

Exploring Enabling Factors of E-Recruitment Adoption in the Public Sector and Its Contribution to Public Value Creation

Iqbal Caraka Altino ^{1)*} , Dana Indra Sensuse ²⁾ , Sofian Lusa ³⁾,
Prasetyo Adi Wibowo Putro ⁴⁾ , Wahyu Setiawan Wibowo ⁵⁾ , Elin Cahyaningsih ⁶⁾

¹⁾²⁾⁴⁾⁵⁾Faculty of Computer Science, Universitas Indonesia, Depok, Indonesia

¹⁾iqbal.caraka@ui.ac.id, ²⁾dana@cs.ui.ac.id, ⁴⁾prasetyo.adi01@ui.ac.id, ⁵⁾wahyusetiawanwibowo@gmail.com

³⁾Tourism Department, Universitas Trisakti, Jakarta, Indonesia

³⁾sofian.lusa@iptrisakti.ac.id

⁶⁾Faculty of Engineering and Computer Science, Universitas Bakrie, Jakarta, Indonesia

⁶⁾elin.cahyaningsh@bakrie.ac.id

Abstract

Background: E-recruitment systems are increasingly prevalent in the public sector to improve candidate outreach and enhance transparency. Despite their potential, users remain skeptical due to challenges such as recruitment fraud and limited system availability, especially in developing countries like Indonesia. Consequently, it remains unclear how much e-recruitment systems contribute to public value creation. This uncertainty is mainly because there is a lack of research that directly explores the relationship between these systems and public value creation in the public sector, especially in developing countries.

Objective: This research aims to examine the factors that influence the use of e-recruitment systems in the public sector and the impact into creation of public values.

Methods: This quantitative study collected data from 408 respondents via an online survey, all of whom had used Indonesian National Civil Service Agency's e-recruitment system. Data were analyzed using the Partial Least Square—Structural Equation Model (PLS-SEM) method.

Results: The study revealed that system, information, and service quality have a positive impact on perceived usefulness and perceived ease of use and have a positive impact on the use of the e-recruitment system. It also shows that the adoption of an e-recruitment system gives a positive impact on public value creation.

Conclusion: This research highlights the critical role of system information quality in fostering e-recruitment adoption and its positive impact on public value creation in the public sector. These findings enrich previous studies that have not yet explored the direct relationship between the use of e-recruitment systems and public value creation. Future research may investigate technological aspects, like artificial intelligence and virtual reality, that could enhance user experience and the adoption of e-recruitment systems in the public sector.

Keywords: E-recruitment, PLS-SEM, Information System Success Model, Technology Acceptance Model, Public Value Theory

Article history: Received 8 February 2025, first decision 9 Mei 2025, accepted 24 June 2025, available online 22 July 2025

I. INTRODUCTION

Currently, the evolution of technology has brought about substantial changes, notably in how governments administer public services to the community [1]. For instance, the establishment of electronic government (e-government) platforms has become one of the widely adopted technological innovations adopted by governments, leading to the creation of public value for the community [2], [3]. Public value denotes the benefits derived from governmental regulations, services, and laws [4]. Twizeyimana & Andersson [3] further emphasize that to actualize public value, e-government initiatives must enhance service efficiency, elevate service quality, and champion social values like transparency and public participation. Hence, e-government becomes the bedrock of public value's creation.

* Corresponding author

One type of e-government utilization is e-recruitment. It empowers institutions to compete effectively and attract highly qualified talent from the job market, serving as a key pillar in the modernization efforts of public institutions [5]. E-recruitment involves the use of web-based platforms that automate various recruitment processes, including job vacancy announcements, submission of resumes or CVs, preliminary application screening, and selection processes to obtain suitable candidates [6], [7], [8]. E-recruitment offers several significant benefits: it shortens the recruitment cycle, reduces cost-per-hire, and expands geographical reach by leveraging the internet. This enhanced reach not only improves recruitment effectiveness but also helps attract and retain a highly talented workforce [9], [10], [11], [12], [13]. Many countries have geared up their recruitment process by adopting e-recruitment, such as Tanzania, Iraq, Indonesia, India, and more [14], [15], [16], [17]. The use of e-recruitment thus is poised to enhance public value creation [1], [18], [19].

The adoption of e-recruitment systems by users often faces challenges, despite the numerous advantages of e-recruitment systems. In Tanzania, the implementation of e-recruitment systems has not been successful in addressing issues such as corruption, unresponsive feedback mechanisms, high recruitment costs, and a lack of transparency [20]. Likewise, in Ghana, the adoption of e-recruitment faces significant barriers, including insufficient ICT infrastructure, a shortage of skilled personnel, poor internet connectivity in rural regions, and limited awareness or trust in the reliability of e-recruitment systems [1].

Moreover, research focusing on the factors influencing the adoption of e-recruitment and its relation with public value creation in the public sector remains limited. This is evident in studies such as [1], [2], [21], [22], [4], [23], which focus solely on examining the relationship between e-government adoption in general and public value creation. AbdulKareem et al. [1] found that social media serves as a mediating variable in the relationship between e-government adoption and public value creation, suggesting an indirect effect rather than a direct link. In contrast, Mensah et al. [4] demonstrated that public value directly and positively influences the intention to adopt e-government services, offering a different perspective from that of AbdulKareem et al. [1]. Other studies such as, [23], [2], [19], and [20] suggests that satisfaction and intention to use act as moderating variables connecting system quality with the creation of public value. Given the limited research that directly examines the relationship between e-recruitment adoption and public value creation, coupled with the significant role of e-recruitment in the public sector, further research is essential to identify the factors influencing e-recruitment adoption in the public sector and how it directly relates to the creation of public value.

This study is conducted by combining DeLone and McLean Information Systems Success Model (D&M ISSM), Technology Acceptance Model (TAM), and Public Value Theory (PVT) model. The integration of these three approaches is expected to provide a more comprehensive and holistic understanding. Previous studies have typically applied these models in isolation—for example, D&M ISSM primarily focuses on evaluating information system success [1], [2], [24], while TAM is limited to analyzing user perceptions [4], [25]. Meanwhile, PVT in previous studies has often been treated as a single, unified variable without separating or analyzing its underlying components, such as transparency, fairness, accountability, and effectiveness, in detail [4], [21], [22]. This is evident in studies by Alhanatleh et al. [22] and AbdulKareem et al. [1], where these aspects were combined into a single construct without individual exploration. However, separating these variables could provide a deeper understanding of the contribution of each aspect to public value creation.

With this integrated approach, the objective of this study is to investigate the factors influencing the adoption of e-recruitment among the users and to determine its impact on the creation of public value in public sector directly. Additionally, the study aims to develop a new theoretical framework for assessing the influence of information system quality on adoption and its effects on various aspects of public value, building on insights from previous research [1], [3], [26], [27]. Through this study, we believe that the findings have the potential to provide new insights into the relationship between adoption of e-recruitment and the creation of public value. These insights could serve as considerations for the government in enhancing and minimizing barriers to the adoption of e-recruitment in the future. Specifically, our study seeks to understand the factors that influence the adoption of e-recruitment systems its potential impact on public value creation.

II. LITERATURE REVIEW

A. E-Government Initiatives: E-Recruitment

Recruitment involves seeking qualified candidates by attracting them to a company or organization based on their skills and qualifications [28], [29]. E-recruitment leverages technology and web-based resources to perform various task including the processes of finding, attracting, assessing, doing interviews, and hiring job applicants [30], [31]. The transition from conventional recruitment methods to e-recruitment in the public sector seeks to enhance recruitment and selection processes [32]. E-recruitment aims to shorten recruitment cycle, lower the cost-per-hire,

improve talent coverage (especially in geographical terms), and set the bar higher for talented workforce [13], [33], [34], [35], [36]. E-recruitment thus addresses several issues associated with traditional recruitment, such as high costs, limited job accessibility, nepotism, and delays [37], [38].

B. Public Value

Public value is a Moore's concept which pertains to the collective expectations of individuals toward public and government services [26], [39]. Public value encompasses the expectations of various stakeholders, including citizens, policymakers, public servants, and taxpayers, about the government's provision of public services [40], [41], [42]. It also represents the benefits the government generates for society through public services [43], [44]. Moore's theory, about public value and e-government, argues that ICT can transform public values and significantly influence citizen behavior [45], [46]. Public value is created through the collective use of public services delivered via various digital technologies [47]. This value can be measured by the digital services provided, which helps organizations categorize and prioritize public value based on the characteristics of e-government services [48]. In the context of e-recruitment, public values include transparency, cost reduction, participation, fairness, trust, and efficiency [7], [39], [49], [50].

C. Summary of Previous Study

Previous studies show the various ways in which e-government is related to public value. Fukumoto and Bozeman [51] highlighted the ambiguity of public value, noting that scholars and academics often provide differing explanations and definitions. There are three main perspectives on the relationship between e-government and public value: (i) adoption e-government influences public value through a mediator variable; (ii) adoption e-government directly influences public value; and (iii) public value influences adoption e-government. Table 1 presents a summary of previous studies.

TABLE 1
SUMMARY OF PREVIOUS STUDY

Author	Theoretical Model	Aims of The Study	Research Finding
[1]	TAM & PVT	Analyzes the integration of information and communication technologies (ICT) in e-recruitment and its effects on public value outcomes.	Confirm significant positive correlations between ICT adoption, the use of social media for e-recruitment, and the creation of public value. Additionally, internet self-efficacy positively moderates the outcomes related to public value.
[52]	D&M ISSM, UTAUT2 (Unified Theory of Acceptance and Use of Technology), PVT, & TAM	Proposed a novel approach to evaluating the performance and management of Fintech Services' Mobile Apps by developing a new conceptual framework called Public Value of Fintech Services' Mobile Apps (PV-FSMA).	The article offers theoretical insights into financial services and public value, and practical advice for improving FSMA quality and performance in Jordan's Fintech sector.
[4]	PVT & TAM	From the perspective of the Chinese people, the factors that influence the public value of e-government were studied.	This study confirms that the public value of e-government directly influences the intention to adopt e-government services.
[2]	D&M ISSM	This study investigates the impact of trust in e-government on the use and success of services provided by e-government. It works within the parameters of the information system (IS) success model and public value theory.	Trust, actual use, and satisfaction in e-government influence the public value of e-government.
[53]	D&M ISSM	This research for empirically evaluating the creation of public value in e-government (PV-EGOV) in Jordan	The findings revealed that service quality was the most crucial factor influencing PV-EGOV.
[54]	D&M	The study employs the DeLone and McLean Information Systems Success Model and the e-government public value perspective to propose and evaluate an e-government success model from the viewpoint of government staff.	Indicate that the intention to use the e-government and user satisfaction contribute to public value through organizational performance and environmental sustainability.

Our study propose an integrated model combining the D&M ISSM, TAM, and PVT, drawing on insights from previous studies [1], [2], [4], [52], [53], [54]. This integration aims to enhance the objectives of the current study.

III. METHODS

A. Theoretical Framework and Hypothesis Development

1) DeLone & McLean Information System Success Model (D&M ISSM)

The D&M ISSM aims to understand the success of information systems [55], [56]. It includes three constructs: *system quality*, *information quality*, and *service quality* [57], [58]. In this study, the D&M ISSM examines how e-

recruitment affects user acceptance through perceived ease of use and perceived usefulness. Understanding how the quality of an information system influences usage levels is essential for user acceptance of e-recruitment. Previous studies indicate that web/technology quality affects users' perceptions of ease of use and benefits [59], [60], [61].

The first aspect is system quality (SYS). System quality assesses the suitability, reliability, and stability of software and hardware. Key characteristics include ease of use, functionality, flexibility, clarity, and reliability [62], [63]. High system quality provides users with convenience, privacy security, and quick response capabilities [27], [59]. This aspect also ensures service availability and reliability, enabling 24/7 access from anywhere without interruptions [63], [64], [65]. The second construct is the information quality (INF). Information quality pertains to the accuracy, reliability, freshness, clarity, format, relevance, timeliness, and additional attributes of information produced by a system [24], [66]. This construct also measures how well the system provides information that meets user needs [67]. High quality of information provides benefits to users and forms the perception that the system is easy to use [68], [69], [70]. The last construct is service quality (SER) which is related to measuring the quality of support provided by the system [24], [66]. The support includes responsiveness, accuracy, reliability, technical competence, and empathy from the related staff [24], [66], [68]. The service support available on the system is very important to help users when they face problems and help in meeting user expectations [71], [72].

In the context of this study, high-quality systems enable candidates to easily access job-related information, submit applications, and monitor their application status—all within a secure environment. This will certainly increase candidate satisfaction and open greater opportunities to obtain a larger number of candidates. Of course, when compared to the traditional recruitment process, the use of a quality e-recruitment system will make the recruitment process easier and more useful for the candidates. Previous studies show that high information system quality can positively impact perceived usefulness and ease of use [1], [27], [59], [68], [69], [73], [74]. Thus, the following hypotheses are proposed:

- H1a: SYS positively influences perceived ease of use.*
- H1b: SYS positively influences perceived usefulness.*
- H2a: INF positively influences perceived ease of use.*
- H2b: INF positively influences perceived usefulness.*
- H3a: SER positively influences perceived ease of use*
- H3b: SER positively influences perceived usefulness.*

2) Technology Acceptance Model (TAM)

The TAM established by Davis in 1989 elucidates the factors influencing the acceptance and deployment of technology. The framework suggests that two main beliefs—perceived usefulness (PU) and perceived ease of use (PEOU)—serve as indicators of an individual's intention to utilize a technology [69], [75], [76]. PU indicates the belief that the system would enhance the effectiveness [1]. It refers to users' perception of how significantly new technology can improve performance compared to old technologies or method [77], [78]. PU reflects the anticipated improvement in benefits as perceived by users [77], [78]. Whereas PEOU indicates the degree to which the system is regarded as user-friendly with low effort [1]. Conversely, complex systems that are difficult to understand and operate will have low adoption rates, as they require more effort and knowledge to use effectively [79]. PEOU describes the simplicity or complexity related to using a particular technology [80]. It also indicates to the degree to which someone consider that using a system demands little effort [77], [78].

AbdulKareem et al. [7] illustrate that the principal elements of TAM substantially affect the adoption of e-recruitment systems by candidates. By focusing on perceived usefulness and perceived ease of use, TAM offers important judgment into the aspects that encourage adoption by candidate in the e-recruitment system context. Within the context of e-recruitment, PU can be interpreted as information relevant to the job such as location, wage, organizational culture, processes, and goals can influence users' behavioral intention to use the system [79]. PEOU illustrates how candidates may find it easier to use e-recruitment for examinations compared to traditional paper-based methods. A complicated or difficult-to-use e-recruitment system may discourage candidates from using it again [81]. A high level of candidate adoption of the e-recruitment system will maximize its benefits and has the potential to broaden the pool of applicants for civil service positions. Previous researches have demonstrated that PU and PEOU can impact the use of e-recruitment [1], [82], [83]. From this, the following hypothesis can be formulated:

- H4: PU positively influences the adoption of e-recruitment.*
- H5: PEOU positively influences e-recruitment adoption.*

3) Public Value Theory (PVT)

Public value is the public's perception of the importance of an element such as social benefits, public goods, and things they want to get from a service or product [1]. Public value can also consist of public trust in the government,

transparency, accountability, and public participation in making policies [1], [23]. The creation of public value in society will strengthen the relationship between society itself and the government as a policy maker. One way to increase the creation of public value in society is by adopting e-government [52], [84]. Lopes et al. [19] demonstrates that public value creation occurs when users adopt existing systems and Alhanateh et al. [21] indicates that increased e-government usage enhances public value for society.

In this study, our study assumes that the use of e-recruitment systems by candidates from the community will have an impact on the creation of public value. As previously explained, the use of e-recruitment systems will increase transparency values, access more candidates in remote areas, reduce costs and time in the recruitment process, and will increase public trust and a sense of fairness among candidates [1]. Based on this description, the following hypotheses can be formulated for each aspect of public value.

- H6a: The adoption of e-recruitment positively influences the creation of public value in transparency.*
- H6b: The adoption of e-recruitment positively influences the creation of public value in cost reduction.*
- H6c: The adoption of e-recruitment positively influences the creation of public value in participation.*
- H6d: The adoption of e-recruitment positively influences the creation of public value in trust.*
- H6e: The adoption of e-recruitment positively influences the creation of public value inefficiency.*
- H6f: The adoption of e-recruitment positively influences the creation of public value in fairness.*

Based on all the hypotheses, the conceptual model that can be seen in Fig. 1.

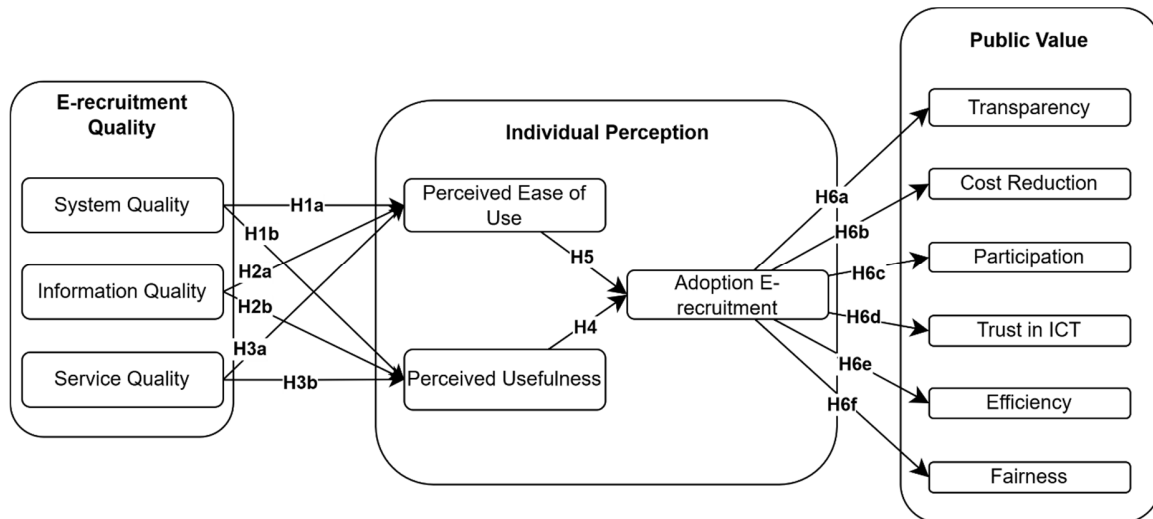


Fig. 1 Conceptual Model.

B. Case Study

The case study selected for this research is the e-recruitment system in Indonesia, which is used for the selection of civil servants. In Indonesia, the recruitment system operates through two platforms: Civil Servant Candidate Selection System (Sistem Seleksi Calon Aparatur Sipil Negara or SSCASN) and Computer Assisted Test (CAT). SSCASN is utilized for stages such as job vacancy announcements, application submissions, and the announcement of selection results, while CAT is employed for conducting selection tests. In Indonesia, this recruitment system is centrally managed by the National Civil Service Agency (Badan Kepegawaian Negara or BKN).

Despite being implemented for several years, the civil servant selection system in Indonesia continues to face various challenges. The Ombudsman of the Republic of Indonesia noted technical issues in SSCASN, such as the inability to print examination cards, unsynchronized National ID numbers, and an unresponsive help desk [85]. Additionally, the SSCASN portal is sometimes inaccessible and displays error messages. These issues have repeatedly occurred from 2019 to 2023 [86], [87], [88]. Technical issues were also encountered during the selection test process. The BKN CAT portal experienced disruptions, causing the selection tests to be temporarily halted [89], [90]. This case study serves to support the aims of the research by elucidating the influence of information system quality on adoption and its impact on the creation of public value.

C. Design of the Study

The current research is quantitative research where data is collected through surveys and analyzed using the PLS-SEM method. The survey distribution was carried out through an online method and targeted respondents who had used SSCASN and CAT BKN in the last 6 recruitment periods (2017-2018, 2018-2019, 2019-2020, 2021-2022, 2022-2023, and 2023-2024). The online media used were email, WhatsApp, Telegram, Instagram, TikTok, and Facebook. Furthermore, this research uses a reflective model where arrows pointing to constructs lead to each of its indicators [91]. The stages in conducting measurement using PLS-SEM in a reflective model consist of three steps: *measurement model assessment*, *structural model assessment*, and *interpreting measurement results* [92]. During the assessment stage of the measurement model, several steps are performed, including measuring indicator loadings, assessing internal consistency reliability, evaluating convergent validity, and examining discriminant validity [93]. In contrast, the structural model assessment stage is conducted by examining values such as R^2 , F^2 , path coefficients, and Q^2 [93], [94]. The final stage is the interpretation of the structural measurement results [93]. Determining the minimum sample size of respondents in this research is based on calculations performed by Kock [95]. Based on the model that has been constructed, it shows that a maximum of 3 arrows pointing to a construct is allowed. Furthermore, our study set the significance level at 5% and R^2 at 0.25. Therefore, the minimum sample size is 59 respondents.

D. Instrumentation

This study is quantitative research. In formulating the instrument, our study refers to indicators in several previous studies. Obtaining data was done by distributing questionnaires to predetermined respondents. The questionnaire in this study employed a Likert scale, with 1 representing "strongly disagree" and 5 representing "strongly agree". The 5-point is widely adopted in social science research [96]. It is also easier and quicker to complete than 6- or 7-point scales. This is important to ensure respondents, especially busy employees, are willing and able to finish the survey properly [97]. It is divided into two sections: respondent identification and respondent opinions. The first section gathers basic information, such as email, gender, age, education level, confirmation of having used SSCASN and CAT, and work experience.

IV. RESULTS

A. Participants

Data collection was conducted from June 27th to July 3rd, 2024. From the data collection process, 446 respondents completed the questionnaire. Our study then conducted a quality check to eliminate invalid responses from participants: filled out the questionnaire more than once; never used CAT and SSCASN; provided the same rating for all statements. Following this quality check, our study obtained 408 valid responses. The summary of demographic data for all respondents is shown in Table 2.

TABLE 2
 SUMMARY OF DEMOGRAPHIC DATA

Demographic Variable		N=408	%
Gender	Males	212	51.96
	Females	196	48.04
Age Range	<21	24	5.88
	21-30	241	59.07
	31-40	108	26.47
	41-50	15	3.68
	51-60	20	4.90
Highest Education	High School	44	10.78
	Diploma	68	16.67
	Bachelor	229	56.13
	Master	62	15.20
Period of Participating in Recruitment	Doctoral	5	1.23
	2017–2018	28	6.86
	2018–2019	44	10.78
	2019–2020	79	19.36
	2021–2022	67	16.42
	2022–2023	108	26.47
	2023–2024	82	20.10

B. Measurement Model Assessment

Our study conducted an evaluation of the reliability of the indicators, as well as an assessment of the internal consistency reliability, convergent validity, and discriminant validity inherent to the measurement model assessment [91]. To evaluate indicator reliability, Hair et al. [91] suggest using indicator loadings: loadings above 0.708 are preferred, since this indicates that the construct explains more than 50 percent of the indicator's variance, ensuring sufficient item reliability. Two indicators, COR1 (0.62) and SYS3 (0.54), had loading values below the acceptable threshold of 0.7 and were therefore excluded from the final research model. The results for indicator reliability, internal consistency reliability, and convergent validity are detailed in Table 3.

TABLE 3
 THE RESULT OF INDICATOR RELIABILITY, INTERNAL CONSISTENCY RELIABILITY, AND CONVERGENT VALIDITY MEASUREMENTS

Variable	Indicator	Indicator Description	Indicator Loading	CR	CA	AVE
Adoption E-recruitment (ADO)	ADO1	Agreement on continuing system use in ASN recruitment	0.916	0.794	0.906	0.829
	ADO2	System's capability to replace traditional recruitment methods	0.904			
Cost Reduction (COR)	COR2	Reduction in printing and mailing application materials	0.906	0.703	0.869	0.769
	COR3	Reduction in travel costs for tests	0.847			
Efficiency (EFF)	EFF1	Perception of faster recruitment process than traditional methods	0.824	0.808	0.874	0.635
	EFF2	Simplification of recruitment processes	0.869			
	EFF3	Improved communication efficiency with recruitment organizers	0.734			
	EFF4	Time savings in the recruitment process	0.754			
Fairness (FAI)	FAI1	Perception of fair treatment throughout recruitment	0.837	0.838	0.891	0.673
	FAI2	Absence of discrimination during recruitment	0.820			
	FAI3	Accessibility of recruitment services to candidates nationwide	0.775			
	FAI4	Recruitment process without bias toward social or economic status	0.847			
Information Quality (INF)	INF1	Adequacy of recruitment information provided by the system	0.841	0.880	0.909	0.625
	INF2	Timeliness of receiving needed information	0.771			
	INF3	Frequency of information updates	0.787			
	INF4	Accuracy of recruitment information	0.815			
	INF5	Completeness of recruitment information	0.733			
	INF6	Clarity and understandability of information	0.793			
Participation (PAR)	PAR1	Ease in understanding recruitment policies and regulations	0.793	0.739	0.845	0.646
	PAR2	Ability to provide feedback on the selection process	0.884			
	PAR3	Feeling of involvement in recruitment process	0.717			
Perceived Ease of Use (PEOU)	PEOU1	Overall ease of using the system	0.801	0.847	0.897	0.685
	PEOU2	Speed of acquiring system skills	0.831			
	PEOU3	User-friendliness of the system	0.841			
	PEOU4	Requirement (or not) of technical expertise to use system	0.768			
Perceived Usefulness (PU)	PU1	Impact on increasing chances to find suitable ASN jobs	0.868	0.804	0.872	0.629
	PU2	Effect on increasing opportunities to find more ASN job openings	0.821			
	PU3	Speed and effectiveness improvement in recruitment process	0.775			
	PU4	Ease in finding hard-to-find ASN job vacancies	0.791			
Service Quality (SER)	SER1	Availability of complaint/helpdesk service	0.785	0.853	0.895	0.631
	SER2	Trustworthiness of the system to fulfill recruitment needs	0.722			
	SER3	Speed of service response to complaints	0.789			
	SER4	Competence of staff in resolving user issues	0.801			
	SER5	Reliability of support services provided	0.837			
System Quality (SYS)	SYS1	Effectiveness of system visual design and user interface	0.819	0.702	0.833	0.624
	SYS2	System accessibility anytime and anywhere	0.818			
	SYS4	Responsiveness and speed of the system	0.805			
Transparency (TRA)	TRA1	Availability of detailed information on job vacancy requirements	0.744	0.848	0.898	0.688
	TRA2	Sufficiency of recruitment process information	0.892			
	TRA3	Ease of accessing application status and selection results	0.790			
	TRA4	Accessibility of outcomes at each recruitment stage	0.843			
Trust (TRU)	TRU1	Confidence in the security of personal information	0.789	0.777	0.869	0.689
	TRU2	Belief in the government's honest and fair use of the system	0.757			
	TRU3	Increased trust in the overall recruitment process	0.849			

For internal consistency reliability, our study administers composite reliability (CR) and Cronbach's alpha (CA). CR and CA scores that exceed 0.7 are regarded as acceptable [92]. The study revealed that all the score CR and CA were above 0.7. This indicates that the constructs are robust and dependable for the research analysis.

We evaluated convergent validity by examining the average variance extracted (AVE), with values greater than 0.5 considered acceptable [98]. All AVE values in this study were above 0.5, indicating strong convergent validity. This confirms that the constructs are effectively capturing the intended measurement.

The final measurement conducted in the measurement model assessment stage is to assess discriminant validity using the Heterotrait-Monotrait Ratio (HTMT) [91]. This measurement ensures that the structural model possesses unique characteristics compared to other models. The HTMT measurement is considered valid when the value is below 0.9 [92]. This study demonstrates that all variables are valid, with values below 0.9. Table 4 shows the overall results of the discriminant validity measurement.

TABLE 4
THE RESULT OF DISCRIMINANT VALIDITY

	ADO	COR	EFF	FAI	INF	PAR	PEOU	PU	SER	SYS	TRA
COR	0.356										
EFF	0.755	0.683									
FAI	0.742	0.498	0.858								
INF	0.619	0.447	0.784	0.771							
PAR	0.611	0.731	0.864	0.742	0.733						
PEOU	0.777	0.457	0.743	0.701	0.673	0.652					
PU	0.780	0.449	0.882	0.860	0.845	0.701	0.808				
SER	0.455	0.563	0.699	0.612	0.840	0.766	0.672	0.720			
SYS	0.588	0.504	0.696	0.704	0.813	0.688	0.775	0.741	0.868		
TRA	0.697	0.561	0.867	0.823	0.826	0.788	0.762	0.833	0.774	0.750	
TRU	0.685	0.646	0.885	0.841	0.780	0.863	0.704	0.767	0.744	0.700	0.815

C. Structural Model Assessment

Structural model assessment involves evaluating path coefficients (β), the coefficient of determination (R^2), and the blindfolding-based cross-validated redundancy measure Q^2 [92]. To derive path coefficient results, bootstrapping procedures are employed [98]. In this study, the bootstrapping procedure is conducted with a significance level of 0.05 and a one-tailed test type. Hair et al. [98] recommend that 10,000 bootstrap subsamples are used. Path coefficient values close to -1 indicate a strong negative relationship, while values near +1 suggest a strong positive relationship [98]. Hypotheses are accepted when the path coefficient approaches +1, the p-value is less than 0.05, and the t-statistic exceeds 1.64 [99]. Based on these criteria, all hypotheses are accepted. Detailed path coefficient measurements are presented in Table 5.

TABLE 5
RESULT OF PATH COEFFICIENT AND F²-EFFECT SIZE

Hypothesis	β	f ²	Effect	T-statistics	p-values	Status
H1a SYS->PEOU	0.302	0.102	Small	4.582	0.000	Accepted
H1b SYS->PU	0.115	0.025	Small	2.136	0.016	Accepted
H2a INF->PEOU	0.267	0.044	Small	3.007	0.001	Accepted
H2b INF->PU	0.555	0.263	Medium	8.129	0.000	Accepted
H3a SER->PEOU	0.174	0.023	Small	2.689	0.004	Accepted
H3b SER->PU	0.117	0.010	Small	1.881	0.030	Accepted
H4 PU->ADO	0.356	0.134	Small	4.475	0.000	Accepted
H5 PEOU->ADO	0.402	0.172	Medium	4.613	0.000	Accepted
H6a ADO->TRA	0.576	0.495	Large	9.876	0.000	Accepted
H6b ADO->COR	0.268	0.078	Small	4.984	0.000	Accepted
H6c ADO->PAR	0.504	0.341	Medium	9.430	0.000	Accepted
H6d ADO->TRU	0.551	0.436	Large	11.772	0.000	Accepted
H6e ADO->EFF	0.612	0.600	Large	11.204	0.000	Accepted
H6f ADO->FAI	0.609	0.589	Large	11.373	0.000	Accepted

R^2 is used to evaluate the *combined* effects of exogenous latent variables on the endogenous variable [92]. The R^2 value falls between 0 and 1, with higher values indicating a greater amount of variance explained. R^2 values are regarded as substantial when they reach 0.75, moderate at 0.5, and weak at 0.25 [92]. In this study, nine endogenous variables are examined: PU, PEOU, ADO, TRA, COR, PAR, TRU, EFF, and FAI. One variable demonstrates a moderate status, while eight show a weak status. The highest R^2 value, 0.535, is found in the PU variable, indicating that INF, SER, and SYS explain 53.5% of the PU variance. Detailed R^2 calculations are provided in Table 6.

Additionally, the impact of removing a predictor construct on the endogenous variable is assessed, known as the f^2 effect size [92]. This measure evaluates the extent of a predictor construct's impact on the endogenous variable. An f^2 value above 0.35 is interpreted as large, 0.15 as medium, and 0.02 as small. The largest f^2 value, ADO->EFF, indicates that adoption has a large effect on efficiency in this study. Detailed f^2 effect size measurements are available in Table 5.

The final step in assessing the structural model involves determining the Q^2 value. This value indicates the predictive effectiveness of the partial least squares path model [92]. Specifically, Q^2 values exceeding 0 yang indicate small, 0.25 indicates medium, and 0.50 indicates large levels of predictive relevance, respectively [92]. These benchmarks provide a measure of how well the model performs in forecasting the outcome variables. A higher Q^2 value indicates better predictive accuracy of the model. In Table 6 shows that the PU variable has the largest value, namely 0.519, which means this variable has predictive ability from data outside the existing sample. Meanwhile, the lowest value is for the COR variable, namely 0.095.

TABLE 6
 RESULT OF R^2 AND Q^2

Endogenous Variable	R^2	Status	Q^2	Accuracy
ADO	0.480	Weak	0.258	Medium
COR	0.072	Weak	0.095	Small
EFF	0.375	Weak	0.299	Medium
FAI	0.371	Weak	0.309	Medium
PAR	0.254	Weak	0.263	Medium
PEOU	0.447	Weak	0.414	Medium
PU	0.535	Moderate	0.519	Large
TRA	0.331	Weak	0.347	Medium
TRU	0.304	Weak	0.296	Medium

The outcomes of the structural model evaluation are illustrated in Fig. 2. This model displays the t-values for each construct and R^2 values for the endogenous variables. Additionally, it highlights how each construct influences the others and the overall explanatory power of the model. The figure provides a comprehensive overview of the model's performance and its predictive capacity.

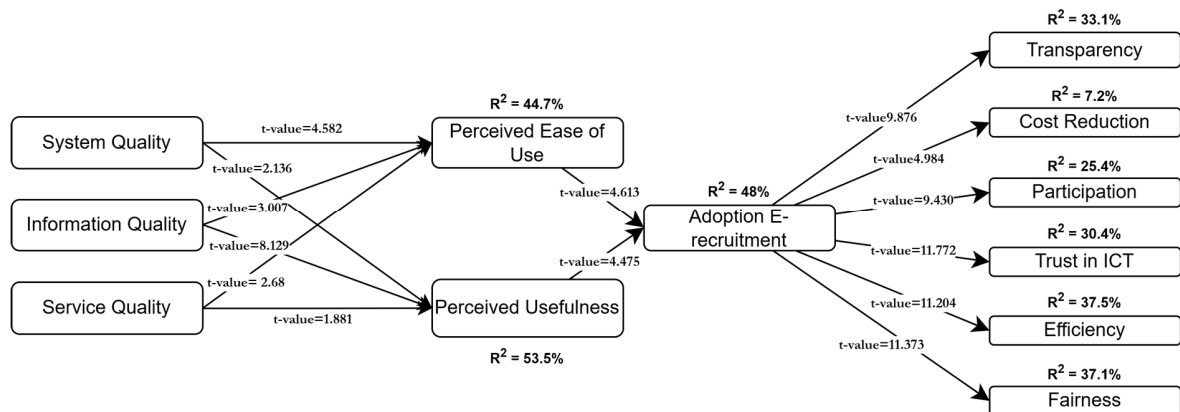


Fig. 2 Result of The Structural Model Assessment

V. DISCUSSION

This research examines how system, information, and service quality impact perceived ease of use and perceived usefulness of e-recruitment systems (CAT and SSCASN) within a specific framework. The implementation of e-recruitment system has significantly enhanced the effectiveness of recruitment process than the traditional way. Furthermore, the outcomes of this study show that the two constructs in the TAM positively influence the adoption of e-recruitment systems by the candidates. Collectively, these variables contribute to 48% of the variance in e-recruitment adoption, as recorded by the coefficient of determination (R^2). In this case, perceived ease of use is the most significant variable influencing the adoption of e-recruitment, compared to perceived usefulness his is indicated by the f^2 values, where the f^2 value for perceived ease of use is 0.172, compared to the f^2 value for perceived usefulness, which is 0.134. Furthermore, system, information, and service quality exert an indirect influence on e-recruitment adoption through perceived usefulness and ease of use, with coefficients of ($\beta = 0.162$; $p < 0.001$; system quality), (β

= 0.305; $p < 0.001$; information quality), and ($\beta = 0.112$; $p < 0.001$; service quality). Overall, the quality of the systems, information, and service delivered promotes a positive user experience and supports the shift from traditional recruitment methods to more efficient e-recruitment processes.

This study also displays that system quality has a substantial influence on both perceived ease of use ($\beta = 0.302$; $p < 0.001$) and perceived usefulness ($\beta = 0.115$; $p < 0.01$), confirming hypotheses H1a and H1b. These findings align with previous studies, which also found that system quality positively affects both perceived ease of use and perceived usefulness [59], [100]. The e-recruitment platforms generally function effectively, providing quick responses and 24/7 accessibility, which improves users' perceptions of their usefulness and ease of use. CAT and SSCASN generally have a well-designed interface which helps the user easily to understand how to use the system. However, the presence of errors within these systems may explain the relatively modest effect sizes (f^2) observed for perceived ease of use and perceived usefulness.

This study supports both hypotheses H2a and H2b, indicating that information quality influences perceived ease of use ($\beta = 0.267$; $p < 0.01$) and perceived usefulness ($\beta = 0.555$; $p < 0.001$). These findings corroborate with previous studies, showing that information quality impacts perceived ease of use [69], [70] and perceived usefulness [69], [73], [101]. The quality of information provided by the e-recruitment systems offers significant benefits to prospective civil servants, providing access to accurate, comprehensive and timely recruitment details compared to traditional methods. SSCASN gives detail information about the description, criteria, and salary ranges, to attract potential candidates. Furthermore, information quality has a moderate impact on perceived usefulness, with well-detailed and accurate information improving the user experience of the e-recruitment system, although the impact is relatively modest.

This study unveils that service quality significantly impacts perceived ease of use ($\beta = 0.174$; $p < 0.01$) and perceived usefulness ($\beta = 0.117$; $p < 0.05$), thus supporting hypotheses H3a and H3b. These findings, again, further reinforce prior studies, which established that service quality affects both perceived ease of use and perceived usefulness [59]. While service quality influences both perceived ease of use and perceived usefulness, its impact remains 'modest'. Respondents noted that support during system use is not always timely, despite the e-recruitment system providing a helpdesk service. The CAT system is accompanied by personnel who assist users with issues and give some guidance, which can enhance perceived ease of use and usefulness.

This research demonstrates that perceived usefulness strongly affects e-recruitment adoption ($\beta = 0.356$; $p < 0.001$). Thus, hypothesis H4 is supported, reinforcing previous studies highlighting the importance of perceived usefulness in adopting recruitment systems [1], [83], [102]. The implementation of e-recruitment systems has revolutionized traditional recruitment methods. Candidates can discover more job vacancies that align with their interests and skills, and CAT facilitates easier administration of selection exams. The ability of e-recruitment systems to match candidate with suitable job vacancies bring the enhancement on the number of users. Apart from that, the CAT system can immediately show the results of exam scores and exam rankings in real time which makes it have a positive value compared to traditional selection.

Similarly, the ease of use of e-recruitment systems positively affects their adoption ($\beta = 0.402$; $p < 0.001$). These findings support hypothesis H5 and corroborate previous studies [1], [83], [103]. This study reveals that perceived ease of use moderately influences the adoption of e-recruitment. The e-recruitment systems are designed to be user-friendly for civil service candidates, enhancing their usability. The current system is designed neatly and in accordance with its function. Moreover, in its use, users can use it independently without expert assistance, although this is also supported by a user manual.

Building on the understanding of factors influencing adoption, this study further investigates how the adoption of e-recruitment significantly enhances various facets of public value creation. The result show positive impacts on transparency ($\beta=0.567$; $p < 0.001$), cost reduction ($\beta=0.268$; $p < 0.001$), participation ($\beta=0.504$; $p < 0.001$), trust ($\beta=0.551$; $p < 0.001$), efficiency ($\beta=0.612$; $p < 0.001$), and fairness ($\beta=0.609$; $p < 0.001$). These findings fully support hypotheses H6a–H6f and empirically reinforce previous research [19], [47] indicating that the relationship between digital government adoption through e-recruitment can influence public value creation. Previously, Panagiotopoulos et al. [47] conducted an in-depth literature review to identify how the adoption of digital technologies in government can contribute to public value creation. These findings also provide a new perspective that contrasts with the research conducted by AbdulKareem et al. [1], who argued that public value creation requires mediating variables, or Mensah et al. [4], who suggested that e-government adoption occurs only after public value has been identified.

Furthermore, the implementation of e-recruitment systems has significantly impact on efficiency, fairness, transparency, cost reduction, participation, and trust in the civil service recruitment process. These systems streamline recruitment by digitizing document submissions and administrative selections, as well as expediting the assessment of selection exams. This transparency ensures equal access to recruitment outcomes for all civil servants' candidates, fostering trust in the process. The use of CAT reduces the cost for the candidates to print all documents and gives possibilities for the candidate from a rural area to apply for the job and enhances the participation value. Furthermore,

e-recruitment enhances fairness by eliminating discrimination based on candidates' backgrounds. The use of CAT has notably diminished political influence in civil service recruitment in Indonesia, promoting extensive public transparency [104].

Our study directly shows that the adoption of the e-recruitment system by candidates will create public value, something that has not been explored in previous research. It clarifies the theories of Lopes et al. [19] and Panagiotopoulos et al. [47] which highlight the relationship between e-government adoption and public value creation. In addition, the findings regarding the relationship between these two variables also clarify the discussion from Fukumoto & Bozeman [51], which previously highlighted numerous discrepancies concerning the relationship between public value and e-government adoption.

This study also develops a new conceptual model that integrates the D&M IS Success Model (ISSM), Technology Acceptance Model (TAM), and Public Value Theory (PVT) frameworks to evaluate e-recruitment adoption and its impact on public value. This model is built based on prior studies and aims to provide a comprehensive understanding of the factors influencing e-recruitment adoption and its contribution to public value creation [1], [21], [27], [59], [69], [105]. The development of this model also involves a more detailed breakdown of the public value variable into transparency, cost reduction, participation, trust, efficiency, and fairness, aspects that had not been explored in previous studies. For practitioners, the results of this study can serve as a reference to develop a more effective and reliable e-recruitment system that delivers a positive user experience, facilitating user adoption and maximizing public value creation. The higher the quality of the e-recruitment system in the public sector, the greater the likelihood of public participation and registration as civil servants, thereby generating public value that enhances the positive image of the selection organizers.

In order to present a comprehensive understanding, it is essential to consider certain limitations that accompany the contributions of this study. First, this research was conducted within the scope of the Indonesian government, which has a centralized civil service recruitment system managed by the BKN. This may differ from the implementation in other countries. Second, the study uses an online survey, which may face some errors in responses and give effect on the seriousness of respondents in finishing the questionnaire. Lastly, the variables related to public value may be limited and potentially less applicable to the context of other countries. Future research can adapt the variables to better align with the components of public value relevant to their specific contexts.

VI. CONCLUSION

Based on the preceding analysis and discussion, this study concludes that the adoption of e-recruitment systems in the public sector is influenced by user perceptions. Both perceived usefulness and perceived ease of use significantly impact the adoption of e-recruitment systems, particularly in developing countries like Indonesia. The perception of ease of use and benefits gained through e-recruitment system increases the likelihood of more applicants participating in the provided recruitment process, thereby enhancing the organization's chances of acquiring good talent. These two perceptions are also influenced by the quality of the e-recruitment system, which includes system quality, information quality, and service quality. Previous research has consistently demonstrated that information system quality significantly shapes users' perceptions regarding both ease of use and perceived benefits. Such insight can serve as a reference for stakeholders to continue paying attention to and developing their e-recruitment systems to foster positive perceptions of such systems.

This study highlights that the adoption of e-recruitment in the public sector has a direct and significant impact on public value creation. The implementation of e-recruitment not only improves the efficiency and effectiveness of the recruitment process but also contributes to enhancing transparency, participation, trust, and fairness. These outcomes indicate that e-recruitment systems play a strategic role in strengthening the relationship between government institutions and the public by delivering services that align with citizens' expectations and values.

Author Contributions: *Iqbal Caraka Altino*: Conceptualization, Methodology, Writing - Original Draft, Writing - Review & Editing, Data Curation, Investigation. *Dana Indra Sensuse*: Supervision, Writing - Review & Editing. *Sofian Lusa*: Supervision, Writing - Review & Editing. *Prasetyo Adi Wibowo Putro*: Conceptualization, Investigation, Writing - Review & Editing. *Wahyu Setyawan Wibowo*: Investigation, Formal Analysis, Validation, Writing - Review & Editing. *Elin Cahyaningsih*: Investigation, Validation, Data Curation, Resources.

All authors have read and agreed to the published version of the manuscript.

Funding: Research received no specific grant from any funding agency.

Conflicts of Interest: The authors declare no conflict of interest.

Data Availability: Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Informed Consent: There were no human subjects.

Institutional Review Board Statement: Not applicable.

Animal Subjects: There were no animal subjects.

ORCID:

Iqbal Caraka Altino: <https://orcid.org/0009-0009-3186-3734>

Dana Indra Sensuse: <https://orcid.org/0000-0002-0012-8552>

Sofian Lusa: -

Prasetyo Adi Wibowo Putro: <https://orcid.org/0000-0002-4695-8391>

Wahyu Setiawan Wibowo: <https://orcid.org/0000-0002-1327-0072>

Elin Cahyaningsih: -

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