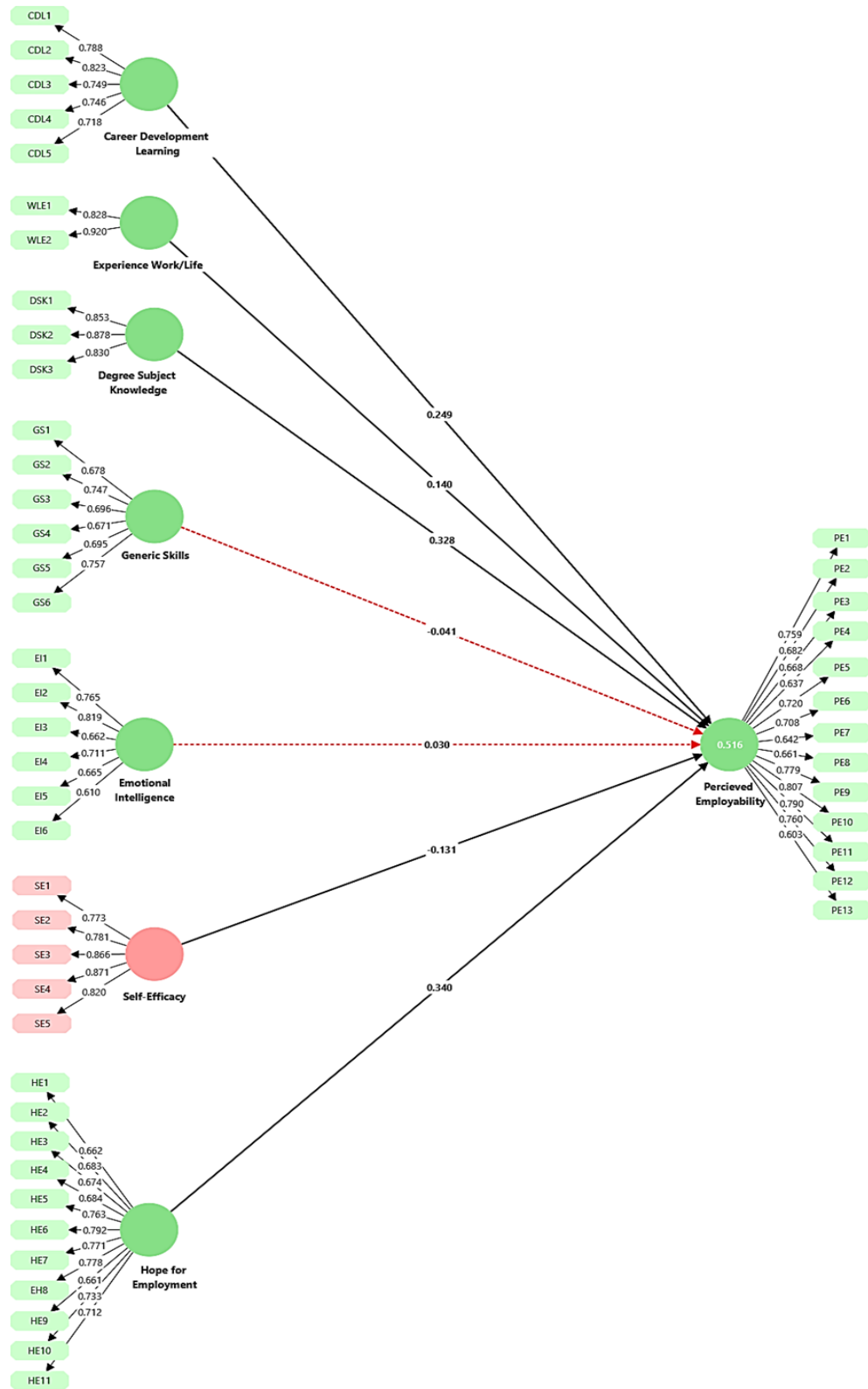
| No | Structural path | Beta   | Std error | T-value | p-value | Decision      |
|----|-----------------|--------|-----------|---------|---------|---------------|
| 1  | CDL → PE        | 0.249  | 0.061     | 4.104   | 0.0001  | Supported     |
| 2  | DSK → PE        | 0.328  | 0.062     | 5.301   | 0.0001  | Supported     |
| 3  | EI → PE         | 0.030  | 0.053     | 0.569   | 0.569   | Not supported |
| 4  | EWL → PE        | 0.140  | 0.049     | 2.830   | 0.005   | Supported     |
| 5  | GS → PE         | -0.041 | 0.068     | 0.608   | 0.605   | Not supported |
| 6  | HE → PE         | 0.340  | 0.074     | 4.598   | 0.0001  | Supported     |
| 8  | SE → PE         | -0.131 | 0.066     | 1.983   | 0.047   | Supported     |

Model predictive power was evaluated using the coefficient of determination ( $R^2$ ) for the endogenous variables. As illustrated in Figures 3 and 4, the ( $R^2$ ) values indicate satisfactory explanatory power for the latent constructs across both the direct-effect and mediation models, confirming the structural model's robust predictive capacity.

The model's predictive relevance was assessed using the Stone–Geisser  $Q^2$  via the blindfolding procedure. A  $Q^2$  value greater than zero signifies predictive relevance for a given endogenous construct (Hair et al., 2020). Results confirmed predictive relevance across both frameworks: the direct-effect model yielded a  $Q^2$  of 0.250 for PE, while the mediation model produced  $Q^2$  values of 0.397 for SE and 0.155 for PE. Since all values exceeded the zero threshold, the predictive relevance of the structural model was established.



**Figure 3.** The structural model of mediating effects within the modified CareerEDGE framework (solid black lines denote significant paths; red dotted lines denote non-significant paths).



**Figure 4.** The structural model of direct effects within the modified CareerEDGE framework (solid black lines denote significant paths; red dotted lines denote non-significant paths).

**Evaluation of the Overall Structural Model Fit**

The overall fit of the mediation and direct-effect models was assessed using the Standardized Root Mean Square Residual (SRMR), geodesic distance ( $d_G$ ), squared Euclidean distance ( $d_{ULS}$ ), and Goodness-of-Fit (GoF) indices. As shown in Table 11, all indices indicated a satisfactory fit between the structural models and the empirical data.

**Table 11.** Evaluation of the Overall Structural Model Fit.

| Fit Indices                   | Threshold                                  | Mediation Model | Direct-effect Model |
|-------------------------------|--------------------------------------------|-----------------|---------------------|
| SRMR                          | < 0.08                                     | 0.073           | 0.072               |
| $d_G$                         | > 0.05                                     | 1.991           | 1.990               |
| $d_{ULS}$                     | > 0.05                                     | 7.024           | 6.938               |
| GoF (Self-Efficacy)           | Small <0.10; Medium 0.10–0.25; Large 0.25– | 0.385           | 0.385               |
| GoF (Perceived Employability) |                                            | 0.110           | 0.258               |
|                               |                                            |                 |                     |

**Comparison of Structural Models**

To identify the most parsimonious and predictive model of PE, a comparative analysis was performed between a mediation model (Table 9) and a direct effects model (Table 10). The direct effects model exhibited superior predictive power, explaining 51.6% of the variance in PE ( $R^2 = 0.516$ ). In contrast, the mediation model, which incorporated SE as a mediator, yielded a lower  $R^2$  of 0.325 for PE, indicating that mediation did not enhance explanatory strength. Crucially, the structural paths from SE to PE within the mediation model were non-significant (Table 9, row 8), and all indirect paths likewise failed to reach statistical significance (rows 9–14). Given the non-significant mediating pathways and the direct effects model's superior predictive accuracy and parsimony, it was selected as the final analytical framework. These results suggest that the exogenous constructs primarily influence PE through direct pathways, rather than via the hypothesized mediating role of SE.

**Discussion and suggestions**

Higher agricultural education is essential for developing professional competencies; nevertheless, graduate employability remains a concern (Dacre Pool & Sewell, 2007). Given the role of psychological mechanisms in career adaptation and success (Braun-Lewensohn et al., 2022), this study examined determinants of PE among agricultural students at Lorestan University using a modified CareerEDGE model.

Although the initial framework proposed SE as a mediator, the indirect effects were nonsignificant; therefore, the more parsimonious direct-effects model was retained. CDL positively predicted PE, consistent with previous research (Dacre Pool & Sewell, 2007; Dacre Pool et al., 2014; Dacre-Pool, 2020; Wujema et al., 2022), but contrary to Van Dam (2004). CDL helps students translate disciplinary knowledge into market-relevant professional services and identify emerging agricultural career paths. Universities could strengthen CDL through courses in agricultural career management and agri-entrepreneurship, early career-orientation workshops, and networking events with agricultural-sector alumni.

DSK was also a positive predictor of PE, supporting earlier evidence (Dacre Pool & Sewell, 2007; Dacre Pool et al., 2014; Wujema et al., 2022). Students who perceive their degree as credible and market-relevant may feel more confident during recruitment and more motivated to acquire complementary skills. Conversely, perceiving the degree as obsolete may reduce career effort. Universities should demonstrate the practical value of agricultural degrees through alumni success stories, employer involvement in curriculum evaluation, and information on professional rankings and legal benefits offered by the Agricultural and Natural Resources Engineering Organization.

**In contrast, EI did not directly predict PE. This may reflect the agricultural labor market, where technical expertise and field-based competence are more salient than interpersonal qualities during entry-level transitions. Thus, EI may operate as a supporting condition rather than a distinct employability signal at this stage, although it may become more consequential in later managerial, leadership, extension, or entrepreneurial roles.**

EWL positively predicted PE, consistent with previous studies (Dacre-Pool, 2020; Dacre Pool et al., 2014; Dacre Pool & Sewell, 2007; Wujema et al., 2022). Paid work, volunteering, social participation, and family farming expose students to workplace demands, professional interactions, and organizational norms, thereby easing the transition to work. In Lorestan, informal experience gained through family farms may provide valuable practical capital and enhance professional identity. Universities could recognize relevant prior experience as internship or extracurricular credit, expand employment in university production units and laboratories, and encourage participation in student organizations. CV-writing workshops, job-shadowing with agricultural entrepreneurs, and pre-graduation training in local firms could further help students convert experience into marketable competencies.

Although GS significantly enhanced SE, their direct effect on PE was nonsignificant. Communication, teamwork, and related skills may foster psychological readiness but may not independently signal employability in a specialized agricultural labor market unless combined with strong technical competence. Because SE did not significantly predict PE, GS also did not demonstrate a significant indirect effect through SE.

HE was a strong positive predictor of PE, supporting prior findings (Hinton, 2012; Bakari & Khoso, 2017; Kasler et al., 2017; Ayala Calvo & Manzano García, 2021; Ma, 2021; Hlatywayo & Chinyamurindi, 2025). HE appears to motivate students to invest in valued competencies, persist in career planning, and pursue available opportunities. Universities should complement academic instruction with career counseling, labor-market information, résumé-writing, negotiation, and entrepreneurship workshops. Where formal jobs are limited, entrepreneurship education may redirect HE toward opportunity creation and strengthen creativity, problem-solving, and PE.

Finally, SE negatively predicted PE. This unexpected result may indicate a mismatch between students' perceived readiness and actual agricultural labor-market requirements. High confidence without realistic knowledge of industry demands may generate inflated expectations and undermine effective career adaptation. Accordingly, employability initiatives should combine confidence-building with internships, employer feedback, practical exposure, and realistic career guidance.

#### Limitations for Future Research

This study, while contributing to the understanding of agricultural student PE, has several limitations. Its cross-sectional design precludes causal inference; longitudinal research is recommended to track the evolution of constructs like SE and PE over time and into early careers. Reliance on self-report measures may introduce common method bias; future studies could benefit from incorporating multi-source data (e.g., supervisor evaluations, employer feedback). The study's single-university context and specific socio-economic environment (Lorestan, Iran) may limit generalizability, particularly given potential cultural differences in higher education and recruitment practices compared to Western contexts where the CareerEDGE model originated. The non-replication of the original CareerEDGE mediation structure, particularly the GS to PE path, suggests context-specific influences. Our findings indicate GS may indirectly impact PE via SE, warranting further investigation into potential moderators (e.g., industry-specific cultural

norms, market maturity). Finally, the exclusion of demographic and background variables (e.g., age, gender, family entrepreneurial history, prior entrepreneurship training) was for parsimony. Future research should integrate these variables to provide a more comprehensive model of employability determinants.

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### Reference

1. Abd Rahmali, N. A., Jaafar, M. N., Mahmud, N., & Shaharuddin, N. (2025a). CareerEDGE in Action: Enhancing the employability of islamic banking and finance graduates in Malaysia's digital economy. *Environment-Behaviour Proceedings Journal*, 10(SI33), 187–193.
2. Abd Rahmali, N. A., Jaafar, M. N., Nurazree, M., & Norhasimah, S. (2025b). A preliminary study on graduate employability among Islamic banking and finance graduates: the role of career edge and digital literacy. *Insight Journal (IJ)*, 13(1), 1–14. <https://doi.org/10.24191/ij.v13i1>
3. Agasisti, T., & Bertoletti, A. (2022). Higher education and economic growth: A longitudinal study of European regions 2000-2017. *Socio-Economic Planning Sciences*, 81, 100940. <https://doi.org/10.1016/j.seps.2020.100940>
4. Alibaygi, A. H., Barani, S., Karami, E., & Pouya, M. (2013). Employability determinants of senior agricultural students in Iran. *Journal of Agricultural Science and Technology*, 15(4), 673–683.
5. Amini, A., Ashoori, H., Ranjbar Ezatabadi, M., Hadi Nodoushan, H., Eslami, H., & Dehghani Tafti, A. (2014). The Survey In Satisfaction Of Students Of Medical Laboratory Sciences From Educational, Research, And Welfare Services At Paramedical Faculty In Shahid Sadoughi University Of Medical Sciences. *Educational Development of Judishapur*, 5(1), 66–72.
6. Ayala Calvo, J. C., & Manzano García, G. (2021). The influence of psychological capital on graduates' perception of employability: the mediating role of employability skills. *Higher Education Research & Development*, 40(2), 293–308. <https://doi.org/10.1080/07294360.2020.1738350>
7. Bakari, H., & Khoso, I. (2017). Psychological Determinants of Graduate Employability: A

- 397 Comparative Study of Business and Agriculture Students Across Pakistan. *Business & Economic*  
398 *Review*, 9(4), 113–140. <https://doi.org/10.22547/BER/9.4.6>
- 399 8. Baroroh, F., Nurrochim, N., & Ratnaningsih, S. (2024). Education As Human Resource  
400 Investment: Educational Resources And Education As An Industry. *Ar-Rosikhun: Jurnal*  
401 *Manajemen Pendidikan Islam*, 4(1), 39–49. <https://doi.org/10.18860/rosikhun.v4i1.30097>
- 402 9. Bhattacharya, A., & Chawla, G. (2026). Unlocking Employability with Grit and Cultural  
403 Intelligence: An Extension of the Career EDGE Model of Employability. *NMIMS Management*  
404 *Review*, 34(2), 151–164. <https://doi.org/10.1177/09711023261417823>
- 405 10. Braun-Lewensohn, O., Mayer, C.-H. M., & Tekoah, S. D. (2022). Women’s coping in various  
406 spheres in society: Challenges and opportunities. *Frontiers in Psychology*, 13, 1048370.  
407 <https://doi.org/10.3389/fpsyg.2022.1048370>
- 408 11. Chankseliani, M., Qoraboyev, I., & Gimranova, D. (2021). Higher education contributing to  
409 local, national, and global development: new empirical and conceptual insights. *Higher Education*,  
410 81(1), 109–127. <https://doi.org/10.1007/s10734-020-00565-8>
- 411 12. Chow, H. J., Wong, S. C., & Lim, C. S. (2019). Examining Mediating Role of Self-Efficacy  
412 on Undergraduates’ Perceived Employability. *International Journal of Academic Research in*  
413 *Business and Social Sciences*, 9(6), 135–158. <https://doi.org/10.6007/IJARBSS/v9-i6/5929>
- 414 13. Dacre-Pool, L. (2020). Revisiting the CareerEDGE model of graduate employability. *Journal*  
415 *of the National Institute for Career Education and Counselling*, 44(1), 51–56.  
416 <https://doi.org/10.20856/jnicec.4408>
- 417 14. Dacre Pool, L., Qualter, P., & J. Sewell, P. (2014). Exploring the factor structure of the  
418 CareerEDGE employability development profile. *Education+ Training*, 56(4), 303–313.  
419 <https://doi.org/10.1108/ET-01-2013-0009>
- 420 15. Dacre Pool, L., & Sewell, P. (2007). The key to employability: developing a practical model  
421 of graduate employability. *Education+ Training*, 49(4), 277–289.  
422 <https://doi.org/10.1108/00400910710754435>
- 423 16. Ekrami, M., Dashtevan Ardestani, Z., & Frahbod, A. (2023). Measuring Students’ Values in  
424 Payame Noor University of Tehran Province. *Quarterly Journal of Research and Planning in*  
425 *Higher Education*, 17(2), 121–136.
- 426 17. El-Kassem, R. C., Sellami, A., & Elawad, E. F. E. (2018). Antecedents and consequences of  
427 perceived student employability in Qatar: parental perspective. *International Review on Public*

- 428 *and Nonprofit Marketing*, 15(4), 575–589. <https://doi.org/10.1007/s12208-018-0214-6>
- 429 18. Ergün, M., & Şeşen, H. (2021). A Comprehensive Study on University Students' Perceived  
430 Employability: Comparative Effects of Personal and Contextual Factors. *Sage Open*, 11(3),  
431 21582440211036104. <https://doi.org/10.1177/21582440211036105>
- 432 19. Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action*  
433 *approach*. Psychology press.
- 434 20. Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in  
435 PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101–110.  
436 <https://doi.org/10.1016/j.jbusres.2019.11.069>
- 437 21. Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021).  
438 *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. Springer  
439 Nature.
- 440 22. Herdem, D. Ö. (2019). The Effect of Psychological Capital on Motivation for Individual  
441 Instrument: A Study on University Students. *Universal Journal of Educational Research*, 7(6),  
442 1402–1413. <https://doi.org/10.13189/ujer.2019.070608>
- 443 23. Hinton, C. G. (2012). *The relationship between employability and hope*. DePaul University.
- 444 24. Hirschi, A., Abessolo, M., & Froidevaux, A. (2015). Hope as a resource for career exploration:  
445 Examining incremental and cross-lagged effects. *Journal of Vocational Behavior*, 86, 38–47.  
446 <https://doi.org/10.1016/j.jvb.2014.10.006>
- 447 25. Hlatywayo, C. K., & Chinyamurindi, W. T. (2025). The Relationship Between Psychological  
448 Capital and Employability Amongst a Cohort of Government Employees in the Eastern Cape  
449 Province, South Africa. *Journal of Public Administration*, 60(1), 145–167.  
450 <https://doi.org/10.53973/jopa.2025.60.1.a10>
- 451 26. Hong, P. Y. P., & Choi, S. (2013). The employment hope scale: Measuring an empowerment  
452 pathway to employment success. *International Journal of Psychology Research*, 8(3).
- 453 27. Hong, P. Y. P., Hong, R., Choi, S., & Hodge, D. R. (2021). Examining psychological self-  
454 sufficiency among low-income jobseekers with mental health barriers. *Community Mental Health*  
455 *Journal*, 57(1), 178–188. <https://doi.org/10.1007/s10597-020-00630-7>
- 456 28. Hong, P. Y. P., Kenemore, T., & In, B. (2015). Transforming Impossible into Possible (TIP):  
457 A group work model in workforce development. *Poster Presented at The*.
- 458 29. Jia, Y., Hou, Z.-J., & Shen, J. (2022). Adolescents' Future Time Perspective and Career

- 459 Construction: Career Adaptability as Mediator and Hope as Moderator. *Journal of Career*  
460 *Development*, 49(1), 202–217. <https://doi.org/10.1177/0894845320926579>
- 461 30. Juntunen, C. L., & Wettersten, K. B. (2006). Work hope: Development and initial validation  
462 of a measure. *Journal of Counseling Psychology*, 53(1), 94. [https://doi.org/10.1037/0022-](https://doi.org/10.1037/0022-0167.53.1.94)  
463 0167.53.1.94
- 464 31. Kasler, J., Zysberg, L., & Harel, N. (2017). Hopes for the future: demographic and personal  
465 resources associated with self-perceived employability and actual employment among senior year  
466 students. *Journal of Education and Work*, 30(8), 881–892.  
467 <https://doi.org/10.1080/13639080.2017.1352083>
- 468 32. Kleka, P., Brycz, H., Zięba, M., & Fanslau, A. (2024). Longitudinal study of metacognition's  
469 role in self-efficacy and hope development. *Scientific Reports*, 14(1), 29379.  
470 <https://doi.org/10.1038/s41598-024-80180-0>
- 471 33. Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach.  
472 *International Journal of E-Collaboration (Ijec)*, 11(4), 1–10.
- 473 34. Ma, J. (2021). A study on the relationship between college Students' psychological capital and  
474 their employability. *6th Annual International Conference on Social Science and Contemporary*  
475 *Humanity Development (SSCHD 2020)*, 536–540. <https://doi.org/10.2991/assehr.k.210121.109>
- 476 35. Moghaddas, S., Nilforooshan, P., Sadeghi, A., & Kazemi, I. (2025). Perceived employability  
477 profiles and their relations to adaptivity, adaptability, and adapting: a person-centered approach.  
478 *International Journal for Educational and Vocational Guidance*, 1–21.  
479 <https://doi.org/10.1007/s10775-025-09758-y>
- 480 36. Mohd Amin, A. H., Rasdi, R. M., & Syuhada Musa, S. N. (2025). Examining Perceived  
481 Employability of Public Service Department Sponsored Undergraduates in Malaysian Public  
482 Universities: CareerEDGE Model and the Role of Self-Efficacy as a Mediator. *Journal of Public*  
483 *Administration and Governance*, 15(2), 14. <https://doi.org/10.5296/jpag.v15i2.23081>
- 484 37. Mokhtar, S. A., Arifin, N. A. M., Rosman, M. R. M., Abdullah, N., Fadzil, F. H., & Isa, A. M.  
485 (2022). Graduates' Competencies and Employability: A Conceptual Framework. *Proceedings*,  
486 82(1), 54. <https://doi.org/10.3390/proceedings2022082054>
- 487 38. Ngai, S. S., Cheung, C., Wang, L., Li, Y., Ng, Y., Yu, E. N., & Leung, W. P. (2022).  
488 Development and validation of the career and life development Hope (CLDH) scale among non-  
489 engaged youth in Hong Kong. *International Journal of Environmental Research and Public*

- 490 *Health*, 19(16), 10283. <https://doi.org/10.3390/ijerph191610283>
- 491 39. Omidifar, R., & Narimani, A. R. (2026). Ranking Iranian universities by process quality and  
492 non-cognitive engagement for graduate employability. *Discover Education*.  
493 <https://doi.org/10.1007/s44217-026-01772-8>
- 494 40. Pouratashi, M., & Zamani, A. (2019). University and graduates employability. *Higher*  
495 *Education, Skills and Work-Based Learning*, 9(3), 290–304. [https://doi.org/10.1108/HESWBL-](https://doi.org/10.1108/HESWBL-12-2017-0103)  
496 12-2017-0103
- 497 41. Quiroz, P. (2017). *Hope and Employability in Master of Social Work Students*. California State  
498 University, Northridge.
- 499 42. Raybould, M., & Wilkins, H. (2005). Over qualified and under experienced: Turning graduates  
500 into hospitality managers. *International Journal of Contemporary Hospitality Management*, 17(3),  
501 203–216. <https://doi.org/10.1108/09596110510591891>
- 502 43. Sewell, P., & Dacre-Pool, L. (2010). *The UCLan-CareerEDGE Employability Development*  
503 *Profile*.
- 504 44. Shmueli, G., Ray, S., Velasquez Estrada, J. M., & Chatla, S. B. (2016). The elephant in the  
505 room: Predictive performance of PLS models. *Journal of Business Research*, 69(10), 4552–4564.  
506 <https://doi.org/10.1016/j.jbusres.2016.03.049>
- 507 45. Statistical Centre of Iran. (2026). *Statistical Yearbook of Iran (2023-2024)*.  
508 <https://amar.org.ir/en>
- 509 46. Valero, D., Hirschi, A., & Strauss, K. (2015). Hope in Adolescent Careers. *Journal of Career*  
510 *Development*, 42(5), 381–395. <https://doi.org/10.1177/0894845314566866>
- 511 47. Van Dam, K. (2004). Antecedents and consequences of employability orientation. *European*  
512 *Journal of Work and Organizational Psychology*, 13(1), 29–51.  
513 <https://doi.org/10.1080/13594320344000237>
- 514 48. Wujema, B. K., Mohd Rasdi, R., Zaremohzzabieh, Z., & Ahrari, S. (2022). The role of self-  
515 efficacy as a mediating variable in CareerEDGE employability model: The context of  
516 undergraduate employability in the North-East Region of Nigeria. *Sustainability*, 14(8), 4660.  
517 <https://doi.org/10.3390/su14084660>
- 518 49. Yang, Y., Xu, X., Liu, W., & Pang, W. (2020). Hope and creative self-efficacy as sequential  
519 mediators in the relationship between family socioeconomic status and creativity. *Frontiers in*  
520 *Psychology*, 11, 438. <https://doi.org/10.3389/fpsyg.2020.00438>

50. Yawson, D. E., & Yamoah, F. A. (2023). Towards a framework for the promotion of business management graduate employability: an extended CareerEDGE model. *Studies in Higher Education*, 48(7), 1007–1024. <https://doi.org/10.1080/03075079.2023.2176481>

### عوامل مؤثر بر ادراک دانشجویان کشاورزی دانشگاه لرستان از قابلیت اشتغال: کاربردی از مدل اصلاح شده CareerEDGE

فاطمه رحیمی، سعید غلام رضایی، و افشین سرداره

یکی از دغدغه‌های کلیدی مؤسسات آموزش عالی، وضعیت حرفه‌ای و قابلیت اشتغال دانشجویان است. بنابراین، مفهوم قابلیت اشتغال دانشجویان به مرکز توجه تبدیل شده و نیاز به بررسی دارد. این مطالعه با هدف بررسی عوامل مؤثر بر قابلیت اشتغال ادراک شده دانشجویان کشاورزی در دانشگاه لرستان انجام شد. برای دستیابی به این هدف، از مدل اصلاح شده CareerEDGE استفاده شد. جامعه آماری این مطالعه، دانشجویان کشاورزی دانشگاه لرستان بودند. یک نمونه طبقه‌بندی شده چند مرحله‌ای با تخصیص متناسب متشکل از 270 دانشجو انتخاب شد. داده‌ها با استفاده از پرسشنامه‌ای که از متون مرتبط تهیه شده بود، جمع‌آوری شدند. روایی محتوایی ابزار توسط هیئتی از متخصصان موضوعی، متشکل از اعضای هیئت علمی دانشکده کشاورزی دانشگاه لرستان، که نماینده رشته‌های مختلف دانشگاهی بودند، به دقت ارزیابی شد. پس از دریافت بازخورد آنها، پرسشنامه برای اطمینان از ارتباط آن با زمینه کشاورزی اصلاح شد. مطالعه آزمایشی که با 30 پاسخ‌دهنده انجام شد، سازگاری درونی رضایت‌بخشی با ضرایب آلفای کرونباخ از 0.715 تا 0.833 را نشان داد. تجزیه و تحلیل مقایسه‌ای مدل‌های ساختاری نشان داد که مدل اثرات مستقیم، توضیح قوی‌تر و مختصرتری از قابلیت اشتغال ادراک شده نسبت به مدل واسطه‌ای ارائه می‌دهد. این نتیجه‌گیری با قدرت توضیحی برتر مدل مستقیم ( $R^2 = 0.516$ ) و نقش واسطه‌ای غیرمعنی‌دار خودکارآمدی پشتیبانی می‌شود، که نشان می‌دهد سازه‌های بیرونی عمدتاً از طریق مسیرهای مستقیم با قابلیت استخدام ادراک شده مرتبط هستند. یافته‌ها، سیاست‌های آموزشی و پیشنهاداتی را برای بهبود قابلیت استخدام دانشجویان ارائه می‌دهند.