

Original article

DOI: 10.17323/1999-5431-2024-0-5-90-110

## DOES CYBERLOAFING AFFECT WORK PERFORMANCE OF THE CIVIL SERVANTS?

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**Abstract.** The COVID-19 pandemic has reshaped the operations of public sectors worldwide, compelling governments to impose nationwide lockdowns. This crisis prompted an immediate shift to Work from Home (WFH) policies for civil servants. Under this policy, work activities predominantly rely on information and communications technology (ICT). While ICTs have a positive impact on the efficiency of public service delivery, the use of technology and the internet has also introduced various adverse effects, such as cyberloafing and destructive behaviors. These negative influences on performance can ultimately impact service delivery. Against this background, this study aims to analyze the influence of cyberloafing on the work performance of civil servants during the WFH policy implementation. The study, for which 272 civil servants from diverse backgrounds were interviewed, reveals that development behavior significantly influences task performance and adaptive performance, while deviant behavior has a notable impact on all dimensions of work performance. These findings contribute to theoretical understanding, offer practical implications, and suggest directions for future research.

**Keywords:** cyberloafing, cyberloafing behaviour, Malaysia, work from home (WFH), work performance.

**For citation:** Ab Razak, R., Rahman, N.H.A. and Kamil, N.L.M. (2024) 'Does cyberloafing affect work performance of the civil servants?', *Public Administration Issues*, 5, pp. 90–110. (In English). DOI: 10.17323/1999-5431-2024-0-5-90-110.

**JEL Classification:** H8, H83.

## Introduction

The concept of work from home (WFH) has evolved into a prominent working arrangement, wherein employees fulfill their essential responsibilities remotely. This paradigm shift, also known as telework or remote work, involves leveraging information and communications technology (ICT) to connect, communicate, and submit results of the work. While introduced in the late 1970s, WFH was initially deemed impractical for densely populated cities (Vyas and Butakhieo, 2020) and considered unfeasible for public sectors with mass daily interactions (Williamson et al., 2020a). However, the landscape changed abruptly in 2020, driven by the global outbreak of the coronavirus (COVID-19) pandemic.

The pandemic wreaked havoc on the global economic, social, and health sectors, prompting numerous countries to enforce nationwide lockdowns (Rahman, 2021). As a result, governments swiftly implemented WFH policies for large segments of the public sector workforce. The shift was not without challenges, but it ushered in a unique opportunity for organizations to explore hybrid workplace elements, especially with the adoption of Flexible Working Arrangements (FWA) (Cook et al., 2021).

Recent studies indicate a positive trend in productivity and efficiency among employees and managers working from home. The Organization for Economic Co-operation and Development (OECD) reported a consistent increase in productivity, with employees maintaining or even improving their performance, especially on individual tasks. This trend extends to the public sector, as evidenced by a survey conducted by the NSW Innovation & Productivity Council (2020), where 82 percent of public servants felt more productive working from home.

Moreover, the phenomenon of cyberloafing, the diversion to non-work-related activities during working hours, has garnered attention in the context of WFH. Zhong et al. (2022) found that informational cyberloafing is positively correlated with employees' innovation performance, suggesting that certain forms of cyberloafing can have unexpected positive outcomes. Additionally, the study by Reizer et al. (2022) highlighted the role of cyberloafing in helping government employees manage stress and depletion while working from home during the pandemic.

The adoption of WFH and the exploration of FWA have been more pronounced in the private sector, while the public sector has been somewhat hesitant to fully embrace these flexible working arrangements. Notably, countries like Malaysia have introduced the Flexible Working Arrangements Policy, effective from January 1, 2023. However, there is limited research on the impact of this policy, especially in the context of Asian countries influenced by conventional work systems.

Despite the positive aspects of WFH and FWA, the phenomenon of cyberloafing poses a challenge. Cyberloafing involves accessing personal matters and non-work-related activities during working hours, such as browsing e-sports, entertainment, online shopping, and other activities. This behavior can lead to decreased involvement in work-related matters, lower efficiency, and diminished overall productivity. Managing technology and internet exploitation in the work-

place becomes crucial, particularly during the pandemic when monitoring employees' activities becomes more challenging due to WFH setups.

The Malaysian government has been at the forefront of the global use of technology in the public sector, consistently improving its electronic government system. Efforts in this direction are embedded in past and existing policies, such as the National Key Areas of the Economic Transformation Program. However, the increasing reliance on ICT has presented various adverse impacts, with cyberloafing becoming a notable concern.

Studies have highlighted the prevalence of cyberloafing among Malaysian civil servants, with significant percentages engaging in non-work-related internet activities during office hours. Koay et al. (2017) reported that a considerable percentage of employees were consistently involved in cyberloafing, which affected their work performance. A substantial portion of Malaysian civil servants are engaged in cyberloafing, that is why the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) issued the guidelines to regulate access to social networking websites during office hours.

These issues gain further significance when considering their impact on the efficiency of public sector service delivery. Reports published by the World Bank have indicated a decline in Malaysia's civil service efficiency since 2014. The country ranks below the average among OECD countries in responsibility, detachment, integrity, and accessibility metrics.

In light of these challenges, this study aims to analyze the influence of cyberloafing on work performance of civil servants in the public sector during the pandemic. This focus is particularly relevant as the majority of public servants, excluding frontline workers, were instructed to work from home. The presumption is that public servants may face work-life balance conflicts during this period, warranting a comprehensive investigation into the dynamics of WFH, FWA, and cyberloafing in the public sector.

## Literature review

Cyberloafing, defined as engaging in non-work-related internet activities during working hours, often associated with goldbricking, is a challenge in organizational settings. It is viewed as a misuse of the internet by employees, potentially undermining organizational performance, particularly in the public sector (Bernard et al., 2019). This behavior can lead to poor performance and substandard service delivery, eliciting client resentment and mistrust, hindering the sector's development. Despite being considered a significant challenge, cyberloafing is often disregarded and undisclosed in public sector settings (Koay et al., 2017).

Previous studies suggest that cyberloafing can contribute to mental recovery, stimulate fresh ideas, and alleviate workplace pressure and burnout, enhancing employees' concentration and work-life balance (Anandarajan and Simmers, 2005). It is claimed that moderate internet use for non-work-related activities positively impacts job satisfaction and performance (Mohammad et al., 2019). Advocates argue that allowing reasonable time for online recreation, provided ethical values are upheld, benefits both employees and organizations (Sao et al., 2020).

However, the advent of smartphones and high-speed internet connections poses a threat to work-life balance and may lead to higher costs for the public sector to meet demands for better performance. Despite the evidence of the negative consequences of cyberloafing on work performance, there is limited research, especially in the context of the public sector from various countries, including Malaysia.

### ***Work Performance***

Performance serves as the driving force for a new approach to public sector administration, necessitating a shift from entrepreneurial government (Osborne and Gaebler, 1993). Work performance, indicating an individual's achievement in tasks, embodies the culmination of effort, a supportive work environment, and an engaged profile. Recognized as a significant predictor of organizational performance, work performance is a multifaceted concept and encompasses various dimensions such as output timing, quantity and quality, presence and participation, efficiency and effectiveness. It is evaluated through competencies, that reflect a range of behaviors crucial for organizational success.

The model for evaluating employee performance has evolved over the decades. Campbell's (1990) influential model identifies eight major dimensions, including job-specific and non-job-specific competencies, communication skills, effort, discipline, teamwork, supervision, and administration. Besides that, Motowidlo, Borman and Schmidt (1997) proposed the Theory of Individual Differences, which integrates task performance and contextual performance dimensions. In line with this, Pradhan and Jena (2017) further delineated three factors: task performance, adaptive performance, and contextual performance.

Task performance involves employees executing assigned job responsibilities to achieve organizational goals, encompassing formal tasks outlined in the job descriptions, such as quantity and quality of work, job skills, and knowledge. Adaptive performance reflects an individual's ability to adapt to changes in work roles or environments, demonstrating flexibility and support for organizational changes. Contextual performance extends beyond formal obligations and encompasses voluntary behaviors that contribute to the social, organizational, and psychological environment. This includes activities such as mentoring colleagues, strengthening social networks, and making additional efforts that, though not within the formal job scope, implicitly enhance organizational performance. High-performing individuals, exhibiting competency across these dimensions, are pivotal to organizational success, emphasizing the importance of assessing and fostering employees' multifaceted work performance.

### ***Cyberloafing Activities***

Cyberloafing, often associated with social media, involves employees engaging in non-work-related activities on popular social networking sites such as Twitter, YouTube, and Facebook during working hours – a practice known as Non-Work-Related Computing (NWRP). This discretionary act utilizes employers' Internet access for purposes unrelated to their job. Li and Chung (2006) categorize cyberloafing into three functions: (1) social function, connecting

with friends (social loafing); (2) informational function, acquiring knowledge (informational loafing); and (3) leisure function, seeking entertainment (leisure loafing).

### ***Cyberloafing Behaviour***

Previous research has highlighted the significant consequences of cyberloafing and identified contributing to such behavior factors. Individuals who feel helpless in their work environment are more likely to engage in such digital forms of cyberloafing, as playing games. Conversely, job satisfaction and perceptions of organizational fairness act as inhibiting factors for cyberloafing. The behavior can be categorized into minor and serious forms. Minor cyberloafing involves sending personal emails and browsing non-work-related websites, while serious cyberloafing entails accessing unsecured websites potentially harmful to the organization's system. Cyberloafing has been associated with positive outcomes, such as reduced burnout and lower levels of anxiety and stress (Anandarajan and Simmers, 2005).

The advent of easily accessible technology has raised concerns among employers regarding personal internet use during work hours, as such activities can shift employees from productive to non-productive tasks. However, limited internet use, of up to one hour, has been associated with a three-fold increase in employee productivity. Cyberloafing is viewed as a recreational activity, offering additional benefits for informal learning and serves as a means to alleviate workplace pressure and achieve work-life balance. It can be seen as a form of psychological withdrawal, providing a cognitive refuge from the work environment (Lim and Teo, 2005).

Van Doorn (2011) introduced recovery, development, and deviant behavior as constructs for understanding cyberloafing. Recovery behavior focuses on health considerations and assesses the employees' well-being in this study. Developmental behavior explores cyberloafing as a potential source of learning, while deviant behavior refers to actions contrary to instructions or efforts to evade assigned tasks.

## **Hypotheses development**

Previous research discussed nuanced perspectives on the relationship between cyberloafing and work performance. While Koay et al.'s (2017) study found no significant correlation between cyberloafing and work performance, Andreasen et al. (2014) reported that cyberloafing could influence performance. Negative impacts have been identified, with cyberloafing being associated with decreased task performance due to prolonged internet use and a lack of commitment to productivity. Incomplete tasks resulting from cyberloafing have been associated with decreased overall work productivity, with an estimated 30 to 40 percent reduction in employee productivity in the USA, equating to approximately \$750 million annually (Henle et al., 2009).

Contrary to the negative findings, several studies emphasize the positive impact of cyberloafing on work performance. Cyberloafing is posited as a means

for employees to take a temporary break from work during working hours, ultimately stimulating productivity upon their return. Sao et al. (2020) suggest that increasing internet usage to one hour can triple employee productivity and encourage the generation of new ideas and innovations (Koay and Soh, 2017). Coker (2011) even identifies a positive correlation between cyberloafing, or workplace internet leisure browsing (WILB), and productivity, with higher productivity grades observed in individuals who engage in WILB compared to those who do not. Additionally, cyberloafing is associated with reduced burn-out, anxiety, and stress (Anandarajan and Simmers, 2005). Based on these findings, this study proposes the hypothesis:

H1: Cyberloafing (social, informational, and leisure) has a significant influence on work performance (task, contextual, and adaptive performance).

To gain a comprehensive understanding of the impact of cyberloafing on work performance, the study considers the role of cyberloafing behavior, examining three perspectives: recovery, development, and deviant behavior. Cyberloafing is viewed as a form of psychological withdrawal, providing a cognitive refuge from the work environment (Lim and Teo, 2005). Employees who feel helpless in their work environment may engage in cyberloafing, such as playing online games, as a part of the recovery process. Cyberloafing is recognized to assist in mental recovery, stimulate fresh ideas (Ivarsson and Larsson, 2011), reduce depression, burnout, and anxiety (Anandarajan and Simmers, 2005), which help to restore employee concentration, and facilitate work-life balance.

Furthermore, the study acknowledges that cyberloafing behavior of public servants poses a significant challenge in the public sector (Sze et al., 2019). Investigation into the deviant factors influencing public servants' engagement in cyberloafing reveals relational attributes such as gender, age, organizational justice, and conscientiousness (Ahmad and Jamaluddin, 2009). Male employees are more engaged in cyberloafing, which is caused by a lack of self-control. Social networking platforms such as Facebook and Twitter contribute to deviant behavior online and have a negative impact on employee work performance (Santos et al., 2020). Based on these considerations, the study proposes the hypothesis:

H2: Cyberloafing behavior (recovery, development, and deviant behavior) has a significant influence on work performance (task, contextual, and adaptive performance).

## Research methods

This study aims to explore the relationships between key constructs, focusing on civil servants in Putrajaya, the federal administrative center of the Government of Malaysia. The Malaysian public sector heavily relies on information and communication technology (ICT) in its daily tasks and administration, which was introduced in the 1980s with the adoption of an electronic government system. The modernization efforts were aimed to enhance the efficiency

and effectiveness of public service delivery. Despite the positive advancements, the public sector in Malaysia faces challenges, notably cyberloafing. To delve deeper into this phenomenon, a quantitative approach was employed and a survey was conducted.

The survey was aimed at civil servants who were divided into categorized under two service groups: Support Group (grades 1 to 40) and Management and Professional groups (grades 41 to 54). A total of 272 respondents participated in the survey, whose detailed characteristics are provided in Table 1. The sample size was determined using various techniques, including Krejcie and Morgan's (1970) sample size for confined populations, the rules of thumb for minimum sample size by VanVoorhis and Morgan (2007), and the equation proposed by Green (1991). Approval from relevant agencies was secured before data collection, and an online survey linked to Likert-based questions was distributed among civil servants in public organizations. Prior to the actual data collection, a pretest of the survey questions was conducted to identify and address any potential problems that could arise with understanding the questions and answers, ensuring the validity and reliability of the data. The choice of an online survey aligns with Western practices and has been utilized since the 1980s, leveraging email as a data collection method. The decision to employ online surveys was reinforced by the ongoing pandemic situation, which led to the enforcement of work-from-home policies and limited in-person interactions within government agencies.

Table 1

### Demographic characteristics of the sample

Variable	N	%
<b>Gender</b>		
Male	58	21.3
Female	214	78.7
<b>Age (years)</b>		
25–30	56	20.6
31–35	61	22.4
36–40	82	30.1
Above 40	73	26.8
<b>Race</b>		
Malay	258	94.9
Chinese	2	0.7
Indian	4	1.5
Others	8	2.9

Variable	N	%
<b>Marital status</b>		
Single	61	22.4
Married	198	72.8
Divorced	11	4.0
Widowed	2	0.7
<b>Working experience</b>		
Less than 2 years	24	8.8
2–5 years	40	14.7
More than 5 years	208	76.5
<b>Level of education</b>		
Malaysian Certificate of Education	96	35.3
Diploma	92	33.8
Bachelor's degree	59	21.7
Master's degree	21	7.7
PhD	4	1.5
<b>Current position (Grade)</b>		
Grade 1–40	231	84.9
Grade 41–54	41	15.1

**Sources:** Created by the author.

### **Measures**

The development of the research instrument is crucial in the survey process, which aims to provide unbiased and well-structured questions. The questionnaire comprises four sections: (1) Respondent background; (2) Work Performance (adapted from Pradhan and Jena (2016)); (3) Cyberloafing Activities (adapted from Van Doorn (2011)); and (4) Cyberloafing Behaviour (adapted from Weatherbee (2010)). Using a 5-point Likert scale, respondents rated the items from (1) never to (5) usually. The instrument is designed for clear understanding, internal coherence, and meaningful data analysis.

## **Results**

This study assesses the measurement model by examining the outer model (measurement model) to test factor loadings, validity, and reliability. Additionally, the inner model (structural model) is evaluated using bootstrapping (5000 resampling) to determine the significance of the path coefficients for hy-



potheses testing. Confirmatory factor analysis is employed to evaluate factor loadings, validity, and composite reliability of the constructs. The PLS algorithm is used for the measurement model, and bootstrapping is applied to the structural model to analyze the impact of cyberloafing activities and behavior on work performance.

### **Measurement Model**

This model produced satisfactory results, with all factor loadings surpassing the benchmark value of 0.70. No significant cross-loadings were observed between the items (Figure 1). The model exhibits good data fit, as indicated by a root mean square residual value of 0.056 and a normed fit index of 0.789. Convergent validity tests (Table 2) confirm the validity of the constructs. Values above 0.50 indicate sufficient average variance extracted by the items. Discriminant validity is also within an acceptable range, exceeding 0.70 as recommended by Hair et al. (2014). Furthermore, Cronbach's  $\alpha$  and composite reliability (Table 2) are in the acceptable range, exceeding 0.70, as suggested by Nunnally and Bernstein (1994).

Table 2

### **Validity and reliability**

Variable	Construct	Item	Factor Loading	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Cyberloafing activities	Social loafing	SL1	0.978	0.949	0.963	0.896
		SL2	0.924			
		SL3	0.938			
	Informational loafing	IL1	0.958	0.902	0.953	0.911
		IL2	0.950			
	Leisure loafing	LL1	0.811	0.836	0.899	0.748
		LL2	0.902			
		LL3	0.880			
	Cyberloafing behaviour	Recovery behavior	RB1	0.975	0.933	0.967
RB2			0.960			
Development behavior		DB1	0.956	0.955	0.970	0.916
		DB2	0.955			
		DB3	0.960			
Deviant behavior		EB1	0.924	0.923	0.950	0.865
		EB2	0.918			
		EB3	0.947			

Variable	Construct	Item	Factor Loading	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Work performance	Task performance	TP1	0.850	0.886	0.913	0.637
		TP2	0.801			
		TP3	0.766			
		TP4	0.837			
		TP5	0.777			
		TP6	0.755			
	Contextual performance	CP1	0.741	0.948	0.956	0.684
		CP2	0.706			
		CP3	0.862			
		CP4	0.837			
		CP5	0.832			
		CP6	0.849			
		CP7	0.837			
		CP8	0.898			
		CP9	0.824			
		CP10	0.868			
	Adjective performance	AP1	0.854	0.920	0.937	0.714
		AP2	0.807			
AP3		0.850				
AP4		0.819				
AP5		0.893				
AP6		0.844				

Sources: Created by the author.

Regarding the HTMT criterion, the HTMT value must remain below 0.90. An HTMT value surpassing 0.90 indicates a potential lack of discriminant validity. Table 3 reveals that all HTMT values are below the suggested threshold of 0.90.

This outcome shows that discriminant validity is not a significant concern in this study. In summary, the results confirm the reliability and validity of the constructs employed in this study for measuring the intended variables.

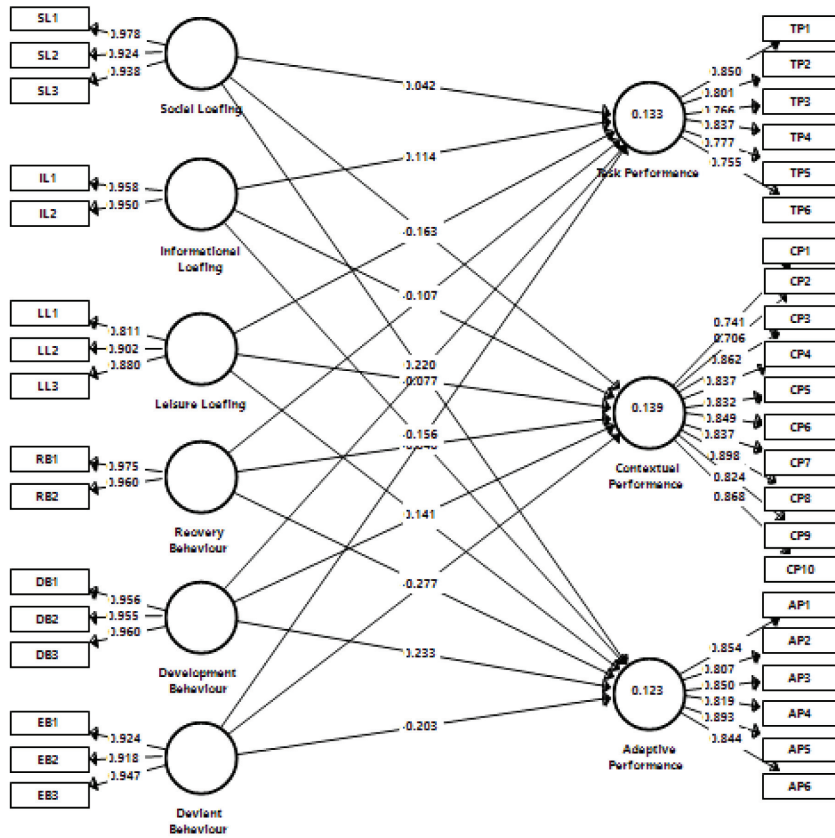


Figure 1: Measurement Model.

Sources: Created by the author.

Table 3

HTMT Criterion

Variable	SL	IL	LL	RB	DB	EB	TP	CP	AP
SL									
IL	0.663								
LL	0.637	0.410							
RB	0.560	0.390	0.832						
DB	0.698	0.733	0.562	0.577					
EB	0.439	0.072	0.679	0.612	0.303				
TP	0.077	0.201	0.193	0.145	0.146	0.247			
CP	0.071	0.227	0.133	0.092	0.144	0.273	0.812		
AP	0.107	0.222	0.089	0.079	0.197	0.202	0.857	0.888	

Notes: SL=Social loafing; IL=Informational loafing; LL=Leisure loafing; RB=Recovery behaviour; DB=Development behaviour; EB=Deviant behaviour; TP=Task performance; CP=Contextual performance; AP=Adaptive performance.

### Correlation

The correlation values provide preliminary support for the proposed hypotheses. Table 4 reveals a positive relationship between task performance and social loafing ( $r = .052$ ), informational loafing ( $r = .189$ ), and development behaviour ( $r = .144$ ). Conversely, it demonstrates a negative relationship with leisure loafing ( $r = -.167$ ), recovery behaviour ( $r = -.130$ ), and deviant behaviour ( $r = -.231$ ). Regarding contextual performance, the analysis shows a positive correlation with social loafing ( $r = .084$ ), informational loafing ( $r = .216$ ), and development behaviour ( $r = .144$ ), but a negative correlation with leisure loafing ( $r = -.118$ ), recovery behaviour ( $r = -.085$ ), and deviant behaviour ( $r = -.265$ ). Lastly, adaptive performance shows a positive correlation with social loafing ( $r = .116$ ), informational loafing ( $r = .209$ ), and development behaviour ( $r = .190$ ), while a negative correlation is found with leisure loafing ( $r = -.081$ ), recovery behaviour ( $r = .076$ ), and deviant behaviour ( $r = -.198$ ).

Table 4

### Correlation

Variable	SL	IL	LL	RB	DB	EB	TP	CP	AP
SL	1								
IL	0.629	1							
LL	0.548	0.331	1						
RB	0.527	0.356	0.730	1					
DB	0.664	0.677	0.490	0.546	1				
EB	0.402	0.056	0.614	0.562	0.280	1			
TP	0.052	0.189	-0.167	-0.130	0.144	-0.231	1		
CP	0.084	0.216	-0.118	-0.085	0.144	-0.265	0.743	1	
AP	0.116	0.209	-0.081	-0.076	0.190	-0.198	0.771	0.831	1

**Notes:** SL=Social loafing; IL=Informational loafing; LL=Leisure loafing; RB=Recovery behaviour; DB=Development behaviour; EB=Deviant behaviour; TP=Task performance; CP=Contextual performance; AP=Adaptive performance.

### Common method variance

To address the issue of Common Method Variance (CMV) in survey-based studies, especially when data are collected from the same respondents for both independent and dependent variables using the same method at the same point in time, the study employs procedural remedies recommended by Podsakoff et al. (2012). These include sending a well-written cover letter, ensuring respondent confidentiality, avoiding confusing or complex questions, and providing clear instructions. Additionally, the researchers conducted statistical tests to assess the severity of CMV.

First, the correlation analysis, presented in Table 5, indicated that none of the correlations exceed 0.9, alleviating concerns about CMV. Second, a collinearity test was performed. As shown in Table 5, all values of the variance inflation factor

are below 3.3, providing evidence that the risk of CMV in this study is negligible (Hair et al., 2014). This also suggests that there is no multicollinearity, as the values of the variance inflation factor are below 3.

Table 5

### Collinearity test

Variable	Variance inflation factor (VIF)
SL	2.442
IL	2.303
LL	2.632
RB	2.517
DB	2.505
EB	1.886

**Notes:** SL=Social loafing; IL=Informational loafing; LL=Leisure loafing; RB=Recovery behaviour; DB=Development behaviour; EB=Deviant behaviour; TP=Task performance; CP=Contextual performance; AP=Adaptive performance.

### Structural Model

The statistical significance of each path coefficient is assessed through t-tests using bootstrapping. The outcomes of this analysis are presented in Table 6 and Figure 2. The hypotheses were tested using a bootstrapping method with 5000 resampling. It was found that that development behavior had a significant effect on task performance ( $\beta = .220$ ,  $t = 2.391$ ) and adaptive performance ( $\beta = .233$ ,  $t = 2.144$ ). Furthermore, deviant behavior significantly influenced task performance ( $\beta = -.156$ ,  $t = 2.117$ ), contextual performance ( $\beta = -.277$ ,  $t = 4.015$ ), and adaptive performance ( $\beta = -.203$ ,  $t = 2.767$ ).

Table 6

### Structural Model

Construct	Beta	Standard Error	T-Statistics	P-value	Decision
SL → TP	0.042	0.112	0.378	0.706	Not supported
SL → CP	0.090	0.118	0.767	0.443	Not supported
SL → AP	0.097	0.125	0.778	0.437	Not supported
IL → TP	0.114	0.101	1.125	0.261	Not supported
IL → CP	0.119	0.095	1.255	0.210	Not supported
IL → AP	0.064	0.106	0.601	0.548	Not supported
LL → TP	-0.163	0.094	1.728	0.084	Not supported
LL → CP	-0.077	0.091	0.846	0.398	Not supported

Construct	Beta	Standard Error	T-Statistics	P-value	Decision
LL → AP	-0.055	0.093	0.595	0.552	Not supported
RB → TP	-0.107	0.085	1.266	0.205	Not supported
RB → CP	-0.040	0.089	0.453	0.651	Not supported
RB → AP	-0.123	0.102	1.206	0.228	Not supported
DB → TP	0.220	0.094	2.352	0.019	Supported
DB → CP	0.141	0.100	1.410	0.159	Not supported
DB → AP	0.233	0.109	2.144	0.032	Supported
EB → TP	-0.156	0.074	2.117	0.034	Supported
EB → CP	-0.277	0.069	4.015	0.000	Supported
EB → AP	-0.203	0.073	2.767	0.006	Supported

**Notes:** SL=Social loafing; IL=Informational loafing; LL=Leisure loafing; RB=Recovery behaviour; DB=Development behaviour; EB=Deviant behaviour; TP=Task performance; CP=Contextual performance; AP=Adaptive performance. Significant level,  $p < 0.05$ .

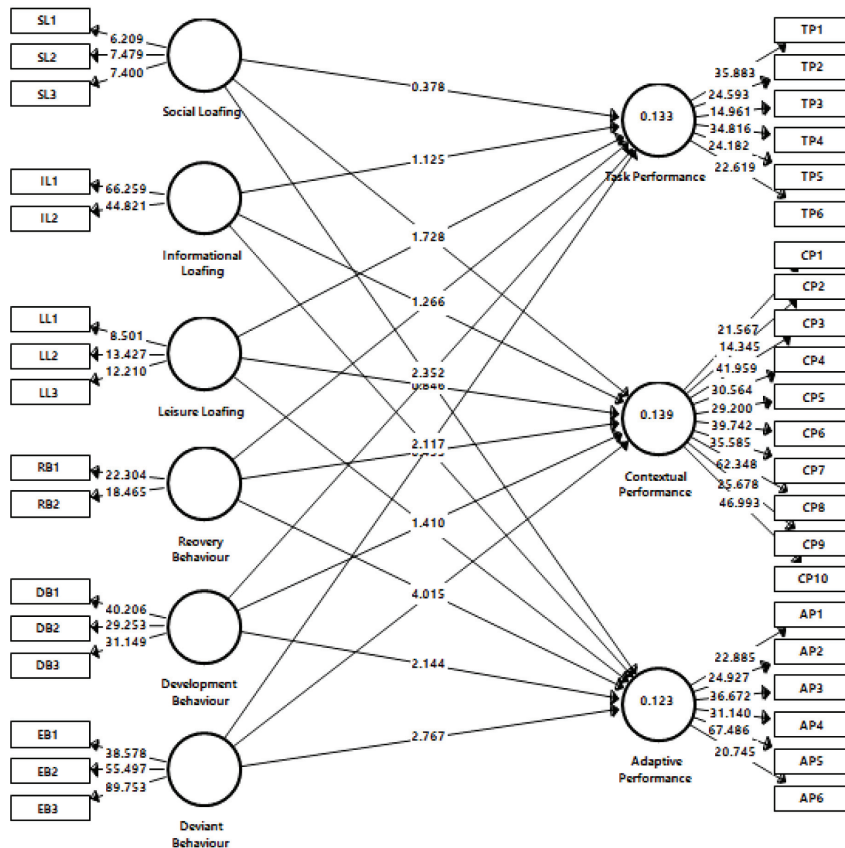


Figure 2: Structural Model

In this study, the structural model is evaluated using the coefficient of determination ( $R^2$ ), the effect size ( $F^2$ ) and the predictive relevance ( $Q^2$ ). Table 7 presents the results of the structural model. To evaluate the fit of the model in the sample, the  $R^2$  is calculated based on Hair et al. (2013) study.  $R^2$  values of 0.75, 0.50 or 0.25 for endogenous latent variables are described as substantial, moderate and weak, respectively. In this study, the  $R^2$  values for all endogenous variables are weak, explaining only 13.3%, 13.9%, and 12.3% of the variance in task performance, contextual performance, and adaptive performance, respectively.

Additionally,  $F^2$  is analyzed using Cohen's (1988) suggestion. Effect size values of 0.02, 0.15 and 0.35 indicate small, medium and large effects respectively. The  $F^2$  values in this study indicate a small to medium effect size. Finally, the predictive relevance of the model is examined. Cohen (1988) suggested that if the  $Q^2$  values are 0.02, 0.15 or 0.35, it indicates that the respective exogenous construct has a small, medium or large predictive relevance for the model. Table 7 shows that all  $Q^2$  predictive values are above zero, indicating that the model has predictive relevance, which is small.

Table 7

### Effect size on the endogenous variable

Endogenous Variable	Exogenous Variable	$R^2$	$F^2$	$Q^2$
TP	SL	0.133	0.001	0.076
	IL		0.007	
	LL		0.012	
	RB		0.005	
	DB		0.022	
	EB		0.015	
CP	SL	0.139	0.004	0.091
	IL		0.007	
	LL		0.003	
	RB		0.001	
	DB		0.009	
	EB		0.047	
AP	SL	0.123	0.004	0.080
	IL		0.002	
	LL		0.001	
	RB		0.007	
	DB		0.025	
	EB		0.025	

**Notes:** SL=Social loafing; IL=Informational loafing; LL=Leisure loafing; RB=Recovery behaviour; DB=Development behaviour; EB=Deviant behaviour; TP=Task performance; CP=Contextual performance; AP=Adaptive performance. Significant level,  $p < 0.05$ .

## Discussion

The findings of the study reveal that development behaviour significantly influenced task performance and adaptive performance, while deviant behavior is confirmed to have a significant impact on all three types of performance. This contribution is particularly valuable for public sector organizations, especially amidst the ongoing pandemic when a considerable number of civil servants worked from home (WFH).

During this period, minimal supervision from superiors is prevalent, placing civil servants in a position where autonomous decision-making about their work activities becomes crucial.

In accordance with the hypotheses put forward by Ajzen and Fishbein (1980) within the framework of the Theory of Planned Behavior (TPB), individuals are expected to make rational decisions regarding specific behaviors. In the context of this study, it is assumed that civil servants choose work-related activities over non-work-related activities during working hours. This is consistent with Skinner's (1965) proposition that human behavior can be controlled through various methods, such as deadlines, frequent meetings, remote log-ins and log-outs, online seminars or training, and task completion. Consequently, this evidence-based assumption justifies why development behavior can influence task performance and adaptive performance. Civil servants can choose to participate in activities beneficial for their career development, ultimately enhancing organizational performance.

However, the TPB also introduces the notion that a person's behavior is not entirely voluntary and cannot always be controlled. This leads to the second evidence-based assumption of the study, highlighting that decisions made by civil servants may go unnoticed by their superiors. This creates opportunities for Deviant Behavior, such as cyberloafing, which involves non-work-related activities such as personal engagement in social media, surfing the internet or online shopping. Such behavior could be detrimental to individuals (e.g. incomplete tasks), to others (e.g. delayed processing of customer requests) and to the organization (e.g. inefficiency that tarnishes the image of public sector).

Contrary to significant relationships, findings also echo previous studies (Van Doorn, 2011), indicating that certain relationships do not significantly influence work performance. The non-significant impact of cyberloafing on employees' work performance may be attributed to the multitasking capabilities enabled by Information and Communication Technology (ICT). Employees can multi-task by using the internet for personal purposes without significantly affecting their performance. This aligns with past studies, which found no significant effect of cyberloafing on bank employees' performance. This argument is consistent with studies indicating that employees may use breaks for cyberloafing, which has not been empirically proven to significantly affect performance.

Additionally, the insignificant relationship between cyberloafing and work performance may be due to the fact that employees could cyberloaf after completing their tasks and assignments (Ivarsson and Larsson, 2011).



The organizational Code of Ethics underscores the importance of employees adhering to specific work standards, emphasizing the need to prioritize these standards over engaging in non-work-related activities. Consequently, this focus on maintaining high work standards mitigates the influence of cyberloafing on employee performance. Sao et al.'s (2020) study further supports this finding by revealing that cyberloafing had no significant impact on various work-related factors.

While the use of the internet facilitates work and communication platforms and entices employees to use online platforms for their daily activities, Vitak et al. (2011) have found that employees are more prone to cyberloafing compared to jobs that do not require internet use. Moreover, the frequent shifts in attention between work-related tasks and personal matters during working hours can lead to errors and a loss of focus and concentration.

The study concludes that development behavior and deviant behavior significantly influence task and adaptive performance, with only deviant behavior significantly influencing contextual performance. These findings contribute to the theoretical discussion in two ways.

First, the study demonstrates the positive influence of development behavior on work performance, suggesting that personal improvement efforts positively affect organizational performance. This is consistent with the theory of planned behavior, which assumes that individual decisions have a positive impact on organizations. Development behavior is conceptualized as a hypothetical proposition measuring personal inclination, intention, and its effect on others. Second, the study highlights the value of the Self-control theory in understanding cyberloafing behavior and its role as psychological detachment. As work from home increases stress and anxiety, self-control theory postulates that individuals regulate their behavior, using cyberloafing as a coping mechanism for psychological and psychosocial effects.

In light of these findings, the study recommends that public sector organizations revise existing policies and procedures related to internet usage. While controlling civil servants from inappropriate internet use during working hours, especially when teleworking, is challenging, the study advises against strict actions. Restricting the use of the internet may be perceived as a lack of trust, potentially diminishing work motivation and affecting performance. Caution is recommended in considering any policy adjustments and improvements, given the potential colossal impact on civil servants and the public sector, particularly in Malaysia with a significant civil servant population.

Overall, this study deepens the understanding of the influence of cyberloafing and behaviors on work performance and fills existing gaps in the literature pertaining to empirical evidence, theoretical discussions, and practical implications. The study acknowledges several limitations that warrant further investigation. Firstly, while the focus on understanding cyberloafing in the public sector is valuable, future research should also explore its occurrence in the private sector. Secondly, comparing various public sectors worldwide implementing work-from-home (WFH) policies during the pandemic could yield insights into how cyberloafing affects civil servants' performance, especially in serving the general

population via virtual platforms. Lastly, future research should explore the relationships among cyberloafing, work performance, and psychological effects, offering solutions for the challenges associated with WFH policies in both the short and long term.

## Conclusion

This study provides a comprehensive analysis of the impact of cyberloafing on the performance of civil servants. The literature review highlights that the influence of cyberloafing on civil servants' performance is still under-researched, particularly in the context of the current global pandemic, when governments worldwide have implemented WFH policies to curb the spread of the COVID-19 virus.

Consequently, an in-depth investigation was conducted to elucidate this relationship. The established theoretical framework found the empirical support, providing both theoretical and empirical contributions to improve existing cyberloafing and WFH policies.

Additionally, the study posits that cyberloafing can be considered as a form of psychological detachment, contributing to the well-being of civil servants. It advocates for the strengthening of existing WFH policies, not only to address pandemic-related challenges, but also as a viable mechanism for the effective operation of public organizations. The adoption of a WFH model or a hybrid model that offers the flexibility of on-site and WFH options, is recommended. These alternatives can be tailored to civil servants, based on the nature of their work.

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The article was submitted: 05.04.2022;  
approved after reviewing: 17.03.2023;  
accepted for publication: 25 March 2024.