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Digital Strain At Work: Technostress, Work Engagement, And Burnout Among Public Sector Employees

Wildan Vanny Hashona [1], Elok Savitri Pusparini [2]
[1,2)] Universitas Indonesia
Email: [1] vannyhashona@gmail.com ,[2] eloksavitri.febui@gmail.com

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ABSTRACT

The increasing reliance on Information and Communication Technology (ICT) has transformed how public sector institutions operate, creating not only improvement but also new challenges for employees. This study investigates the impact of technostress on employee well-being using the Job Demand–Resource (JD-R) framework. Data was collected from 364 auditors at The Financial and Development Supervisory Board (BPKP) through a non-probability sampling and analyzed using SmartPLS. The findings reveal that technostress creators significantly increase burnout and reduce work engagement, while technostress inhibitors mitigate these effects by reducing burnout and enhancing work engagement. The study further confirms the mediating role of work engagement in the relationship between technostress and burnout, highlighting its importance as a psychological resource. Unlike previous research, which predominantly focused on healthcare and academic professionals, this study provides new insight into the effects within the public sector context, particularly among auditors in Indonesia. The findings offer practical implications for improving employee well-being through better digital support systems.

INTRODUCTION

In recent years, the integration of Information and Communication Technology (ICT) into public administration has become a critical instrument for improving efficiency, transparency, and citizen satisfaction. Governments worldwide have increasingly adopted digital platforms to streamline processes and enhance accountability (Wirtz et al., 2018). The growing emphasis on digital transformation has shifted public service standards toward more technologically driven models, where ICT plays a central role in shaping how government agencies operate and interact with stakeholders (Rodríguez et al., 2023).

The COVID-19 pandemic further accelerated this shift. As physical restrictions demanded alternative modes of service delivery, public sector institutions rapidly transitioned to digital

tools and platforms. This period marked a fundamental change in ICT dependency, with many organizations implementing remote collaboration systems, digital auditing platforms, and integrated databases under tight timelines. Post-pandemic, many of these digital infrastructures have remained permanent, solidifying a new norm in public service environments that are increasingly reliant on continuous digital engagement (LeRoy et al., 2024; Raza et al., 2023).

However, while digital tools promise increased efficiency, their overuse and mismanagement have also introduced a set of challenges to public sector employees. This phenomenon, referred to as technostress arises when individuals perceive technological demands as exceeding their adaptive capacities (Ragu-Nathan et al., 2008; Tarafdar et al., 2019)). As digital interfaces become more complex and communication becomes constant, employees face growing mental strain. While technostress research has gained traction, it remains concentrated in the healthcare and academic sectors (Bernburg et al., 2024; Hashim et al., 2024), with even less studies exploring its prevalence and impact among other knowledge workers in bureaucratic contexts.

Among government auditors, prior studies have primarily focused on themes such as turnover intention, digital resistance, or the adoption of emerging technologies. In contrast, research in other organizational settings has advanced into examining psychological outcomes like work engagement, burnout, and job satisfaction (Kotzé, 2022). Despite the high cognitive demands placed on auditors, there is a notable lack of studies assessing how digital stressors affect their workplace well-being.

To address the adverse impact of technostress, scholars have introduced the concept of technostress inhibitors, which represent organizational mechanisms that buffer the negative effects of digital pressure. These include three key dimensions: literacy facilitation, technical support provision, and involvement facilitation *(T. S. Ragu-Nathan et al., 2008)*. However, in public sector organizations, where budgets and technical capacity are often constrained, such support mechanisms may be inconsistently applied (Pflügner et al., 2021).

Despite their theoretical promise, empirical validation of technostress inhibitors in the public sector remains limited. There is insufficient evidence on whether the presence of these inhibitors translates into measurable improvements in employee well-being (Bernburg et al., 2024). Few studies have investigated the simultaneous influence of technostress creators and inhibitors on outcomes such as work engagement and burnout, particularly in government institutions with rigid structures and limited adaptive flexibility (Jena, 2015).

In Indonesia, the digitalization of public administration is formalized through the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik or SPBE). This national initiative mandates interoperable systems across ministries and oversight agencies (Hidayah & Almadani, 2022). Government internal auditors (APIP), particularly those within BPKP, are tasked with both implementing and auditing SPBE, placing them at the heart of digital governance (Isdarmadji, 2023). The rapid digital shift, combined with cybersecurity concerns and performance pressure, potentially heightens their exposure to technostress.

Addressing these gaps, this study aims to examine the psychological consequences of technostress and evaluate the buffering role of technostress inhibitors in the public sector. First, it investigates how technostress creators influence work engagement and burnout. Second, it explores whether technostress inhibitors serve as a form of organizational support in mitigating the adverse effects of technostress on employee well-being. By focusing on internal auditors in the Indonesian public sector, this research contributes to a more comprehensive understanding of digital transformation's human impact within government institutions.

LITERATURE REVIEW

The Conservation of Resources (COR) Theory

Introduced by Hobfoll (1989) COR theory emphasized that individuals sought to acquire, protect, and retain valuable resources such as time, energy, and social support to manage stress effectively. Resource loss was considered more psychologically harmful than resource gain, leading to negative outcomes such as burnout, decreased job satisfaction, and emotional exhaustion when resources were continuously depleted. In public sector environments, employees typically face bureaucratic rigidity, excessive workloads, and limited institutional support, which increased the likelihood of resource strain. Several studies confirmed that inadequate job resources and overwhelming demands negatively affected job satisfaction and well-being, whereas supportive environments, including feedback from supervisors and peers, acted as buffers that preserved employee mental health (Clarke & Higgs, 2020; Nguyen & Tuan, 2022). Implementing COR-based principles in public organizations often involved reinforcing job autonomy, investing in employee development, and fostering a positive workplace climate (Raza et al., 2023).

In organizational studies, the COR theory had frequently been applied using perceived stressors as proxies for resource threats, rather than measuring specific resource levels. This approach was consistent with previous research that employed cross-sectional designs to explain stress in the workplace. For instance, Chandra et al. (2019) applied COR by conceptualizing technostress creators as perceived threats to employee resources. Rather than focusing on tangible resources, Chandra relied on employees' perceptions of technostress intensity to represent resource erosion, a practice commonly used in work-related stress literature. This framing allowed scholars to interpret how employees psychologically processed digital demands in relation to their resource capacities, especially in highly structured and technology-intensive environments such as the public sector.

Job Demands-Resources Model (JD-R Model)

The JD-R model provided a flexible framework for explaining employee well-being across various occupational contexts. This model categorized job characteristics into two broad dimensions: job demands and job resources. Job demands referred to the physical, psychological, social, or organizational aspects of a job that required sustained effort and were associated with physiological and psychological costs, such as emotional fatigue, time pressure, and cognitive overload (Demerouti et al., 2001). In contrast, job resources comprised those physical, psychological, and social elements that helped employees achieve work goals, reduce the cost of job demands, and stimulate personal growth. These resources included autonomy, performance feedback, peer support, and learning opportunities, which collectively played a vital role in buffering the impact of excessive demands (Bakker et al., 2023).

In the context of digital work environments, the JD-R model had been used to explain how technostress affected psychological outcomes by disrupting the balance between job demands and individual resources. Sanjeeva Kumar (2024) emphasized that technostress could lead to anxiety, depression, burnout, and mental exhaustion when job demands consistently outweighed available coping resources. Psychological strain resulted not only from excessive workload or complex digital systems but also from continuous exposure to technological stimuli without adequate support. The JD-R model highlighted the mitigating role of job resources such as safe technological use, access to training, and supportive leadership in reducing the negative consequences of technostress. This perspective reinforced the model's relevance for understanding how organizations could protect employee well-being by strengthening internal support mechanisms in response to growing digital pressures.

Technostress

The concept of technostress was initially introduced to describe the inability of individuals to adapt to or cope with new technologies in a healthy manner. Ragu-Nathan et al. (2008) conceptualized technostress as a modern occupational hazard arising from individuals' struggles to deal with ICT-related demands in the workplace. They developed a multi-dimensional scale that categorized technostress creators into five dimensions: techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. Each dimension captured different facets of digital pressure, from the demand to work faster and longer to fear of technological obsolescence. This framework positioned technostress as a significant contributor to job dissatisfaction, reduced productivity, and psychological strain in technology-intensive work environments.

More recent developments have expanded the understanding of technostress beyond its original negative framing. While Ragu-Nathan's (2008) instrument remains widely used, Tarafdar et al. (2019) introduced the concept of the technostress trifecta, distinguishing between techno-distress, techno-eustress, and design-related stress. This nuanced perspective recognized that not all stress arising from technology use was detrimental; some technology-induced stress could be motivating and performance-enhancing. Further refinement by Tarafdar et al. (2024) emphasized the dynamic and context-dependent nature of technostress, noting that individual appraisal, digital literacy, and organizational environment significantly shaped how technostress manifested and influenced outcomes. These theoretical advancements highlighted the evolving nature of technostress, suggesting that both the harmful and beneficial aspects must be considered when analyzing employee responses to digital demands.

Technostress Creator

Technostress creators refer to the factors or conditions in the workplace that induce stress due to the use of information and communication technology (ICT). These stressors were first systematically conceptualized by Ragu-Nathan et al. (2008) as part of a multidimensional construct representing the negative aspects of ICT interaction. Technostress creators increase mental fatigue, reduce job satisfaction, and impair performance by overwhelming employees with digital demands. Each dimension reflects a specific mechanism through which technology imposes pressure on employees, as outlined below:

- Techno-overload: Occurs when technology forces employees to work faster and for longer hours, often beyond their standard workload or capacity.
- Techno-invasion: Reflects the blurring of boundaries between work and personal life due to constant connectivity, such as being reachable via work platforms outside of working hours.
- Techno-complexity: Arises when employees feel inadequate or overwhelmed by the complexity of new digital systems, requiring additional time and effort to learn and adapt.
- Techno-insecurity: Refers to the fear of losing one's job or being replaced by colleagues with better technological skills or by automation.
- Techno-uncertainty: Describes the stress caused by rapid and continuous technological changes that make employees feel unsettled and unable to maintain competence.

Technostress Inhibitor

Technostress inhibitors (TSI) are organizational mechanisms or resources that help reduce, buffer, or prevent the negative psychological effects associated with technostress, representing the supportive factors that enable employees to better cope with the demands of ICT in the workplace (Tarafdar et al., 2011). Within the JD-R framework, TSI function as job resources that mitigate the impact of digital strain on employee well-being, and enhance perceived control, confidence, and competence when interacting with technology. The three dimensions of technostress inhibitors are:

- Literacy facilitation: refers to the provision of adequate training, education, and learning opportunities to ensure employees have the necessary skills to use technology effectively.
- Technical support provision: involves timely and accessible assistance from IT personnel or helpdesks to address technological issues, reducing frustration and downtime.
- Involvement facilitation: the degree to which employees are included in the decision-making and implementation processes of new technologies, reducing resistance to change.

Work Engagement

Work engagement is defined as a positive, fulfilling, and work-related state of mind characterized by vigor, dedication, and absorption (W. B. Schaufeli et al., 2002). Rather than being a transient state, work engagement represents a more persistent motivational affective-cognitive condition that reflects how employees relate to their work. The most widely used instrument to measure this construct is the Utrecht Work Engagement Scale (UWES), which operationalizes work engagement through three dimensions. Vigor refers to high levels of energy and mental resilience while working; dedication captures a sense of significance, enthusiasm, and pride in one's job; and absorption describes being fully concentrated and happily engrossed in work activities. UWES has since been used extensively across various sectors and cultures, including public institutions. The instrument has proven to be psychometrically reliable and conceptually robust in measuring engagement levels in response to both supportive and challenging job characteristics (Bakker et al., 2014). High engagement is associated with better performance, reduced burnout, and improved psychological resilience. In digitally intensive workplaces, maintaining work engagement has become increasingly relevant as a counterbalance to job stressors such as technostress, a critical outcome in organizational behaviour research.

Burnout

Burnout is a state of physical, emotional, and cognitive exhaustion that results from prolonged exposure to work-related stressors. According to W. Schaufeli & De Witte (2023), burnout is defined as a work-related syndrome that manifests in four core dimensions: exhaustion, mental distance, cognitive impairment, and emotional impairment. This multidimensional view expands upon earlier burnout conceptualizations by recognizing that the syndrome does not only involve fatigue but also includes psychological detachment and functional decline in emotional and cognitive domains. burnout assessed as a gradual depletion of mental and emotional resources, leading to withdrawal from work tasks and diminished functioning. Exhaustion reflects extreme tiredness due to work demands; mental distance describes indifference or cynicism toward one's job; cognitive impairment involves difficulty concentrating and reduced mental sharpness; and emotional impairment indicates an inability to regulate emotional responses.

H1 Technostress creator has a positive effect on burnout.
H2 Technostress creator has a negative effect on work engagement.
H3 Technostress inhibitor has a negative effect on burnout.
H4 Technostress inhibitor has a positive effect on work engagement.
H5 Work engagement mediates the relationship between technostress creator and burnout.
H6 Work engagement mediates the relationship between technostress inhibitor and burnout.

METHODS

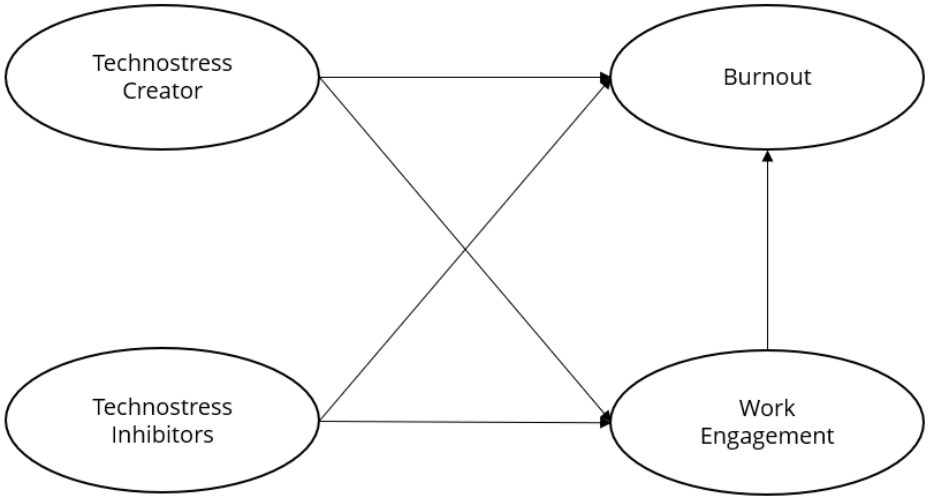
This research employs a quantitative method to evaluate the work condition variables being examined. A descriptive research methodology was chosen, since the research issue had

previously been clearly established. Subsequent information was collected to offer guidance in resolving the problem and to validate the suitability of the selected solution. The research methodology used is cross-sectional, which entails collecting standardized data from a group of people at a single point in time using a structured questionnaire (Wang & Cheng, 2020). The focus of this study is on auditors employed in Indonesia's Government Internal Oversight Agency (BPKP).

non-probability sampling method was employed, With the primary data consist of quantitative information and was gathered using a self-completed structured survey, which was filled out directly by the intended respondents. The digital questionnaire was created using Google Forms and employed a Likert scale that spanned from 1 to 7. The research comprised a total of 57 metrics. The data collected were then analyzed via Structural Equation Modeling (SEM) using the SmartPLS software.

To ensure the content validity of the questionnaire, reading tests were done prior to the main test. Based on their feedback, minor adjustments were made to enhance the clarity of the items. The questionnaire comprised a total of 23 items to measure TS creators. Additionally, 13 items were used to measuring TS inhibitors (literacy facilitation (LI), technical support (TS), and involvement facilitation (IF), and 21 items to measure employee workplace well-being, Work Engagement (WE) and Burnout (BO). Detailed indicators are provided in appendix 1.

Figure 1 Proposed Research Model



RESULTS

Demographic Analysis

This study employed a web-based survey methodology to collect data from auditors employed at BPKP. Over the course of the data collection period, a total of 388 respondents successfully completed the online questionnaire. After applying the inclusion criteria, 364 responses were retained for further analysis. The survey aimed to gather data on respondents' demographic characteristics, technological practices, and perceptions related to technostress in the context of public sector auditors.

Demographic analysis reveals that majority of respondents were male (62.9%), aligning with the actual gender distribution of functional auditor positions at BPKP as reported in their latest statistics report. In terms of age, more than half of the participants (51.9%) were between 30 and 39 years old, followed by 26.1% who were under 30, 14.6% who were over 50, and 7.4% in the 40–49 age range. Regarding educational background, most respondents held a bachelor's or

applied bachelor's degree (56.6%), while others had completed a diploma (22.5%) or a master's degree (20.6%). A small number of respondents (0.3%) reported holding a doctoral degree.

With respect to work experience, the largest proportion of respondents (37.6%) had between 10 and 15 years of service, indicating a workforce with a mid-level tenure profile. Others had been employed for more than 15 years (13.7%) or between 2 and 10 years (33.8%). In terms of position within the audit hierarchy, the majority held roles equivalent to Manager (40.8%) and Senior Manager / Director (17.1%), followed by Junior Auditor (22.5%), Associate Manager (15.6%), Associate Auditor (5.5%), and Senior Associate / Supervisor (3.8%). Table 1 summarizes the demographic statistics of the respondents involved in this study.

Table 1 Respondent Demographic Statistics

Category		Percentage	Frequency (n=364)
Gender	Male	62,9%	229
	Female	37,1%	135
Age	Under 30 years	26,1%	95
	30 – 39 years	51,9%	189
	40 – 49 years	7,4%	27
	50 years and above	14,6%	53
Education	Diploma (D-III)	22,5%	82
	Bachelor (S-1/D-IV)	56,6%	206
	Master (S-2)	20,6%	75
	Doctorate (S-3)	0,3%	1
Years of Work	>2 – 5 years	18,7%	68
	>5 – 10 years	15,1%	55
	>10 – 15 years	37,6%	137
	>15 – 20 years	9,6%	35
	>20 – 25 years	4,1%	15
Position/Level	Junior	22,5%	78
	Associate	5,5%	19
	Senior Associate	3,8%	13
	Associate	15,6%	54
	Manager	40,8%	141
	Senior Manager	17,1%	59

Source: Data Processed, 2025

Validity and Reliability Test Results

The assessment of convergent validity in this study was conducted by evaluating several performance metrics, including individual item loadings, composite reliability (CR), Cronbach's alpha, and average variance extracted (AVE) (Hair et al., 2022). In line with the recommendations of Hair et al (2022), a measurement model is considered to exhibit acceptable convergent validity when each item loading is ≥ 0,70, CR ≥ 0,70, and AVE ≥ 0,50. As shown in the measurement results, most items demonstrated satisfactory loadings ranging from 0,621 to 0,963, and all constructs achieved CR and AVE values above the recommended thresholds, with the exception of the techno-insecurity and techno-uncertainty dimensions.

Item TS16 under the techno-insecurity construct showed a substantially low loading of 0,129, far below the 0,40 tolerance level. Consequently, it was removed from the model as its inclusion would have weakened the overall construct reliability and validity. Additionally, all four items under techno-uncertainty (TS20–TS23) exhibited negative loadings ranging from –0,650 to –0,852, indicating problematic measurement issues such as inverse directionality and construct inconsistency. These findings suggest that respondents may have interpreted the uncertainty-

related items in a manner inconsistent with other technostress creator dimensions. The average variance extracted (AVE) for this dimension was only 0,521, and the directionality of its relationship with the higher-order construct contradicted theoretical expectations.

Similar results were observed by Chandra et al. (2019), that reported techno-uncertainty was significant in other direction of the overall technostress construct and was excluded from their structural model as it undermined measurement validity and interpretability. In response to both empirical findings and theoretical justification, the techno-uncertainty dimension was removed from the final measurement model. This adjustment preserved model integrity and ensured that the revised measurement model met all requirements for convergent validity.

Discriminant validity

Discriminant validity ensures that each construct in the model captures unique variance and is empirically distinct from others. As Hair et al (2022) emphasize, a well-defined measurement model exhibits discriminant validity when its indicators load strongly on their intended latent variables and weakly on all others. To rigorously establish discriminant validity in this study, we employed three key criteria: cross-loadings, the Fornell-Larcker criterion, and the Heterotrait-Monotrait ratio (HTMT).

The cross-loading analysis confirms that each indicator loaded more strongly on its associated construct than on any other construct. The Fornell-Larcker criterion provides a straightforward method for assessing discriminant validity. According to this criterion, discriminant validity is achieved when the square root of a construct's Average Variance Extracted (AVE) is greater than its highest correlation with any other construct in the model (Hair et al., 2022). In our analysis, we observed that the square root of the AVE for each latent variable consistently surpassed the correlation coefficients with all other constructs, For instance, the square root of AVE for BO (0,770) was greater than its highest correlation (0,669 with WE), Similarly, TSI (0,738), TS (0,563), and WE (0,834) all shows their AVE square roots were higher than their inter-construct correlations, thereby confirming discriminant validity according to this criterion.

Complementing the Fornell-Larcker criterion, the HTMT offers an even more robust assessment of discriminant validity, The HTMT value represents the average of the correlations of indicators across different constructs, relative to the average of the correlations of indicators within the same construct, Hair et al (2022) suggest that HTMT values should ideally be below 0,90, with a more conservative threshold of 0,85 often recommended when constructs are conceptually similar.

Our analysis of the HTMT values revealed that all construct pairs met the stringent threshold of 0,85, thereby confirming discriminant validity, for example the HTMT between TS and TSI was 0,186, and between WE and TS was 0,187, Even the highest HTMT value, between WE and BO, was 0,669, well below the critical threshold. These results collectively affirm that our measurement model successfully establishes discriminant validity, ensuring that each construct uniquely captures its intended theoretical concept.

Table 2 Convergent Validity

Dimension	Code	Item Loading	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
Exhaustion	BO1	0,896	0,866	0,918	0,789
	BO2	0,907			
	BO3	0,861			
Mental Distance	BO4	0,881	0,821	0,893	0,736
	BO5	0,873			
	BO6	0,819			

Cognitive Impairment	BO7	0,934	0,888	0,931	0,819
	BO8	0,941			
	BO9	0,836			
Emotional Impairment	BO10	0,919	0,864	0,917	0,787
	BO11	0,917			
	BO12	0,822			
Techno-overload	TS01	0,787	0,866	0,903	0,652
	TS02	0,868			
	TS03	0,877			
	TS04	0,735			
	TS05	0,759			
Techno-invasion	TS06	0,825	0,849	0,899	0,691
	TS07	0,727			
	TS08	0,879			
	TS09	0,884			
Techno-complexity	TS10	0,657	0,816	0,873	0,582
	TS11	0,820			
	TS12	0,823			
	TS13	0,636			
	TS14	0,851			
Techno-insecurity	TS15	0,825	0,643	0,775	0,446
	TS16	0,129			
	TS17	0,769			
	TS18	0,741			
	TS19	0,627			
Techno-uncertainty	TS20	-0,678	0,749	0,811	0,521
	TS21	-0,690			
	TS22	-0,650			
	TS23	-0,852			
Literacy facilitation	TSI01	0,788	0,877	0,910	0,670
	TSI02	0,828			
	TSI03	0,789			
	TSI04	0,870			
	TSI05	0,816			
Technical support provision	TSI06	0,914	0,927	0,948	0,821
	TSI07	0,872			
	TSI08	0,926			

Dimension	Code	Item Loading	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)

	TSI09	0,911			
Involvement facilitation	TSI10	0,621	0,799	0,872	0,634
	TSI11	0,791			
	TSI12	0,881			
	TSI13	0,865			
Vigor	VI01	0,963	0,923	0,952	0,868
	VI02	0,954			
	VI03	0,876			
Dedication	DE02	0,906	0,877	0,924	0,802
	DE03	0,915			
	DE04	0,865			
Absorption	AB03	0,887	0,767	0,866	0,685
	AB04	0,853			
	AB05	0,735			

Source: Data Processed, 2025

Structural Model Assessment

To examine potential multicollinearity among predictor constructs, Variance Inflation Factor (VIF) values were assessed. According to Hair et al. (2022), VIF values above 5 may indicate moderate collinearity concerns, while values exceeding 10 reflect serious multicollinearity that should be addressed. In the initial model, the indicator VI02 under WE construct recorded VIF value of 9,665, nearing the critical threshold. Consequently, VI02 was removed to reduce multicollinearity and improve model stability.

After this adjustment, the highest remaining VIF values were found in indicators BO7 (5,311) and BO8 (5,098), slightly above the conservative benchmark of 5.0, but still acceptable under the 10 thresholds. The lowest VIF values observed were TSI10 (1,192), indicating that most indicators fell well within safe multicollinearity limits. Thus, no additional items were removed, and the final model was deemed free of significant multicollinearity concerns.

The coefficient of determination (R^2) then used to assess the predictive power of the structural model, specifically to evaluate how well the independent variables explain the variance in the dependent variables. As shown in the results, the R^2 value for BO is 0,528, indicating that 52,8% of the variance in burnout can be explained by its predictor constructs within the model. Meanwhile, the R^2 value for WE are 0,343, suggesting that 34,3% of the variance in work engagement is explained by its predictors.

According to Hair et al. (2022), R^2 values of 0,75, 0,50, and 0,25 can be interpreted as substantial, moderate, and weak, respectively. Based on these criteria, the model demonstrates moderate predictive power for burnout and weak-to-moderate predictive power for work engagement. These findings suggest that the model captures a meaningful portion of variance in the key endogenous constructs.

The models predictive relevance then assessed using the Q^2predict value derived from the PLS Predict procedure. a Q^2 value greater than 0 indicates that the model has predictive relevance for the corresponding endogenous construct.

In this study, the Q^2predict value for Burnout (BO) was 0,332, confirming that the model is capable of adequately predicting the variance in burnout. This is further supported by acceptable prediction error values, with a Root Mean Square Error (RMSE) of 0,823 and a Mean

Absolute Error (MAE) of 0,642, which are considered appropriate within the context of a 7-point Likert scale. Together, these results indicate that the model demonstrates moderate predictive power for the burnout construct.

Hypothesis testing

The results of the hypothesis testing on the direct and indirect effects of technostress creator and technostress inhibitor constructs on burnout and work engagement are presented in Table 4. The analysis shows that H1, H2, H4, H5, and H6 are statistically supported. Specifically, technostress creator (TS) has a significant positive effect on burnout (β = 0,393; p < 0,001) and a negative effect on work engagement (β = –0,128; p = 0,004), thus supporting H1 and H2. Technostress inhibitor (TSI), on the other hand, significantly increases work engagement (β = 0,571; p < 0,001), supporting H4.

However, H3, which proposed that TSI reduces burnout, was not supported due to its non-significant p-value (p = 0,130).

Table 3 Path coefficients, T statistics and hypothesis results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (Stdev)	T Statistics (|O/Stdev|)	P Values	Hypothesis Result
TS -> BO	0,386	0,386	0,039	9,792	0,000	H1 supported
TS -> WE	-0,135	-0,136	0,047	2,894	0,002	H2 supported
TSI -> BO	-0,032	-0,032	0,045	0,707	0,240	H3 not supported
TSI -> WE	0,574	0,573	0,035	16,354	0,000	H4 supported
WE -> BO	-0,553	-0,552	0,044	12,618	0,000	H5 supported
TS -> WE -> BO	0,075	0,075	0,026	2,909	0,002	H6 supported
TSI -> WE -> BO	-0,317	-0,316	0,033	9,719	0,000	H7 supported

Source: Data Processed, 2025

Furthermore, the analysis confirms the mediating role of work engagement in the relationship between both technostress constructs and burnout. Hypotheses H5 (TS → WE → BO) and H6 (TSI → WE → BO) are both supported with statistically significant indirect effects (p < 0,005), indicating that work engagement functions as an important psychological mechanism explaining how technostress impacts burnout outcomes in auditors.

DISCUSSION

This study aims to examine how technostress creators and technostress inhibitors influence burnout among auditors, with work engagement as a mediating mechanism. By integrating constructs from the technostress and JD-R frameworks, this research contributes to a deeper understanding of how digital work demands and organizational support shape psychological strain in highly structured bureaucratic environments.

The findings indicate that technostress creator significantly increases burnout among auditors. This supports prior studies (e.g., Tarafdar et al., 2019), which found that exposure to digital demands such as overload, invasion, and complexity can lead to emotional exhaustion. In BPKP's context, frequent exposure to administrative digital systems and rapidly evolving technical mandates may intensify this strain, reinforcing burnout tendencies.

The results also confirm that technostress creator has a negative effect on work engagement. This is consistent with Picazo-Vela et al. (2020), who observed that digital interruptions and system complexity reduce attentional and emotional investment in work. Given the high standardization and compliance burdens faced by auditors, this finding emphasizes the disengaging effect of persistent technological demands.

In contrast, the direct effect of technostress inhibitor on burnout was not statistically significant. This contradicts Hashim, (2024) that emphasized the stress-buffering role of inhibitors. A possible explanation is that support mechanisms at BPKP may be perceived as passive or insufficiently integrated into auditors' workflows, thereby weakening their impact in directly reducing burnout.

Meanwhile, technostress inhibitor has a significant positive effect on work engagement, reinforcing earlier findings by Mahapatra & Ford (2024) that digital literacy, training, and participatory involvement promote engagement. In the context of public auditing, structured support may strengthen employees' psychological availability and sense of autonomy, which are key drivers of engagement.

The analysis also confirms that work engagement significantly mediates the relationship between technostress creator and burnout. This supports previous research by Manu rung & Christian (2024), which highlighted engagement as a critical pathway through which stress translates into exhaustion. Thus, technostress undermines engagement, which in turn, contributes to higher levels of burnout.

Finally, H6 is also supported, where work engagement mediates the relationship between technostress inhibitor and burnout. This finding aligns with Bail (2023), who emphasized that fostering engagement could serve as an indirect buffer against burnout—even if inhibitors do not directly reduce emotional fatigue. The implication is that inhibitors are most effective not by directly reducing stress, but by reinforcing positive psychological states.

Overall, the findings underscore the importance of cultivating work engagement as a strategic buffer against the adverse effects of technostress. From a managerial perspective, organizations should not only focus on minimizing digital demands but also proactively invest in systems and practices that promote active employee involvement, literacy, and emotional connectivity to their work.

CONCLUSION

This study centers on the impact of technostress on employee workplace well-being in the context of auditors in Indonesia. The results confirm that technostress creator significantly increases burnout and reduces work engagement, while technostress inhibitors significantly enhance work engagement but does not directly reduce burnout. Furthermore, work engagement is shown to mediate the effect of both technostress creator and technostress inhibitor on burnout, highlighting its critical psychological function in buffering negative outcomes.

Moreover, this study reveals that among the three dimensions of technostress inhibitor, by literacy facilitation emerges as the most dominant factor in strengthening engagement and mitigating burnout indirectly, followed by technical support provision and involvement facilitation.

Theoretically, this study contributes to the growing body of knowledge on technostress by empirically validating a structural model that integrates technostress creators, technostress inhibitors, and work engagement as pathways to burnout. This empirical evidence demonstrates that the negative impact of technostress is not only dependent on the intensity of digital demands but also on the extent to which supportive mechanisms are perceived and internalized by employees.

Practically, the study offers actionable insights for public sector management in formulating strategies to enhance employee well-being in technology-intensive environments. First, agencies should prioritize implementing digital literacy facilitation programs, as this dimension demonstrated the strongest positive effect on work engagement in this study. Initiatives may include structured e-learning modules, digital upskilling sessions, and access to curated learning resources to help employees navigate evolving technological systems. Second, technical support provision should be reinforced by ensuring timely, accessible IT assistance and proactive system guidance, especially during the adoption of new platforms or software. Lastly, employee involvement facilitation, while still beneficial, showed a relatively lower statistical impact. Nevertheless, creating inclusive forums for feedback and participatory IT decision-making remains important to foster shared ownership of technology use in the workplace.

LIMITATION

This study has several limitations. First, it employs a cross-sectional design, which limits the ability to draw causal conclusions regarding the relationships between technostress, work engagement, and burnout. Second, although focused on civil servants in Indonesia that works as auditors, it is important to note that auditors operate in mobile, field-based roles, which differ considerably from the more desk-bound functions typical of other civil servants. As such, the generalizability of findings may not extend uniformly across all public sector occupations.

Secondly, the uncertainty dimension of technostress creator, which produced inconsistent and statistically insignificant results. This may reflect conceptual misalignment or differences in how uncertainty is experienced by professionals with specialized autonomy such as auditors.

Future studies should consider expanding the sample size and testing the model in other white-collar segments of the public sector to improve generalizability. Researchers are also encouraged to integrate other indicators of workplace well-being, such as job satisfaction or organizational commitment, as well as perceived stress based on the transactional model of stress.

The application of emerging constructs such as techno-eustress (Tarafdar, 2019; 2024) may also offer deeper insight into how certain technostress elements can be perceived positively. Finally, employing a longitudinal research design would enable a more robust investigation of the causal effects of technostress, work engagement, and burnout over time.

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