

Nexus between Human Talent Attraction and Digital Recruitment: A Signaling Theory Perspective on Anticipatory Psychological Contract

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Abstract

This study aims to examine the role of the degree of digitalization in the recruitment process on human talent attraction by increasing candidates' intention to engage in and take part in the recruitment process. Using the signaling theory perspective, the study suggests that this relatedness is mediated by organizational attractiveness and the anticipatory psychological contract. The study analyzed data collected from 260 students from both government and private sector universities based in Karachi, Pakistan. The study revealed a positive relationship between the degree of digitalization in the recruitment process and candidates' intention to apply through digital recruitment techniques as a means of talent attraction. The results are acquired using the Partial Least Square Structural Equation Modelling (PLS-SEM) technique through smart PLS software. The results also illustrated that organizational attractiveness and anticipatory psychological contract mediates the relationship between digitalization in the recruitment process and candidates' intention to apply. The study can help the management of organizations to foster the parameters so that human talent would get attracted and apply for a job at an organization. Furthermore, since the study is based on a sample collected from Pakistan, it contributes to the literature thread from developing countries.

Keywords: Digital recruitment; candidates' intention to apply; organizational attractiveness; anticipatory psychological contract.

JEL Classification: J24, O33, M12

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1. Introduction

In the recent competitive and technology-driven era, an organization's cornerstone is digitalizing different functions in all business streams. Sustaining this, the use of digital technology in the human resource department's different processes has also increased in popularity over time (Abdalla Hamza et al., 2021). Amongst all other functions of human resource management, digitalization of the recruitment and selection process has also become a must-have approach for Talent Acquisition Managers (Al-Zagheer & Barakat, 2021). With time, organizations have become more demanding in acquiring talent for vacant jobs and are more focused on candidates' talent (Amirreza & Svetlana, 2021). This challenging facet of organizations has made the labor market much more competitive as organizations demand human talent instead of candidates (Gong et al., 2022).

To meet these ever-changing and competitive requirements, Talent Acquisition Managers use emerging technologies to attract, source, assess and select the best-matched candidates for their organizations (Fernandes & Machado, 2022). Web-based recruitment and e-recruitment tools have transformed job advertisement processes (Dhiman & Arora, 2018). The second phase of digital recruitment streamlined the recruitment stages using several automation techniques (Gilch & Sieweke, 2021; Girisha & Nagendrababu, 2020) such as applicant tracking systems (ATS). The recent recruitment transformation focuses on attracting human talent with digitalization in the recruitment process (Minhas et al., 2022; Paramita, 2020).

The above-cited transformation in the recruitment process has reshaped how candidates apply for available opportunities (Miller & Akdere, 2019). Through the traditional recruitment process, candidates used to apply for jobs by sending their applications through couriers. In contrast, with the digital recruitment process, many organizations evaluate candidates' LinkedIn profiles instead of asking them to send their resumes for the available opportunity. With this, it became a more convenient and effortless task for the candidates to apply for the vacancies (Sasirekha, 2021). As a result, organizations could generate a diverse pool of resumes for their open positions because it increases organizational attractiveness to candidates (Abugre & Boachie-Ansah, 2021).

On one end, digital recruitment expands the diversity of the applicant pool, but on the other end, it makes screening a large volume of resumes more difficult (Abdalla Hamza et al., 2021). A recent study by Bhatt (2022) concluded that organizations receive an average of 144 applications for each entry-level position (Bhatt, 2022). The findings of the study indicate that digitalization in one stage of recruitment can create problems for the other stage, which makes it difficult to find the right candidates with the necessary skills for these positions, so a strategy should be developed for more effective and efficient hiring (Al-Zagheer & Barakat, 2021). Incorporating digitalization in all stages of recruitment can significantly save cost,

effort and time for recruiters in the organizations (Shayrine & Gomathi, 2022). However, another unintended impact of the digital recruitment & selection process would be on the candidates (Qayum, 2022). Digital recruitment impacts the organizations' performance and may influence talent's perception of the organization (Bazian et al., 2022), specifically their understanding of organizational attractiveness. Candidates' perception of organizations can significantly influence their pre-employment beliefs based on which they intend to apply for vacant positions (Basavaraj et al., 2022).

Through the lens of signaling theory, digitalization in the recruitment process is perceived to send signals about the organizations during the pre-employment phase, which helps to develop their anticipatory psychological contract (APC), resulting in increasing attractiveness for the organization as a future employer (Maceira Elvira, 2022). If the candidates negatively perceive these signals, they might lose interest in the organization and opt out of the recruitment process (Alzaid & Dukhaykh, 2023). A recent study on LinkedIn illustrates that 83% of the interviewed candidates changed their minds about the organization they initially liked because of the apprehensions they developed during the recruitment process (Folger et al., 2022).

Considering the above facets of digital recruitment & selection, the current study aims to clarify the impact of the degree of digitalization in the recruitment process on human talent's perceptions of an organization's attractiveness (ORA) via anticipatory psychological contract (APC) as a future employer and its role on candidates' intention (CIP) to apply for the job through the lens of signaling theory.

2. Theoretical Elucidations and Hypothesis Development

2.1.1 Digitalization in Recruitment & Selection Process

Human talent is among the important players in an organization's success and always plays a crucial role in the organization's progress (Hosain, 2020). The quality of the employees represents the quality and strong branding of the organization. Organizations always want a quality workforce and the best talents to distinguish their businesses from their competitors (Ahmed et al., 2021). Hence, it is paramount to select the right candidate for the job. A good hire can positively affect the overall performance of the organization. Employees' recruitment and selection process plays a significant role in hiring quality human talents. Recruiting and selecting candidates is an expensive and effortful process. Therefore, frequently replacing a candidate is costly for the organization (Swadia, 2018). Previous literature argued that organizations spend millions per year on replacing candidates due to employees leaving, and one of the major reasons for employee turnover is that they are not a suitable fit for the job. As such, it is obvious that a quality recruitment and selection process is a dire need.

The recent recruitment and selection processes are heavily influenced by technology in all the phases of the recruitment and selection cycle (Mishra & Kumar, 2019). The internet, networking websites, artificial intelligence-based recruitment tools, gamification and psychometric assessments have strongly influenced the way recruiters do their jobs and candidates search for jobs (Strohmeier, 2020). This changing facet of using technology in recruitment and selection has increased researchers' interest in investigating and exploring different aspects of digitally equipped recruitment and selection methods and their influence on candidates' perceptions (D'Silva, 2020).

However, the degree of digitalization is distinctive based on the usage of digitalization in the recruitment process (Folger et al., 2022). The degree of digitalization in recruitment can be examined in three main stages of the recruitment process. i.e. stage 1: sourcing or application process, stage 2: candidate assessment, and stage 3: candidate selection. For instance, many organizations rely on traditional recruitment methods by applying all the manual techniques in three stages of the recruitment process which will be considered as a low degree of digitalization in the recruitment process (Bhatia & Satija, 2022).

Contrarily, many organizations believed in a high degree of digitalization in recruitment by sourcing candidates through LinkedIn or career portal (Abdalla Hamza et al., 2021) and assessing candidates through gamification or psychometric testing (Frampton et al., 2020) and selecting candidates through online mediums such as zoom or Teams (Darko et al., 2022). Prior research suggests that a high degree of digitalization in the recruitment process creates a positive image of an organization and thus increases candidates' attraction to the organization as a future employer (Gilch, 2022).

2.1.2 Organizational Attractiveness

Prior research elucidated that the candidate aspect of an organization's image during the recruitment process is not just a fact but an indication of what the organization will be like (Bresciani et al., 2021). As a result, candidates can build up an image of an organization based on its technology usage. If an organization uses high-tech procedures and new technology in recruitment, it creates a positive impression on the candidates' psyche and can increase employer branding (Al-Marouf et al., 2023). Prior research studies have discovered that organizations' use of digital recruitment procedures may create a positive image on candidates and thus increase attractiveness to job candidates to engage in the job process (Black & Van Esch, 2020).

Similarly, a disorganized, full of glitches, lengthy and unreliable digitalized recruitment process may build a negative image on candidates and ruin their interest in the job process (D'Silva, 2020). Based on this assertion, which is consistent with the research, it has been assumed that organizational attractiveness can indirectly impact a candidate's psyche

and can significantly compel a candidate either to take part or not in the digital recruitment process.

2.1.3 Anticipatory Psychological Contract

The anticipatory psychological contract can be defined as a candidate's beliefs and expectations in the pre-employment phase about their future employer (Madan & Madan, 2019). Unlike a contract used to demonstrate legal binding, a psychological contract is a binding of mutual expectations and unwritten obligations between the two parties, an employee and an employer (Ruchika & Prasad, 2019). Both employee and employer hold obligations towards each other as the employee expects the employer to provide work-life balance, good salary package, flexibility, growth etc. and as an exchange employer expects that the employee will accomplish all those responsibilities that come within the job role and will also be supportive in performing the functions that are not mentioned in the job description, i.e. late working hours (Pantouvakis & Karakasnaki, 2017). This psychological set of expectations is a dynamic process that starts before joining the organization, known as an Anticipatory Psychological Contract (Lee et al., 2022).

Anticipatory Psychological Contract (APC) is a dynamic process that begins before employment and continues through various career stages. It develops during the period preceding organizational entry and marks the development of an employee's expectations from their employer based on the stimuli they experience from the environment (Madan & Madan, 2019). APC is an employment schema comprising candidates' information and impressions and an individualistic naive schema entirely dependent on an individual's perception (Fernandes & Machado, 2022). Thus, based on these pre-employment perceptions and beliefs, a candidate evaluates and decides which job to apply for.

2.1.4 Candidates' Intention to Engage in and Apply through Digital Recruitment

Even though digital recruitment and selection has gained awareness and is growing rapidly in organizations, its success is based on candidates' engagement and attraction towards the process (Van Esch & Black, 2019). Empirical pieces of evidence show the use of social media and digital recruitment tools has increased over time; with this, we can presume that this increases the chance of candidates getting attracted towards the digital recruitment and selection process (Borges et al., 2021). But research traces of evidence on the factors that increase candidates' likelihood of engaging in the digital recruitment and selection process are still scarce (Van Esch et al., 2021).

During a recruitment and selection process, it is not only organizations that actually select the candidates but on the other side of the table, candidates also decide whether to apply for the job or not, whether to accept the offer or not (Hafeez et al., 2018; Hosain, 2020).

Consequently, it is justifiable for the candidates to focus on the points or factors which attract them. Candidates decide at every step of the recruitment and selection cycle whether to proceed further or stop the process then and there (Van Esch et al., 2021).

Literature related to candidates' perspectives, while attracted towards the digital-friendly recruitment and selection process, sheds light on multiple determinants based on which candidates get attracted to engage in the digital recruitment and selection process (Zafeiriadou, 2021). Empirical piece of research shows that the factors based on which candidate may attract towards an organization can be an organizational brand, user-friendliness of the recruitment process, candidates' experience during the recruitment process, procedural justification and innovativeness of the digital recruitment process (Fernandes & Machado, 2022).

2.1.5 A Signaling Theory Perspective

Signaling theory introduced by Spence (1973) is commonly used to explain how information, or signals, about an organization's characteristics, revealed during recruitment activities, can influence applicant attraction to the recruiting organization (Hahn & Reimsbach, 2021). The current study uses the signaling theory to understand how organizations' usage of digital recruitment and selection process influence candidates' perceptions to get engaged in the digital recruitment process. The Signaling Theory approach in the case of recruitment and selection suggests that when an individual does not have complete information regarding any function and is unsure about the next steps, they may conclude based on cues, and this can demotivate them from participating in the process (Wolff & Burrows, 2021). Regarding candidates' reactions to selection processes, signaling theory articulates that candidates use the information they receive about an organization during recruitment to indicate the organizational attribute (Folger et al., 2022).

A study by Paramita (2020) demonstrated that candidates use attributes of recruitment and selection activities, such as the design or methods used in the selection process, as indicators of overall organizational characteristics (Paramita, 2020). Applicants, who typically know little about the recruiting organization, form an image of the organization as a potential employer based on these signals, which develop anticipatory psychological contracts of candidates (Ruchika & Prasad, 2019). These impressions or inferences are signaling mediums that directly influence signaling outcomes, which is how candidates' intentions towards an organization influence their choices, thus engaging in the recruitment process (Black & Van Esch, 2020).

Hence, the study aims to examine these signaling illustrations that is how the degree of digitalization in the recruitment & selection process (DRS) provide signals to increase the organizational attractiveness (ORA) and develop anticipatory psychological contract (APC)

to influence candidates' intention to engage in the recruitment process and apply for the vacant job (CIP).

2.2 Conceptual Framework

The conceptual model depicts the degree of digitalization in the recruitment process (DRS) at each stage of sourcing, attracting, assessing and selecting stages as an independent variable, whereas candidates' intention to engage in and apply through the digital recruitment process (CIP) as a dependent variable. In the illustrated model, organizational attractiveness (ORA) mediates the relationship between the digital recruitment process and candidates' intention to apply. However, anticipatory psychological contract (APC) has also been taken as a mediator variable. Figure 1 illustrates the conceptual model used in the study.

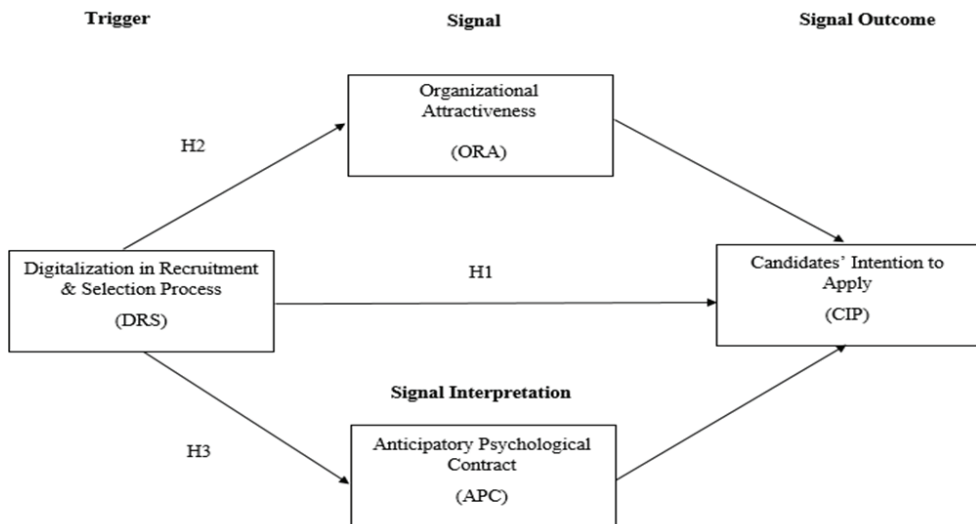


Figure 1: Conceptual Framework

2.3 Hypothesis Development

2.3.1 Degree of Digitalization in Recruitment and Candidates' Intention to Apply

Job searching and applying is a rigorous process of decision-making on the candidates' side (Al-Zagheer & Barakat, 2021). Existent literature suggests that the degree of digitalization in sourcing, attracting, assessing and selecting stages of the recruitment process plays a significant role in moulding candidates' intentions to engage in and apply through the digital recruitment process (Bhatia & Satija, 2022; Bina et al., 2021). The organizations' execution of digitalization in the recruitment process has a significant direct impact on candidates' intention to apply for the opportunities available in that organization (Maceira Elvira,

2022; Madan & Madan, 2019). Therefore, considering this, it has been hypothesized in the current study that a high degree of digitalization in sourcing, attracting, assessing and selecting stages directly affects candidates' intention to engage in and apply through the digital recruitment process in organizations.

H1: High degree of digitalization in the recruitment process positively impacts candidates' intentions to apply for the vacant job.

2.3.2 Mediating Role of Organizational Attractiveness

Existent literature on organizational attractiveness illustrates that candidates develop an organization's image during the recruitment process not just as a fact but as an indication of what the organization will be like (Basavaraj et al., 2022; Bazian et al., 2022). As a result, candidates can build up an impression of an organization based on its technology usage. Suppose an organization uses high-tech procedures and new technology in recruitment, In that case, it creates a positive image for the candidates' psyches and can increase their organizational attractiveness (Alzaid & Dukhaykh, 2023). Therefore, it has been proposed in the current study that organizations' high degree of digitalization in the recruitment process increases organizational attractiveness resulting in increasing candidates' positive intention to apply for open positions in the recruiting organization. Hence, it is hypothesized as follows:

H2: Organizational attractiveness mediates the relationship between the degree of digitalization in the recruitment process and candidates' intentions to apply for the vacant job.

2.3.3 Mediating Role of Anticipatory Psychological Contract

Candidates' career expectations can be comprehended through the prism of an anticipatory psychological contract. Candidates' pre-employment beliefs about their future employer are the promises they wish to make to prospective employers and the inducements they want to offer, defined as the APC (Madan & Madan, 2019). A recent Bruise (2019) study posits that candidates expect salary, status, growth opportunities, and challenging work to meet their needs. In contrast, organizations expect time, energy, skills, competencies, talents, and loyalty from the candidates as an exchange of the relationship (Bruins, 2019). Anticipatory psychological contract (APC) is a vigorous process that begins during the anticipatory socialization phase of a candidate, which is considered the pre-employment period (Lee et al., 2022). Candidates learn about an organization through socialization and develop an impression of it during the period preceding organizational entry (Madan & Madan, 2019). Prior literature suggests that candidates, based on these pre-employment perceptions and beliefs decide whether to apply for the job in the recruiting organization (Pujol-Jover et al., 2023). Candidates' knowledge gained while selecting their employer leads to the perceived employer's image of the employer and also forms an anticipatory psychological contract, which is

the set of beliefs an individual brings to the organization before socialization with the organization begins (Sajid et al., 2022). A candidate's perceptions of an employer are formed due to the individual's familiarity with the organization. As a result of digitalization in recruitment initiatives, candidates' perceptions of the employer may improve (Shayrine & Gomathi, 2022). The APC of a candidate is formed by the organization's implicit and explicit communications through social media platforms when they post job advertisements. The candidate interprets their surroundings and absorbs the information provided by others (Van Esch & Black, 2019). Thus, it is proposed in the study that organizations' high degree of digitalization in the recruitment process supports the development of a positive anticipatory psychological contract (APC) which leads them to intend to apply to that organization. Hence, it is hypothesized as follows:

H3: Anticipatory psychological contract (APC) mediates the relationship between the degree of digitalization in the recruitment process and candidates' intentions to apply for the vacant job.

3. Research Methodology

The current study adopted a deductive approach by using a quantitative research method. For collecting the data, a survey was conducted on the degree of digitalization in recruitment and selection, organizational attractiveness, anticipatory psychological contract and candidates' intention to apply. The questionnaire used a five-point Likert scale ranging from strongly disagree to strongly agree. All questions were given in the English language. The scales used for the variables in the study are given below:

Table 1
Measurement Scales and Items

Variable	Measurement Scale
Degree of digitalization in recruitment	Folger et al. (2022)
Organizational Attractiveness	Polyhart et al. (1999)
Anticipatory Psychological Contract	De Vos et al. (2003)
Candidates' Intention to Apply	High house et al. (2003)

The participants for the study were final semester, undergraduate and graduate level, private and government sector university students in Karachi, Pakistan. The criteria for candidates were those frequently appearing in the career fairs organized by universities and those actively looking for a job. Another criterion for selecting candidates was the experience of applying through digital recruitment and selection so that they could provide relevant information. Non-probability convenience and snowball sampling was used to choose a sample from the population. Using Krejcie and Morgan's (1970) table, the initial sample size was 390 candidates for data collection. However, the response rate was 68%, making 260 respondents the actual sample size. Once the survey collected the data, it was analyzed through structural equation modeling (SEM) using smart PLS software.

4. Findings and Results

4.1 Profiles of Respondents

During the data collection phase, the questionnaire was distributed to 390 university students through google forms and physical sources. As the response rate was 68% therefore, 260 filled questionnaires were received. Amongst the respondents, the majority were males, i.e. 52.3%, compared to the ratio of the female respondents, which was 47.7%. Most respondents were of the age group between 26 to 35 making 58.8% fall into this category. However, most respondents were final-semester undergraduate students from the Business Administration field.

Table 2
Respondents' Demographics

Categories		Frequency	Per cent
Gender	Male	136	52.3
	Female	124	47.7
Age	Below 20	49	18.8
	20-25	53	20.4
	26-35	153	58.8
	Above 35	5	1.9
Total		260	100

4.2 Assessment of Measurement Models

4.2.1 Composite Reliability

Assessment of measurement models determines the relationship between the latent variables and their measures. It comprises the reliability, validity and consistency of the scales that were used for data collection. Structural equation modeling using smart PLS was used to test the latent variables' reliability, validity and consistency. As such, Cronbach Alpha, factor loadings, composite reliability and average variance extracted (AVE) values were examined. The model used in the current study is reflective, which means that all measuring items of a latent variable originate from the same variable (Hair et al., 2011). Therefore, all items are interchangeable, and omitting any item from the construct does not affect its meaning, provided the construct has suitable reliability. The items having less than 0.5 loadings were omitted for better results (Hair et al., 2011)s. To calculate a reflective construct's convergent validity, outer loadings and average variance extracted (AVE) must be assessed. As a result, the threshold value of 0.7 and above for outer loadings were retained in the study.

However, the loadings less than 0.7 were carefully assessed before removing them so that it should not affect the composite reliability of the construct. The Cronbach Alpha value of all latent variables was more than 0.7 satisfying the threshold criteria. Furthermore, the AVE values of all constructs were also deemed acceptable as they reached the threshold value of more than 0.5. The results of the measurement model were considered acceptable and confirmed the threshold criteria of reliability, consistency and validity of the instrument used in the study. These results led to a further process of analysis. Table 3 depicts the results of the assessment model.

Table 3
Assessment of Measurement Model

Construct	Items	Loadings	Cronbach Alpha	Composite Reliability	AVE
Anticipatory Psychological Contract	APC 1	0.684	0.87	0.91	0.55
	APC 2	0.908			
	APC 3	0.888			
	APC 4	0.905			
	APC 5	0.781			
	APC 6	0.878			
	APC 7	0.623			
Candidates' Intention to Apply	CIP1	0.662	0.88	0.85	0.53
	CIP2	0.823			
	CIP3	0.851			
	CIP4	0.844			
	CIP5	0.649			
Digital Recruitment & Selection	DRS 1	0.866	0.73	0.81	0.51
	DRS 2	0.870			
	DRS 3	0.863			
	DRS 4	0.845			
	DRS 5	0.845			
	DRS 6	0.859			
	DRS 7	0.533			
	DRS 8	0.725			
Organizational Attractiveness	ORA 1	0.760	0.82	0.87	0.57
	ORA 2	0.902			
	ORA 3	0.840			
	ORA 4	0.815			

4.2.2 *Discriminate Validity*

Unlike convergent Validity, discriminant Validity measures the extent to which the constructs in the model are unrelated. The discriminate Validity was measured through Fornell-Larcker criteria and cross-loadings. The results depict that all constructs could gauge the different nature of variables and also show satisfactory results of cross-loadings representing each item loaded on its construct. The results of discriminate Validity through Fornell-Larcker criteria are provided in the table below. Diagonal values in the table represent the square root of AVE.

Table 4
Fornell-Larcker Criteria

	DRS	ORA	APC	CIP
DRS	0.74			
ORA	0.34	0.72		
APC	0.31	0.41	0.72	
CIP	0.33	0.34	0.42	0.75

4.3 Assessment of the Structural Model

After assessing the measurement model to be satisfactory, the next step is to evaluate the structural model. Structural model estimation can be used to analyze and interpret the data. Measurement of the structural model can be examined through the coefficient of determination or R-square, Collinearity through variance inflation factor (VIF) and hypothesis testing through path coefficient (P value).

4.3.1 *Collinearity Diagnosis and Evaluating R-square (R²)*

Examining the variance inflation factor (VIF) is the measure to assess collinearity. If the VIF value equals 1, it means no collinearity amongst variables, whereas VIF greater than 1 indicates that variables are moderately correlated but less than 5. The results eliminated multi-collinearity issues in the data, illustrating the final analysis's next step. Furthermore, the coefficient of determination, also known as R square, is a statistical measure used to explain the proportion of variance in the dependent variable reflected by the independent variable. Scholars have suggested a threshold R² value of 0.67 as substantial, 0.33 as moderate and 0.19 as weak (Falk & Miller, 1992). The below Table shows the results of VIF and R².

Table 5
Results of VIF and R²

	VIF	R²	Relation
DRS	2.19		
ORA	2.63	0.52	Moderate
APC	2.77	0.72	Substantial
CIP	1.92	0.16	Weak

The result illustrated a moderate relationship between the dependent variable organizational attractiveness ORA and the independent variable degree of digitalization in the recruitment process (DRS). The results also depicted a weak association of independent variable DRS with dependent variable candidates' intention to apply CIP. However, when it comes to anticipatory psychological contract (APC) as the dependent variable, it showed a strong and substantial relationship with DRS.

4.3.2 Hypothesis Testing through P value

The hypothesis was tested through structural equation modeling using smart PLS version 4 as a final analysis step. For hypothesis testing, P-values were analyzed to check the significance of the structural model. The significant limit of P-values was analyzed to accept or not accept the hypothesis. As the threshold value of P should be less than 0.05 to get the hypothesis, the result concluded that the degree of digitalization positively correlates with the candidates' intention to apply with a p-value of 0.001.

Moreover, the results also revealed a positive mediating relationship between organizational attractiveness and anticipatory psychological contract with candidates' intention to apply, with a p-value of 0.003 and 0.000, respectively. The result leads to accepting Hypothesis 1 (H1), hypothesis 2(H2) and Hypothesis 3 (H3). The results are given in the table below.

Table 6
Hypothesis Testing

Hypothesis	Relation	P Value	Decision	Literature Support
H1	DRS→CIP	0.001	Accepted	(Bhatia & Satija, 2022; Nikolaou, 2021)
H2	DRS→ORA→ CIP	0.003	Accepted	(Alzaid & Dukhaykh, 2023; Basavaraj et al., 2022)
H3	DRS→APC→ CIP	0.000	Accepted	(Madan & Madan, 2019; Shayrine & Gomathi, 2022)

5. Discussion

One of the major challenges for HR professionals is attracting human talent to their vacant positions (Alzaid & Dukhaykh, 2023). With the growth in digital recruitment and selection process, a significant increase in job applicants has been found (Bhatia & Satija, 2022). The digital recruitment and selection process has also smoothened the recruitment process, resulting in less time to hire (Bina et al., 2021). In today's competitive era, organizations must emphasize their employer brand to potential candidates to increase their chances of hiring the best talent to fill their human resources needs. Digital friendly recruitment process incorporates a process to send a strong, peculiar and direct message to the targeted

candidates to attract them to engage and take part in the recruitment process (Kachouh, 2021).

Prior research elucidated that a candidate develops an organization's image during the recruitment process not just as a fact but as an indication of what the organization will be like (Bresciani et al., 2021). As a result, candidates can build up an image of an organization based on its technology usage. If an organization uses high-tech procedures and new technology in the recruitment process, it creates a positive impression on the candidates' psyche and can increase organizational attractiveness (Al-Marroof et al., 2020). Prior research studies have found that organizations' use of digitalization in the recruitment process may create a positive image on candidates and thus increase attractiveness to engage in the job process (Black & Van Esch, 2020).

Similarly, candidates' knowledge gained while selecting their employer leads to the perceived employer image of the organization and also forms an anticipatory psychological contract, which is the set of beliefs the individual brings to the organization before socialization with the organization begins (Sajid et al., 2022). A candidate's perceptions of an employer are formed due to the individual's familiarity with the organization. As a result of digitalization in recruitment initiatives, candidates' perceptions of the employer may improve (Shayrine & Gomathi, 2022). The APC of a candidate is formed by the organization's implicit and explicit communications through social media platforms when they post job advertisements. The candidate interprets their surroundings and absorbs the information provided by others (Black & Van Esch, 2019).

The current study aimed to examine the role of digital recruitment on candidates' intention to engage and take part in the recruitment process. The study also examined the mediating role of organizational attractiveness and the anticipatory psychological contract between digital recruitment and candidates' intention to apply. Based on the results obtained from several tests done using structural equation modeling, it has been found that there exists a relationship between organizations' use of digitalization in the recruitment process and candidates' intention to apply to that organization. Furthermore, the results also illustrated that organizations' use of digitalization creates a positive image of that organization in front of the candidates, ultimately increasing organizational attractiveness to them. As a result, candidates develop positive pre-employment beliefs in the shape of anticipatory psychological contract and thus influence their intention to engage in the recruitment process of that particular organization.

6. Conclusion and Future Research Directions

The current study aimed to examine the nexus between digital recruitment and talent attraction. The study investigated how digitalization in the recruitment process influences candidates' intention to apply, focusing on organizational attractiveness and the anticipatory

psychological contract. For doing so, the final semester, undergraduate and graduate level, private and government sector university students in Karachi, Pakistan, were selected for data collection. The major objective of the study was to examine the link between digitalization in recruitment and candidates' intention to apply. Results revealed that organizations' use of digitalization in the recruitment process creates a positive exposure for candidates, which ultimately increases their attraction towards the organization; thus, they will be anticipating positive expectations for the organization as future employers. However, the case may be vice versa if the organizations' digital recruitment process could be more user-friendly. Therefore, organizations should ensure that digitalization in the recruitment process avoids a disorganized, full of glitches, lengthy and unreliable mechanism as it may create a negative image on candidates' psyche and can ruin their interest in participating in the job process.

Another objective was to investigate the role of organizational attractiveness and anticipatory psychological contract in strengthening the relationship between the degree of digitalization in recruitment and candidates' intention to apply. The results revealed a strong role of organizational attractiveness and anticipatory psychological contract in moulding a candidate's decision to participate in the recruitment process. Organizational attractiveness works as a positive signal of the triggering mechanism of the digital recruitment process, which ultimately helps to develop a positive pre-employment belief of the candidates. Hence, organizations should highlight their brand image and culture through implicit and explicit job advertisements. Organizations should also increase the use of social media platforms such as LinkedIn, Facebook and career portal to increase their presence and thus leading to a positive organizational image for the candidates.

The current study investigated the candidates' perspectives while developing their anticipatory psychological contract. Future researchers can use the employer-side view in their research. Also, future researchers can use the same framework to investigate corporate employees' intentions while switching jobs.

7. Implications

The recent adoption of digitalization in the workplace compels organizations to incorporate different measures to attract human talent through technological interventions in their various functions. The current study will guide in all these areas. It will be particularly beneficial for talent acquisition managers, HR business partners – talent acquisition and recruiters to introduce digitalization in their recruitment function for successful hiring. The most important practical contribution would be for the TA Managers and HRBP – Talent Acquisition as they can evaluate contextual factors like organizational attractiveness to increase candidates' intention to apply through the digital recruitment process. Furthermore, the organizations would also benefit from understanding the role of organizational attractiveness in increasing candidates' anticipatory psychological contract. A positive anticipatory

psychological contract would help increase positive candidates' intention to apply for open positions in the recruiting organization.

Theoretically, the study adds to the literature on applicants' perspectives towards digitalization in recruitment. The study provides candidates' perspectives on a new form of recruiting methods through the lens of signaling theory and the anticipatory psychological contract. With this, the study adds to the current literature where candidates' intention to apply through digital recruitment is investigated by drawing on signaling theory and broadening the scope of the anticipatory psychological contract.

References

- Abdalla Hamza, P., Jabbar Othman, B., Gardi, B., Sorguli, S., Mahmood Aziz, H., Ali Ahmed, S., Anwar, G. (2021). Recruitment and selection: The relationship between recruitment and selection with organizational performance. *Hamza, PA, Othman, BJ, Gardi, B., Sorguli, S., Aziz, HM, Ahmed, SA, Sabir, BY, Ismael, NB, Ali, BJ, Anwar, G.(2021). Recruitment and Selection: The Relationship between Recruitment and Selection with Organizational Performance*. Doi: 10.22161/ijebm.5.3.1.
- Abugre, J. B., & Boachie-Ansah, R. (2021). Digitizing Recruitment and Selection of Employees in Ghana: *A Social Media Network Perspective Business in Africa in the Era of Digital Technology* (pp. 43-61): Springer. https://doi.org/10.1007/978-3-030-70538-1_4.
- Ahmed, S. S., Khan, M. M., Khan, E., Sohail, F., & Mahmood, N. (2021). Enhancing Intellectual Capital and Organizational Performance Through Talent Management *The Dynamics of Intellectual Capital in Current Era* (pp. 205-220): Springer. https://doi.org/10.1007/978-981-16-1692-1_10.
- Al-Marouf, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2023). Fear from COVID-19 and technology adoption: the impact of Google Meet during Coronavirus pandemic. *Interactive Learning Environments*, 31(3), 1293-1308 <https://doi.org/10.1080/10494820.2020.1830121>.
- Al-Zagheer, H., & Barakat, S. (2021). E-Recruitment as Application Solution during Corona Pandemic. *Annals of the Romanian Society for Cell Biology*, 25(5), 5051-5058.
- Alzaid, D., & Dukhaykh, S. (2023). Employer Branding and Employee Retention in The Banking Sector in Saudi Arabia: *Mediating Effect of Relational Psychological Contracts*. *Sustainability*, 15(7), 1-14 DOI: <https://doi.org/10.3390/su15076115>.

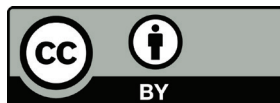
- Amirreza, N., & Svetlana, S. (2021). Digital shifts in human resource management in the global economy. *BRICS Journal of Economics*, 2(3), 70-82. <https://doi.org/10.38050/2712-7508-2021-3-4>.
- Basavaraj, S., Ramanath, H., & Gailani, A. (2022). Employer branding on the creation of anticipatory psychological contract. *International Journal of Management Practice*, 15(2), 175-204. <https://doi.org/10.3390/su15076115>.
- Bazian, Z., Pirannejad, A., & Nargesian, A. (2022). Identifying the facilitating contexts of digitalizing processes of human resource management: A study case of Asanpardakht company in Tehran. *Journal of Human Resource Management*, 11(4), 97-128. <https://doi.org/10.22034/JHRS.2022.143767>.
- Bhatia, S., & Satija, M. (2022). A Study on factors affecting Job Seekers' Perception and Behavioural Intention towards E-Recruitment. *Asian Journal of Management*, 13(1), 63-68. [10.52711/2321-5763.2022.00012](https://doi.org/10.52711/2321-5763.2022.00012).
- Bhatt, P. (2022). Artificial Intelligence-Based Hiring in Data Science Driven Management *Context ICT and Data Sciences* (pp. 101-116): CRC Press.
- Bina, S., Mullins, J., & Petter, S. (2021). Examining game-thinking in human resources recruitment and selection: A literature review and research agenda DOI:10.24251/HICSS.2021.161.
- Black, J. S., & Van Esch, P. (2020). AI-enabled recruiting: What is it and how should a manager use it? *Business horizons*, 63(2), 215-226. <https://doi.org/10.1016/j.bushor.2019.12.001>.
- Borges, A. F., Laurindo, F. J., Spínola, M. M., Gonçalves, R. F., & Mattos, C. A. (2021). The strategic use of artificial intelligence in the digital era: Systematic literature review and future research directions. *International Journal of Information Management*, 57, 102225.
- Bresciani, S., Ferraris, A., Romano, M., & Santoro, G. (2021). Human Resource Management and Digitalisation *Digital Transformation Management for Agile Organizations: A Compass to Sail the Digital World*: Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80043-171-320211011>.
- Bruins, J. (2019). The Anticipatory Psychological Contract. The effect of anticipation of fulfillment of the psychological contract on job stress and the moderating effect of age.

- D'Silva, C. (2020). A Study On Increase in E-Recruitment and Selection Process. *International Journal of Research in Engineering, Science and Management*, 3(8), 205-213.
- Darko, E. M., Kleib, M., & Olson, J. (2022). Social media use for research participant recruitment: integrative literature review. *Journal of Medical Internet Research*, 24(8), e38015. [10.2196/38015](https://doi.org/10.2196/38015).
- Dhiman, N., & Arora, N. (2018). Adoption of E-Recruitment mobile apps: a study based on UTAUT2 framework. *Journal of Organisation and Human Behaviour*, 7(2&3), 55-63 <http://publishingindia.com/johb/>.
- Falk, R. F., & Miller, N. (1992). A primer for soft modeling University of Akron Press. Akron, Ohio.
- Fernandes, A. B. A., & Machado, C. F. (2022). E-Recruitment and the Impact of Digital Age on Recruitment: A Critical Literature Review. *Organizational Innovation in the Digital Age*, 199-209. https://doi.org/10.1007/978-3-030-98183-9_8.
- Folger, N., Brosi, P., Stumpf-Wollersheim, J., & Welppe, I. M. (2022). Applicant Reactions to Digital Selection Methods: A Signaling Perspective on Innovativeness and Procedural Justice. *J Bus Psychol* 37, 735–757. <https://doi.org/10.1007/s10869-021-09770-3>.
- Frampton, G. K., Shepherd, J., Pickett, K., Griffiths, G., & Wyatt, J. C. (2020). Digital tools for the recruitment and retention of participants in randomised controlled trials: a systematic map. *Trials*, 21(1), 1-23. <https://doi.org/10.1186/s13063-020-04358-3>.
- Gilch, P. M. (2022). Occupation-specific recruitment: An empirical investigation on job seekers' occupational (non-) fit, employer image, and employer attractiveness. *Frontiers in Psychology*, 13, 937116. <https://doi.org/10.3389/fpsyg.2022.937116>.
- Gilch, P. M., & Sieweke, J. (2021). Recruiting digital talent: The strategic role of recruitment in organisations' digital transformation. *German Journal of Human Resource Management*, 35(1), 53-82.
- Girisha, M., & Nagendrababu, K. (2020). Challenges and Issues of E-HRM Practices in India. *Our Heritage*, 68(30), 5123-5132. <https://doi.org/10.1177/2397002220952734>.
- Gong, Y., Zhao, M., Wang, Q., & Lv, Z. (2022). Design and interactive performance of human resource management system based on artificial intelligence. *PloS one*, 17(1), e0262398. <https://doi.org/10.1371/journal.pone.0262398>.

- Hafeez, M., Farooq, U., Ziaullah, M., & Ashraf, S. (2018). The role of e-recruitment in attracting potential candidates evidence from fresh graduate job seekers. *IBT Journal of Business Studies (IBTJBS)*, 14(2) 65-80. <http://dx.doi.org/10.46745/ilma.jbs.2018.14.02.05>.
- Hahn, R., & Reimsbach, D. (2021). Bringing signaling theory to intermediated voluntary disclosure. Commentary on “Detecting False Accounts in Intermediated Voluntary Disclosure” by Patrick Callery and Jessica Perkins. *Academy of Management Discoveries*, 7(1), 155-157. <https://doi.org/10.5465/amd.2020.0015>.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152. <https://doi.org/10.2753/MTP1069-6679190202>.
- Hosain, S. (2020). The impact of social media recruitment on job candidates’ perceptions: Evidence from Bangladeshi fresh graduates. *Postmodern Openings*, 11(1),20-41 DOI:10.18662/po/106 .
- Kachouh, H. (2021). Digitalization in Recruitment: AI’s Impact on The Recruitment Process (Master’s thesis, NTNU).
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Lee, J., Waung, M., & Beatty, J. E. (2022). Internships and promises of diversity: how anticipatory psychological contracts shape employment intentions in the US. *The International Journal of Human Resource Management*, 33(17), 3560-3590. <https://doi.org/10.1080/09585192.2021.1916775>.
- Maceira Elvira, P. (2022). The aging brain as a model to understand motor skill acquisition in humans and its restoration using non-invasive brain stimulation. <https://doi.org/10.5075/epfl-thesis-8969>.
- Madan, A. & Madan, S. (2019). Attracting millennial talent: a signal theory perspective. Evidence-based HRM: *a Global Forum for Empirical Scholarship*. 7(1), 8-23, <https://doi.org/10.1108/EBHRM-01-2018-0009>.
- Miller, K. E., & Akdere, M. (2019). Advancing organizational corporate social responsibility (CSR) agenda: Implications for training and development. *European Journal of Training and Development*, 43(9), 860-872. <https://doi.org/10.1108/EJTD-10-2018-0107>.

- Minhas, A. H., Shaiq, M. D., Qureshi, S. A., Cheema, M. D. A., Hussain, S., & Khan, K. U. (2022). *An Efficient Algorithm for Ranking Candidates in E-Recruitment System*. Paper presented at the 2022 16th International Conference on Ubiquitous Information Management and Communication (IMCOM). 10.1109/IMCOM53663.2022.9721629.
- Mishra, S., & Kumar, S. P. (2019). E-recruitment and training comprehensiveness: untapped antecedents of employer branding. *Industrial and commercial training* 51(2), 125-136 <https://doi.org/10.1108/ICT-12-2017-0106>.
- Nikolaou, I. (2021). What is the Role of Technology in Recruitment and Selection? *The Spanish Journal of Psychology*, 24. <https://doi.org/10.1017/SJP.2021.6>.
- Pantouvakis, A., & Karakasnaki, M. (2017). Role of the human talent in total quality management–performance relationship: an investigation in the transport sector. *Total Quality Management & Business Excellence*, 28(9-10), 959-973. <https://doi.org/10.1080/14783363.2017.1303873>.
- Paramita, D. (2020). Digitalization in talent acquisition: A case study of AI in recruitment.
- Pujol-Jover, M., Duque, L. C., & Riera-Prunera, M.-C. (2023). The recruit requirements of recent graduates: approaching the existing mismatch. *Total Quality Management & Business Excellence*, 34(1-2), 57-70. <https://doi.org/10.1080/14783363.2022.2029695>.
- Qayum, F. M. (2022). A study on the effectiveness of recruitment and selection process of management trainee officer program in Gemcon.
- Ruchika, & Prasad, A. (2019). Untapped relationship between employer branding, anticipatory psychological contract and intent to join. *Global Business Review*, 20(1), 194-213. <https://doi.org/10.1177/0972150917713897>.
- Sajid, H., Kanwal, J., Bhatti, S. U. R., Qureshi, S. A., Basharat, A., Hussain, S., & Khan, K. U. (2022). *Resume parsing framework for e-recruitment*. Paper presented at the 2022 16th International Conference on Ubiquitous Information Management and Communication (IMCOM). 10.1109/IMCOM53663.2022.9721762.
- Sasirekha, S. (2021). A Study On Recruitment Process At Msys Technologies. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(11), 425-432. <https://doi.org/10.17762/turcomat.v12i11.5895>.

- Shayrine, H., & Gomathi, S. (2022). Measuring Digitalization of Talent Acquisition Practices And identifying Critical Positions with Employee Branding and Mediating the Role of Technology Resources Strategy. *International Journal of Intelligent Systems and Applications in Engineering*, 10(4), 677-683.
- Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. *German Journal of Human Resource Management*, 34(3), 345-365. <https://doi.org/10.1177/2397002220921131>.
- Swadia, B. U. (2018). A Study On Recruitment And Selection Process Of Airtel. *A Case Study On SM Patel Institute Of Commerce Ahmedabad*, 4(1issn), 2454-8596.
- Van Esch, P., & Black, J. S. (2019). Factors that influence new generation candidates to engage with and complete digital, AI-enabled recruiting. *Business horizons*, 62(6), 729-739. <https://doi.org/10.1016/j.bushor.2019.07.004>.
- Van Esch, P., Black, J. S., & Arli, D. (2021). Job candidates' reactions to AI-enabled job application processes. *AI and Ethics*, 1(2), 119-130. <https://doi.org/10.1007/s43681-020-00025-0>.
- Van Esch, P., Stewart Black, J., Franklin, D., & Harder, M. (2021). AI-enabled biometrics in recruiting: Insights from marketers for managers. *Australasian Marketing Journal*, 29(3), 225-234. <https://doi.org/10.1016/j.ausmj.2020.04.003>.
- Wolff, M., & Burrows, H. (2021). Planning for virtual interviews: residency recruitment during a pandemic. *Academic pediatrics*, 21(1), 24-31. <https://doi.org/10.1016/j.acap.2020.10.006>.
- Zafeiriadou, A. (2021). Candidates' reaction on the modern methods of personnel selection processes and the influence of word-of-mouth on employer branding <https://repository.ihu.edu.gr/xmlui/handle/11544/29891>.



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