

THE IMPACT OF COMPETENCE AND COMPENSATION ON THE PERFORMANCE OF INFECTION PREVENTION AND CONTROL COMMITTEE MEMBERS WITH A PARTICULAR FOCUS ON THE MEDIATING ROLE OF COMPENSATION

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ABSTRACT

INTRODUCTION:

The performance of Infection Prevention and Control (IPC) Committee members plays a critical role in ensuring effective healthcare safety protocols. Understanding how competence and compensation influence this performance, with particular attention to the mediating role of compensation, is essential for optimizing healthcare systems and improving outcomes. This study aimed to analyze the effect of competence and compensation on the performance of IPC committee members.

METHODS:

This study was conducted at the Regional General Hospital under the Southeast Sulawesi Provincial Health Office, Indonesia. A sample size of 212 members was determined based on geographical clusters. The data were then analyzed using the PLS-SEM technique.

RESULTS:

The path coefficient for the effect of competence on employee performance is 0.508, with a p-value of 0.000, which is statistically significant. The effect of compensation on employee performance is indicated by a coefficient value of 0.361, with a p-value of 0.000. Additionally, the coefficient value for the mediation effect of compensation between competence and employee performance is 0.242, with a p-value of 0.000.

CONCLUSION:

This study found that competence and compensation significantly and positively affect the performance of members of the Southeast Sulawesi IPC Committee.

KEYWORDS

HAIs, competence, compensation, performance; infection prevention and control committee

INTRODUCTION

Nowadays, quality healthcare has become a global concern [1,2]. In fact, every level of society has now realized the importance and demand for quality in healthcare services. For this reason, several countries have begun to establish various indicators to measure the quality of health services, including the accreditation of healthcare facilities such as clinics, public health centers, and hospitals [1,3,4]. Accreditation of hospitals aims to at least reduce the risk of infection. Infections in healthcare facilities, known as Healthcare Associated Infections (HAIs), are infections acquired by patients during the treatment process. These infections are either not present or have not yet entered the incubation period when the patient is admitted. Included in this category are infections that are acquired in the hospital but only appear after the patient is discharged. In addition to patients, HAIs can also occur in health workers and hospital staff [5,6]. According to a survey conducted in hospitals in the United States, there were 722,000 cases of HAIs in acute care units, resulting in 75,000 patient deaths from HAIs [7]. Meanwhile, several studies have found many cases of HAIs in Indonesia [8–10].

Infection prevention and control (IPC) should not be considered as a separate aspect of the health profession, but as a collection of principles that are crucial to implement in order to reduce the risk of infection for patients and others. Therefore, as an important indicator in improving service quality, every hospital is required to have an IPC committee [6]. In Southeast Sulawesi, all hospitals under the Southeast Sulawesi Provincial Health Office have established an IPC committee, comprising various healthcare professionals including IPC practitioners, IPC nurses, general practitioners, specialists, dentists, room nurses, and other health workers, with a total of 447 members as of March 31, 2023. However, despite this initiative, the performance of these IPC committees appears to have fallen short of expectations. The incidence of infections (HAIs) in Southeast Sulawesi Regional Hospital exceeds the national rate, standing at more than 1%. Furthermore, routine IPC reporting on a quarterly basis has not been implemented, indicating a gap in monitoring and evaluation processes [11].

Infection prevention and control (IPC) is a crucial aspect of healthcare quality [12–14]. All hospitals under the Southeast Sulawesi Provincial Health Office have established IPC committees, comprising various healthcare professionals. However, despite this initiative, IPC committee's performance has fallen short of expectations, with HAIs in Southeast Sulawesi Regional Hospital exceeding the national rate.

The non-optimal performance of IPC likely stems from various factors, with work competence being a significant contributor [14,15]. Work competence encompasses the knowledge, skills, and attitudes necessary for effective task execution. Employees equipped with adequate competencies excel in problem identification, solution implementation, and service standard maintenance. Additionally, competency significantly influences compliance with IPC protocols, a crucial aspect of infection prevention in hospitals [16–18].

Based on this background, this study aims to determine the impact of competence and compensation on the performance of IPC committee members, with a particular focus on the mediating role of compensation

LITERATURE REVIEW

Work competence has been shown to have a positive relationship with employee performance. Competence includes knowledge, skills, and attitudes required to carry out tasks effectively. Research has demonstrated that high competence is directly related to increased productivity and work quality. Employees with strong competencies are better at adhering to infection prevention measures, identifying problems, and maintaining high standards of service.

However, competence alone is not always sufficient to guarantee good performance. Other factors such as motivation, work environment, and psychological well-being also significantly influence performance. Studies suggest that while competence is crucial, it must be supported by good management and effective work systems to maximize its impact.

Another major factor influencing employee performance is compensation. Fair and competitive compensation can increase motivation and productivity. Research shows that financial incentives encourage employees to work harder and more efficiently. However, excessive financial compensation may undermine intrinsic motivation, causing employees to lose interest in their work beyond financial rewards. Thus, an optimal balance between financial incentives and a supportive work environment is necessary for improving performance.

This study examines the impact of competence and compensation on IPC committee members' performance, with compensation acting as a mediating variable. The literature review concludes with the identification of research gaps and the development of a conceptual framework for this study.

METHODS

This research is explanatory in nature, aiming to provide an explanation of the influence (causality) between variables through hypothesis testing. The study was conducted in Regional Public Hospitals under the Southeast Sulawesi Provincial Health Office, Indonesia. The population consisted of IPC members serving in 17 Southeast Sulawesi Regional Public Hospitals, totaling 447 IPC members. The sample size was determined using the Slovin formula with a 5% margin of error, resulting in 212 research samples. A probability sampling technique, specifically cluster random sampling, was used to select the sample. Cluster sampling was chosen because the population could be divided into geographic clusters.

Data collection was conducted through personal visits and online surveys using structured questionnaires. Questionnaire surveys can involve large samples without geographical restrictions. The data collection utilized closed-ended items with a fixed set of answers for respondents to choose from. The instruments used to measure variables were adapted from measures developed by several previous researchers.

Competency variables were measured using KSA-based competency indicators (knowledge, soft skills, hard skills, and attitudes) developed by Huang et al. [21] and Zhang [22]. The knowledge aspect includes understanding IPC protocols, infection control guidelines, and hospital hygiene standards. Soft skills encompass communication, teamwork, and adaptability in clinical settings, while hard skills involve technical expertise in infection prevention procedures. Attitudes were measured based on professional responsibility and commitment to infection control practices. Compensation was measured using indicators developed by Tessema & Soeters [23], covering financial and non-financial aspects. Financial compensation includes salary, incentives, bonuses, and benefits, while non-financial compensation involves recognition, career advancement opportunities, and job security. Employee performance was measured using task performance indicators developed by Koopmans et al. [24]. These indicators include efficiency in carrying out infection prevention protocols, adherence to hospital IPC guidelines, effectiveness in implementing infection control measures, and overall contribution to reducing Healthcare-Associated Infections (HAIs). The questionnaire employed a five-point Likert scale where respondents ranked each item according to 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

To ensure the indicators used in this study are valid and reliable, validity and reliability tests were conducted. The validity test employed included outer loading and convergent validity (AVE). Reliability was assessed using composite reliability and Cronbach's Alpha. The results of these tests are shown in Table 2. Table 2 indicates that valid and reliable indicators as a supporting model have an outer loading value above 0.50, composite reliability above 0.70, and AVE above 0.5. The test results showed that the outer loading and AVE values of all indicators were above 0.5, and both composite reliability and Cronbach's Alpha values were greater than 0.60. Based on these results, with the AVE coefficient above 0.50, and composite reliability and Cronbach's Alpha above 0.60, the overall data can be considered valid and reliable.

After data collection and the completion of validity and reliability tests, the data was analyzed. The analysis employed the PLS-SEM technique and was conducted in three stages: the measurement model evaluation stage, the structural model evaluation stage, and the hypothesis testing stage.

RESULTS

TABLE 1. MODEL FIT TEST

Variable	R ²	Q ²	SRMR
Compensation	0.449	0.218	0.086
Staff Performance	0.634	0.464	

The results of model fit testing presented in Table 1 indicate that the R² value for the effect of work competence on compensation is 0.449. This means that work competence explains 44.9% of the variation in compensation. Meanwhile, the R² value for employee performance is 0.634, indicating that work competence and compensation together explain 63.4% of the variation in employee performance. In addition to the R² criterion, the fit of the model can also be evaluated using the Q-Square (Q²) value. The Q² value is 0.218 for compensation and 0.464 for employee performance, indicating the model's predictive power of 21.8% for compensation and 46.4% for employee performance. Furthermore, model fit can be assessed using the Standardized Root Mean Square Residual (SRMR) indicator. A model is considered to have a good fit if the SRMR value is below 0.10. The SRMR value of the model used in this study is 0.086, which indicates that the research model has a good fit. Overall, based on a review of the model fit criteria, all indicators suggest that the research model has a good level of accuracy.

TABLE 2. RESPONDENTS CHARACTERISTICS

Demography	Category	Total	Percentage (%)
Gender	Male	73	34.43
	Female	139	65.57
Age (Years old)	22 – 31	29	13.68
	32 – 41	93	43.87
	42 – 51	81	38.21
	52 – 61	9	4.25
	62 – 71	0	0.00
Tenure (years)	01 – 10	94	44.34
	11 – 20	100	47.17
	21 – 30	17	8.02
	31 – 40	1	0.47
Employment	Civil servants	179	84.43
	Contract staff	7	3.30
	Honorary Staff	26	12.26
Types of Health Workers	IPC Practitioner	11	5.9
	IPC Nurse	16	7.55
	General practitioner	17	8.02
	Specialist	7	3.30
	Dentist	2	0.94
	Ward nurse	65	30.66
	Other health staff	94	44.34

In Table 2 shows that 73 respondents (34.43%) were male, while 139 respondents (65.57%) were female. The age of respondents ranged from 22 to 53 years, with the largest distribution in the range of 32 to 51 years, accounting for 174 respondents (82.08%). Only 9 respondents (4.25%) were older than 52 years. The tenure of respondents ranged from 1 to

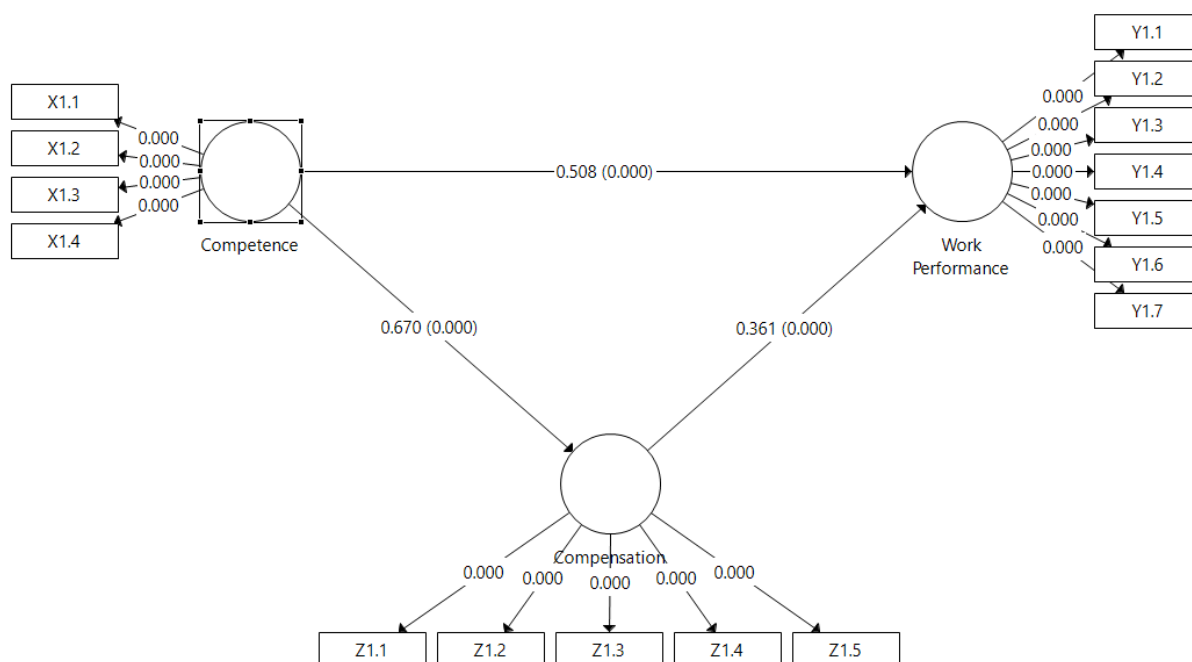
40 years, with the majority (194 respondents) having a tenure of 1 to 20 years. Most of the respondents (179 people, 84.43%) were civil servants. All respondents in this study were health workers who were members of the PPI Committee. The most common types of health workers were ward nurses (65 respondents, 30.66%) and other health workers (94 respondents, 44.34%).

TABLE 3. HYPOTHESIS TEST

	Correlations	Coefficient	t-stat	p-value	Caption
H1	Competence → Staff Performance	0.508	7.963	0.000	Accepted
H2	Competence → Compensation	0.670	16.553	0.000	Accepted
H3	Compensation → Staff Performance	0.361	6.212	0.000	Accepted
H4	Competence → Compensation → Staff Performance	0.242	5.935	0.000	Accepted

Table 3 shows that path coefficient for the effect of competence on employee performance is 0.508, with a p-value of 0.000 ($p < 0.05$). This indicates that the effect of competence on employee performance is positively significant. Similarly, the effect of compensation on employee performance is represented by a coefficient value of 0.361, with a p-value of 0.000, indicating that compensation has a significant positive effect on employee performance. Consequently, hypothesis 3, which states that compensation has a significant positive effect on employee performance, is supported. Additionally, the test results show that increasing competence significantly increases compensation. The coefficient for the effect of competence on compensation is 0.670, with a p-value of 0.000, demonstrating that competence has a significant positive effect on compensation. Therefore, hypothesis 2, which states that competence has a significant positive effect on compensation, is also supported.

FIGURE 1. THE RESULTS OF TESTING THE ROLE OF COMPENSATION AS A MEDIATING VARIABLE OF COMPENSATION IN THE RELATIONSHIP BETWEEN COMPETENCE AND EMPLOYEE PERFORMANCE



In Figure 1 shows that coefficient value is 0.242, with a p-value of 0.000. This indicates that compensation acts as a mediator in the relationship between competence and employee performance. Since the direct relationship between competence and compensation, as well as the direct relationship between compensation and employee performance, is significant, compensation serves as a partial mediator.

DISCUSSION

The results of this study support the hypothesized model and specifically reveal the mediating role of compensation in the relationship between employee competence and performance. Competencies, represented by knowledge, soft skills, hard skills, and attitudes, were found to positively and significantly influence both the compensation and performance of IPC committee members in Southeast Sulawesi. This finding aligns with Becker's Human Capital Theory [25], which posits that investment in knowledge and skills increases an individual's productivity and value in the labor market, subsequently leading to higher compensation. Additionally, it supports Vroom's Expectancy Theory [26], which suggests that employees are motivated to improve their performance if they believe that better performance will result in higher compensation.

This research is consistent with the findings of a study conducted by Martini et al. [14], which showed that employee competency development is closely related to improved performance and compensation. However, other studies have shown different results. For instance, Efendi and Yusuf [15] found that the relationship between competence and performance is not always mediated by compensation. They argue that other factors, such as organizational culture and managerial support, also play an important role in determining employee performance.

Hypothesis testing also helps to understand the effect of compensation on the performance of IPC Sultra Committee members. Compensation refers to any form of payment given to individuals for work performed for the organization. The results of this study indicate that compensation plays a significant role in influencing the performance of committee members. This finding confirms that a good compensation system can improve employee motivation and performance. Vroom's Expectancy Theory [26] is particularly relevant in this context. This theory suggests that individuals will be motivated to work harder if they believe that greater effort will result in better performance, which will eventually be followed by appropriate rewards, including compensation. Therefore, when IPC Sultra committee members feel that they are compensated fairly and in accordance with their contributions, they will be more motivated to improve their performance. Additionally, Adams' Equity Theory [27] also supports this finding. According to this theory, employees compare the ratio of their input (such as effort and competence) to outputs (such as compensation) with others in the organization. If they feel that they receive fair compensation compared to their peers, they will feel motivated and satisfied, positively impacting their performance.

Previous research also supports these findings. For example, a study conducted by Heneman et al. [28] shows a positive relationship between a good compensation system and improved employee performance. Similarly, research by Akbar et al. [29] indicates that competitive and fair compensation can increase employee motivation and performance. However, some studies show different results. For instance, research conducted by Ramli [12] found that in some cases, excessive compensation can reduce employees' intrinsic motivation. They argue that when employees focus too much on extrinsic compensation, they may lose intrinsic interest in their work, which can ultimately negatively impact performance.

The results of hypothesis testing also reveal the mediating role of compensation in the relationship between competence and performance among members of the Southeast Sulawesi PPI Committee. This study demonstrates that high competence, which includes knowledge, skills, and professional attitudes, can significantly improve performance through increased compensation. In other words, compensation acts as a mediator that strengthens the relationship between competence and performance. These findings are supported by Becker's Human Capital Theory [25], which states that investment in individuals' competencies through education and training increases their productivity and value to the organization. This increase in competence is then recognized and rewarded by the organization through increased compensation, which in turn motivates employees to work harder and improve their performance.

LIMITATION

This research has several limitations that warrant further in-depth investigation. Firstly, the study was conducted solely on IPC Committee members in Southeast Sulawesi, which may limit the generalizability of the results to other organizations or

regions. Future research could broaden the sample to include diverse regions and types of organizations to enhance the generalizability of the findings. Secondly, this study employed a cross-sectional design, which may not capture long-term changes in competence, compensation, and performance. Future research should consider using a longitudinal research design to examine how the relationship between competencies, compensation, and performance evolves over time. Additionally, this study did not account for other external factors that could influence performance, such as working conditions, organizational environment, and work culture. Future research could include variables such as working conditions, intrinsic motivation, managerial support, and organizational culture to provide a more comprehensive understanding of the factors affecting performance.

CONCLUSION

This study found that competence and compensation significantly and positively affect the performance of members of the Southeast Sulawesi IPC Committee. Competencies, including knowledge, skills, and attitudes, directly impact performance and also influence performance through increased compensation. Additionally, compensation itself has a significant positive influence on committee members' performance. Furthermore, compensation acts as a mediating variable in the relationship between competence and performance, suggesting that increased competence followed by appropriate compensation can effectively improve performance.

Meanwhile, several implications arise from this research. Organizations, especially the IPC Southeast Sulawesi Committee, need to focus on developing members' competencies through continuous training and education. It is crucial to ensure that the compensation system implemented is fair and competitive to motivate committee members to improve their performance. Decision makers in the health sector should consider increasing budget allocations for training and human resource development programs. They should also review the compensation system to align with employee contributions and competencies. Managers and team leaders in the PPI Committee need to adopt an approach that combines competency development and fair rewards to encourage better performance from their members.

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CONFLICT OF INTEREST

The authors report no conflict of interest.

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AUTHORS' CONTRIBUTION

All authors equally contributed to preparing this article.

References

1. Organization WH. Quality and accreditation in health care services: a global review. 2003.
2. Kilbourne AM, Beck K, Spaeth-Rublee B, Ramanuj P, O'Brien RW, Tomoyasu N, et al. Measuring and improving the quality of mental health care: a global perspective. *World psychiatry*. 2018;17(1):30–8.
3. Scrivens E. Accreditation and the regulation of quality in health services. *Regul Entrep Behav Eur Heal care Syst*. 2002;91.
4. Alkhenizan A, Shaw C. Impact of accreditation on the quality of healthcare services: a systematic review of the literature. *Ann Saudi Med*. 2011;31(4):407–16.
5. Saleem Z, Godman B, Hassali MA, Hashmi FK, Azhar F, Rehman IU. Point prevalence surveys of health-care-associated infections: a systematic review. *Pathog Glob Health*. 2019;113(4):191–205.

6. Al-Tawfiq JA, Tambyah PA. Healthcare associated infections (HAI) perspectives. *J Infect Public Health*. 2014;7(4):339–44.
7. Henley SJ, King JB, German RR, Richardson LC, Plescia M. Centers for Disease Control & Prevention (CDC). 2010.
8. Sapardi VS, Machmud R, Gusty RP. Analisis Pelaksanaan Manajemen Pencegahan Dan Pengendalian Healthcare Associated Infections Di RSI Ibnu sina. *J Endur*. 2018;3(2):358–66.
9. Maharani DRD. Literature Review: Gambaran Pengetahuan, Kepatuhan, Teknik Cuci Tangan dan Kejadian Infeksi Nosokomial. *Prof Heal J*. 2023;4(2sp):20–30.
10. Asnawati R, Syukur SB, Yunus H, Abas FF, Tabrani S, Yahya M. Pengendalian Infeksi Di Ruangan Interna RSUD Aloe Saboe Kota Gorontalo. *J-ABDI J Pengabdian Kpd Masy*. 2022;1(11):3211–6.
11. Dinas Kesehatan Provinsi Sulawesi Tenggara. Profil Kesehatan Sulawesi Tenggara 2020. 2020.
12. Ramli AH. Organizational Culture, Job Satisfaction Also Employee Accomplishment in the Private Hospital. *Bus Entrep Rev*. 2019;19(2):157–68.
13. Muis MR, Jufrizen J, Fahmi M. Pengaruh budaya organisasi dan komitmen organisasi terhadap kinerja karyawan. *Jesya (Jurnal Ekon dan Ekon Syariah)*. 2018;1(1):9–25.
14. Martini IAO, Supriyadinata AANE, Sutrisni KE, Sarmawa IWG. The dimensions of competency on worker performance mediated by work commitment. *Cogent Bus Manag*. 2020;7(1).
15. Efendi S, Yusuf A. Influence of Competence, Compensation and Motivation on Employee Performance With Job Satisfaction As Intervening Variable in the Environment of Indonesian Professional Certification Authority. *Int J Econ Bus Account Res*. 2021;5(3):1078–88.
16. Sandi Q, Syukri A, Us KA. Manajemen Sumber Daya Manusia Dalam Meningkatkan Keunggulan Kompetitif. *AlGhazali*. 2019;2(2):63–84.
17. Bariqi MD. Pelatihan dan pengembangan sumber daya manusia. *J Stud Manaj dan bisnis*. 2018;5(2):64–9.
18. Spencer ML, Spencer MS. *Competence at Work: Models for Superior Performance*, John Wiley & Son. Inc New York, USA. 1993.
19. Vidyani N, Desiana P. The Effect of Knowledge Sharing on Affective Commitment: The Mediation Role of Competency Development of Gen Y Employees at PT PP (Persero), Tbk Head Office. 2019.
20. Idris, Adi KR, Soetjipto BE, Supriyanto AS. The mediating role of job satisfaction on compensation, work environment, and employee performance: Evidence from Indonesia. *Entrep Sustain Issues*. 2020;8(2):735–50.
21. Huang X, Li Z, Wang J, Cao E, Zhuang G, Xiao F, et al. A KSA system for competency-based assessment of clinicians' professional development in China and quality gap analysis. *Med Educ Online*. 2022;27(1).
22. Zhang A. Peer assessment of soft skills and hard skills. *J Inf Technol Educ*. 2012;11(1):155–168. doi: 10.2147/IJGM.S363474.
23. Teclemichael Tessema M, Soeters JL. Challenges and prospects of HRM in developing countries: testing the HRM–performance link in the Eritrean civil service. *Int J Hum Resour Manag*. 2006;17(1):86–105. <https://doi.org/10.1080/09585190500366532>.
24. Koopmans L, Bernaards CM, Hildebrandt VH, van Buuren S, van der Beek AJ, de Vet HCW. Improving the Individual Work Performance Questionnaire using Rasch analysis. *J Appl Meas*. 2014;15(2):160–75.
25. Becker GS. Investment in human capital: effects on earnings. In: *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, Second Edition. NBER; 1975. p. 13–44.
26. Vroom V, Porter L, Lawler E. Expectancy theories. In: *Organizational Behavior 1*. Routledge; 2015. p. 94–113.
27. Adams JS, Berkowitz L, Hatfield E. Equity theory: Toward a general theory of social interaction. (No Title). 1976;
28. Heneman RL, Greenberger DB, Fox JA. Pay increase satisfaction: A reconceptualization of pay raise satisfaction based on changes in work and pay practices. *Hum Resour Manag Rev*. 2002;12(1):63–74.
29. Akbar A, Musadieq M Al, Mukzam M. Pengaruh komitmen organisasional terhadap kinerja (Studi pada karyawan PT Pelindo Surabaya). Brawijaya University; 2017.