

THE EFFECT OF CYBERLOAFING ON PERFORMANCE MODERATED BY WORK PROCEDURES AND SELF-CONTROL

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Abstract

In today's digital era, cyberloafing which refers to surfing the web for personal reasons during work hours is a major workplace issue. A policy was put in place at XYZ Agency in July 2024 to control internet usage and curb cyberloafing. The policy is meant to boost productivity, but its impact is still uncertain. Even with the policy, some employees continue cyberloafing on personal internet connections, leading to concerns about its effect on their work performance and how self-control and work procedures play a role in this behavior. This study seeks to investigate the impact of cyberloafing on productivity, influenced by levels of self-discipline and workplace protocols. Employing a quantitative method, the research involved 100 participants from the XYZ Agency. Utilizing Smart PLS 3.0 software, the data was examined to ascertain connections between different factors. The results indicated that cyberloafing had a notable, albeit modest, positive effect on performance measures within this study, with a coefficient of 0.161. Workplace procedures, acting as a moderating element, were found to have a detrimental impact on the correlation between cyberloafing and employee productivity. However, self-control was not found to significantly alter or moderate the link between cyberloafing and job performance.

Keywords: Cyberloafing, Employee Performance, Moderation Role, Self-Control, Work Procedures

1. INTRODUCTION

In the growing digital age, the use of internet technology in the workplace has become commonplace. Cyberloafing, the use of the internet for personal purposes during working hours is one of the phenomena that has emerged as a result of the application of this technology. Since it can reduce worker productivity and performance, cyberloafing is often considered as deviant behavior in the workplace (Lim & Teo, 2005). Many daily activities, both in the workplace and in personal life, rely on digital technology as information and communication technology advances. Cyberloafing is when a person uses their work time to engage in unproductive online activities, such as visiting entertainment websites, playing games, or social media, rather than focusing on the task at hand.

This unlimited internet access makes it easy for employees to use the internet in ways that do not support their work, known as cyberloafing. Cyberloafing can be both good and bad for employees and the organizations they work for. Some of the benefits of cyberloafing behavior include relieving boredom, stress, or fatigue, increasing job satisfaction, as well as giving employees the opportunity to recreate, if an employee experiences difficulties while doing their tasks, it makes cyberloafing a danger

(Sulistiyanto, 2022). Spending excess time online during work hours can result in lower output and wastage of network resources, ultimately affecting the company's competitiveness. The rising trend of employees in Indonesia using the internet during work hours will undoubtedly impact their performance, whether it be beneficially or detrimentally. It is feared that this cyberloafing behavior will have a direct impact on the productivity of organizational performance. To increase productivity in the workplace or in the academic environment, this behavior must be reduced.

Most employees use the internet, including at XYZ Agency. To increase productivity and reduce behavior that disrupts performance, a policy was issued that regulates employee internet usage. Based on information quoted from sources, this circular has been in effect since July 2024 at XYZ Agency. This policy specifically addresses the issue of cyberloafing, which involves using the internet for personal activities while on company time. Restricting access to useless sites and monitoring internet usage in the workplace are part of this policy. This is deliberately done to prevent employees from playing "online" gambling. For this reason, employees cannot access office computers to do things that are not related to work, it also applies if the employees access wi-fi using personal cellphones.

Despite the fact that the policy has been put into place, there remain some uncertainties, particularly in terms of how successful the policy is in minimising the influence of cyberloafing on productivity. In this instance, the way in which tasks are carried out and the level of autonomy employees have been crucial factors in regulating the connection between cyberloafing and productivity. Self-control helps employees control how they use the internet, and clear work procedures minimize cyberloafing. The policy set at XYZ Institution regarding employee internet usage is to increase productivity in the workplace. However, the success of this policy largely depends on how employees use self-control and comply with established work procedures. Based on initial observations and brief interviews with employees at XYZ Institution, it shows that the policy prohibiting office internet access for personal use has begun to be implemented quite well. However, there are still some workers who utilize their own internet connection for personal activities instead of focusing on their job duties. This behavior is still categorized as cyberloafing behavior. This phenomenon raises questions about how well policies prevent cyberloafing and how it impacts employee performance. Research (Zhong et al., 2022) found that these findings provide theoretical and practical information on how to use personal internet and encourage innovation in emergency situations.

Self-control is a key element that can contribute to Cyberloafing tendencies. It also plays a role in influencing the level of commitment within an organization, ultimately impacting overall performance. Individuals with a strong sense of self-discipline can make better decisions that benefit the company. According to Masruroh et al. (2024), it is advised that employees enhance their self-control in order to reduce the negative effects of cyberloafing behaviour. To prevent cyberloafing, all employees must have Self Control. This is in line with another opinion (Marsela & Supriatna, 2019), which states that employees are busier doing personal work that is considered more important or less important. If someone has a low level of self-control, they will find it difficult to control emotions that can cause problems. However, Rianti & Rahardjo in (Marsela & Supriatna,

2019) stated that people who have high self-control will be more positive and more able to take responsibility. Aside from self-control, the way work is organised also plays a vital role in managing the connection between cyberloafing and employee productivity. Well-defined and orderly work procedures can act as a barrier against cyberloafing by offering clear instructions and limitations to employees. Effective work procedures can enhance work productivity and encourage employees to focus more on their tasks (Sarip et al., 2021).

The split focus and concentration of employees between work and cyberloafing behavior leads to poor work quality, which has a negative impact on employee performance appraisals. The purpose of this study is to determine how cyberloafing affects performance directly and also through moderating variables such as self-control and work procedures. By understanding how these variables relate to each other, it is hoped that effective methods can be found to manage cyberloafing and improve employee performance in the modern era. Therefore, this study is important because it provides insight into how agencies can reduce the negative impact of cyberloafing through improving employee self-control and implementing effective work procedures.

2. LITERATURE REVIEW

2.1. Work Procedure

According to Armstrong (2006) in his book *Performance Management: Key Strategies and Practical Guidelines*, work procedures are a collection of steps that must be followed to complete a specific task assigned to the organization. These methods are created to ensure consistent, efficient, and quality results. Armstrong emphasizes that good work procedures should be clear, easy to understand, and can be followed by all staff to achieve the desired performance standards.

In his book entitled *The Nature of Managerial Work*, Henry Mintzberg (1973) said that work procedures are one of the five elements of organizational structure that are very important in the coordination of work. According to Mintzberg (1973), organizations that have well-designed procedures can perform repetitive tasks with high efficiency and effectiveness.

2.2. Self-Control

Friese and Hofmann (2009) states that self-control is a person's power to steer actions in order to prevent and thwart impulsive actions. Rykman (in Ramdhani, 2013) describes self-control as "how the individual acts to alter the variables of which other parts of his behavior are functioning". According to Logue (1988), self-discipline involves managing and guiding one's actions. Brosschot et al. (1994) states that when someone has self-reliance, they can concentrate on goals that they can control through their actions, and can know what can and cannot be influenced by their own actions in various situations. One of the core functions that exist within a person is self-control, a person can develop and utilize this function to achieve success in their life process. Self-control is an individual's power to modify their conduct, handle both favourable and unfavourable stimuli, and select a course of action based on their values. Self-control may be characterised as people's capacity to grasp their own circumstances and that of their surroundings, according to Duckworth et al. (2016).

Based on the above definition, self-control can be defined as a series of processes experienced by individuals who can shape themselves and have the ability to control and control behavioral factors in various situations.

2.3. Cyberloafing

Cyberloafing refers to when employees abuse their work privileges by using the internet and email for personal reasons instead of focusing on their job responsibilities during working hours (Lim & Teo, 2005). Examples of this behavior include online shopping, sending emails containing entertainment content, sending instant messages, posting to newsgroups, and downloading songs. Factors that cause stress in the workplace such as role ambiguity, role conflict, and role workers.

According to Blanchard and Henle (2008), cyberloafing involves employees using office email and internet for non-work related purposes during work hours, typically without meaning to do so. Minor cyberloafing consists of sending or receiving personal emails while at work, such as news headlines and online financial and shopping websites. Serious cyberloafing includes visiting non-work-related computing (NWRC, or Non-Work-Related Computing) related websites. The term NWRC is used to describe the actions of individuals who frequently use the internet during work hours for personal reasons, which can negatively impact their productivity. The term includes ideas such as “junk computing” and “cyberloafing”. Junk computing is when employees use the organization's internet services for personal interests and not related to organizational goals (Oktapiansyah, 2018).

2.4. Performance

According to Cahyaningrum and Yulianti (2022), performance and achievement in individuals are comparable because both are related to evaluation as a measurement of an employee's ability. One of the important rights of the company is to conduct an assessment. Performance is the result achieved by individuals on the tasks and work given by their superiors, either in quantity or quality, which is influenced by organizational support, ability, and knowledge.

Performance is the measurement of how successful a person has been in completing a task over a specific period, considering factors like work standards, goals, and agreed criteria. It can be noted that performance is the outcome produced by employees at work in line with position-specific standards (Bagis et al., 2023).

2.5. The Relationship of Cyberloafing to Employee Performance

According to Prasetya et al. (2023), cyberloafing is an action taken by employees when using internet access provided by a company or organization intentionally for matters unrelated to their work during their working hours. Monica and Maharani (2020) found that cyberloafing does not affect employee performance. Adelina and Saputro (2023) explained in their research that cyberloafing was found to have a notable impact on the productivity of employees working at the Surakarta State Wealth and Auction Service Office, as highlighted in the study (Cahyaningrum & Yulianti, 2022) Cyberloafing proved to have no effect on the performance of school employees (SMA and SMK) in the city of Tarakan.

Several studies indicate that engaging in cyberloafing can have a notable effect on employees' performance. Previous research has also shown that the act of cyberloafing can impede productivity and job efficiency. For example, research conducted by Damayanti et al. (2022) at PT Inbio Tani Nusantara found that cyberloafing behavior negatively affects employee performance. From previous research, the hypothesis can be explained as follows:

H₁: Cyberloafing has a significant effect on performance.

2.6. Self-control Moderates Cyberloafing on Performance

In several studies, the correlation coefficient between self-control and cyberloafing varies. The results of this study indicate that self-control is very important to prevent cyberloafing behavior. An individual with higher self-control tends to be able to withstand cyberloafing behavior, while individuals with lower self-control tend to engage in cyberloafing. Therefore, increasing self-control can be a great way to reduce cyberloafing in the workplace.

Prasetya et al. (2023) describes self-control as a person's ability to guide, structure, organize, and direct actions in a positive direction. Catarina Cori Paramitha suggests that fluctuations in self-discipline can greatly influence an employee's effectiveness. One factor within people that is thought to contribute to cyberloafing behaviour is self-discipline. As per Adelina and Saputro (2023), their study revealed that self-discipline plays a role in shaping the link between cyberloafing and employee performance at the Surakarta State Wealth and Auction Service Office, showcasing a significant adverse impact. Study from Mahsyar et al. (2019) shows that self-regulation has a beneficial impact on managing the influence of cyberloafing on work productivity. Maintaining self-regulation is crucial in controlling the impact of cyberloafing on employee job performance.

The hypothesis is explained as follows:

H₂: Self-control moderates the significant relationship between cyberloafing and performance.

2.7. Work procedures moderate the relationship of cyberloafing to performance

Work procedures refer to policies, rules, and guidelines that govern how employees work and behave in the workplace. Study from Lim and Teo (2005) shows that managerial control and strict work procedures can reduce the tendency of employees to cyberloafing. This indicates that in an environment with strict work procedures, the negative impact of cyberloafing on performance may be smaller because the behavior occurs less frequently. Blanchard and Henle's (2008) study discusses that the clarity of internet use policies in the workplace and consistent implementation of procedures can affect the frequency and intensity of cyberloafing. In other words, effective work procedures, clear and consistently applied work procedures can limit or reduce the level of cyberloafing.

Strict work procedures can reduce time spent cyberloafing by setting clear boundaries on what is considered acceptable behavior in the workplace. With clear work procedures in place, employees tend to focus more on their tasks because they know there are consequences for inappropriate behavior, including cyberloafing. This can improve their performance by minimizing distractions. Social Cognitive Theory states that the work environment (including work procedures and policies) influences individual

behavior. When work procedures explicitly prohibit cyberloafing, employees may be more likely to comply with those rules, which in turn may moderate the effects of cyberloafing on performance (Sitorus et al., 2019). This study shows that moderation of work procedures cannot strengthen cyberloafing on employee performance due to a positive insignificant effect. From some of the research above, the hypothesis of this study is:

H₃: Work procedures moderate the significant relationship between cyberloafing and performance

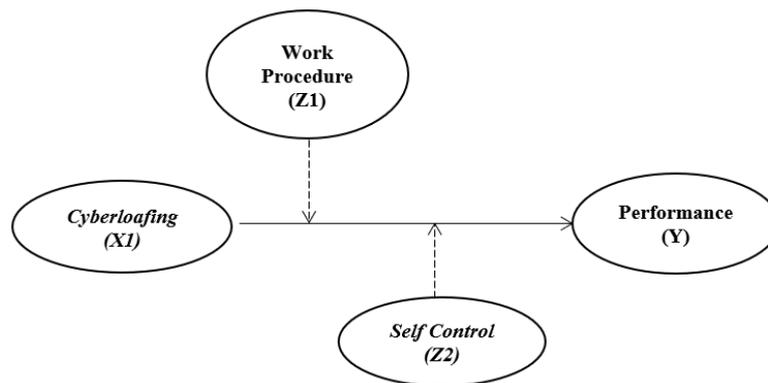
3. RESEARCH METHODS

Quantitative methods are used in this research, where research is conducted by testing theories through numerical data analysis. After the data is processed using statistics, the results are interpreted to get conclusions. This method was chosen because this research requires an indicator measurement scale that is asked to respondents.

This study uses the type of explanatory research. According to Sugiyono (2015), explanatory research is conducted to clarify the relationship between variables and their influence on each other. The primary goal of this type of research is to test hypotheses that have been put forward. The study's findings are anticipated to clarify the connection and impact between the independent variables and the attachments outlined in the hypothesis. The location of this research was carried out in one of the government agencies. According to Sekaran (2016), a sample consists of a group of individuals selected from the population. In this study, 100 employees have internet access at their workplace. Sample sizes from 30 to 500 are appropriate for research, according to Sekaran (2016). Thus, the sample size of this study, consisting of 100 employees, is considered appropriate.

In this research, cyberloafing is considered the independent factor, with performance as the dependent factor. In addition, self-control and work procedures are seen as variables that may influence the outcome. The study involved collecting data through online questionnaires using Google Forms, targeting 100 employees from the XYZ agency. The scale used for responses ranged from 1 to 4. The reason researchers use even scales such as 1-4, is to eliminate middle options (such as "neutral" or "don't know"). This intends to encourage respondents to make a clearer decision, whether they agree or disagree with the given statement, thus reducing the bias of respondents' tendency to always choose the middle option.

The study utilises Structural Equation Modelling (SEM) analysis methods through the use of SmartPLS software. SEM is a statistical tool that merges factor analysis, structural modelling, and path analysis techniques (Sekaran, 2016). Partial Least Squares (PLS) is a robust analytical approach that is versatile in its ability to handle data of various scales, including nominal, ordinal, interval, ratio, or categorical (non-normal) data.



Source: Researcher

Figure 1. Conceptual Framework

4. RESULTS AND DISCUSSION

4.1. Convergent Validity

Convergent validity is determined by assessing how well an item or component score aligns with the overall score of the construct. This is indicated by the standardized loading factor, which indicates the degree of correlation between each measurement item and the construct. If an individual reflective measure has a correlation of >0.70 with the construct, it is considered to be strong. An outer loading value between 0.50-0.60 is deemed acceptable in this context (Ghozali, 2016).

Table 1. Loading Factor

Variable	Item Statement	Outer Loading	Description
Cyberloafing	CL2	0,698	Valid
	CL3	0,640	Valid
	CL4	0,780	Valid
	CL5	0,756	Valid
	CL7	0,802	Valid
	CL8	0,779	Valid
	CL9	0,727	Valid
	CL10	0,671	Valid
	CL11	0,670	Valid
	CL12	0,632	Valid
Work Procedure	PK1	0,801	Valid
	PK3	0,84	Valid
	PK4	0,785	Valid
	PK8	0,678	Valid
	SC1	0,659	Valid
	SC2	0,820	Valid
	SC3	0,853	Valid
	SC4	0,723	Valid
	SC5	0,779	Valid
	SC6	0,690	Valid

Self-control	SC7	0,731	Valid
	SC8	0,662	Valid
	SC9	0,808	Valid
	SC10	0,659	Valid
	SC11	0,825	Valid
Performance	KK1	0,820	Valid
	KK2	0,792	Valid
	KK3	0,782	Valid
	KK4	0,796	Valid
	KK5	0,734	Valid
	KK6	0,726	Valid
	KK7	0,701	Valid
	KK9	0,715	Valid
	KK10	0,731	Valid
	KK11	0,792	Valid
	KK12	0,631	Valid
	KK13	0,695	Valid
	KK14	0,720	Valid

Source: Smart PLS 3.0

In the second phase of data processing, the Cyberloafing variable shows that all instruments are considered legitimate with a rating exceeding 0.6. Work procedure variables are all valid instruments (>0.6). These results also apply to the variable self-control and employee performance, where all items are said to be valid because they have a loading factor > 0.6 .

4.2. Discriminant Validity

Assessment of discriminant validity is now widely accepted when evaluating connections between hidden variables. A way to assess discriminant validity is by conducting a cross-loading analysis, which involves comparing the correlation of an indicator with its associated construct to its correlation with other constructs. The indicator correlation construct value must be greater than the association construct. A larger value indicates that the indicator is more suitable for explaining its associated construct than other constructs (Van Riel et al., 2017).

Table 2. Fornell-Larcker Criterion Discriminant Validity

	Cyberloafing (X1)	Kinerja (Y)	Prosedur Kerja (Z)	Self Control (Z2)	Z1*X	Z2*X
Cyberloafing (...)	0.710					
Kinerja (Y)	0.472	0.743				
Prosedur Kerja ...	0.301	0.633	0.778			
Self Control (Z2)	0.441	0.853	0.617	0.761		
Z1*X	-0.085	-0.594	-0.396	-0.560	1.000	
Z2*X	-0.276	-0.599	-0.554	-0.567	0.801	1.000

Source: Smart-PLS 3.0

According to the findings in table 2, it is evident that the loading values of each indicator item on its construct exceed the cross loading value. This implies that all constructs or latent variables exhibit strong discriminant validity, with the construct indicators outperforming others in their respective blocks.

4.3. Composite Reliability

Once the validity of the construct has been evaluated, the reliability of the construct is then assessed using Composite Reliability (CR) of the indicator block. This CR construct provides evidence of substantial reliability. An indicator is deemed reliable if its composite reliability coefficient exceeds 0.6. According to (Hair et al., 2021), while a value of 0.6 may be considered satisfactory, it is recommended that the composite reliability coefficient is at least 0.7. If the construct validity has been established, there is no requirement to carry out an internal consistency test. This is because a valid construct is typically reliable, whereas an unreliable construct may not necessarily be valid (Cooper & Schindler, 2014).

Table 3. Composite Reliability

Variable	Composite Reliability	Rule of Thumb	Conclusion
Cyberloafing (X1)	0.917	0.600	Reliable
Performance (Y)	0,941	0.600	Reliable
Work Procedure (Z1)	0.859	0.600	Reliable
Self-Control (Z2)	0.938	0.600	Reliable
Z1*X	1000	0.600	Reliable
Z2*X	1.000	0.600	Reliable

Source: Data processing Smart PLS 3.0

Based on table 3, the results of composite reliability testing show a value > 0.6 which means that all variables are declared reliable.

4.4. Model Fit

Table 4. Model Fit

	Saturated Model	Estimated Model
SRMR	0,091	0,090

Source: Data processing Smart PLS 3.0

Hair et al. (2021) - In his book “A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)”, Hair et al. state that SRMR below 0.10 is considered an acceptable upper limit, especially in the context of PLS-SEM, which tends to be more tolerant of model fit. In the context described by Hair et al. (2021), an SRMR value of 0.090 is an acceptable fit, which means that the model is still quite representative of the existing data.

4.5. R Square

Table 5. R Square

	R Square	R Square Adjusted
Performance (Y)	0,782	0,770

Source: data processing Smart PLS 3.0

The table 5 shows that this model has outstanding predictive ability with R^2 of 0.782. That is, almost 80% of employee performance is explained by the combination of cyberloafing variables, self-control and work procedures, along with moderating interactions between them. This shows that the model used is strong enough and relevant to understand the components that affect employee performance. Meanwhile, 21.8% of the explanation comes from variables or factors not in the model affecting employee performance.

4.6. Q Square

Table 6. Q Square

	Q Square
Performance (Y)	0,415

Source: Smart-PLS 3.0

The Q-square (Q^2) value of 0.415 indicates that the model has a fairly good predictive relevance in the context of Partial Least Squares Structural Equation Modeling (PLS-SEM). This value indicates that the model is able to predict the variability in the dependent variable well. In this case, a Q^2 value above 0.25 and close to 0.50 indicates that the model can explain most of the variance in the data well. In the book, Hair et al. (2021) explains that a Q^2 value higher than 0.35 is considered to indicate strong predictive relevance, so the value of 0.415 is in that category.

4.7. Hypothesis Test

To establish the link between hidden variables, a comparison needs to be made on the path coefficient with a significance level of 0.005. The values are obtained from Smart PLS using bootstrapping. The goal is to test the hypothesis.

Table 7. Path coefficient test results

Relationship between variables	Original sample	t-statistics	p-values	Description
Cyberloafing on performance	0.061	2.687	0.007	H1 accepted
Work Procedures on Performance	0.161	2.343	0.019	
Self-control on Performance	0,582	6.255	0.000	
Z1*X	-0.202	2.237	0.025	H2 accepted
Z2*X	0.042	0.461	0.645	H3 rejected

Source: Smart-PLS 3.0

The measurement bootstrapping model test is used to see the relationship between constructs and the significant value in the path coefficient table which displays the direct effect results and then can see the indirect effect, through the coefficient estimate value and how the t-statistics or p-values of each variable.

5. CONCLUSION

This research investigates how cyberloafing impacts employee productivity, taking into consideration work processes and self-discipline as factors that influence the outcome. The results indicate that engaging in cyberloafing actually leads to improved performance among employees, suggesting a positive correlation between the two. This suggests a positive relationship between the two variables, where cyberloafing can enhance performance under certain conditions. However, when work procedures are strictly enforced, the benefits of cyberloafing on performance are reduced. This indicates that rigid work procedures may limit the positive effects of cyberloafing, suggesting the need for a balanced approach to work policies.

Alternatively, when self-control is considered as a moderating factor, it is found to have a minimal and inconsequential impact on the correlation between cyberloafing and productivity. This suggests that self-control does not play a significant role in shaping this interaction. In this context, work procedures appear to be a more relevant moderating factor than self-control. Based on these findings, it is recommended that the XYZ Institution strengthen work procedures to minimize cyberloafing, while also maintaining low levels of cyberloafing to ensure optimal performance. Implementing restrictions on the use of personal devices for non-work-related activities during working hours could help achieve this balance.

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