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INTEGRATED PROCUREMENT SYSTEM AS A CATALYST FOR BUMN PROCUREMENT DIGITALIZATION: RESISTANCE AND OPPORTUNITIES

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ABSTRACT

Purpose: This study aims to explore user resistance to the implementation of the Integrated Procurement System (IPS) as part of the digitalization of goods and services procurement within state-owned enterprises (BUMN) in the plantation sector, specifically in PT Perkebunan Nusantara (PTPN) Group. The primary focus is to identify the underlying factors of resistance, assess its impact on system effectiveness, and formulate appropriate change management strategies.

Methodology/approach: This research employs a transcendental phenomenological methodology to uncover the subjective meanings behind users' experiences with the IPS. Data were collected through in-depth interviews and observations involving procurement staff, finance, legal, regional management, and vendors. The Technology Acceptance Model (TAM) serves as the analytical framework to understand user perceptions regarding perceived usefulness, perceived ease of use, perceived trust, and perceived security in the context of digital system adoption.

Findings: The study reveals five main causes of resistance: lack of understanding, aversion to change, fear of audits, leadership gaps, and conflicts of interest. These factors led to delayed financial processes and weakened internal control. However, the study also found opportunities such as improved transparency, digital leadership, and potential integration of AI in procurement workflows.

Practical implications: The study offers strategic recommendations, including awareness-based training, the use of artificial intelligence (AI), the strengthening of

transformational leadership roles, and the harmonization of digital regulations to enhance the effectiveness of IPS implementation in BUMN environments.

Originality/value:
This study provides a novel contribution by deeply understanding users' subjective experiences during IPS implementation in state-owned enterprises. Through a transcendental phenomenological approach, the research uncovers the meaning embedded in these experiences to identify resistance factors, analyze their impact on system effectiveness, and develop context-specific change management strategies aligned with the organization's characteristics. The use of the Technology Acceptance Model (TAM) as an analytical tool structures the findings and offers a holistic perspective on user resistance, encompassing technical, psychological, and social dimensions.

Keywords: e-Procurement, Integrated Procurement System, Resistance to Change, State-Owned Enterprises

Technology Acceptance Model**ABSTRAK** (**Tujuan penelitian):** Penelitian ini bertujuan untuk mengeksplorasi resistensi pengguna terhadap implementasi *Integrated Procurement System* (IPS) dalam proses digitalisasi pengadaan barang dan jasa di Badan Usaha Milik Negara (BUMN) sektor Perkebunan di PT Perkebunan Nusantara (PTPN) Group. Fokus utama penelitian adalah mengidentifikasi faktor-faktor penyebab resistensi, dampaknya terhadap efektivitas sistem, serta merumuskan strategi manajemen perubahan yang sesuai.
Metode/pendekatan: Penelitian ini menggunakan metodologi fenomenologi transendental untuk menggali makna subjektif dari pengalaman pengguna IPS. Data diperoleh melalui wawancara mendalam dan observasi terhadap staf pengadaan, keuangan, hukum, manajemen regional dan vendor. *Technology Acceptance Model* (TAM) digunakan sebagai kerangka analisis untuk memahami persepsi pengguna terhadap *perceived usefulness, perceived ease of use, perceived trust,* dan *perceived security* dalam konteks adopsi sistem digital.
Hasil: Penelitian menemukan lima penyebab utama resistensi yaitu kurangnya pemahaman, penolakan terhadap perubahan, kekhawatiran terhadap audit, kesenjangan kepemimpinan, dan konflik kepentingan. Dampaknya meliputi keterlambatan proses keuangan dan pelemahan kontrol internal. Ditemukan juga peluang

seperti transparansi yang meningkat, kepemimpinan digital, dan potensi integrasi AI dalam proses pengadaan.
Implikasi praktik: Studi ini memberikan rekomendasi strategis berupa pelatihan berbasis kesadaran, pemanfaatan kecerdasan buatan (AI), penguatan peran kepemimpinan transformasional, dan harmonisasi regulasi digital guna mendukung efektivitas implementasi IPS di lingkungan BUMN.
Orisinalitas/kebaharuan: Penelitian ini menghadirkan kebaruan dalam memahami secara mendalam pengalaman subjektif pengguna terhadap implementasi Integrated Procurement System (IPS) di lingkungan BUMN. Melalui pendekatan fenomenologi transendental, peneliti menggali makna dari pengalaman tersebut untuk mengidentifikasi faktor-faktor penyebab resistensi, menganalisis dampaknya terhadap efektivitas sistem, serta merumuskan strategi manajemen perubahan yang kontekstual dan sesuai dengan karakteristik organisasi. Penelitian ini menggunakan Technology Acceptance Model (TAM) sebagai alat analisis untuk menstrukturkan temuan, sehingga memberikan perspektif yang holistik terhadap resistensi pengguna, baik dari sisi teknis maupun dari aspek psikologis dan sosial.

Kata kunci: BUMN, *e-Procurement*, *Integrated Procurement System*, Resistensi terhadap Perubahan, *Technology Acceptance Model*

INTRODUCTION

Digital transformation in the procurement of goods and services has become a strategic focus for various organizations, particularly within State-Owned Enterprises (SOEs). Digitalization aims to improve operational efficiency through the application of technologies such as automation, data analytics, and interactive services. These initiatives help simplify business processes, reduce operational costs, and enhance transparency and accountability in corporate governance. A study by Yan et al. (2024) Shows that digital transformation also strengthens corporate governance by increasing innovation capacity and reducing information asymmetry, thereby supporting the achievement of organizational sustainability.

In the context of Indonesian SOEs, Maslani et al. (2024) emphasize the importance of strengthening competitiveness through innovation, dynamic capabilities, and organizational resilience as a response to rigid bureaucracy and ever-changing external challenges. This study affirms that digital transformation is not merely a technical effort but also a managerial strategy to promote organizational resilience and agility amid industrial disruption.

One tangible implementation of digital transformation is e-Government, which is the utilization of information and communication technology (ICT) to improve efficiency, transparency, and accountability in public services and government administration (Laudon, 2022). The implementation of e-Government enables interaction between the government and the private sector, known as Government-to-Business (G2B). Digital platforms such as

e-Procurement in the G2B framework play a crucial role in providing services, information, and business transactions between the government and business actors.

The use of e-Procurement has proven effective in increasing procurement process efficiency, expanding access to information, and reinforcing transparency and accountability in public governance (Khorana et al., 2024; Hochstetter et al., 2023). Studies across countries indicate that such systems can reduce corruption potential, improve public trust, and foster fairer competition in procurement (Ahmad et al. (2023). In addition, digital transformation through e-Procurement assists governments in simplifying administrative processes and reaching more suppliers of goods and services openly and efficiently (Chan, 2022). According to Mavidis (2022), the implementation of e-Procurement significantly contributes to the efficient use of public resources, strengthens public trust in government, and promotes fair and equitable competition among business actors.

In Indonesia, the State-Owned Enterprises Procurement Program (PBJ BUMN) has been established to create a procurement process that is transparent, accountable, and professional, supported by regulations such as Ministry of SOEs Regulation No. PER-2/MBU/03/2023 and Presidential Regulation No. 17 of 2023 (JDIH LKPP, 2023). The implementation of e-Procurement as part of a digitalization strategy is not only aimed at improving process efficiency but also at strengthening strategic collaboration between SOEs and business actors. This transformation is driven by the use of technologies such as big data and artificial intelligence to accelerate accurate decision-making. However, e-Procurement implementation still faces various challenges. The main challenge is internal resistance, which stems from changes in organizational culture, uneven technological infrastructure, and limited human resource development.

As shown by Banmairuroy et al. (2022), the development of knowledge-oriented leadership and targeted human resource development strategies are crucial factors in promoting organizational innovation and building sustainable competitive advantage, especially in the face of digitalized industrial complexity.

PT Perkebunan Nusantara (PTPN) Group serves as one example of an SOE that has implemented a digital system for the procurement of goods and services through the Integrated Procurement System (IPS). This system integrates all procurement processes into a single ERP-SAP-based platform, encompassing modules such as e-Tendering, Vendor Management, e-Contract, e-Invoice, and e-Payment. IPS is designed to strengthen procurement efficiency, transparency, and integration across all business units, which vary in commodity types, business processes, and organizational structures. The implementation of IPS is not without challenges. Variations in business unit characteristics, differences in internal procedures, and post-merger changes have led to user resistance to the new system. This resistance does not always manifest as outright rejection but often as an adaptive response to disruptions of longstanding routines. In this context, understanding the dynamics of resistance becomes essential to ensuring the success of digital procurement transformation within SOEs.

Theoretically, this study refers to the Technology Acceptance Model (TAM) developed by Davis. TAM explains that technology acceptance is influenced by two main variables: perceived usefulness (PU) and perceived ease of use (PEOU). PU refers to the extent to which users believe the system will improve their performance, while PEOU refers to the perception that the system is easy to use and does not cause burden. Studies such as those by Gupta (2022), Al-Adwan et al. (2023), and Ma (2011) indicate that PU is a stronger

predictor of technology acceptance than PEOU, particularly in organizations undergoing restructuring or systemic transformation.

Musa (2023) extends the TAM by incorporating perceived trust and perceived security as additional variables relevant in the context of the public sector and digital procurement systems. The findings show that trust and perceptions of data security also determine the extent to which technology is accepted or rejected by users. This aligns with the context of IPS in the PTPN Group, where the system's functional benefits have a greater influence on acceptance than its technical ease of use.Previous studies have highlighted challenges in implementing e-Procurement in the public sector. Mohungoo et al. (2020) identified that the main challenges in e-Procurement implementation include technological, organizational, and environmental aspects. Specifically, they emphasize the importance of stakeholder involvement, leadership support, and organizational readiness as crucial factors in adopting this technology. However, the study does not explicitly discuss user experiences within integrated procurement systems in large organizations with complex structures like PTPN Group.

In their systematic review, Nnaji et al. (2023) highlight that TAM has been expanded to include social and cultural variables such as subjective norms, perceived behavioral control, and facilitating conditions. This expansion has been shown to increase the predictive power of the model in the context of technology adoption in large and complex organizations, particularly in the public sector. These findings conceptually justify that resistance to IPS stems not only from users' technical perceptions but also from social factors and collective norms embedded in the organizational work culture.

The development of analytical focus in this study is based on the extended TAM framework, as well as relevant previous empirical findings. Instead of testing hypotheses quantitatively, this study adopts an inductive approach to explore how perceived usefulness (PU) and perceived trust are understood and interpreted by users in the context of IPS acceptance. Furthermore, perceived ease of use (PEOU) and perceived security are interpreted as experiential elements that can strengthen or weaken the relationship between perceived usefulness and users' intention to adopt technology. These findings are constructed through an exploratory process based on in-depth interviews and thematic analysis of qualitative data collected from various IPS user units within the PTPN Group.

This study aims to fill this gap by deeply exploring user experiences regarding IPS implementation through a transcendental phenomenological approach. Transcendental phenomenology is used to uncover the subjective meaning behind users' resistance and acceptance of the system. This meaning is then analyzed to identify the factors causing resistance, evaluate its impact on system effectiveness, and formulate relevant change management strategies based on the constructed meanings formed within their work context. According to Bombaerts (2025), transcendental phenomenology not only explains individual consciousness and intentions but can also be developed into a system phenomenology approach, which understands experience collectively in the interaction between humans, technology, and the work environment as an interdependent whole

METHOD

This study employs a qualitative approach using transcendental phenomenology to explore the subjective experiences of IPS users within the PTPN Group. This approach was selected because it is capable of capturing the social realities shaped by individuals' direct experiences and the social interactions that accompany them, particularly in the context of resistance and

adaptation to digital procurement transformation. Transcendental phenomenology, as developed by Edmund Husserl, emphasizes the importance of the processes of epoche (suspension of judgment), phenomenological reduction (filtering of essential meanings), and imaginative variation (exploration of experiential structures from various perspectives) in understanding the essence of a phenomenon as experienced by the subject. The aim of this approach is to produce a pure description of the experience as apprehended in the subjective consciousness of individuals, free from the researcher's prior assumptions (Husserl, 2006; Moustakas, 2011).

The methodological foundation of this research aligns with the interpretivist paradigm, which views social reality as a subjective construct resulting from interactions between individuals. This paradigm emphasizes that social meaning is formed through dynamic experiences and interactions, thereby understanding social reality as fluid and continually evolving. Kamayanti (2021) reinforces this approach by asserting that transcendental phenomenology is not merely a technical procedure, but a path to reveal the spiritual, critical, and reflective consciousness of research subjects.

In the context of IPS implementation, users' experiences are not only understood through perceived benefits and ease of use but also through their awareness of value changes, uncertainty, and adjustments to new work norms. According to Kamayanti, phenomenology serves as a way to understand the subject as a whole human being living in a social world rich in meaning and values.

The phenomenological perspective is also elaborated by Smith (2019), who explains that the interpretative phenomenological analysis, which is rooted in hermeneutic phenomenology, focuses on the search for meaning from individuals' lived experiences within complex social and emotional contexts. In this approach, the researcher and participants are simultaneously engaged in a reflective process, and meaning is constructed through an experiential structure known as double hermeneutics, in which participants seek to understand their own world, while the researcher seeks to understand the participants' process of meaning-making. Accordingly, the use of transcendental phenomenology in this study allows the researcher to explore the deep meaning behind IPS users' experiences, whether in the form of resistance or as an effort toward adaptation to digital transformation in their work environment.

The use of transcendental phenomenology in this study not only enables the researcher to understand the technical challenges in IPS implementation, but also to delve into the psychological and social dimensions experienced by users, such as confusion, emotional burden, or the motivation to adapt. As noted by Moerer (2004), transcendental phenomenology provides a logical and systematic design for understanding the essence of human experience and is particularly beneficial in describing complex social phenomena through the lens of individual experience. Thus, this study seeks to uncover the deepest meanings of users' experiences with the IPS system, both as a form of resistance and as an opportunity to enhance digital adaptation in a more human-centered and contextual manner.

The population in this study consists of all individuals who use the IPS within PT Perkebunan Nusantara Group (PTPN Group). The informants included in the population are those directly involved in the procurement of goods and services through the IPS system, such as procurement staff, financial managerial officials, and vendors as external users. Their participation represents diverse perspectives on system use experiences, both from within the organization and from external business partners.

The sampling technique employed is purposive sampling, whereby informants are selected based on specific criteria determined by the researcher in accordance with the research

objectives (Creswell, 2018). The main criteria for selecting informants include: having actively used IPS for at least one year, possessing experience in procurement processes both before and after the digital transformation, and having a comprehensive understanding of the challenges encountered during system implementation. This technique allows the researcher to obtain in-depth information from individuals with significant involvement in the system. To clarify the relevance of the data, the following is a brief profile of the informants who were interviewed.

No	Name	Position	Division	Board of Directors Level
1	Ricky	Subdivision Head	Procurement and IT	BOD-2
2	Sanusi	Staff	Procurement and IT	BOD-3
3	Candra	Staff	Procurement and IT	BOD-3
4	Bayonta	Staff	Procurement and IT	BOD-3
5	Budi	Subdivision Head	Palm and Rubber Operations	BOD-2
6	Tjahyo Adi	Division Head	Finance	BOD-1
7	Jonri	Subdivision Head	Finance	BOD-2
8	Arief	Subdivision Head	Finance	BOD-2
9	Batara	Subdivision Head	Legal	BOD-2
10	Muharris	Staff	Regional Management	BOD-3
11	Fino	Vendor	PT. SISI	External

Table 1. Research Informants

Source: Processed by the researcher (2024)

The research sample consisted of various organizational levels, ranging from operational staff, heads of subdivisions, and heads of divisions to vendors from external parties. This diversification of informants aimed to obtain a comprehensive picture of how the IPS was adopted and responded to by different actors within and outside the organizational structure of the PTPN Group. In addition, the participation of informants from business units spread across different regions, including Java, Sumatra, Kalimantan, and Sulawesi, further enriched the representation of user experiences in diverse geographical and work culture contexts.

This study employs transcendental phenomenology to explore users' subjective experiences regarding the implementation of the Integrated Procurement System (IPS). The Technology Acceptance Model (TAM) is used as a conceptual framework to structure the findings based on user perceptions of perceived usefulness, perceived ease of use, perceived trust, and perceived security within the context of digital procurement systems.

The study aims to uncover the dynamics of user resistance and adaptation to IPS comprehensively, covering technical, organizational, and psychosocial dimensions. The careful selection of the population and sampling strategy serves as a critical foundation for ensuring data depth and validity in this qualitative research grounded in transcendental phenomenology.

The data used in this study consist of both primary and secondary sources. Primary data were collected through in-depth interviews intended to explore informants' experiences in adopting IPS and the challenges they encountered. Interviews were conducted in a semi-structured format to provide informants with the flexibility to reflectively share their experiences. In addition, direct observations were carried out to understand how IPS is implemented in daily practice and how interactions between informants and the system occur in their work environments. Secondary data were obtained from procurement policy documents, IPS implementation reports, and literature related to digital transformation in procurement processes within state-owned enterprises.

The research instrument used during interviews was a semi-structured interview guide developed based on the Technology Acceptance Model (TAM) framework. This guide included questions about how informants interpreted the usefulness and ease of use of the system, their experiences dealing with technical and non-technical obstacles, and the strategies they employed to overcome barriers in system implementation. To enhance data validity, member checking was applied by asking informants to review the interview transcripts to ensure that the researcher's interpretation accurately reflected their intended meaning.

Data analysis was conducted by following the stages of transcendental phenomenology as developed by Husserl. The analysis process began with the epoche stage, in which the researcher suspended all assumptions and biases that could influence the interpretation of the phenomenon under investigation. This was followed by bracketing, to ensure that the analysis was based solely on the informants' pure experiences without researcher subjectivity. In the horizontalizing stage, equal weight was given to each statement from the informants so that all perspectives were considered fairly. Statements derived from interviews and observations were then categorized into meaning units based on emerging themes.

Phenomenological reduction was used to filter out non-essential elements, retaining only the core aspects of the experience for further analysis (Kuswarno, 2009). The analysis then proceeded with imaginative variation, which aimed to explore how the informants' experiences could vary under different conditions to gain a broader understanding of the experiential dynamics. The results of this analysis were structured into textural and structural descriptions, depicting how the informants' experiences unfolded within their organizational context. The final stage of analysis was the synthesis of meaning and essence, intended to summarize a deep understanding of how informants made sense of their experience in adopting IPS within the PTPN Group.

The validity of the data in this study was maintained through both source and methodological triangulation. Source triangulation was conducted by comparing interview results from various informants with different levels of responsibility in the organization, such as procurement staff, managers, and vendors. This approach aligns with the view of Flick (Rokhamah, 2024), who emphasizes that triangulation, particularly data triangulation, is an important strategy to enhance validity in qualitative research by confirming findings through multiple perspectives and sources of information. Meanwhile, methodological triangulation was conducted by comparing interview results with direct observations and relevant secondary documents (Creswell, 2018). To ensure transparency throughout the research process, an audit trail technique was applied by systematically documenting each stage of data collection and analysis, allowing this research to be replicated in similar contexts.

By using a transcendental phenomenological approach and referring to the technology acceptance model, this study is expected to provide deeper insights into the factors

influencing informants' resistance to IPS, as well as strategies that can be applied to enhance system adoption within SOEs. The findings of this research are anticipated to serve as the foundation for designing more effective digital transformation policies, particularly in managing technological change in the procurement process of state-owned companies.

The data analysis components in this study refer to the concept of transcendental phenomenology as explained by Husserl (2006) in Kamayanti (2021). The transcendental phenomenological model in Figure 1 can be interpreted in the context of exploring IPS user experiences within the PTPN Group. The following illustrates the research process.

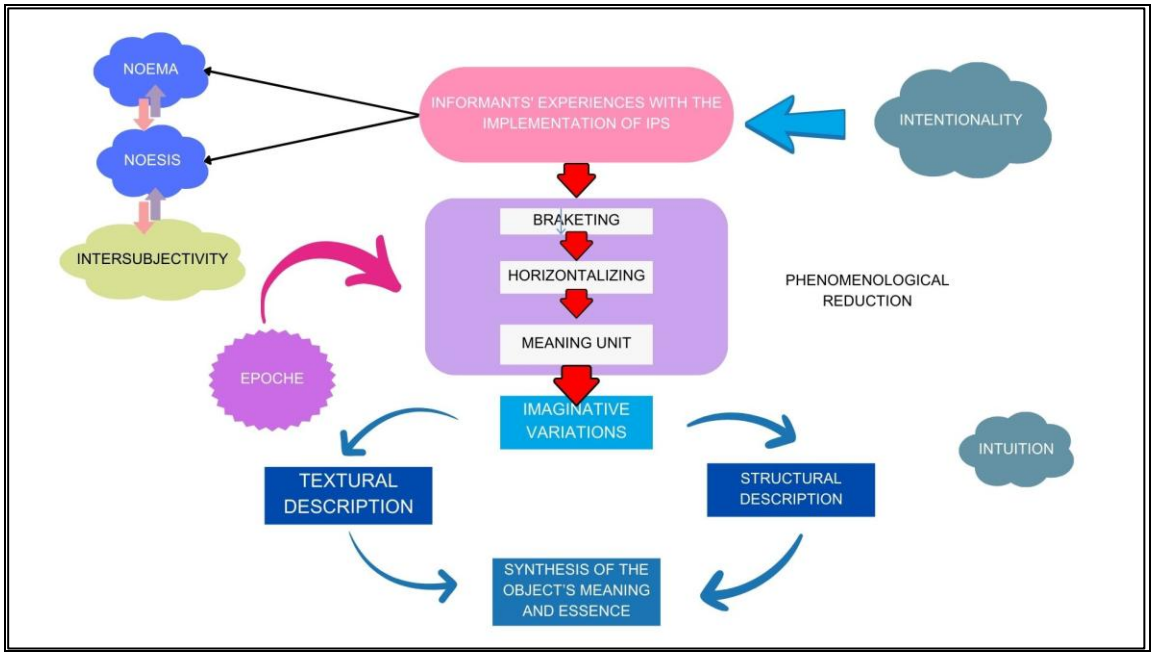

Figure 1. Phenomenological Research Model

Source: Processed by the researcher (2024)

This study adopts a transcendental phenomenological approach to investigate the lived experiences of IPS users within the PTPN Group, including procurement staff, finance personnel, and vendors. The core experiential aspects examined involve their interactions with the system, particularly related to perceived ease of use, technical barriers, cultural resistance, and potential improvements. Data were collected through in-depth interviews and analyzed through phenomenological reduction, focusing on the noema (the initial perception of the system) and the noesis (the cognitive process of meaning-making). The study emphasizes intersubjectivity, acknowledging that user experiences are shaped not only individually but also through shared social contexts within the organization.

To obtain a pure understanding of user experience, the researcher applied epoche, that is, the suspension of all preconceived judgments regarding the causes of resistance. The researcher did not immediately assume that the barriers stemmed from low digital literacy or an unfriendly system interface. Instead, this approach allowed the researcher to uncover that resistance could arise from fear of change or concerns about auditing digital documents. Bracketing was employed to filter out irrelevant data, maintaining focus on core elements such as user interactions with the e-Tendering or e-Payment features. All experiential data were treated equally during the horizontalizing process, whether originating from lower-level staff or external vendors, to ensure the objectivity of the analysis.

Through this process, the researcher began identifying meaning units such as technical obstacles (for example, vendors struggling to understand the system), cultural resistance

(senior staff reluctant to transition from manual systems), and perceptions of system effectiveness (users feeling that the e-Payment feature accelerated payment processing by up to 50%).

After identifying the key elements of these experiences, phenomenological reduction and imaginative variation were applied to uncover the deepest essence of user experiences and to explore alternative scenarios. For example, the effect of intensive training was simulated, revealing a 30% increase in system understanding. This process generated textural descriptions (what users experienced, such as difficulties understanding the e-Tendering feature) and structural descriptions (how the experience was shaped, such as by a lack of user guidance).

Finally, through the synthesis of meaning and essence, it was found that users' experiences with IPS were strongly influenced by individual readiness and organizational culture, rather than merely by the sophistication of the technology. These findings offer a strategic recommendation: the success of digital transformation initiatives like IPS requires a holistic approach that combines technical interventions with change management strategies grounded in user awareness.

RESULTS AND DISCUSSION

This study adopts a transcendental phenomenological approach to explore and deeply understand users' subjective experiences regarding the implementation of the Integrated Procurement System (IPS) within the PTPN Group. The Technology Acceptance Model (TAM) is employed as a conceptual framework to structure the findings based on user perceptions of perceived usefulness, perceived ease of use, perceived trust, and perceived security in the context of digital procurement systems.

The analytical process followed the epoche stage, in which the researcher suspended all personal assumptions and biases to grasp the phenomenon as it truly appeared in the users' consciousness. The researcher examined the noema, which refers to the users' experience of IPS in their work reality, and the noesis, which is the way users interpreted this experience based on the social and cultural context of the organization. Phenomenological reduction and imaginative variation were then used to formulate the essence of resistance and acceptance observed in the field.

Table 2. Factors Influencing User Resistance to IPS

Factor	Key Findings	Impact on Adoption
Understanding	Minimal socialization and training, users are unfamiliar, strong legacy mindset	Inhibits understanding and early-stage adoption
Resistance to Change	Accustomed to manual systems, fear of leaving comfort zone	Increases reluctance to adapt
Compliance and Audit Concerns	The belief that physical documents are safer, unclear digital regulations	Reduces trust in digital documentation
Leadership Gaps	Absence of change leadership, weak coordination, burden rests on one division.	Suboptimal system implementation
Conflict of Interest	Fear of losing control, strategic positions, or informal benefits	Emergence of subtle sabotage against the system

Source: Processed by the researcher (2024)

The findings reveal that resistance to IPS implementation in the PTPN Group is influenced by five interrelated main factors: lack of understanding, resistance to change, concerns over compliance and audits, leadership gaps, and conflicts of interest. These factors do not operate in isolation but reflect the social, psychological, and structural dynamics of an organization undergoing digital transformation. Resistance is thus not merely a matter of technical limitations but a construction of meaning in response to changes perceived to disrupt the balance of established work routines.

Lack of understanding emerged as a primary barrier to IPS adoption, particularly within the Accounting, Finance, and Procurement divisions. IPS users from the Accounting and Tax divisions stated that many users did not fully comprehend the system's workflow and even perceived the IPS as increasing their workload. This illustrates a low level of perceived ease of use within the TAM framework, as the system was seen as misaligned with long-standing manual work patterns.

Resistance to change was observed in several units across the PTPN Group, as conveyed by the Procurement Division. Legacy procedures had created a comfort zone perceived as more controllable and familiar by employees. The manual system instilled confidence due to its deep integration into daily routines. IPS users noted that, although the system could technically accommodate procurement needs, the adjustment process was not optimal due to personal unpreparedness for the changes. Some employees felt that change was unnecessary as long as the old system still worked. In such cases, the IPS was seen more as a burden than a solution.

This tendency to maintain old working habits also indicated a low level of perceived usefulness. Employees had not fully recognized the benefits of digital systems in enhancing performance or efficiency. The reluctance to change hindered the full use of IPS features, despite the system's integration into various modules such as e-Tendering, e-Contract, and e-Payment. Underutilization of the system suggests that technology adoption was not yet perceived as an urgent need among IPS users in PTPN units.

Concerns over audit processes and unclear regulations regarding digital documents also contributed to resistance, particularly within the Legal and Finance divisions. Users felt safer storing physical documents, which they believed held greater legal validity. They continued to maintain hard copy records due to fears of audits by agencies such as the Corruption Eradication Commission (KPK) or the State Audit Board (BPK). This was confirmed by informants from the Finance Division. Additionally, the Legal Division acknowledged delays in contract verification and expressed a preference for processing physical documents, rarely accessing the IPS platform. These findings highlight perceived trust and perceived security as critical dimensions of digital system acceptance, consistent with the extended TAM framework.

Leadership gaps also emerged as structural obstacles to IPS implementation. The absence of a clear change leader to coordinate across divisions led to uneven digitalization progress. An IPS user from the Procurement Division, who was involved in the early development of the system, stated that the IPS is a cross-functional and cross-divisional module, but related divisions failed to take ownership. One informant expressed, "We were the ones bearing the entire burden," highlighting the need for knowledge-oriented leadership to ensure collective engagement in systemic change.

Conflict of interest was the final, sensitive, but impactful factor. The transparency introduced by IPS was perceived as threatening the informal power systems embedded in manual procurement processes. An IPS user stated, "When everything is recorded and open, some

feel like they are losing control. The old system allowed for certain flexibilities." The traceability and restriction of discretion brought by digitalization were seen as undermining strategic positions and informal benefits previously enjoyed by some parties. This form of resistance often did not manifest explicitly but appeared in passive behaviors such as delaying data entry, ignoring system features, or continuing informal practices outside official workflows.

These five factors, both those explicitly addressed in TAM (perceived usefulness, perceived ease of use, perceived trust, and perceived security) and those not fully covered by the model (leadership and conflict of interest), demonstrate that technology acceptance is neither linear nor universal. In this context, transcendental phenomenology provides a lens for understanding how users subjectively interpret the presence of technology as noema, and how they assign meaning through noesis in their conscious awareness. Such experiences are not formed in isolation but are socially constructed through interactions in a complex workplace environment.

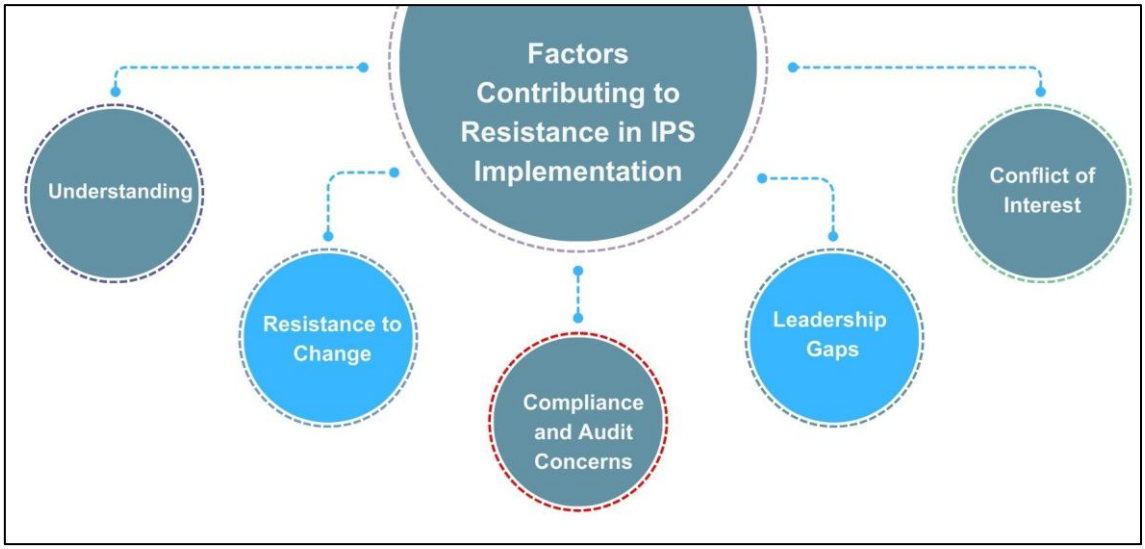

Figure 2. Factors Contributing to Resistance to IPS Implementation

Source: Processed by the researcher (2024)

After mapping the five primary causes of resistance, it can be understood that such resistance affects various strategic aspects of the organization. For employees, systems that have been used for years have fostered a sense of comfort and control. The digital system introduced through IPS, however, creates new anxieties. Users interpret the digital system as a form of surveillance, a potential loss of autonomy, and a reduction in work flexibility. In their consciousness, this change is perceived as a threat to the existing work structure. One of the most apparent consequences is a decline in operational effectiveness and efficiency. The IPS, which was designed to streamline processes, is instead perceived as an additional burden. Users accustomed to manual systems become confused when operating digital procedures, which are seen as rigid. Many choose to print digital documents as backups, causing duplicated processes and unnecessary administrative burdens. As stated by a user from the Accounting Division, "The administration process becomes longer and less efficient because it has to be done twice, manually and digitally."

Inter-divisional integration has also been disrupted. The Legal and Accounting Divisions, for example, believe that digital procedures do not offer the same sense of security as manual procedures. They feel that the flexibility to re-examine documents is lost. This has created the impression that the digital system restricts rather than facilitates work. This resistance has spread to inter-unit processes within the PTPN Group, resulting in delays in contract

review through the e-Contract module and payment verification. Modules such as e-Invoice and e-Payment have not been fully utilized due to a lack of understanding of digital workflows among internal users and vendors. As one unit user explained, "In the end, we decided to do the review outside the system. Only after it's complete do we enter it into the system."

Another impact of resistance is the imbalance in workload. The Procurement Division bears the brunt of IPS implementation, while other divisions have not shown the same level of commitment. Individuals like Mr. Ricky from the Procurement Division are responsible for three units simultaneously due to recent post-merger changes, experiencing existential burdens as bridges across divisions. In the structure of collective consciousness, this burden reflects a lack of shared awareness of the importance of change and the absence of intersubjectivity in digitalization.

The transparency and accountability promised by IPS have not yet been fully perceived as positive values. For some users, the digital system is seen as reducing discretionary space and limiting opportunities to maintain flexible work habits that were once familiar. This resistance reveals how technological transformation reaches into the deepest layers of meaning related to power relations and informal practices. Regulatory uncertainty further reinforces this dissonance. Users express concern that the digital system does not offer flexible revision options, creating anxiety over errors that cannot be corrected. This reinforces the belief that physical documents provide both legal and psychological protection. In their consciousness, the digital system is not yet seen as a tool of assistance, but rather as a source of new risks. A user from the Legal Division stated, "We often have to print the document first, then review it manually."

The impact of resistance also extends to the vendor ecosystem. Vendors that are already technically prepared experience transaction delays because the company's internal teams continue to process documents manually. This difference in perception creates issues in inter-organizational workflows and reduces vendor trust in the digital system. Mr. Fino noted, "Vendors are ready to use the digital system, but the biggest resistance comes from within the company, which is still used to physical documents."

Despite these challenges, IPS has generated positive impacts in units that have moved beyond the initial phase of resistance. Some users have experienced increased efficiency in verification and payment processes. The e-Payment module has significantly reduced processing time, and digital documentation has enhanced accountability. In these units, informal leaders or "champions" have emerged to help other users construct new meanings around IPS. Initial resistance, once seen as a clash, becomes a turning point in collective awareness. Within the framework of transcendental phenomenology, this process not only depicts a change in systems but also a transformation in meaning. Each act of resistance becomes a moment of collective reflection, reinforcing that change should not be seen merely as a replacement of tools, but as the formation of new ways of thinking and working. Therefore, organizational change strategies must reach into the deepest aspects of user consciousness, touching psychological dimensions and rebuilding confidence in facing new systems.

In an in-depth interview, Mr. Ricky, who has been involved since the early design and development stages of IPS within the PTPN Group, proposed the integration of artificial intelligence (AI) as a solution to the various obstacles faced in IPS implementation. According to him, conventional approaches to procurement process management are no longer sufficient in the era of digital transformation. AI is considered a key catalyst for

improving efficiency, reducing administrative burdens, and accelerating more accurate decision-making processes.

Several key areas highlighted in Mr. Ricky's proposal include the use of AI for demand consolidation, contract review automation, development of a chatbot-based knowledge repository, and the application of AI in market intelligence and price negotiation. In the context of demand consolidation, AI is expected to analyze procurement patterns based on historical data to more accurately predict procurement needs. This predictive capability can minimize sudden demand, which often hampers procurement efficiency. AI is also considered useful in assisting contract review, a process often seen as a bottleneck in the Legal Division. With high workloads and limited human resources, AI can speed up the identification of risks and administrative errors without compromising legal accuracy.

One particularly important aspect highlighted by Mr. Ricky is the development of an AI-based chatbot as a central knowledge repository. He explained that the high rate of staff rotation in the procurement division often creates gaps in knowledge transfer. In this context, the chatbot can serve as a practical solution that enables new employees to independently access information about IPS procedures and policies without being entirely dependent on senior colleagues. Supported by machine learning specifically trained for the procurement context, the chatbot can answer both general and specific questions related to system operations accurately and efficiently. In the interview, Mr. Ricky explained that personnel rotations in the Procurement Division typically occur every three years. These rotations often result in disrupted knowledge transfer, as replacements may not have sufficient understanding of procurement procedures and systems. To address this, Mr. Ricky believes the organization must provide a chatbot as a knowledge repository, designed to help staff access procurement information without relying solely on others. This chatbot is powered by AI, trained to answer procurement-related inquiries specific to the PTPN Group environment.

In addition to this, Mr. Ricky emphasized the potential of AI for market intelligence and price negotiations, especially in analyzing market trends and providing recommendations based on real-time data. However, he also noted challenges on the external side, namely the readiness of vendors, which remains low. This makes the transition to data-driven negotiations more difficult compared to other SOEs such as PLN, which already have a more digitally mature vendor ecosystem. "PLN may be able to use AI for market intelligence because their vendors are more modern. In our case, many vendors are still traditional, so AI-based market intelligence and negotiation are still a challenge," he added.

Beyond the technical aspects, Mr. Ricky emphasized that AI integration must be accompanied by the development of clear and robust regulations, as well as consistent leadership support. Without firm policies and enforcement, AI adoption will face resistance from users who feel disrupted or unprepared for change. AI implementation in IPS indeed involves complex challenges. One major challenge is the large initial investment required for technological infrastructure and system development. Additionally, there is still a lack of internal experts with a deep technical understanding of AI, making training and recruitment of new talent essential. Other challenges include the potential for algorithmic bias if the data used does not represent real-world conditions, which could lead to misleading recommendations. Another concern is the psychological anxiety among employees that AI may replace human roles in decision-making, triggering further resistance to innovation.

The transition to an AI-based system also demands a significant shift in organizational culture. Adapting to this new way of working cannot occur instantly, especially among staff

who are accustomed to legacy methods. Therefore, change management strategies must seriously consider individual and organizational readiness and ensure strong leadership guidance throughout the transformation process.

The implementation of IPS is not merely about adopting technology but requires a fundamental transformation in organizational culture and awareness. Digitalization efforts must go beyond software improvement or system redesign. Change strategies must engage the deepest aspects of IPS users, namely their awareness, perceptions, and professional values embedded in their roles. Within this framework, transcendental phenomenology becomes highly relevant. This approach helps us understand that users do not simply interact with digital systems as work tools but live and internalize them as part of their existence, experience, and professional responsibility within the organization.

A study by Spreitzenbarth et al. (2024) demonstrates that artificial intelligence and machine learning are key technologies in the modernization of global procurement systems, even though their adoption is still in early stages. In the context of e-Procurement, AI can support bid evaluation processes, procurement pattern analysis, and dynamic forecasting of goods requirements. Thus, optimizing intelligent technologies such as AI within IPS has the potential not only to accelerate procurement processes but also to enhance the strategic value of procurement functions in supporting data-driven decision-making.

Based on these insights, the proposed change management strategy is built upon four key pillars: the transformation of digital and transcendental awareness, optimization of artificial intelligence, the strengthening of transformational leadership roles, and the harmonization of digital regulations and governance frameworks.

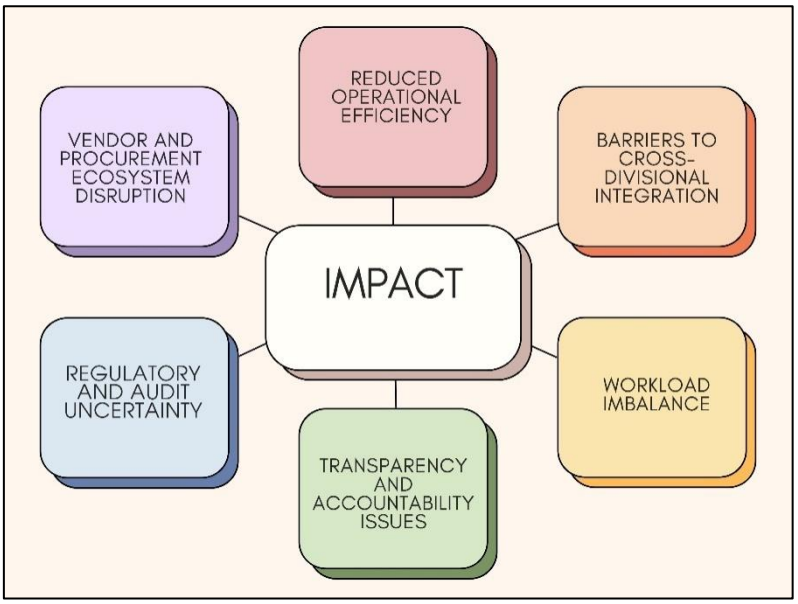

Figure 3. Impacts of User Resistance on IPS Implementation

Source: Processed by the researcher (2024)

After mapping the five main sources of resistance, it becomes clear that such resistance affects multiple strategic aspects of the organization. For employees, systems that have been used for years have become a source of comfort and control. The digital system introduced by IPS instead triggers new anxieties. Users perceive the digital system as a form of surveillance, a potential loss of autonomy, and a reduction in workplace flexibility. In their consciousness, this change is interpreted as a threat to the familiar structure of their daily work routines.

One of the most apparent impacts is the decline in operational effectiveness and efficiency. Although IPS was designed to simplify processes, it is instead perceived as an additional burden. Users accustomed to manual systems often experience confusion when navigating the rigid procedures of the digital platform. As a result, they choose to print digital documents as backups, causing the process to be duplicated and resulting in excessive administrative workload. As expressed by a user from the Accounting Division, "The administrative process has become longer and less efficient because it must be done twice, both manually and digitally."

Inter-divisional integration has also been disrupted. For example, the Legal and Accounting divisions consider that digital procedures do not offer the same sense of security as manual ones. They feel deprived of the flexibility to re-review documents. This creates the impression that the digital system imposes restrictions rather than facilitates workflow. Such resistance has extended to inter-unit processes across the PTPN Group, causing delays in contract reviews within the e-Contract module and payment verifications. The e-Invoice and e-Payment modules have not been fully utilized due to widespread misunderstanding of the digital workflow among internal users and vendors. As explained by one user from a business unit, "Eventually we decided to conduct the review outside the system first, then input it later."

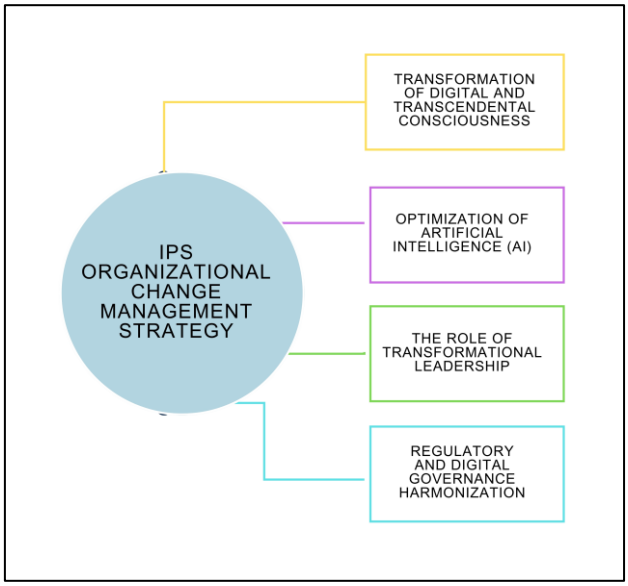

Figure 4. IPS Adaptation Strategy: Efficiency, AI, and Transcendental Awareness

Source: Processed by the researcher (2024)

The first pillar is the Transformation of Digital and Transcendental Awareness. This pillar is based on the assumption that resistance to IPS is not solely rooted in limited technical skills but also in the organization's failure to construct new meaning around digitalization. Therefore, the training provided should not only include technical materials but also offer a reflective space to encourage the internalization of new meaning. The Digital Awareness training is designed to allow users to directly experience the differences between manual systems and IPS through role-playing sessions comparing both approaches. Core values such as integrity, transparency, and honesty are reinforced as the spiritual foundation for using the system. A reward and recognition system is implemented to appreciate employees who are responsive and adaptive to change, while the Digital Champion program appoints internal mentors in each work unit as agents of transformation.

The second pillar is the Optimization of Artificial Intelligence (AI). In this pillar, AI serves as a driver of efficiency and data-driven decision-making. AI is applied in several aspects of

the IPS system, including predictive analysis of procurement demand to avoid sudden requests, automated compliance monitoring and fraud detection, performance evaluation of vendors based on historical data, and the development of the previously discussed chatbot. In addition, AI is used to conduct price trend analysis and strengthen negotiation strategies through market intelligence. However, the integration of AI also presents challenges such as limited quality of historical data, potential algorithmic bias, low readiness of human resources, and dependency on external data quality. Therefore, this approach must be accompanied by HR training, data quality supervision, and the establishment of clear and ethical AI usage policies.

The third pillar is the Role of Transformational Leadership. Leaders play a central role in bridging cultural and perceptual change within the organization. They are not only technical directors but also sense-givers who shape a shared narrative about the meaning of digital transformation. This strategy is implemented through the appointment of Chief Digital Officers (CDOs) or IPS Champions in each unit to lead implementation efforts. Additionally, digital leadership training is provided to equip leaders with managerial and emotional competencies to manage change. Coaching sessions are conducted intensively to help leaders transform traditional values into digital thinking and working models. Town hall forums are held regularly as open discussion platforms, while a cross-division digital helpdesk is prepared as a coordination, consultation, and problem-solving hub that is fast and responsive.

The fourth pillar is the Harmonization of Regulations and Digital Governance. This pillar focuses on establishing legal frameworks and policies that support IPS integration. The strategy includes active dialogue with external institutions such as the Corruption Eradication Commission (KPK), the Audit Board of Indonesia (BPK), and independent auditors to ensure consensus on the legality of digital documents, electronic signatures, and the validity of the system in audit processes. Furthermore, the organization must develop internal policies that standardize integration between IPS and other systems such as ERP, finance, and e-signature platforms so that all processes operate in an integrated and consistent manner. One essential part of this strategy is the strengthening of automated validation systems for invoices and vendor payments, thereby making administrative processes more efficient, transparent, and accountable. It should be noted that all these initiatives cannot succeed without the commitment of top leadership and the active involvement of users in the formulation and dissemination of policies.

These four pillars do not stand alone but complement and reinforce one another. The transformation of awareness provides the psychological foundation and values that drive technology adoption. The optimization of AI accelerates performance and strengthens organizational competitiveness. Transformational leadership serves as the guide for shifting organizational work culture, while regulatory harmonization ensures legal legitimacy and long-term system sustainability. Through a transcendental phenomenological approach, this strategy positions users not merely as system operators but as subjects who live and assign meaning to digitalization as part of their moral and professional responsibilities. Therefore, the success of IPS implementation should not be measured solely by its technical outcomes but also by the extent to which it fosters efficiency, accountability, and new meaning in the workplace for all members of the PTPN Group.

CONCLUSION

This study reveals that resistance to the implementation of the Integrated Procurement System (IPS) in the PTPN Group does not solely stem from technical constraints but also

reflects the complex dynamics of users' subjective consciousness. Through a transcendental phenomenological research methodology, it was found that resistance arises from the interaction between *noema*, which refers to users' experiences with the system, and *noesis*, which represents the meaning-making process constructed by users in response to changes in their work reality. The Technology Acceptance Model (TAM) was used to structure the understanding of user perceptions, particularly those related to perceived usefulness, perceived ease of use, perceived trust, and perceived security, which influence users' attitudes in accepting or rejecting IPS. This interaction is shaped within the organizational culture, user perceptions of system benefits and usability, and the limited internal support and leadership in guiding the change process.

The study successfully identified five key factors contributing to resistance: lack of understanding due to minimal training and socialization, discomfort with transitioning from manual to digital systems, concerns about audits and unclear regulations regarding digital documents, leadership gaps across divisions, and conflicts of interest related to the loss of discretionary space in procurement processes. These five factors have a direct impact on disrupted workflows, delays in procurement and payment processes, low inter-unit integration, duplication of manual and digital procedures, and declining vendor trust in a digital system that was intended to promote efficiency and transparency.

Nevertheless, the study also found that in work units that managed to overcome the initial resistance phase, IPS implementation had a positive impact. The system enhanced efficiency in verification and payment processes, improved accountability through digital traceability, and strengthened a more open and standardized work culture. These successes were achieved when the organization fostered a new level of awareness among users through reflective training, transformative leadership, and change strategies oriented toward direct user experience.

The findings indicate that digital transformation strategies in organizations cannot rely solely on technical improvements and regulatory compliance. Organizations must also consider the behavioral and psychological dynamics of users when designing a more holistic and sustainable approach. Such strategies must address the dimension of user consciousness and the professional values embedded in their daily work. Change strategies should be developed based on four main pillars. The first pillar is the transformation of digital and transcendental awareness through training that includes both technical content and reflective learning. The second pillar is the optimization of technologies such as artificial intelligence to improve efficiency through demand consolidation, contract review automation, and the development of chatbots for knowledge transfer. The third pillar is the strengthening of transformational leadership through the appointment of digital champions in each work unit, digital leadership training, and the provision of cross-functional coordination platforms. The fourth pillar is the harmonization of regulations and digital governance to ensure the legality of electronic documents, system integration across platforms, and certainty in audit mechanisms.

By implementing a strategy that focuses on meaning formation, technological development, leadership enhancement, and the formulation of adaptive regulations, digital transformation through IPS becomes not only a change in work systems but also a means of shaping a collaborative, accountable, and resilient organizational culture in the digital era. Therefore, the success of IPS implementation should not be measured merely by technical achievements, but by the extent to which the system fosters new awareness and enhances the quality of procurement governance within the PTPN Group.

The theoretical contribution of this study lies in the integration of a transcendental phenomenological approach with the Technology Acceptance Model (TAM) framework. This approach broadens the understanding that resistance to technology is not merely the result of technical perceptions, but rather a complex process of meaning-making shaped by users' values, emotions, and consciousness in relation to digital systems. Accordingly, this study encourages the expansion of the TAM framework to be more responsive to the psychological and cultural dimensions of technology adoption, particularly in the public sector.

This study has two main limitations. First, there is a limitation in the scope of participation, as it only involved the PTPN Group holding office, one representative from a regional office, and one affiliated vendor. As a result, the range of experiences explored does not fully represent the diversity of organizational structures, work cultures, and dynamics across all subsidiary entities within the PTPN Group in different regions.

Second, there is a limitation in the perspective of informants, which was dominated by active users who were willing to be interviewed through purposive sampling. This approach has not captured the voices of passive users, those who rejected the system, or other important stakeholders such as internal auditors or informal actors who are affected by the system but do not use it directly. Silent or internalized forms of resistance may be more complex than explicit resistance, and the absence of these perspectives presents a challenge in forming a comprehensive understanding of the dynamics of change within the context of digital procurement transformation.

Future research is recommended to explore the impact of resistance toward the implementation of digital procurement systems, such as IPS, on the quality of accounting information, delays in transaction recording, and the effectiveness of internal control within the company's expenditure cycle. In the short term, research may focus on how user resistance affects the accuracy and timeliness of invoice recording and payment reconciliation, especially in cases where manual and digital processes coexist.

In the long term, a longitudinal approach is needed to observe how gradual system acceptance influences compliance with accounting standards, the efficiency of financial reporting, and the integration of accounting systems with e-Procurement modules in real-time. Further studies may also broaden the scope by examining the role of internal audit functions and the influence of IPS implementation on transparency and accountability in financial reporting within state-owned enterprises (SOEs), thereby strengthening data-driven governance practices.

REFERENCES

Ahmad, H., Abul Hassan, S. H., & Ismail, S. (2023). Transparency level of the electronic procurement system in Malaysia. *Journal of Financial Reporting and Accounting*, 21(3), 592–606. https://doi.org/10.1108/JFRA-07-2021-0181

Al-Adwan, A. S., Li, N., Al-Adwan, A., Abbasi, G. A., Albelbisi, N. A., & Habibi, A. (2023). Extending the Technology Acceptance Model (TAM) to predict university students' intentions to use metaverse-based learning platforms. *Education and Information Technologies*, 28(11), 15381–15413. https://doi.org/10.1007/s10639-023-11816-3

Banmairuroy, W., Kritjaroen, T., & Homsombat, W. (2022). The effect of knowledge-oriented leadership and human resource development on sustainable competitive advantage through organizational innovation's component factors: Evidence from Thailand's new S-curve industries. *Asia Pacific Management Review*, 27(3), 200–209. https://doi.org/10.1016/j.apmrv.2021.09.001

Bombaerts, G., & Botin, L. (2025). From individual intentionality to sympoiesis in system phenomenology. *Philosophy and Technology*, 38(1). https://doi.org/10.1007/s13347-025-00859-8

Chan, A. P. C., & Owusu, E. K. (2022). Evolution of electronic procurement: Contemporary review of adoption and implementation strategies. *Buildings*, 12(2), 198. https://doi.org/10.3390/buildings12020198

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). *Thousand Oaks*, CA: SAGE Publications.

Gupta, S., Abbas, A. F., & Srivastava, R. (2022). Technology Acceptance Model (TAM): A bibliometric analysis from inception. *Telecommunications and the Digital Economy*, 10(3), 77–106. https://doi.org/10.18080/jtde.v10n3.598

Hochstetter Diez, J., Negrier-Seguel, M., Diéguez-Rebolledo, M., Vásquez-Morales, F., & Sancho-Chavarría, L. (2023). Governance, democratic and big data: A systematic mapping review. *Sustainability*, 15(16), 12630. https://doi.org/10.3390/su151612630

Husserl, E. (2006). *The basic problems of phenomenology* (I. Farin, Trans.). Dordrecht, Netherlands: Springer. https://doi.org/10.1007/1-4020-3789-9

Indonesia. Presiden. (2023). *Peraturan Presiden Republik Indonesia Nomor 17 Tahun 2023 tentang Percepatan Transformasi Digital di Bidang Pengadaan Barang/Jasa Pemerintah*. Lembaran Negara Republik Indonesia Tahun 2023 Nomor 31.

Kamayanti, A. (2021). *Metodologi Penelitian Kualitatif Akuntansi* (A. D. Mulawarman, Ed.; Edisi revisi). Malang, Indonesia: Penerbit Peneleh.

Khorana, S., Caram, S., & Rana, N. P. (2024). Measuring Public Procurement Transparency with an index: Exploring the Role of e-GP systems and institutions. *Government Information Quarterly*, 41(3). https://doi.org/10.1016/j.giq.2024.101952

Kuswarno, E. (2009). *Metodologi Penelitian Komunikasi: Fenomenologi, Konsepsi, Pedoman, dan Contoh Peneli*tian (M. A. Z., Ed.). Bandung, Indonesia: Widya Padjadjaran.

Laudon, K. C., & Laudon, J. P. (2022). *Management Information Systems: Managing the Digital Firm* (16th ed.). Harlow, England: Pearson Education Limited.

Ma, Q., & Liu, L. (2011). The Technology Acceptance Model. *In Advanced Topics in End User Computing* (Vol. 4, pp. 59–70). IGI Global. https://doi.org/10.4018/9781591404743

Maslani, M., Hartoyo, S., Syarief, R., & Harianto. (2024). Strengthening the competitiveness of state-owned enterprises. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1), 199. https://doi.org/10.1016/j.joitmc.2023.100199

Mavidis, A., & Folinas, D. (2022). From Public E-Procurement 3.0 to E-Procurement 4.0: A critical literature review. *Sustainability*, 14(18), 11252. https://doi.org/10.3390/su141811252

Moerer Urdahl, T., & Creswell, J. W. (2004). Using transcendental phenomenology to explore the "ripple effect" in a leadership mentoring program. *International Journal of Qualitative Methods*, 3(2), 1–28.

https://journals.library.ualberta.ca/ijqm/index.php/IJQM/article/view/4476/3662

Mohungoo, I., Brown, I., & Kabanda, S. (2020). A systematic review of implementation challenges in public e-procurement. *Lecture Notes in Computer Science*, 12067, 46–58. https://doi.org/10.1007/978-3-030-45002-1_5

Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: SAGE Publications. https://doi.org/10.4135/9781412995658

Musa, U., Jaafar, M., & Raslim, F. M. (2023). E-procurement adoption in Nigeria: Perceptions from the public sector employees. *Arab Gulf Journal of Scientific Research*. https://doi.org/10.1108/AGJSR-10-2022-0224

Nnaji, C., Okpala, I., Awolusi, I., & Gambatese, J. (2023). A systematic review of technology acceptance models and theories in construction research. *Journal of Information Technology in Construction*, 28, 39–69. https://doi.org/10.36680/j.itcon.2023.003

Rokhamah, R., Yana, P. R., Hernadi, N. A., Rachmawati, F., Irwanto, I., Dey, N. P. H., Purwanti, E. W., Noviana, R., Bawono, Y., Rianto, R., Masruha, M., Kosasih, K., Mola, M. S. R., Djumaty, B. L., & Putra, G. K. (2024). *Metode Penelitian Kualitatif: Teori, Metode dan Praktik*. Bandung, Indonesia: Widina Media Utama.

Smith, J. A. (2019). Participants and researchers searching for meaning: Conceptual developments for interpretative phenomenological analysis. *Qualitative Research in Psychology*, 16(2), 166–181. https://doi.org/10.1080/14780887.2018.1540648

Spreitzenbarth, J. M., Bode, C., & Stuckenschmidt, H. (2024). Artificial intelligence and machine learning in purchasing and supply management: A mixed-methods review of the state-of-the-art in literature and practice. *Journal of Purchasing and Supply Management*, 30(1), 100896. https://doi.org/10.1016/j.pursup.2024.100896

Yan, J., Yang, J., Yin, C., & Hu, W. (2024). Adaptive models of digital government governance in smart shared services. *Applied Mathematics and Nonlinear Sciences*, 9(1). https://doi.org/10.2478/amns.2023.2.01032