

Understanding Technostress Toward Job Performance in Digital Working Era

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Abstract. The dynamic development of the digital world has changed various aspects of human life, one of which is the use of digitizing work. Since 2020 employees have been forced to use technology and remote work platforms as a result of the COVID-19 pandemic. Employees must be able to keep up with technological changes quickly. The demands of this change will cause employees to experience increased technostress. The increase in technostress will ultimately reduce employee performance. This research was conducted on 63 tax employees who in the implementation of their work are very dependent on technology. The results showed that techno-overload and techno-uncertainty had a significant negative impact on performance, while techno-invasion, techno-complexity, and techno insecurity based on testing had no effect on employee performance.

Keywords: Techno-overload; techno-invasion; techno-complexity; techno-insecurity; techno-uncertainty

1. Introduction

The 21st century or often referred to as the information age, provides space for Information and Communication Technology (ICT) to change the face of the world because almost all activities ranging from personal to government activities cannot be separated from the use, empowerment and implementation of ICT. The development of ICT is not only used by the general public because today almost all government and private agencies have modernized their services and data management using a computerized system. The use of ICT in government agencies or what is often called e-government is intended to support better public services, improve relations between government and business and industry, and increase community participation in increasing the efficiency of government management.

One government agency that is aggressively modernizing is the Directorate General of Taxes. For the Indonesian government, taxes are one of the main sources of state revenue. Directorate General of Taxes as the agency that manages taxation continues to make efforts to improve the tax governance system in order to provide better service in accordance with its vision, namely "To become the best state tax collection government institution in the

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Southeast Asia". DGT has modernized the delivery of tax returns (SPT), which is the center of DGT activities through electronic media, such as electronic tax reporting through e-filing, registration of Taxpayer Identification Numbers (NPWP) through e-registration, and online payments with e-billing which can be accessed through www.pajak.go.id.

The use of computerized technology in processing the tax system is a way to provide convenience for taxpayers because an organization needs to improve services so that it can develop better. The online system makes it easy for taxpayers to report their SPT at a lower cost, faster processing, more accurate because taxpayers record their own SPT, is more transparent and can minimize all fraud, leakage and irregularities in tax receipts.

Advances in mobile information technology (IT) and devices have resulted in significant changes in business organizational practices in recent years (Sewell & Taskin, 2015). Today employees can complete their tasks anywhere and anytime without space and time constraints by using various digital media tools and enterprise collaboration systems. Such IT-enabled remote work is referred to as "telework" (Suh & Lee, 2017; Wang et al., 2022). According to data from the International Labor Organization, in early 2020, the COVID-19 outbreak affected people's work practices worldwide. Governments from around the world are implementing different social distancing policies (e.g., self-isolation periods, rehabilitation) to prevent coronavirus disease. It is estimated that around 81% of the workforce worldwide has been affected by some form of mitigating measures due to the pandemic (Camacho & Barrios, 2022).

Stress is defined as mental and physical situations that affect a person's health, work and quality of life, with a focus on work-related stress that diminishes job satisfaction and the quality of life of workers. Technostress is defined as a disorder of modern adaptation resulting from a lack of safe handling of new technologies. This is driven by technology tasks like planning meetings, business plans, and concerns about deadlines for work (Gabr et al., 2021). Technostress refers to "a modern adaptation disease caused by an inability to cope with new computer technology in a healthy way (Hudiburg, 1989). Arnetz & Wiholm, (1997) define technostress as a state of arousal" found in workers who are dependent on computers for the most part. their work.

According to Ragu-Nathan et al., (2008); Tarafdar et al., (2007) there are five factors that cause technostress: techno-overload where employees feel that their workload is becoming more and more, techno-invasion where employees always feel connected to their work wherever and whenever, techno-complexity in where employees feel that their abilities are not in accordance with technological developments, techno-insecurity where employees feel afraid if their work will be replaced by increasingly sophisticated technology or other people who are more technologically competent and techno-uncertainty where employees feel uncomfortable because the technology used is always changing.

Self-efficacy theory views self-efficacy as an assessment of a person's ability to successfully produce the required performance as the main determinant of human behavior (Hwang et al., 2016). Self-efficacy indirectly influences behavioral intentions and predicts the abilities of people who are influenced by their motivation (Yang et al., 2021). More confidence in the ability to use technology has a strong positive impact on attitudes and usage habits.

2. Literature Review

2.1 Technostress

Tarafdar et al. (2007) and Ragu-Nathan et al. (2008) outlines five factors that cause technostress. First, techno-overload. Is a situation where technology users are forced to be able to work more and faster. This is a consequence of increasing technological support

which expects employees to be able to work more productively (Francis, 2013). In addition, the increase in work is also due to the increasing number of user requests, causing information overload (Al-Qallaf, 2006) this makes employees have to work extra because they have to input data into the computer system in a limited time so that employees must work faster (Ragu-Nathan, 2008).

The second factor is the techno-invasion. In today's digital era, the need for technology is essential. Advances in technology force individuals to always be connected with organizations so that they must always follow the development of the organization and their work (Ayyagari, 2011). Weil and Rosen (1997) revealed that the presence of electronic mail increases the pressure on employees because they must always be ready to respond to any incoming letter or information whenever and wherever. A situation like this is better known as a techno-invasion where the presence of technology makes its users feel connected to their work wherever and whenever.

The third factor is techno-complexity. This factor is a situation where technology users feel that the technology they have to use is very complicated, while their skills are still far behind, so it takes time to be able to use new technology. According to Moses and Okebaram (2010) the incompatibility of capabilities and technological developments is influenced by internal individual factors, namely performance anxiety and lack of experience using computers. So Tiemo and Ofua (2010) argue that to minimize anxiety due to lack of individual ability, organizations need to provide training before implementing a new system or application so that employees feel more confident and also need to provide assistance by a special team of IT so as to reduce employee anxiety when it occurs. problems with the equipment used.

The fourth factor is techno-insecurity. This is often experienced by workers who are afraid that their work will be replaced by new technology or other people who are more knowledgeable about technology. According to Akhtari's research (2013) employees who are over 45 years of age experience higher levels of stress because they have difficulty adapting to new technology and it is also difficult for them to learn new technology. Meanwhile, according to research by Mahalakshmi et al. (2014), young people are more familiar with the latest technological developments, so they are less likely to experience technostress.

The last factor is techno-uncertainty. Is a situation where technology users feel uncomfortable because the technology used is always changing. Enis (2005) suggests that work pressure can cause stress, among others due to changes in technology and applications that are too fast and work standardization is not clear. According to Ragu-Nathan (2008), another factor that causes employee discomfort is the frequent repair or replacement of software and hardware that hinders work.

2.2 Job Performance

One of the keys to organizational success in the current era of globalization is the extent to which people in an organization can synergistically contribute positively both in planning and in implementing tasks and responsibilities (Sulung, 2011). According to Rusdianti (2013) good performance is of course a hope for all companies and institutions, because with good employee performance it is expected to improve overall company performance.

Etymologically, performance comes from the word job performance or actual performance which means work performance or actual achievement achieved by someone (Mangkunegara, 2006). Improving employee performance needs to be carried out by an organization in order to achieve the target of excellent service (Pariaribo, 2014). Information technology will be able to play a role in improving performance both at the individual and organizational levels if it can be utilized properly (Thompson et al, 1991).

According to Goodhue and Thompson (1995) higher performance involves a combination of increasing efficiency, increasing effectiveness, increasing productivity and increasing

quality where better performance will be achieved if individuals can meet individual needs in carrying out and completing tasks. Therefore Hendriani and Artati (2014) argue that an evaluation of employee performance needs to be done to determine the abilities of organizational members so that further development strategies will be known that must be carried out to achieve organizational goals.

Information about employee performance and the factors that influence employee performance is very important to know. Laloma (2013) states that performance measurement should be translated as an evaluation activity to assess or see the success and failure of the implementation of assigned tasks and functions. Performance can be known and measured through various kinds of assessments. However, according to Moeheriono (2010: 60) before conducting an assessment, it is necessary to have known and mutually agreed upon criteria or standards to achieve the benchmarks of success set by the organization.

Performance appraisal is a process for evaluating how well an employee performs his duties when compared to the standards set by the organization or company (Slamet, 2007: 236) and then communicates this information to employees (Mathis & Jackson, 2006). There are five parties that can evaluate employee performance, namely: direct supervisor, co-workers, self-evaluation, direct subordinates, and an all-in-one approach: 360 degrees (Robbins, 2001).

2.3 Hypothesis

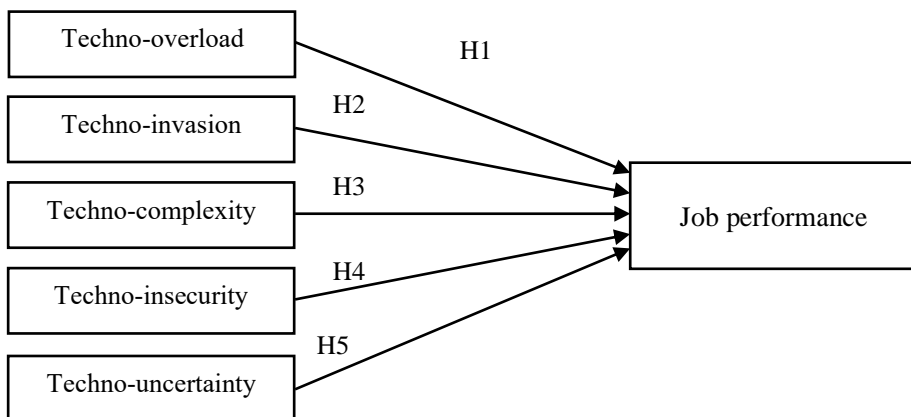


Figure 1. Conceptual Model

3. Research Method

The population in this study were tax officials at Salatiga Tax Office. The number of employees at KPP Salatiga is 63 employees. The sampling method used is the saturated sampling method. The research design chosen in this study was a quantitative cross-sectional design in which data were collected at the same time (or within a short time frame). The questionnaire in this study describes the influence of the use of information technology on employees. In this study, data were analyzed using SPSS 26.

4 Results and Discussion

4.1 Result

Table 1. Sample Description

	Frequency	Percentage
Gender		
Male	33	52
Female	30	48
Age		
20-29 year	18	29
30-39 year	22	35
40-49 year	17	27
> 50 years	6	9
Education		
SMA	6	9
Diploma	20	32
S1	29	46
S2	8	13
S3	0	0
Work experience		
1-5 year	13	21
> 5 year	50	79

Based on the table above, it can be seen that KPP Salatiga has almost the same proportion of male and female employees. Meanwhile, when viewed from an age perspective, there were only six respondents (9.5%) who were over 50 years old, this shows that the majority of tax officials are still in the productive age category. At the education level, the largest proportion is employees with an undergraduate education level of 46% and only six employees (9.5%) with a high school education level, so it can be interpreted that tax officials have a good education because the DJP wants to continue to improve the quality of human resources so that many facilities are provided for employees who wish to continue their education to a higher level. Furthermore, the majority of respondents have worked for more than five years, this indicates that the employees have sufficient experience in their field.

Table 2. Validity Test Result

Variable	Item	Pearson Correlation	Result
Techno-overload	P1	0,783	Valid
	P2	0,764	Valid
	P3	0,733	Valid
	P4	0,847	Valid
Techno-invasion	P5	0,840	Valid
	P6	0,770	Valid
	P7	0,902	Valid
Techno-complexity	P8	0,879	Valid
	P9	0,805	Valid
	P10	0,845	Valid
Techno-insecurity	P11	0,807	Valid
	P12	0,785	Valid
	P13	0,761	Valid
Techno-uncertainty	P14	0,778	Valid
	P15	0,877	Valid
	P16	0,875	Valid

Job performance	P17	0,821	Valid
	P18	0,812	Valid
	P19	0,783	Valid
	P20	0,878	Valid

Table 2. Reliability Test Result

Variable	Item	Alpha	Result
Techno-overload	3	0,626	Reliable
Techno-invasion	3	0,748	Reliable
Techno-complexity	3	0,828	Reliable
Techno-insecurity	3	0,727	Reliable
Techno-uncertainty	4	0,842	Reliable
Job performance	4	0,837	Reliable

Reliability calculations in this study were carried out using the Cronbach's Alpha analysis technique. Based on the calculations, all item reliability results are obtained above 0.60 so that this research instrument can be said to be reliable.

Table 3. Hypotesis Test Result

Variable	t	Sig.
Techno-overload	-2.709	0.009
Techno-invasion	0.451	0.654
Techno-complexity	-0.600	0.551
Techno-insecurity	-0.233	0.816
Techno-uncertainty	-1.734	0.088

The first hypothesis (H1) result was carried out to determine the effect of the techno-overload factor on performance. From the test results obtained tcount -2.709 and a significance value of 0.009 < 0.10 which means the first hypothesis (H1) is rejected. In this hypothesis, the coefficient value is negative which indicates that the higher the techno-overload factor, the lower the employee's performance.

The second hypothesis (H2) result was carried out to determine the effect of the techno-invasion factor on technostress. From the test results, the tcount is 0.451 and the significance value is 0.654 > 0.10, which means that the second hypothesis (H2) is rejected. In this hypothesis the coefficient value is positive which indicates that the higher the techno-invasion factor, the employee's performance will increase.

Testing the third hypothesis (H3) was carried out to determine the effect of the techno-complexity factor on technostress. From the test results obtained tcount -0.600 and a significance value of 0.551 > 0.10 which means the third hypothesis (H3) is rejected. In this hypothesis, the coefficient value is negative which indicates that the higher the techno-complexity factor, the lower the employee's performance.

Testing the fourth hypothesis (H4) was conducted to determine the effect of techno-insecurity factors on technostress. From the test results, the tcount is -0.233 and a significance value of 0.816 > 0.10, which means that the fourth hypothesis (H4) is rejected. In this hypothesis, the coefficient value is negative which indicates that the higher the techno-insecurity factor, the lower the employee's performance.

Testing the fifth hypothesis (H5) was carried out to determine the effect of the techno-uncertainty factor on technostress. From the test results obtained tcount -1.734 and a significance value of 0.088 < 0.10, which means the fifth hypothesis (H5) is accepted. In this hypothesis, the coefficient value is negative which indicates that the higher the techno-uncertainty factor, the lower the employee's performance.

4.2 Discussion

Based on the results of the analysis and discussion in the previous chapter, the techno-overload and techno-uncertainty factors have a significant negative impact on the performance of these two factors not only influenced by technological factors as a whole but also other factors that affect performance such as increased workload which causes employees to using computer equipment for a long time. The techno-uncertainty factor is influenced by the lack of evaluation before implementing a new system or application, causing frequent application updates that confuse employees and can hinder work.

Based on testing, the techno-invasion, techno-complexity, and techno insecurity factors have no effect on employee performance. The organizational support variable as a moderating variable only has a significant effect on the techno-invasion and techno-complexity factors on employee performance so that organizations need to provide training or debriefing and provide adequate equipment. From this explanation it can be concluded that currently information technology and computerized technology are not things that hinder and cause negative impacts, but the presence of technology can help lighten and speed up work when compared manually.

Previous self-efficacy research has shown that self-efficacy is a key antecedent for technology use behavior. The main functional objective of information technology is to support the work functions of its users by providing the information needed. Self-efficacy can influence their choice of activity, effort and persistence, their mindset, and their emotional reactions (Bandura, 1986). Several other studies also show that efficacy beliefs facilitate individual motivation to integrate and use complex information effectively. Bandura, (1991) states that individuals with high self-efficacy perform significantly better in management simulations that require complex information integration. Individuals with high self-efficacy are motivated to learn more from feedback, respond more adaptively to the decision environment, and translate their learning into improved performance.

Technology self-efficacy, defined as an individual's ability to use technology-equipped devices, becomes important when individuals accept new technologies (Kim et al., 2022). Technology self-efficacy is also positively related to job satisfaction, because motivation or affective attitudes are antecedents of beliefs about how a worker perceives his work (Shiau et al., 2020). Technology self-efficacy relates to judgments about how well an individual can use IT needed to deal with prospective situations that contain many ambiguous, unpredictable, and often stressful dimensions from the use of management information. Technology self-efficacy is self-efficacy for mastering computer technology in general rather than self-efficacy for specific applications, because it can be applied to information technology adoption behavior in general.

4 Conclusion

The results of the study show that there is a significant influence on the techno-overload factor on the performance of tax officials so that with increasing techno-overload factors, employee performance will decrease. The results of this study support the research of Okebaram and Moses (2013) state that the main factor causing technostress is due to information overload which will have an impact on decreasing employee performance. In addition, the occurrence of work overload also causes employees to feel the physical impact as expressed by Harper (2000); Dyer and Moris (1990) in the form of visual disturbances, tension in several limbs such as the neck, shoulders, waist and wrists caused by sitting too long in front of the computer and the effects of using the mouse.

The test results on the factors that cause technostress: techno-invasion, techno-complexity, and techno-insecurity show insignificant results which means that these factors

have no effect on the performance of tax officials. In this study, respondents felt comfortable with their jobs and employees needed technology because technology made it easy to do work, accelerated receiving various official information, and made it easier to access various information anywhere and anytime through the facilities provided by the organization. The results of this study contradict some of (Tarafdar, Tu, Ragu-Nathan, et al., 2007); (Ragu-Nathan et al., 2008); (Ayyagari et al., 2011); Akhtari et al. (2013); Norulkamar et al. (2014) which shows that technological invasions cause technology users to continue to be connected to work through communication media, complex technology, technology that often changes and also technology that continues to develop so that one day it will threaten human work.

The techno-uncertainty factor has a negative effect on performance because too frequent software and hardware changes make employees have to constantly update their knowledge and skills about new technologies. The organizational support factor does not have a significant effect as a moderating variable on all the factors that cause technostress. However, with the high average value of the organizational support variable, it can be said that organizational support is needed by employees to improve performance. Efforts to improve human resources that can be carried out by organizations are by increasing capabilities in the form of providing training, equipment, productive work teams and providing adequate facilities for employees. So that the more appropriate the technology used will further reduce the technostress that occurs as described by (Ayyagari et al., 2011).

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