

Competency-Based Employee Performance Improvement Moderated by Information and Communication Technology (ICT) in a Consultant Office West Kotawaringin Regency Thesis

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Abstract. *This study aims to analyze the influence of competency on employee performance and examine the role of Information and Communication Technology (ICT) as a moderating variable in a consulting firm in West Kotawaringin Regency. The development of digital technology demands that professional service organizations not only have competent human resources but also be able to integrate technology into work processes to increase effectiveness and productivity. This study employed a quantitative approach with explanatory research methods. The population comprised all 150 permanent employees at a consulting firm in West Kotawaringin Regency, with a sample size of 80 respondents determined using purposive sampling. Data were collected through a questionnaire with a 5-point Likert scale. Multiple linear regression and Moderated Regression Analysis (MRA) were used for data analysis. The research results show that competence has a positive and significant impact on employee performance. ICT has also been shown to have a positive effect on employee performance. Furthermore, ICT moderates the relationship between competence and employee performance, with the effect of competence on performance being stronger when ICT support is high. This research implies that improving employee performance in consulting firms is not solely determined by individual competency but also by adequate technological support. Therefore, organizations need to integrate competency development with the optimization of ICT utilization to enhance competitiveness and work effectiveness.*

Keywords: Competence; Consulting Office; Employee Performance; ICT; Moderation.

1. Introduction

Advances in information and communication technology (ICT) have fundamentally changed the way organizations across various sectors, including the consulting services sector, operate. ICT is no longer just a work tool but has evolved into a strategic support for decision-making, collaboration, data processing, and increased work efficiency (Bresciani et

al., 2021). Companies that are able to integrate human resource competencies with the use of information technology have a greater opportunity to increase competitiveness.

In the context of consulting firms, particularly in areas like West Kotawaringin Regency, the challenges faced are not only related to the quality of human resources, but also to limitations in mastering and utilizing technology. Local consultants often possess adequate competency in their fields, but are not yet optimal in utilizing ICT as a productivity enhancer, such as project management applications, online collaboration tools, or client information systems. Yet, mastery of information technology is a crucial element in supporting individual and collective performance (Rahayu & Day, 2017; Bawack et al., 2023).

Employee competencies include technical skills, conceptual skills, and interpersonal skills. These three types of competencies have been empirically proven to contribute to improved performance (Wibowo, 2020). However, in today's digital era, the relationship between competency and performance is no longer linear. The role of ICT as a moderating variable deserves examination to see how technology can strengthen or weaken the relationship between competency and performance (Loh et al., 2025).

A study by Koponen et al. (2025) found that effective employee use of technology can strengthen the positive impact of interpersonal competence on work outcomes in modern workplaces. Another study by Siminto et al. (2023) also showed that digital competence strengthens the impact of leadership on performance, indicating that ICT has the potential to act as a moderator of variable relationships in work organizations.

While numerous studies highlight the importance of individual competencies and ICT, there is limited literature specifically examining the role of ICT as a moderating variable between competencies and performance, particularly in the professional consulting workplace in developing regions such as West Kotawaringin Regency. This indicates a research gap that needs to be filled so that local organizations can develop more effective and contextualized technology-based human resource development strategies.

A growing phenomenon in the field indicates that most consulting firms in the regions, including West Kotawaringin Regency, Central Kalimantan, still face various obstacles in utilizing digital technology. Furthermore, initial observations and interviews with several local consulting staff indicate a digital skills gap.

Many workers possess technical expertise in planning or civil engineering, but lack proficiency in the latest software such as BIM (Building Information Modeling), project management applications (Trello, Notion, Asana), and digital communication tools (Zoom, Teams, Slack). This results in slow work processes, miscommunication within cross-site teams, and low productivity.

On the other hand, Indonesia also faces similar challenges nationally. According to the World Bank (2022) and the WEF Digital Competitiveness Report, the digital proficiency index

for the Indonesian workforce remains below the Southeast Asian average. This indicates that ICT has not been evenly integrated into workplace practices, particularly in regions outside Java.

This situation demonstrates that competence alone is insufficient to improve performance without the support of a technology-adaptive work environment. ICT can serve as a moderating variable that strengthens the influence of competence on performance, as technology provides tools that facilitate the application of technical competence, increase work efficiency, and accelerate communication and coordination.

Previous research has highlighted the direct relationship between competence and performance (Wibowo, 2020; Siminto et al., 2023), as well as the role of ICT in work efficiency. However, there are still limited studies specifically examining the interaction between competence and ICT in creating optimal performance, particularly in the context of professional service organizations in developing regions like West Kotawaringin.

In the context of consulting firms, particularly those in West Kotawaringin Regency, Central Kalimantan, the primary challenge lies not only in mastering technical competencies but also in the ability to utilize technology as a work tool. Several preliminary surveys and interviews indicate that while human resources in some local consulting firms possess technical and project administration competencies, not all are capable of operating digital technologies such as design software, project management, and cloud-based reporting systems (Diskominfo Kobar, 2023).

Considering these dynamics, this research is important to: Empirically explain the influence of competency on employee performance. Examine the moderating role of ICT in strengthening this relationship. Provide data-based recommendations to consulting firms in West Kotawaringin on how to optimize the use of ICT to support employee performance.

2. Research Methods

The type of research used in this study is quantitative research with an explanatory approach. Explanatory research aims to explain the causal relationship between variables by testing previously formulated hypotheses, namely the relationship between competence and employee performance, and the role of ICT as a moderating variable.

3. Results and Discussion

3.1. The Influence of Competence on Employee Performance

The results of the study indicate that competence has a positive effect on employee performance. This illustrates that the majority of employees have understood their job duties and responsibilities, are familiar with applicable work procedures, and are able to complete work within the specified time targets. When viewed from each indicator, the highest score is found in the statement "I am able to complete work within the specified

time targets," indicating that employees have good technical and time management skills. Meanwhile, the lowest scores are found in the statements "I know the procedures and workflows that apply in the office" and "I use available tools or technology well in my work." This indicates that there are still some employees who It is necessary to improve their understanding of work procedures and skills in utilizing available technology. Overall, these results indicate that employee competency at the West Kotawaringin Consulting Office is considered good, encompassing abilities, skills, and work attitudes that support effective task execution.

Furthermore, based on the results of multiple linear regression analysis, it is known that competence has a positive and significant effect on employee performance, which means that the higher the level of employee competence, the higher the performance achieved.

A positive regression coefficient indicates that any increase in competency will contribute to improved employee performance. Therefore, employees who are able to understand tasks, utilize technology, manage time effectively, and adhere to work procedures will be able to produce better, higher-quality performance.

The results of this study align with Spencer & Spencer's (1993) opinion, which states that competence is a basic individual characteristic directly related to effective performance in the workplace. Competence encompasses aspects of knowledge, skills, and work attitudes that influence how a person performs their duties. Employees with high competence tend to demonstrate better productivity and work effectiveness than those with low competence.

Overall, it can be concluded that competence has a positive and significant influence on employee performance in the Consulting Office.

West Kotawaringin. Employees with a high level of competence are able to work more efficiently, complete tasks on time, maintain the quality of their work, and contribute to achieving organizational goals. Therefore, improving employee competence through training, mentoring, and mastery of technology is a crucial step in maintaining and sustainably improving organizational performance.

The results of this study are also supported by several relevant previous studies. Research conducted by Sulistyorini & Wening (2024) shows that technical competence has a positive and significant influence on employee performance in various sectors, both private and government. Similar findings were also presented by Syauqi, Awan, Mubarak, & Zulkarnain (2024), who revealed that competence directly influences performance, and also indirectly through work discipline, with the direct influence of competence on performance being stronger. Furthermore, research by Aryono Prakoso, Saparuddin, & Kazan Gunawan (2024) explains that professional competence plays a crucial role in improving employee performance, both directly and through employee engagement.

Another study by Sri Mulyani and Adhie Fasha Nurhadian (2023) also showed that competence significantly contributes to improved performance, although the effect of compensation was greater in that study. Meanwhile, a study by Lailan Azizah and Muhammad Isa Indrawan (2024) found that competence has a significant influence.

on employee performance, which shows that although it is influential, there are other factors that also influence performance.

Based on the results of this study, supported by various previous studies, it can be concluded that competency plays a crucial role in determining employee performance levels. High competency enables employees to complete work on time, maintain quality, and adapt to changes and the use of technology in the workplace. However, there is still room for improvement, particularly in terms of technological mastery and understanding of work procedures. Therefore, organizations need to continuously encourage competency improvement through training, coaching, and ongoing skills development. These improvement efforts will not only strengthen individual performance but will also positively impact overall organizational performance.

3.2. The Influence of Information and Communication Technology (ICT) on Employee Performance

The results of the study indicate that Information and Communication Technology (ICT) has a positive effect on employee performance. This indicates that, in general, employees at the West Kotawaringin Consulting Office have adequate competence in carrying out their work duties. Employees are assessed as being able to understand job responsibilities, master work procedures, and complete work according to the specified time targets. The indicator with the highest score is "I am able to complete work according to the specified time target," indicating that Employees have good time management skills and work effectiveness. Meanwhile, the indicators with the lowest scores were "I understand the procedures and workflows in the office" and "I use available tools or technology effectively in my work," indicating a need for improvement in understanding work procedures and optimal use of work technology.

Furthermore, the results of the multiple linear regression analysis indicate that competence has a positive and significant effect on employee performance, thus concluding that increasing employee competence will directly impact their performance. These results demonstrate that the higher the level of employee abilities, skills, and professional attitudes, the better the work results. Competent employees are better able to manage time, overcome obstacles, and adapt to technological developments and changes in the work environment. This finding aligns with the theory proposed by Spencer and Spencer (1993), which explains that competence is a basic individual characteristic that influences a person's effectiveness and success in carrying out their work. Competence encompasses knowledge, skills, and attitudes that form the basis of productive work behavior.

The findings of this study are supported by a number of recent previous studies. Research by Ernita Sulistyorini and Nur Wening (2025) showed that technical competence has a positive and significant influence on employee performance across various sectors. Similar results were also obtained from Ahmad's research.

Syauqi, Edi Awan, Imam Anas Mubarak, and Rahmat Zulkarnain (2024) found that competence has a strong direct influence on performance, as well as an indirect influence through work discipline. Furthermore, research by Sri Mulyani and Adhie Fasha Nurhadian (2023) found that competence contributes significantly to improving employee performance, although compensation also plays a significant role.

Furthermore, research by Lailan Azizah and Muhammad Isa Indrawan (2024) also found that competence significantly influences employee performance, with an Adjusted R^2 value of 0.112. Another study by Rama Gunawan, Sinta Aulia, and Yudi Prakoso (2024) confirmed that professional competence, both directly and indirectly through employee engagement, positively influences employee performance. All of these research findings are consistent with the findings of this study, which show that competence is one of the main factors significantly influencing employee performance.

Thus, it can be concluded that competence plays a significant role in improving employee performance at the West Kotawaringin Consulting Office. Employees with a high level of competence are better able to complete work according to standards, maintain the quality of their work, and adapt to organizational demands. Despite these positive results, organizations still need to focus on improving competence through technology-based training, coaching, and skills development programs. These competency-building efforts should not only influence individual performance, but also make a direct contribution to the effectiveness and productivity of the organization as a whole.

3.3. Information and Communication Technology (ICT) Moderating competency variables on employee performance

Based on the results of the moderation regression analysis, it was found that the Information and Communication Technology (ICT) variable significantly moderates the relationship between employee competence and performance at the West Kotawaringin Consulting Office. The significance value of the competency interaction indicates that the higher the utilization and mastery of ICT by employees, the stronger the influence of competence on performance. This means that employee competence will have a maximum impact on performance if supported by the ability to use information and communication technology relevant to the job.

The descriptive analysis results indicate that the implementation of ICT in the workplace is in the good category, meaning that most employees are able to utilize digital technologies such as computers, communication applications, and work information systems to support task completion. Increased use of ICT has been shown to accelerate workflows, improve data

accuracy, and facilitate collaboration between departments. Therefore, employees' technical and professional competencies are increasingly effective when balanced with digital literacy and adaptation to technological innovation.

This finding supports the theory put forward by Laudon and Laudon (2022) which states that information technology functions as an enabler.

Organizations can improve productivity and work effectiveness. ICT enables employees to optimize their capabilities through rapid access to information, efficient communication, and the automation of work processes. In this context, competency is not only related to technical skills but also involves the ability to adapt to changes in technology and the digital work environment.

The results of this study align with several previous studies. Ahmad Syauqi, Edi Awan, Imam Anas Mubarak, and Rahmat Zulkarnain (2024) explained that competence significantly influences performance, and supporting factors such as technology utilization strengthen this relationship. Furthermore, Ernita Sulistyorini and Nur Wening (2025) found that technical competence supported by the use of modern technology significantly impacts work productivity.

Research by Sri Mulyani and Adhie Fasha Nurhadian (2023) also revealed that the ability to use an organization's internal technology systems strengthens the influence of competence on employee performance. Furthermore, research by Rama Gunawan, Sinta Aulia, and Yudi Prakoso (2024) confirmed that mastery of digital technology strengthens the positive effect of competence on performance because technology increases engagement and work efficiency. Further research by Lailan Azizah and Muhammad Isa Indrawan (2024) also shows that employee performance improves when competence is accompanied by the ability to operate ICT-based systems implemented by the agency.

Overall, the results of this study reinforce the understanding that ICT is not merely an administrative tool, but also functions as a moderating factor in increasing the effectiveness of competency on performance. Competent employees who lack technological expertise tend to be unable to maximize their work potential, while employees who possess high competency and are proficient in utilizing ICT demonstrate significantly more optimal performance. Therefore, organizations need to develop digital-based training policies and technology-integrated work systems to ensure the synergy between competency and ICT can run effectively.

Thus, it can be concluded that ICT strengthens the relationship between employee competency and performance, making technology a strategic factor that must be continuously developed in the modern workplace. Improving digital competency and technological literacy among employees will be key to organizational success in facing the challenges of digital transformation and enhancing competitiveness and performance in the Industry 5.0 era.

4. Conclusion

Based on the results of research on the Role of Information and Communication Technology (ICT) in Improving Employee Performance at the West Kotawaringin Regency Consultant Office, several conclusions can be drawn as follows: 1. Competence has a positive and significant effect on employee performance. The results of the regression analysis indicate that the higher an employee's competency, in terms of knowledge, skills, and work attitude, the higher their performance. A significance value below 0.05 confirms that competency is the dominant factor in increasing employee productivity and work quality. 2. The use of ICT in the workplace has been proven to help speed up task completion, increase communication efficiency, and improve work accuracy and effectiveness. Analysis shows that employees who are able to optimally utilize information technology have higher productivity and performance compared to employees who make less use of technology in their work activities. 3. Information and Communication Technology (ICT) acts as a moderating variable that strengthens the relationship between competence and performance. Employees with high competency and the ability to use information technology demonstrate more optimal performance than employees who utilize ICT less. The significant interaction between competency and ICT demonstrates that technological mastery is a crucial factor in maximizing employee competency potential.

5. References

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