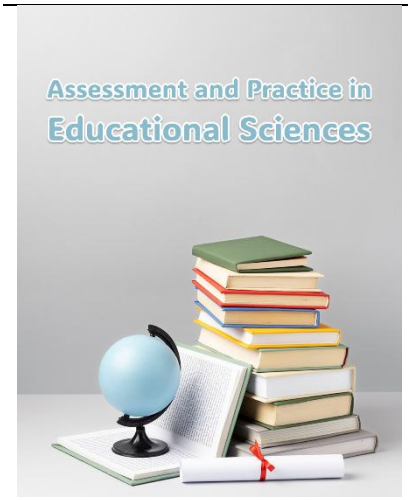
Assessment and Practice in Educational Sciences



Examining and Testing a Model for Attracting Knowledge Workers Based on Professional Competencies (Case Study: Governmental Organizations in Iraq)

1. Faten Abed. Mohsin AlRashid: Department of management, Isf.C, Islamic Azad University, Isfahan,Iran.

2. Zohreh. Aghababaei Dehaghani*: Assistant Professor, Social and Cultural Researches Center, Deh.C, Islamic Azad University, Isfahan,Iran. (Email: Zohrehbabaii@iau.ac.ir)

3. Abdulridha Faraj. Badrawi Alkhammas: Associate Professor ,department of business administration college of administration and economics university of Basra.

3. Mohsen. Shariati Kamalabadi: Assistant Professor,Department of culture and communication, Isf.C., Islamic Azad University, Isfahan, Iran

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ABSTRACT

Knowledge workers possess advanced education, high technical literacy, and elevated cognitive abilities, including abstract reasoning. They also demonstrate the capacity to observe, integrate, and interpret data and information while generating and transferring new perspectives and insights that support improved decision-making and more appropriate organizational solutions. The present study aims to examine and test a model for attracting knowledge workers based on professional competencies in the context of governmental organizations in Iraq. Accordingly, the research is applied in purpose, quantitative in data type, and descriptive–correlational in method. The statistical population consists of managers and officials from various governmental organizations. Due to the unlimited size of the population, Cochran's formula for an infinite population was applied, resulting in a sample size of 384 individuals. The research instrument was a questionnaire, and data analysis was conducted using structural equation modeling (SEM) in PLS software. The results indicate that all hypothesized relationships were confirmed (t-value > 1.96). The model fit index reached 0.63, indicating a strong model fit. Furthermore, the factor loadings for all components exceeded 0.40, confirming the acceptability of the confirmatory factor analysis.

Keywords: Knowledge workers; Professional competencies; Governmental organizations

Introduction

Attracting and retaining knowledge workers in public organizations has become a strategic imperative as governments face accelerating digitalization, complex citizen demands, and talent competition with private and transnational sectors (1). Knowledge workers—individuals whose primary contribution lies in problem-solving, professional judgment, and the production and application of specialized knowledge—expect competency-based recruitment, continuous professional development, and meaningful work architectures aligned with evolving digital and pedagogical standards (2, 3). In emerging administrative systems, especially within developing contexts, the shift from credential-centric hiring to professional competency frameworks is not merely a modernization gesture; it is a governance capacity strategy that links the quality of public services to the caliber and growth trajectories of human capital (4, 5). Against this backdrop, Iraqi governmental organizations face a dual challenge: building robust competency models that fit the local institutional fabric while competing in a labor market shaped by global expectations for digital fluency, transparent career pathways, and evidence-based professional development (6, 7).

Competency frameworks provide common language and measurement anchors for defining, assessing, and developing the capabilities required for high-stakes public roles, ranging from policy design and regulatory enforcement to data-driven service delivery (8). The recruitment system is a critical first mile of this architecture: how organizations specify roles, operationalize competency profiles, and structure selection processes materially affects who enters and who thrives (9). In education and allied public services—the pipelines that often supply technical and administrative talent—recent scholarship has converged on professional digital competence (PDC) as a foundational domain, encompassing not only tool proficiency but also ethical reasoning, pedagogical integration, assessment literacy, and collaborative innovation (6, 10). For Iraqi public institutions undergoing digitization of records, citizen interfaces, and back-office processes, embedding PDC within recruitment criteria and development plans is likely to be a high-leverage intervention (11). Parallel streams of research on competence formation in universities reinforce that professional competence emerges through integrative curricula, practice opportunities, and reflective assessment—features that can be mirrored in public-sector induction and internship models (12, 13).

Yet, drawing knowledge workers into public service cannot be reduced to screening tools alone. Motivation, identity, and perceived justice shape both attraction and performance outcomes. Studies on remuneration and generational expectations show that knowledge workers calibrate employment choices against bundles of extrinsic and intrinsic rewards, including flexible work, career autonomy, and mission alignment (2, 3). Satisfaction with one's work—particularly in universities and other knowledge-intensive public settings—correlates with clear role expectations, supportive leadership, and development pathways that signal long-term investment (14, 15). When attraction and retention strategies ignore these behavioral levers, governments risk cyclical vacancies, degraded service quality, and weakened institutional memory (5). Conversely, competency-based attraction integrated with structured professional development and ethical practice cultures can energize professional identity and persistence, especially in education systems that supply or mirror the talent dynamics of the broader public sector (16, 17).

The literature on attracting talented human resources in public and quasi-public contexts highlights three converging design principles. First, attraction must be evidence-informed: mapping job families to competency profiles and using validated assessments to reduce noise and bias (18, 19). Second, attraction must be coupled with credible development offerings—mentoring, blended and workplace learning, and career lattices—so that recruitment signals a pathway rather than a transaction (7, 20). Third, attraction must respect labor-market realities: competitive total rewards, employer branding that communicates public value and growth, and working conditions that enable high-skill practice (14, 21). Within Iraq's public administration,

these principles intersect with reform agendas aimed at service quality, transparency, and digital government, making competency-based attraction both a technical and institutional reform lever (4, 9).

Competency development research from teacher education—an important analogue for public-sector capability building—underscores the need to align selection, induction, and in-service learning with contemporary professional demands. Frameworks advancing PDC argue for coherence: programs should specify target competencies, integrate authentic tasks, and evaluate growth with robust analytics (6). International studies of future English language teachers and broader pedagogical fields show that professional-pedagogical competence is cultivated through iterative practice, reflective supervision, and digital integration—elements that public organizations can emulate via pre-service internships and probationary rotations (10, 13). Moreover, systematic reviews indicate that competence improvement depends on leadership support, organizational learning routines, and the judicious use of digital innovation to scaffold just-in-time learning opportunities (7). These insights align with projects in Iranian provincial school systems that model personal and professional development pathways—offering transferable design patterns for Iraqi ministries that manage large, distributed workforces (22).

Beyond developmental design, attraction hinges on signaling. Employer branding for public organizations must communicate challenging work, public impact, and credible development ladders—particularly salient for high-ability candidates choosing between private sector compensation and public sector mission (5, 21). AHP-based prioritization studies in e-service businesses identify attraction and retention drivers such as career clarity, fair evaluation, and competency-linked rewards—features that can be localized within civil-service regulations and ministerial HR policies (19). Recruitment research in health and records administration provides operational lessons on specification clarity, pipeline management, and the standardization of assessments across units—techniques that reduce time-to-hire while maintaining competency fidelity (9). Where internal labor markets are thin, partnerships with universities to co-design competency profiles and internship pipelines can de-risk entry-level recruitment and accelerate time to independent practice (12, 13).

Psychological mechanisms also matter. Empowerment and professional identity are mediators between development inputs and job performance, suggesting that attraction strategies should be integrated with early identity work—clarifying professional purpose, standards of practice, and avenues for contribution (23). Empirical work on innovative work behavior in education systems further indicates that when development is framed as capability for innovation—rather than compliance—professionals display higher engagement and create local improvements in service delivery (24). Ethical dimensions of professional growth—such as cultivating just practice and reflective agency—reinforce retention by aligning organizational and individual values, a consideration that is increasingly salient for knowledge workers evaluating public sector roles (16). In this context, blended and multicultural professional development models show promise for large, diverse systems, combining scalability with contextual sensitivity (20).

The digital layer cuts across attraction and competence. Studies on digital methods for competence development emphasize that technology should serve authentic professional tasks—analytics for formative assessment, collaborative platforms for problem-solving, and AI-supported curation of learning resources—rather than function as an end in itself (11). For Iraqi public organizations ramping up digital service delivery, prioritizing candidates' capacity for ethically sound, data-informed decision-making and for learning new platforms rapidly may be more predictive of success than static tool lists (6, 25). Systematic literature in teacher competence improvement suggests that leadership commitment and digital innovation are complementary: leaders who sponsor experimentation, protect learning time, and link development to performance management create climates where competencies translate into outcomes (7). Field evidence from professional development consortia also points to the value of andragogical principles—self-direction, problem-centering, and immediate relevance—in accelerating competence gains among experienced hires (13, 17).

Attraction policies must also engage with practical constraints and preferences. Compensation structures can be optimized to reflect the heterogeneous preferences of knowledge workers—for instance, trading off base pay with development opportunities, flexible scheduling, or research time—while staying within public finance rules (3). In developing-country universities—often a proxy for broader public employment conditions—employees' satisfaction with completed work hinges on recognition, resource adequacy, and developmental feedback loops, all of which can be embedded into civil service performance systems (14, 15). Meta-synthesis of recruitment factors in Iran echoes the need for multi-criteria approaches that combine competency assessment with organizational fit, procedural fairness, and career signaling, a triad with direct applicability to Iraqi contexts (18). Regional studies in education management—such as identifying attraction drivers for professional HR in provincial systems—underscore local tailoring: while competency categories may be portable, the weighting and implementation must fit institutional history and market conditions (4).

Finally, talent strategies must anticipate future competence needs. The modern knowledge economy rewards adaptive expertise: the capability to transfer principles across problems, learn new tools, and collaborate across boundaries (1). Competency frameworks should therefore include meta-competencies—self-efficacy, reflective judgment, and cross-cultural collaboration—whose development is linked to both performance and well-being (8). International and regional analyses of professional competence development point to blended learning ecosystems, mentorship networks, and rigorous assessment as pillars of sustainable growth, equally relevant to ministries and agencies as to schools and universities (6, 22). As Iraq's public sector articulates competency-based attraction models, anchoring recruitment in validated profiles, strengthening early professional identity, and committing to continuous, ethically grounded, digitally enabled development can position governmental organizations as competitive employers of choice (16, 21, 25). The present study aims to examine and test a model for attracting knowledge workers based on professional competencies in the context of governmental organizations in Iraq.

Methods and Materials

Considering that the objective of this study is to examine and test a model for attracting knowledge workers based on professional competencies (case study: governmental organizations in Iraq), the research method is applied in terms of purpose and descriptive–correlational in terms of approach. The statistical population consists of managers and officials of various governmental organizations. Due to the unlimited size of the population, Cochran's formula for an infinite population was used. The sample size for an infinite population was determined to be 384 individuals. The research instrument was a questionnaire. Data analysis was performed using structural equation modeling (SEM) in the PLS software. The questionnaire's validity was assessed and confirmed by a panel of experts in the field of management. To ensure the reliability of the questionnaire, Cronbach's alpha was applied, and all components demonstrated reliability with Cronbach's alpha coefficients greater than 0.70.

The conceptual model of the study is based on the work of Abd al-Ali Al-Karmaw (2024). The conceptual model is presented in Figure 1.

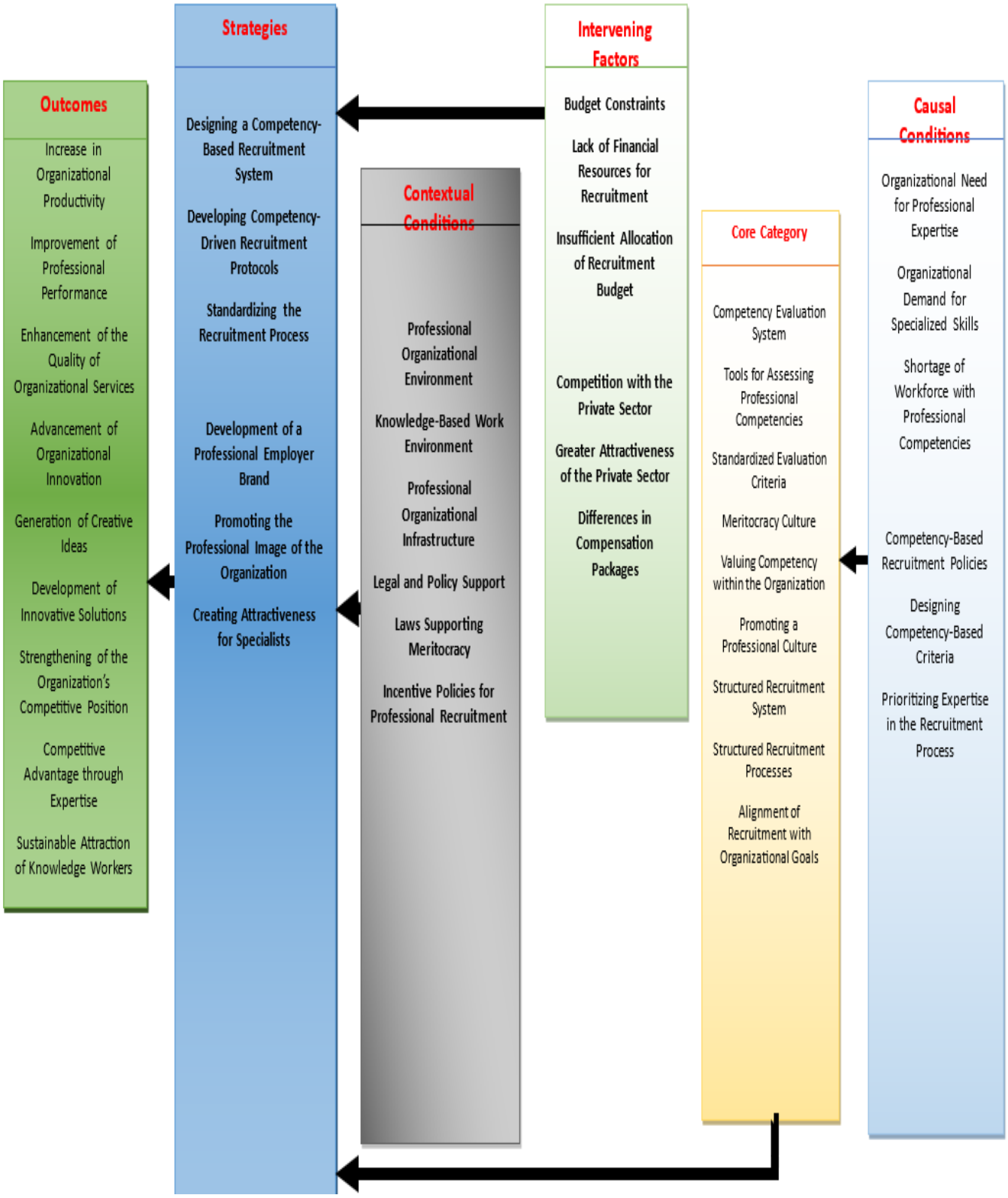

Figure 1. Conceptual Model

Findings and Results

Table 1 presents the demographic statistics of the research sample in terms of gender, age, educational level, and work experience.

Table 1. Descriptive Statistics of the Research Sample

Variable	Category	Frequency	Percentage
Gender	Male	287	74.74
	Female	97	25.26
	Total	384	100.00
Age Group (years)	20–30	88	22.92
	31–40	129	33.59
	41–50	103	26.82
	51 and above	64	16.67
	Total	384	100.00
Educational Level	Bachelor's	194	50.52
	Master's	152	39.58
	Doctorate	38	9.90
	Total	384	100.00
Work Experience (years)	5 or less	69	17.97
	6–10	96	25.00
	11–15	118	30.73
	More than 15	101	26.30
	Total	384	100.00

The components and indicators along with their symbols are presented in Table 2.

Table 2. Research Components and Items

Row	Factor Type	Concept	Symbol	Secondary Codes
1	Causal Conditions	Organizational need for professional expertise	q1	Organizational demand for specialized skills
2			q2	Shortage of workforce with professional competencies
3		Competency-based recruitment policies	q3	Designing competency-based criteria
4			q4	Prioritizing expertise in the recruitment process
5	Core Conditions	Competency evaluation system	q5	Tools for assessing professional competencies
6			q6	Standardized evaluation criteria
7		Meritocracy culture	q7	Valuing competency within the organization
8			q8	Promoting professional culture
9		Structured recruitment processes	q9	Structured recruitment procedures
10			q10	Alignment of recruitment with organizational goals
11	Contextual Conditions	Professional organizational environment	q11	Knowledge-based work environment
12			q12	Organizational professional infrastructure
13		Legal and policy support	q13	Laws supporting meritocracy
14			q14	Incentive policies for professional recruitment
15	Intervening Conditions	Budget constraints	q15	Lack of financial resources for recruitment
16			q16	Insufficient allocation of recruitment budget
17		Competition with the private sector	q17	Greater attractiveness of the private sector
18			q18	Differences in compensation packages
19	Strategies	Designing a competency-based recruitment system	q19	Developing competency-driven recruitment protocols
20			q20	Standardizing the recruitment process
21		Developing a professional employer brand	q21	Promoting a professional organizational image
22			q22	Creating attractiveness for experts
23	Outcomes	Increasing organizational productivity	q23	Improving professional performance
24			q24	Enhancing the quality of organizational services
25		Improving organizational innovation	q25	Generating creative ideas
26			q26	Developing innovative solutions
27		Strengthening organizational competitive position	q27	Achieving competitive advantage through expertise
28			q28	Sustainable attraction of knowledge workers

After examining the fit of the measurement models, the structural model, and the overall model according to the data analysis algorithm in the PLS method, the researcher is allowed to test and analyze the relationships between the variables.

In this section, the standardized path coefficients for the hypotheses and their t-values are examined. To confirm or reject the hypotheses, the t-value must be greater than 1.96 or less than -1.96. Values within this range indicate no significant difference between the calculated regression weights and zero at the 95% confidence level.

Figure 2 shows the model output with standardized factor loadings, and Figure 3 shows the t-values related to the relationships among the variables.

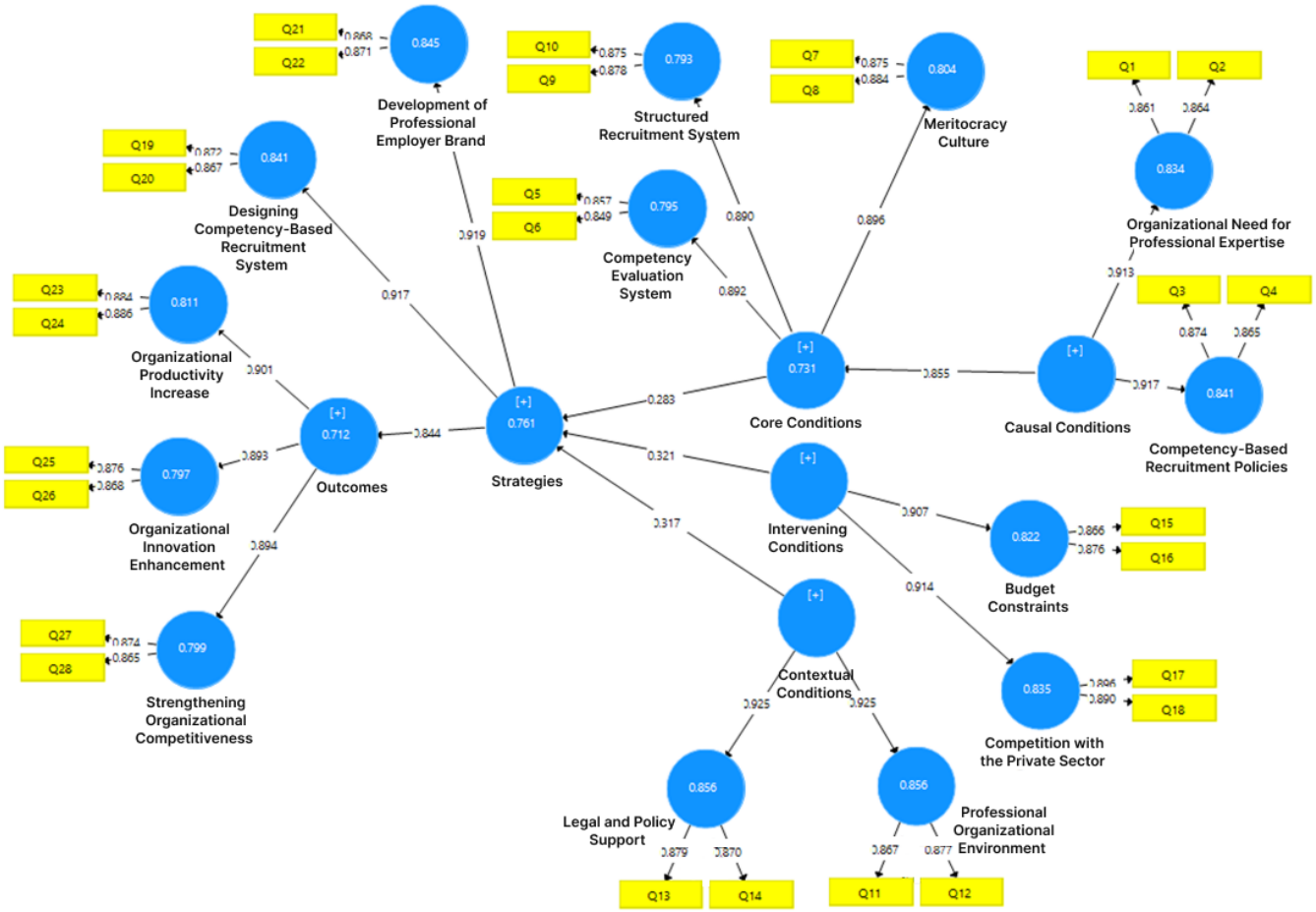

Figure 2. Research Model with Standardized Coefficients

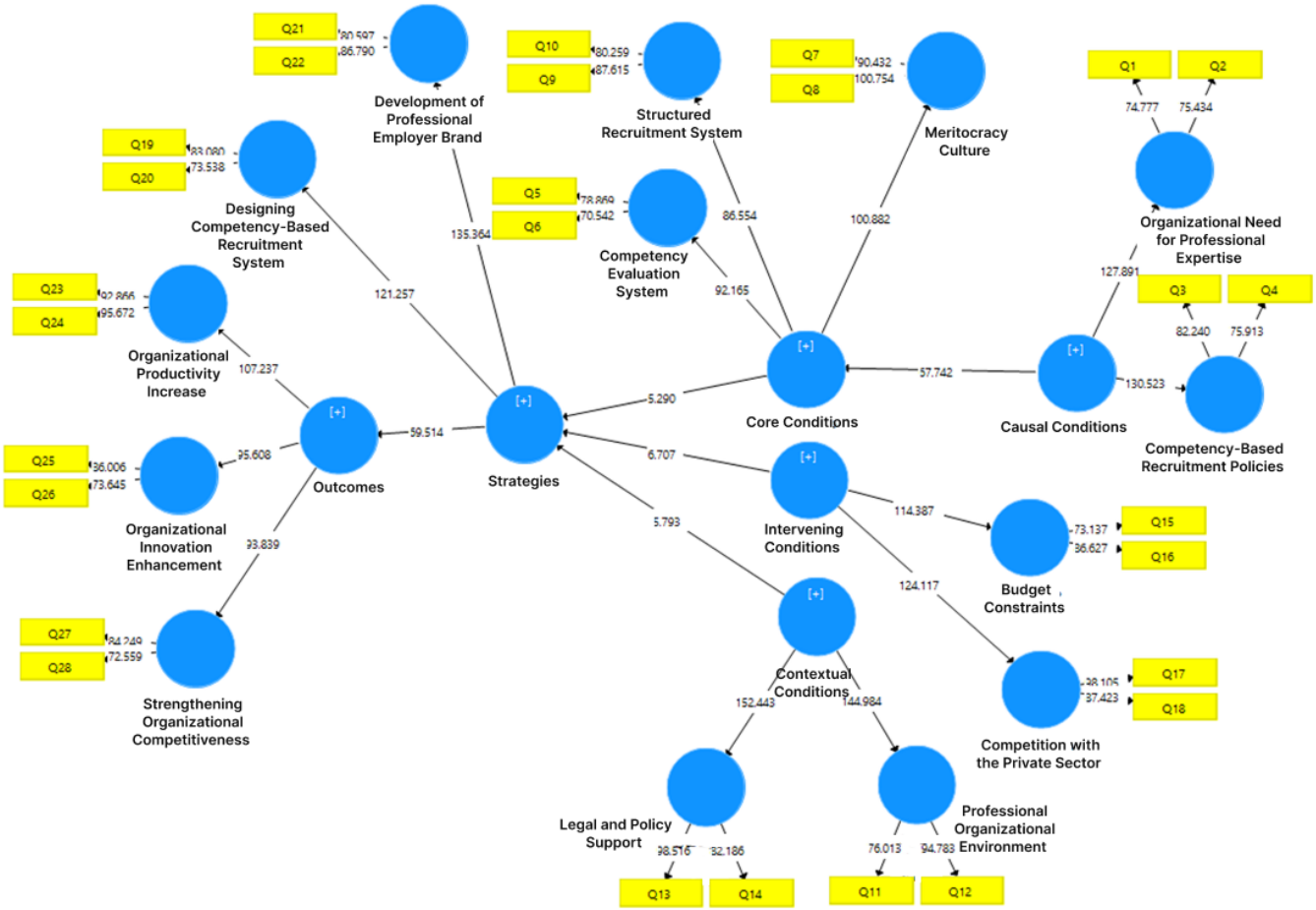

Figure 3. Research Model with t-values

Table 3 presents the description and reliability values of the research constructs.

Table 3. Reliability Values

Construct	Cronbach's Alpha	rho_A	Composite Reliability
Organizational Innovation Enhancement	0.785	0.785	0.864
Organizational Productivity Increase	0.725	0.725	0.879
Strengthening Organizational Competitiveness	0.776	0.777	0.861
Development of Professional Employer Brand	0.778	0.778	0.861
Legal and Policy Support	0.792	0.792	0.866
Strategies	0.810	0.811	0.875
Competition with the Private Sector	0.747	0.747	0.888
Structured Recruitment System	0.799	0.799	0.869
Competency-Based Recruitment Policies	0.777	0.878	0.861
Contextual Conditions	0.822	0.823	0.882
Causal Conditions	0.802	0.803	0.871
Core Conditions	0.868	0.869	0.901
Intervening Conditions	0.816	0.817	0.879
Designing Competency-Based Recruitment System	0.777	0.877	0.861
Meritocracy Culture	0.707	0.708	0.872
Budget Constraints	0.781	0.781	0.862
Professional Organizational Environment	0.785	0.885	0.864
Competency Evaluation System	0.726	0.726	0.842
Organizational Need for Professional Expertise	0.756	0.856	0.853
Outcomes	0.875	0.875	0.906

According to Table 3, Cronbach's alpha and composite reliability values are greater than 0.70, indicating that the research data are reliable.

Table 4 presents the AVE (Average Variance Extracted) values for the research variables, all of which are above 0.50.

Table 4. Convergent Validity

Construct	Composite Reliability	Average Variance Extracted (AVE)
Organizational Innovation Enhancement	0.864	0.760
Organizational Productivity Increase	0.879	0.784
Strengthening Organizational Competitiveness	0.861	0.755
Development of Professional Employer Brand	0.861	0.756
Legal and Policy Support	0.866	0.764
Strategies	0.875	0.637
Competition with the Private Sector	0.888	0.798
Structured Recruitment System	0.869	0.768
Competency-Based Recruitment Policies	0.861	0.756
Contextual Conditions	0.882	0.652
Causal Conditions	0.871	0.628
Core Conditions	0.901	0.603
Intervening Conditions	0.879	0.645
Designing Competency-Based Recruitment System	0.861	0.756
Meritocracy Culture	0.872	0.773
Budget Constraints	0.862	0.758
Professional Organizational Environment	0.864	0.760
Competency Evaluation System	0.842	0.728
Organizational Need for Professional Expertise	0.853	0.744
Outcomes	0.906	0.615

It is observed that the Average Variance Extracted (AVE) is consistently greater than 0.50, and the composite reliability in all cases is higher than 0.70 and exceeds the AVE. Therefore, convergent validity is confirmed.

To evaluate the overall model fit, which controls both the measurement and structural parts of the model, the Goodness of Fit (GoF) index is used. Table 5 shows the mean communalities and mean R-squared values. Based on these values, the GoF index was calculated as 0.63, indicating a strong model fit.

Table 5. Mean Communalities and Mean R-squared Values

Construct	avg-communality	avg-R	GOF
Organizational Innovation Enhancement	0.493	0.808	0.631
Organizational Productivity Increase			
Strengthening Organizational Competitiveness			
Development of Professional Employer Brand			
Legal and Policy Support			
Strategies			
Competition with the Private Sector			
Structured Recruitment System			
Competency-Based Recruitment Policies			
Contextual Conditions			
Causal Conditions			
Core Conditions			
Intervening Conditions			
Designing Competency-Based Recruitment System			
Meritocracy Culture			
Budget Constraints			
Professional Organizational Environment			
Competency Evaluation System			
Organizational Need for Professional Expertise			
Outcomes			

Based on Figures 2 and 3, the summary of results is presented in Table 6.

Table 6. Results of the Relationships Between Dimensions and Components of the Research

Pathway	Path Coefficient	T Statistics	P Values	Status
Strategies → Organizational Innovation Enhancement	0.753	52.831	0	Confirmed
Strategies → Organizational Productivity Increase	0.760	52.626	0	Confirmed
Strategies → Strengthening Organizational Competitiveness	0.754	50.610	0	Confirmed
Contextual Conditions → Organizational Innovation Enhancement	0.239	5.767	0	Confirmed
Contextual Conditions → Organizational Productivity Increase	0.241	5.787	0	Confirmed
Contextual Conditions → Strengthening Organizational Competitiveness	0.239	5.737	0	Confirmed
Contextual Conditions → Development of Professional Employer Brand	0.292	5.777	0	Confirmed
Contextual Conditions → Designing Competency-Based Recruitment System	0.291	5.771	0	Confirmed
Contextual Conditions → Outcomes	0.268	5.783	0	Confirmed
Causal Conditions → Organizational Innovation Enhancement	0.183	5.099	0	Confirmed
Causal Conditions → Organizational Productivity Increase	0.184	5.089	0	Confirmed
Causal Conditions → Strengthening Organizational Competitiveness	0.183	5.114	0	Confirmed
Causal Conditions → Development of Professional Employer Brand	0.223	5.157	0	Confirmed
Causal Conditions → Strategies	0.242	5.171	0	Confirmed
Causal Conditions → Structured Recruitment System	0.761	48.903	0	Confirmed
Causal Conditions → Designing Competency-Based Recruitment System	0.222	5.163	0	Confirmed
Causal Conditions → Meritocracy Culture	0.767	50.910	0	Confirmed
Causal Conditions → Competency Evaluation System	0.763	49.138	0	Confirmed
Causal Conditions → Outcomes	0.205	5.134	0	Confirmed
Core Conditions → Organizational Innovation Enhancement	0.214	5.228	0	Confirmed
Core Conditions → Organizational Productivity Increase	0.215	5.215	0	Confirmed
Core Conditions → Strengthening Organizational Competitiveness	0.214	5.242	0	Confirmed
Core Conditions → Development of Professional Employer Brand	0.261	5.278	0	Confirmed
Core Conditions → Designing Competency-Based Recruitment System	0.260	5.284	0	Confirmed
Core Conditions → Outcomes	0.239	5.260	0	Confirmed
Intervening Conditions → Organizational Innovation Enhancement	0.241	6.636	0	Confirmed
Intervening Conditions → Organizational Productivity Increase	0.244	6.648	0	Confirmed
Intervening Conditions → Strengthening Organizational Competitiveness	0.242	6.634	0	Confirmed
Intervening Conditions → Development of Professional Employer Brand	0.295	6.713	0	Confirmed
Intervening Conditions → Designing Competency-Based Recruitment System	0.294	6.714	0	Confirmed
Intervening Conditions → Outcomes	0.270	6.634	0	Confirmed

According to Table 6, the significance levels for all relationships are greater than 1.96 (t-value > 1.96). Therefore, all hypothesized relationships are significant and confirmed.

Discussion and Conclusion

The purpose of this study was to examine and empirically test a competency-based attraction model for knowledge workers in Iraqi governmental organizations. The results demonstrated that all hypothesized paths were significant (t-value > 1.96), and the structural model showed strong overall fit (GoF = 0.63), confirming that causal, contextual, core, and intervening conditions meaningfully predict strategies for attracting and retaining knowledge workers and that these strategies strongly influence innovation, productivity, and competitive positioning. The confirmation of these relationships aligns with the growing consensus that talent acquisition in the public sector must be grounded in well-defined professional competency frameworks rather than traditional credential-based approaches (4, 9).

Interpretation of Findings and Alignment with Prior Studies

The strong paths from strategies to outcomes—particularly organizational innovation, productivity, and competitiveness—reinforce the idea that attraction systems must go beyond initial recruitment and incorporate mechanisms to foster continuous professional development and innovative work behaviors (24). Our results confirm that when organizations design competency-driven recruitment protocols and invest in employer branding and targeted attraction strategies, they cultivate not only rete ntion

but also the innovative capacity of their workforce (21). This aligns with evidence from public education systems where clear professional development pathways tied to competency frameworks improve teachers' ability to innovate and deliver higher-quality outcomes (7, 17).

The significance of causal conditions, including the need for specialized professional expertise and competency-based recruitment policies, is consistent with earlier meta-synthesis work showing that attraction is most effective when organizations articulate and operationalize precise professional standards (18). Similarly, the strong link between causal conditions and structured recruitment systems mirrors findings from health administration and educational service sectors, where clear competency models streamline selection and reduce mismatches (9, 19). This indicates that Iraqi governmental organizations can benefit from standardizing recruitment workflows to reduce ambiguity and ensure that selected candidates possess the desired knowledge, digital capabilities, and professional ethics (16).

Contextual conditions, including a professional organizational environment and legal/policy support, also showed significant effects on strategies and outcomes. This is in line with studies demonstrating that recruitment success in the public sector depends heavily on institutional climate and policy scaffolding (4). Employer branding and incentive policies were particularly influential, confirming insights from studies of job satisfaction among university employees, where clear recognition and legal support systems improved attraction and retention (14, 15). The findings also resonate with research on competition between public and private employers; when public organizations fail to create knowledge-friendly, innovation-supportive contexts, they risk losing talent to better-branded private firms (3, 5).

The influence of core conditions, especially meritocracy culture and competency evaluation systems, underscores the necessity of aligning HRM practices with principles of fairness and capability recognition. Merit-based selection and transparent competency assessment were shown to energize professional identity and motivation, echoing findings that psychological empowerment and professional identity mediate the link between development inputs and job performance (23). By institutionalizing competency evaluation and fostering a meritocracy culture, organizations can improve perceptions of justice and competence development among knowledge workers (16).

The role of intervening conditions, including budget constraints and competition with the private sector, was also statistically significant. This aligns with studies on remuneration preferences of knowledge workers that emphasize the importance of designing compensation packages and non-monetary incentives suitable for public sector limitations while still meeting the diverse motivational needs of knowledge professionals (2, 3). Our results suggest that even when fiscal flexibility is limited, organizations can mitigate budget constraints through alternative value propositions such as meaningful work, development opportunities, and digital innovation in workflows (1, 21).

Another important insight is the close relationship between digital competence development and attraction strategies. Our study's model, which emphasizes professional digital competence (PDC) as part of recruitment criteria, aligns with international evidence that digital skills are now foundational to professional performance (6, 10). Digital competence is not simply about tool literacy but about ethical reasoning, pedagogical and operational integration, and adaptive expertise—qualities needed in modern Iraqi public organizations managing digital records, e-government services, and data-driven decision-making (11, 25). By embedding PDC into their attraction models, these organizations can future-proof their workforce and ensure resilience in fast-changing environments.

The strength of the strategies → innovation/productivity/competitiveness paths also aligns with research on professional development models that use blended and andragogical methods to empower knowledge workers (13, 20). Our findings support the view that attraction systems should explicitly connect to long-term development, encouraging candidates to perceive

government service as a platform for professional growth and innovation rather than a static job (7, 24). These insights are critical for positioning public organizations as attractive employers in Iraq's competitive labor market.

This study has several limitations. First, it was conducted within the context of Iraqi governmental organizations, which may limit the generalizability of the findings to other countries or to private sector settings. Iraq's institutional, economic, and labor market structures differ from those of more developed economies, which could affect how competency-based attraction models function elsewhere. Second, the research relied on cross-sectional survey data analyzed through structural equation modeling. While SEM can test theoretical relationships, it cannot establish causality or capture longitudinal dynamics of attraction and retention processes. Third, although the sample size (n = 384) was adequate, the respondents were primarily managers and officials; the perspectives of frontline employees or candidates themselves were not captured, potentially omitting valuable insights about recruitment experiences. Additionally, self-reported data may be subject to bias, such as social desirability or overestimation of organizational competency practices.

Future research should consider conducting longitudinal studies to examine how competency-based attraction models evolve over time and how early recruitment decisions influence long-term retention, innovation, and organizational competitiveness. Comparative studies between public and private sectors in Iraq or across similar developing contexts could illuminate differences in talent attraction strategies under varying resource constraints and governance frameworks. Qualitative studies, including interviews and focus groups with both recruiters and knowledge workers, could provide deeper insights into lived experiences and uncover factors not easily captured by surveys. Researchers should also explore the intersection of digital transformation and recruitment more explicitly, investigating how emerging technologies such as AI-driven assessment or predictive analytics influence fairness, efficiency, and candidate perception. Moreover, cross-cultural studies could test whether the core, causal, and contextual conditions identified here are universally applicable or require adaptation across cultural and institutional boundaries.

For practitioners in Iraqi governmental organizations, the study highlights the importance of developing clear, competency-based recruitment frameworks that articulate desired knowledge, digital skills, and professional ethics. HR managers should integrate reliable competency assessments and merit-based selection processes to build trust and align workforce capabilities with organizational goals. Given fiscal and competitive constraints, public agencies should invest in employer branding that communicates professional growth opportunities, ethical culture, and public impact to attract talent. Integrating induction programs and structured professional development pathways from day one can increase retention and innovation capacity. Finally, leaders should institutionalize supportive policies and legal frameworks that reinforce competency development and meritocracy while addressing contextual barriers such as limited budgets and private sector competition.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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