

The Role of University Career Development Centers and Industry Partnerships in Enhancing Graduate Employability

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Abstract—The research aims to detect the role of career development centers (CDC) at universities and Industry Partnerships in Graduate Employability (GE) Enhancements in the Kurdistan Region of Iraq. The research design was descriptive-analytical, in which the variables were described, and their interrelationship and effects were examined. This study was carried out in the universities in the Kurdistan Region - Iraq. To complete the research objectives, a questionnaire was developed to gather field information and was administered to randomly sample University Career Centers. There were (57) valid questionnaires returned and analyzed. The statistical analysis of the data was conducted through the Statistical Package for the Social Sciences the findings indicate that CDC programs and services enhance graduates' readiness for the labor market, while robust industry participation is associated with improved employability outcomes. Besides this, CDC also emphasizes the need to combine the support of the institutions and the outside involvement to make the most out of the interaction effect between the quality of the service and the collaboration in the industry. Finally, a series of recommendations was formulated to help guide the universities, policymakers, and industry partners to strengthen the strategic position of CDC and the collaboration of universities and the industry to achieve better GE results within the Kurdistan Region

Keywords—Career centers, Graduate employability, Internship programs, Service quality, University-industry linkage.

I. INTRODUCTION

University graduates in the Kurdistan Region of Iraq Universities face several structural factors that limit graduates' access to suitable employment opportunities, which has resulted in high unemployment and frustration rates. Career Development Centers (CDCs) started being established in public and private universities in the Kurdistan Region in 2014. The centers have grown consistently in the face of limited financial and institutional capacity because of focused training and organizational changes. Over the period between 2023 and 2025, CDCs enabled 2,199 graduates to secure employment, which proves their increasing role in improving graduate employability (GE) and employment in the labor market (Sadiq, 2025). These issues are not merely connected with the economic situation, but also feature a wide disparity between the production of educational and work market requirements. The study objectives are as follows: The data were analyzed using descriptive and analytical statistical methods to obtain the results: Based on

their organizational structure, examine the present situation, including the service offered and resources of CDC at Universities in the Kurdistan Region of Iraq. Examine the gap between the university graduates' skills and the market needs in the public and market sectors. Evaluate how cooperation between the academic institutions and industrial institutions affects designing the academic curriculum, offering praxis and job offerings to university graduates. Assess the CDC activities related to preparing the graduates to the labor market. CDC in the Kurdistan Region is crucial in dealing with issues related to the labor market and unemployment. The information gap between the academic qualifications and the labor market requirements is filled by the centers, helping provide the qualification of youth and sustainable employment opportunities.

Despite the growing presence of CDCs in universities across the Kurdistan Region, graduate unemployment remains high. The lack of systematic collaboration between universities and industry partners, along with insufficient

evaluation of CDC effectiveness, has created a persistent gap between graduates' acquired skills and labor market demands. This study, therefore, investigates the extent to which CDC activities and university-industry partnerships contribute to enhancing GE in the Kurdistan Region of Iraq.

The Significance of this study are: Linking the world of academia and industry, as it inspects how universities should better equip their students to fit in the labor market, to face the issue of graduate unemployment, with the knowledge on how CDC and industry partnerships make to work., supporting the economy through helping graduates to be employed, sharing evidence-based information: The research provides statistical data and profound analyses of the existing programs effectiveness, suggestions on policies to be implemented by parties (government decision-makers, administrators of universities and local businesses).

The academic outputs and the labor market mismatch in the Kurdistan Region implies that the labor market does not require the skills and knowledge that university and college graduates earned. The result of this disparity is high rates of unemployed graduates, particularly in areas that lack the need of their areas of specialization. The set of essential research questions that will lead to this research is the following: What are the key services offered by CDC in the universities within the Kurdistan Region? Are these services fulfilling their actual needs in the labor market? Are CDC measuring the contribution of their programs to the employability skills of graduates, and in which ways? What are the key challenges that these centers encounter to engage more students and offer effective services? What is the role of these alliances in recognizing the skills needed in the labor market and in inserting them into the curriculum? What will CDC and industry partnerships do to assist each other more effectively in closing this gap?

Although numerous studies have explored the relationship between university career centers, industry engagement, and GE in developed contexts, there is a scarcity of empirical research examining these dynamics within Iraq or the Kurdistan Region. Existing international models may not adequately capture the structural, cultural, and policy-related challenges faced by universities in developing and post-conflict regions. This study contributes to filling this gap by providing the first regional quantitative analysis of CDC effectiveness and university–industry partnerships using data from public and private universities in the Kurdistan Region. The findings will help policymakers and higher education institutions tailor employability strategies to the specific socio-economic conditions of the region. Paper structure overview It has comprised six major sections, namely, the first was while introductions, the second was devoted to the Literature Review, the third was devoted to the methodological framework, the fourth results presented the practical, the fifth, discussion framework, and the sixth included the Conclusion and Recommendations presented to the higher education and scientific research institutions in the Kurdistan Region, with the main focus being on the public and the private universities.

II. LITERATURE REVIEW

A. GE

GE has turned into a multidimensional phenomenon, where disciplinary knowledge is only one part of the whole, along with soft skills, flexibility, and professional identity (Jackson and Bridgstock, 2021; Tomlinson, 2023). According to scholars, the concept of employability can be regarded as a process and as an outcome, which is affected by the institutional input, work-integrated learning, and personal agency (Kersh et al., 2025; Grantham and Iachizzi, 2024). The latest models, including the Employability Capital Growth Model (Donald et al., 2024a), focus on the employability developmental path, promoting coaching, mentoring, and simulation. Furthermore, digital literacy and interdisciplinary skills have become one of the most significant qualities in the Fourth Industrial Revolution age (Zegwaard et al., 2023; Bennett et al., 2023). The persistent gaps, especially on the employment of women in cultural restrictive environments are still there (Movahedi, 2024) and institutional gaps with work requirements in areas, such as Ethiopia and Georgia (Shimeket and Oumer, 2022; Kikutadze et al., 2022). These challenges need the urgency for responsive curricula and complete support structures.

B. CDC

Career Development Centers have evolved as a form of transactional placement office to become a strategic organization providing employability results. By being incorporated in the academic departments, CDCs can easily provide customized services, such as alumni mentorship, employer-led sessions, and job-readiness training (Dean and Rook, 2023; Emms et al., 2024). Nevertheless, there are still differences in engagement. Melhuish (2025) emphasizes that marginalized students have access and confidence issues that frequently restrict their engagement with CDC services. Equally, Saraf (2023) records institutional inefficiencies in developing nations, where the low number of staff and poor employer nexus decrease the effect. Best CDCs now combine evidence-based decision-making, where feedback of alumni and employers is used to continually enhance (Rokhimawan et al., 2025). Their fit to the institutional objectives brings about sustainability and relevance in the fast-changing labor markets (Caratozzolo et al., 2025).

C. University-Industry Partnerships

The development of CDCs in the Kurdistan Region is relatively recent, and as a result, there is a clear lack of regional literature addressing their structure, performance, or impact on GE. Unlike countries with long-established CDC networks, the Kurdistan Region has limited academic or policy-based research on this topic. The only available documentation comes from the Ministry of Higher Education and Scientific Research's CDC Annual Performance Report (2023–2025) (Sadiq, 2025), which remains unpublished and internal. This absence of peer-reviewed local studies highlights a significant gap in the literature and underscores the need for empirical academic research on how CDCs

and university-industry partnerships operate and influence employability outcomes in the Kurdistan context.

University industry partnerships (UIPs) are the necessary ones to address the theory-practice gap. Lasrado et al. (2024) suggest the implementation of the framework based on mutual trust and common design of learning experiences, as well as on the outcomes-based collaboration. The result of such alliances includes better internships, real project work, and jointly developed curricula (Vuoriainen et al., 2025; Massoudi et al., 2025). The quality of partnerships; however, differs regionally and institutionally. According to Suleman and Suleman (2024), cultural differences and communication barriers are the obstacles to sustainable cooperation. In addition, partnerships tend to be informal and in Africa and Southeast Asia, do not have policy scaffolding (Kikasu et al., 2025; Kikutadze et al., 2022). Specifically, it is revealed that integrating employer feedback into the curriculum design makes it more relevant and graduate-ready (Emms et al., 2024). Another way in which long-term UIPs are strong in the creation of employability ecosystems is through alumni-led models of engagement (Gallo, 2021). - Employer Interaction on Campus (EIC): Assess employer connection in curriculum design, mentoring, and networking events (Ferns et al., 2016; Choy and Delahaye, 2011). These dimensions are supported by Human Capital Theory (Becker, 1964) and Social Cognitive Career Theory (Lent et al., 1994), suggesting that employability outcomes are formed by institutional investment and student engagement. Practical applications of this outline have corroborated its utility in tracing the efficacy of HE interventions across various settings (Massoudi and Birdawod, 2023; Rokhimawan et al., 2025).

D. The Hypothetical Research Model

- Hypothesis 1: University CDC programs and services (such as workshops, career counseling, and CV development) directly contribute to improving graduates' skills and increasing their chances of finding suitable jobs.
- Hypothesis 2: Partnerships between universities and the private sector provide internship opportunities for graduates, thus narrowing the gap between academic skills and labor market needs.
- Hypothesis 3: There is a positive interactive relationship between the efficiency of CDC and the effectiveness of industrial partnerships. The more active the centers are in building relationships with companies, the higher the quality and outcomes of these partnerships.
- Hypothesis 4: CDC dimensions – including career center service quality (CCSQ), industry partnership intensity and quality (IPIQ), internship/work-integrated learning quality (IWILQ), and Employer Interaction on Campus – significantly predict GE.

E. Research Model

The selection of the four dimensions in this model – CCSQ, IPIQ, IWILQ, and Employer Interaction Competence

(EIC) – was guided by empirical and theoretical evidence discussed in the literature review. These dimensions are grounded in Human Capital Theory (Becker, 1964) and Social Cognitive Career Theory (Lent et al., 1994), which together emphasize that employability outcomes are shaped by institutional structures and student engagement. In the context of the Kurdistan Region, these four variables were prioritized because CDCs are still in their developmental phase and rely heavily on service quality, industrial collaboration, practical learning opportunities, and employer engagement to achieve measurable outcomes. Thus, the model integrates both global frameworks and local institutional realities, A hypothetical model has been derived by treating the University Career Centers (CDC) and Industry Partnerships independent variable and GE as a dependent variable to demonstrate the potential to bring about an environment that can be conducive to establishment of universities in Kurdistan Region, Iraq, and the extent that these two variables relate to the work environment under study has been indicated by the correlation of the two variables with the work environment under study is also indicated in (Fig. 1).

III. METHODOLOGY

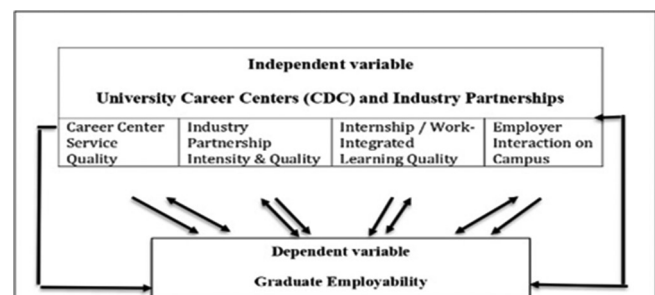
The study was constructed on the descriptive and analytical research design where the data were collected through a survey shared to the target population to the Kurdistan Region of Iraq, the study adopted a descriptive-analytical design to examine the relationship between CDC.

A. Research Design

Qualitative data analysis using the Statistical Package for the Social Sciences (SPSS) program to analyze questionnaires and hypotheses test.

B. Data Collection

A survey questionnaire in the form of a structured questionnaire was used as the main source of data in this research among the CDC employees and directors of the (17) public and (6) private universities in the Kurdistan Region. One used Google Forms to collect responses and SPSS to analyses them (Survey of CDC staff and directors



Source: Prepared by researcher

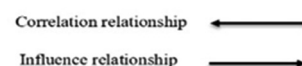


Fig. 1: Research model.

in universities in Kurdistan (demographic info: Gender, Age, Role, City, Years working in CDC, Number of graduates who offered them job opportunities through the CDC)) and Questionnaires, Google Forms, and literature reviews.

C. Sampling Strategy

A total of 72 responses were received, of which 69 were valid for analysis. Demographic analysis was based on 57 fully completed responses.

TABLE I
RELIABILITY STATISTICS FOR UNIVERSITY CAREER DEVELOPMENT CENTERS (CDC) AND GRADUATE EMPLOYABILITY SCALES

Scale	Cronbach's alpha	Number of items
University career development centers (CDC) and Industry Partnerships	0.842	20
Graduate employability	0.866	10

Source: Prepared by researcher

TABLE II
N=57 (COMPLETE DEMOGRAPHIC RESPONSES); TOTAL ANALYTICAL SAMPLE=69

Variable	Category	Frequency	Percentage
Age	30–39 years	33	57.9
	40–49 years	14	24.6
	50 years and above	10	17.5
Role in center	Staff	27	47.4
	Coordinator	12	21.1
	Director	18	31.6
Type of university	Public	51	89.5
	Private	6	10.5
Years of experience in CDC	<1 year	3	5.3
	1–4 years	49	86
	5–10 years	5	8.8
Graduates offered jobs in the past 5 years (grouped)	<20	30	52.6
	101–200	16	28.1
	More than 200	11	19.3

n=57 complete demographic responses; total analytical sample=69. Source: Prepared by researcher

TABLE III
DISTRIBUTION OF CDC STAFF BY UNIVERSITY/CENTER (N=57)

Name of centers	Frequency	Percentage
CDC, Salahaddin University-Erbil	7	12.3
CDC/Hawler Medical University	3	5.3
CDC/Erbil Polytechnic University	7	12.3
CDC/Duhok University	5	8.8
CDC/Sulaimani Polytechnic	6	10.5
CDC-Koya University	2	3.5
CDC/Garmian University	4	7
CDC/Halabja University	3	5.3
CDC/Raparin University	3	5.3
CDC/Zakho University	3	5.3
Career Development Center, Akre University	3	5.3
CDC-Technical Institute of Shingal, DPU	5	8.8
CDC/American University Duhok	1	1.8
CDC/Cihan University	1	1.8
CDC/American University of Iraq, Sulaimani	1	1.8
CDC/Komar University	1	1.8
CDC/Tishk International University	1	1.8
CDC/Knowledge University	1	1.8

Source: Prepared by researcher

D. Measurement of Variables

Independent variable (University Career Centers [CDC] and Industry Partnerships, Dimension 4), Dependent variable (GE, 10 items), 5-point Likert scale.

E. Reliability Statistics for University CDC and GE Scales

Table I contains the reliability statistics of university CDC and GE scales.

Table I indicates that the two scales have a good internal consistency. The Cronbachs alpha of the CDC and industry partnership scale (0.842) shows that this scale is highly reliable to assess the quality and intensity of CDC programs, industry participation, internship programs, and employer interactions. The alpha of the Graduate Employee Scale is 0.866 and this shows that the scale remains constant in its measurement of the outcome of the employment of graduates. These findings are an indication that questionnaire items can be used in the study.

IV. RESULTS AND DISCUSSION

The study used quantitative research to explore the role of University CDC and Industry Partnerships in Enhancing GE in the Kurdistan Region sample of CDC staff and directors in the Universities of Kurdistan Region-Iraq. The characteristics

TABLE IV
MODEL SUMMARY AND ANOVA FOR THE EFFECT OF CDC PROGRAMS ON GRADUATE EMPLOYABILITY

Model	R	R ²	Adjusted R ²	Standard error	F	Sig. (P)
1	0.526	0.277	0.264	0.2277	21.036	0.000

Source: Prepared by researcher

TABLE V
REGRESSION COEFFICIENTS FOR CDC PROGRAMS PREDICTING GRADUATE EMPLOYABILITY

Predictor	B (unstandardized)	Standard error	β (Standardized)	t	Sig. (P)
Constant	3.272	0.194	–	16.823	0.000
CDC programs and services	0.234	0.051	0.526	4.587	0.000

Source: Prepared by researcher

TABLE VI
PEARSON CORRELATION BETWEEN INDUSTRY PARTNERSHIP INTENSITY AND QUALITY AND GRADUATE EMPLOYABILITY

Variables	Correlations	
	Graduate employability	Industry partnership intensity and quality
Graduate employability		
Pearson correlation	1	0.308*
Sig. (2-tailed)		0.020
n	57	57
Industry partnership intensity and quality		
Pearson correlation	0.308*	1
Sig. (2-tailed)	0.020	
n	57	57

*. Correlation is significant at the 0.05 level (2-tailed). Source: Prepared by researcher

TABLE VII

MULTIPLE REGRESSION ANALYSIS FOR THE INTERACTIVE EFFECT OF CAREER CENTER SERVICE QUALITY AND INDUSTRY PARTNERSHIP ON GRADUATE EMPLOYABILITY					
Predictor	B (unstandardized)	Standard error	β (standardized)	t	Sig. (P)
Constant	-0.49	1.085	-	-0.452	0.653
Career development center programs and Services	1.311	0.295	2.943	4.445	0.000
Industry partnership intensity and quality	0.839	0.263	2.206	3.186	0.002
Interaction term	-0.239	0.067	-4.376	-3.542	0.001

Source: Prepared by researcher

of data analysis in this study were wide-ranging, and it was carried out to achieve reliable results. The study received (72) valid questionnaires out of its targeted sample size (80) ones. The cleaning procedure made (69) usable records available to be analyzed. Several statistical characteristics of SPSS enabled the assessment of the opinion of the participants along with the presence of the most significant relationships among the variables. The research depended on several statistical procedures comprising of descriptive statistics that utilized mean and standard deviation values alongside reliability evaluations involving Cronbach's alpha ended in correlation evaluation using Pearson correlation coefficient and then linear regression. All the responses were measured using a five-point Likert scale that the participants utilized.

A. Socio-Demographic Characteristics of CDC Staff

Table II presents the Socio-Demographic Characteristics of CDC Staff.

Table II indicates that most of the CDC employees were aged between 30 and 39 (57.9), 40–49 (24.6), and 50 and above (17.5). Concerning roles, the majority of the participants were the staff members (47.4%), then directors (31.6%) and coordinators (21.1%). Most of the respondents were employed in the public universities (89.5% and 10.5%, respectively). The majority of staff had experience of 1–4 years in CDCs (86%), 53% fewer than 1 year experience, 8.8% fewer were 5–10 years' experience. More than 50% of the personnel said that their CDC offered <20 graduates' jobs over the past 5 years (52.6%), with 28.1% indicating 101–200 graduates and 19.3% indicating more than 200 graduates.

B. Distribution of CDC Staff by University/Center

Table III is the Distribution of CDC Staff by University/Center.

As indicated in Table III, the respondents in the study were staff members, and participants were from 18 universities and technical institutes in the Kurdistan Region. CDC, Salahaddin University, and CDC/Erbil Polytechnic University (all 12.3%), CDC/Sulaimani Polytechnic (10.5%), and CDC-Technical Institute of Shingal, DPU (8.8%), had the highest representation. The other centers were less represented, with some universities representing one or two respondents only (1.835.3).

C. Model Summary and ANOVA for the Effect of CDC Programs on GE

Table IV presents the model summary and ANOVA of effect of CDC programs on the GE.

TABLE VIII

MODEL SUMMARY AND ANOVA FOR THE INTERACTIVE EFFECT OF CAREER CENTER SERVICE QUALITY AND INDUSTRY PARTNERSHIP ON GRADUATE EMPLOYABILITY

Model	R	R ²	Adjusted R ²	Standard error	F	Sig. (P)
1	0.654	0.427	0.395	0.2064	13.19	0.000

Source: Prepared by researcher

TABLE IX

MODEL SUMMARY AND ANOVA FOR THE EFFECT OF CDC DIMENSIONS ON GRADUATE EMPLOYABILITY

Model	R	R ²	Adjusted R ²	Standard error	F	Sig. (P)
1	0.686	0.47	0.429	0.2005	11.525	0.000

Source: Prepared by researcher

Table IV investigating the relationship between CDC programs and services and GE was statistically significant ($F = 21.036$, $P < 0.001$) and it accounted 27.7% of the graduated employability variation ($R^2 = 0.277$). It means that CDC programs add value to graduates of the job readiness level, which confirms Hypothesis 1, which suggested that CDC services enhance graduate skills and raise the level of employability.

D. Regression Coefficients for CDC Programs Predicting GE

Table V shows the regression coefficients of CDC programs that predict GE.

Table V indicates that the unstandardized coefficient ($B = 0.234$, $P < 0.001$) and standardized coefficient ($=0.526$) value is positive and significant in terms of CDC programs and services on GE. This supports Hypothesis 1 which shows that the better the quality of CDC programs, the better the employability of graduates.

E. Pearson Correlation between IPIQ and GE

Table VI shows the Pearson correlation between IPIQ and GE.

Table VI Pearson -Correlation ($R = 0.308$, $P = 0.020$) shows the positive and significant relation between the intensity of the industry partnership and GE. It confirms Hypothesis 2 which indicates that, successful collaboration with the private sector, such as internship and employer involvement, enhances the preparedness of the candidate to the labor market.

F. Multiple Regression Analysis for the Interactive Effect of CCSQ and Industry Partnership on GE

Table VII shows the multiple regression analysis of interactive effect of CCSQ and industry partnership on GE.

TABLE X
REGRESSION COEFFICIENTS FOR CDC DIMENSIONS PREDICTING GRADUATE EMPLOYABILITY

Predictor	B (unstandardized)	Standard error	β (standardized)	t	Sig. (P)
Constant	2.962	0.218	–	13.583	0.000
Career development center programs and services	0.262	0.071	0.588	3.68	0.001
Industry partnership intensity and quality	0.036	0.063	0.094	0.57	0.571
Internship/work-integrated learning quality	0.159	0.081	0.434	1.964	0.055
Employer interaction on campus	-0.181	0.049	-0.81	-3.701	0.001

Dependent variable: Graduate employability. Source: Prepared by researcher

According to Table VII, the intensity of industry partnership ($B = 0.839$, $P = 0.002$) and the CDC program ($B = 1.311$, $P < 0.001$) have a significant predictive effect on employability. The interaction term was also important ($B = -0.239$, $P = 0.001$), indicating that the impact of CDC programs on employability is the subject of the level of industry partnership. These findings confirm the Hypothesis 3, which shows the strong interactive effect between the quality of CDC and industry relationship.

G. Model Summary and ANOVA for the Interactive Effect of CCSQ and Industry Partnership on GE

Table VIII contains the model summary and ANOVA of interactive effect of CCSQ and industry partnership on GE.

Table VIII indicates that the model was significant ($f = 13.19$, $P = 0.001$) and explained 42.7% of the variance in GE ($R^2 = 0.427$). This validates Hypothesis 3, and states that when high-quality CDC programs are accompanied by active involvement of industries, the employability outcomes are higher than when either is present, alone.

H. Model Summary and ANOVA for the Effect of CDC Dimensions on GE

Table IX provides the model summary and ANOVA of effect of CDC dimensions on GE.

As reported in Table IX, the testing of all four dimensions in the CDC of employment in a multiple regression model was significant ($f = 11.525$, $P < 0.001$) and described approximately 47.0% ($R^2 = 0.470$) as an explained variance. It confirms Hypothesis 4, according to which, the quality of CDC services, the industry partnerships, internship, and employer interaction play a significant role in GE.

I. Regression Coefficients for CDC Dimensions Predicting GE

Table X shows the regression coefficients of CDC dimensions which predict GE.

The negative and significant coefficient for Employer Interaction on Campus (EIC) indicates that, when controlling for other CDC-related variables, higher scores on EIC were associated with slightly lower employability outcomes. This unexpected result can be attributed to multicollinearity between EIC and other dimensions, such as IPIQ and *Work-Integrated Learning Quality*. While the correlation analysis showed a positive relationship, the regression coefficient became negative once shared variance was accounted for. Furthermore, most employer interactions at Kurdish

universities are still sporadic and primarily symbolic (e.g., short-term workshops and recruitment events), lacking long-term collaboration or mentoring components. Consequently, these limited engagements may not yet produce measurable employability improvements, reflecting the early stage of CDC development in the region.

Table X indicates that the significant predictor between the four dimensions includes CDC programs ($\beta = 0.588$, $P = 0.001$) and the interaction of the employer on campus ($\beta = -0.810$, $P = 0.001$), whereas the quality of internship was only significant marginally ($\beta = 0.434$, $P = 0.055$) and the industry partnership was not significant ($\beta = 0.094$, $P = 0.571$). This implies that employability is the most affected by CDC programs and engagement by employers, and supports Hypothesis 4, but does not affect all dimensions equally.

V. CONCLUSION

Across the outcomes of all the analyses, the study determined that the University CDC is significant in enhancing the GE within the Kurdistan Region. Conclusions reveal that, CDC health programs and services enhance the preparedness of the graduates to the labor market whereas robust industry involvement leads to employability results. Moreover, CDC focuses on the significance of combining the institutional support with the external participation to maximize the effect of interaction between the service quality and the cooperation with the industry. In considering four dimensions simultaneously, both the CDC program and employer interaction were the most impressive predictions, where skills in students were the focal point, and a direct interaction with employers was promoted. On the whole, the findings indicate that the hypotheses are well supported, and the suggested method proves that effective CDC operations, in combination with active industry connections are significant factors in the GE.

A. Recommendations

This research presents a number of recommendations based on evidence to improve GE in the Kurdistan Region on the basis of statistical and qualitative outcomes:

1. CDCs need to unite employers in the design and delivery of programmed in a systematic way. This embraces a series of activities and programs, including developing curricula together, providing workshops led by employer, and advisory boards of industry representatives making sure that it remains in line with market demand.

2. Formal mechanisms need to be employed to gather structured feedback about internship experiences between employers and students. Accountability and learning outcomes would be increased by using a standardized internship evaluation tool and conducting regular review meetings between CDCs and their partners.
3. The Ministry of Higher Education and Scientific Research, with the assistance of leadership of the university, must practice the national performance indicators of CDC effectiveness. These standards must cover coverage of services, graduate placements, employer satisfaction, and involvement of alumni.
4. It is immediately required that collaboration platforms should be established and a lasting dialogue between academia, industry, government agencies, and NGOs is made possible. These platforms may improve joint ownership of the strategies of the development of the workforce and make sustainable cooperations.
5. Employer relations programs, digital career service programs, and labor market intelligence should be employed to enable CDC staff. This will improve service quality and make the staff respond in advance to the changing dynamics in the labor market.
6. The universities should expand the definition of WIL to include project-based learning, final projects based on the industry, and simulations, in addition to the traditional internships. These different models have the capability of embracing diverse disciplines and the settings of regional employment.
7. Employer exposure: It is possible to have more active employers on campus in terms of career fairs, visiting lectures, mock interviews, mentorships, etc., exposing students to more exposure to professional framework and expectations, thereby growing confidence and employability.

By implementing these strategic recommendations, the system of higher education in Kurdistan can better fill the gap between academic outputs and achievable outcomes in relation to labor market needs; hence, it will be supportive in economic development.

B. Limitations and Future Research

There are number of limitations in this research which limit the external validity of the research results. The data of this study, collected from employees and directors only, did not include the opinions of the employers and graduates, being essential in assessing the overall effects of CDC programs. Furthermore, the cross-sectional design restricts causal conclusions, since this design lacks the ability of tracing the changes in the outcomes of employability with time. The Kurdistan Region is also given exclusive attention, limiting the extrapolation of results to the whole national or international setting.

Moreover, the researchers did not consider the possible variations according to gender, major, or type of university, which can contribute to service utilization and employment success. The external factors in the labor market, including

economic conditions or employment trends by the sector, were also not included in the analysis, although they are likely to influence GE. To further evaluate the contextual variables, future studies need to take a multi-stakeholder, longitudinal design and examine these contextual variables.

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