

A Model For Improving The Scientific Work Productivity Of Lecturers At Universitas Malahayati Through Competence, Workload, Incentives, And Motivation

Afit Afrizal¹, Dahlan Gunawan², Reza Hardian Pratama³

^{1,3}) Management, Economi And Management , Universitas Malahayati.

²) Management, Economic And Bussines, Universitas Negeri Jakarta.

Jl. Pramuka No. 27, Kemiling Permai, Kecamatan Kemiling, Kota Bandar Lampung, Provinsi Lampung, Indonesia.

Email: Afit@Malahayati.ac.id, Dahlangunawan@Gmail.Com, Rezahardianpratama@malahayati.ac.id

ABSTRACT

Scientific work productivity among lecturers is an important indicator of improving the quality and competitiveness of higher education institutions. This study aims to analyze a model for improving lecturers' scientific work productivity at Universitas Malahayati through competence, workload, and incentives, with motivation as a mediating variable. This study employed a quantitative approach with an explanatory research design. The research population consisted of lecturers at Universitas Malahayati, with a sample of 119 respondents selected using purposive sampling. Data were collected through a questionnaire using a Likert scale and analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The research model examined the direct effects of competence, workload, and incentives on scientific work productivity, as well as their effects on motivation. Furthermore, motivation was examined as a mediator in the relationships between the independent variables and scientific work productivity. The results are expected to provide empirical insights into the individual and organizational factors that contribute to improving lecturers' scientific work productivity. This study is also expected to serve as a basis for Universitas Malahayati in designing strategies for competency development, workload management, incentive provision, and motivation enhancement to sustainably improve both the quantity and quality of lecturers' scientific work.

Keywords: competence, workload, incentives, motivation, scientific work productivity, lecturers.

Introduction

Higher education institutions play a strategic role in producing qualified human resources while advancing knowledge through education, research, and community service activities. Within the implementation of the Three Pillars of Higher Education (*Tridharma Perguruan Tinggi*), lecturers are not only required to conduct teaching and learning activities but are also expected to produce high-quality and sustainable scientific works. Scientific outputs produced by lecturers, including journal articles, conference proceedings, books, intellectual property rights, and other research outputs, constitute important indicators for assessing academic productivity and the contribution of higher education institutions to the advancement of knowledge., [1], [2], [3]

The scientific productivity of lecturers has become increasingly important as higher education institutions face growing demands to strengthen research and publication cultures. Scientific publications not only serve as a means of disseminating research findings but also contribute to enhancing academic reputation, institutional rankings, lecturers' career development, and institutional recognition at both national and international levels. Therefore, the ability of higher education institutions to improve lecturers' scientific productivity constitutes an important component of institutional quality enhancement and competitiveness strategies [4], [5], [6]

Universitas Malahayati, as one of the private higher education institutions in Bandar Lampung, also faces the need to improve lecturers' academic productivity, particularly in producing scientific works. Lecturers have complex responsibilities, ranging from conducting teaching activities, undertaking research, performing community service, supervising students, carrying out administrative duties, and participating in various academic and institutional activities.,[7], [8], [9] These conditions indicate that productivity in producing scientific works is not determined solely by lecturers' academic abilities but is also influenced by various individual and organizational factors.

One factor expected to influence scientific work productivity is lecturer competence. Competence reflects lecturers' abilities, knowledge, skills, and capacities to perform their professional responsibilities. In the context of research and publication, lecturers require competencies in formulating research problems, determining appropriate research methods, conducting data analysis, preparing scientific manuscripts, selecting suitable journals, and understanding the publication process. Lecturers who possess strong research and publication competencies tend to have greater capacity to produce

scientific works productively. Conversely, limitations in competence may become obstacles to the process of producing and publishing scientific works [10], [11], [12]

Workload represents an important factor that needs to be considered [7], [9], [13], [14] Lecturers simultaneously perform various academic and non-academic activities. Teaching responsibilities, student supervision, academic administration, institutional activities, research, and community service require substantial allocations of time and energy. An excessive or disproportionate workload may reduce the time available for lecturers to conduct research and prepare scientific publications. Therefore, workload needs to be managed appropriately so that it does not become a barrier to research and publication productivity [11], [13], [17], [18], [19], [20].

Incentives also play an important role in encouraging lecturers' productivity. Producing scientific works requires time, effort, competence, and consistency. Appropriate incentives can serve as a form of institutional recognition of lecturers' academic contributions. Incentives may include financial rewards, publication funding support, recognition of publication achievements, research facilities, and other forms of academic recognition. A clear, fair, and transparent incentive system has the potential to encourage lecturers to increase their engagement in research and publication activities [8], [9], [20], [21]. Individual and organizational factors such as competence, workload, and incentives do not necessarily result in high levels of scientific work productivity. This may occur because psychological factors influence how lecturers respond to their work environment [8], [9], [15]. Motivation represents the driving force that encourages individuals to direct their efforts, time, and energy toward achieving particular goals. In an academic context, motivation can encourage lecturers to conduct research, write and publish research findings, improve the quality of scientific works, and achieve established academic targets. In this study, motivation is positioned as a mediating variable that explains the mechanism through which competence, workload, and incentives may be associated with lecturers' scientific work productivity.

Lecturers with adequate competence may possess greater confidence and motivation to engage in research activities [9], [21], [22], [23], [24]. Effective workload management may provide lecturers with sufficient time and energy to conduct research. Meanwhile, appropriate incentives may strengthen lecturers' motivation to produce scientific works. These three factors may ultimately contribute to productivity through increased lecturer motivation. The issue addressed in this study is that improving lecturers' scientific work productivity cannot be achieved merely by establishing publication targets. Institutions need to understand the factors that facilitate or constrain lecturers' ability to produce scientific works [25], [26], [27]. Adequate competence needs to be supported by proportional workload management and an incentive system capable of recognizing academic achievements. At the same time, lecturers' motivation needs to be strengthened so that institutional policies can be translated into productive behavior in research and publication activities [28], [29], [30].

Based on the foregoing discussion, a model is needed to explain the relationships among competence, workload, incentives, motivation, and lecturers' scientific work productivity. Such a model is expected to provide empirical evidence regarding the factors that play the most important roles in improving the scientific work productivity of lecturers at Universitas Malahayati. The findings are also expected to provide a basis for the institution in designing more effective policies for competency development, workload distribution, incentive systems, and strategies for strengthening lecturer motivation.

Hypotheses :

H1: Competence has a positive and significant effect on the scientific work productivity of lecturers at Universitas Malahayati.

H2: Workload has a negative and significant effect on the scientific work productivity of lecturers at Universitas Malahayati.

H3: Incentives have a positive and significant effect on the scientific work productivity of lecturers at Universitas Malahayati.

H4: Competence has a positive and significant effect on the motivation of lecturers at Universitas Malahayati.

H5: Workload has a negative and significant effect on the motivation of lecturers at Universitas Malahayati.

H6: Incentives have a positive and significant effect on the motivation of lecturers at Universitas Malahayati.

H7: Motivation has a positive and significant effect on the scientific work productivity of lecturers at Universitas Malahayati.

H8: Motivation mediates the effect of competence on the scientific work productivity of lecturers at Universitas Malahayati.

H9: Motivation mediates the effect of workload on the scientific work productivity of lecturers at Universitas Malahayati.

H10: Motivation mediates the effect of incentives on the scientific work productivity of lecturers at Universitas Malahayati.

Research Method

This study employed a quantitative approach with an explanatory research design aimed at explaining the relationships and effects among competence, workload, incentives, motivation, and lecturers' scientific work productivity. According to Sugiyono, quantitative research is used to examine specific populations or samples through data collection using research instruments and statistical data analysis to test predetermined hypotheses. The study was conducted among lecturers at Universitas Malahayati, Bandar Lampung, with the research object focusing on lecturers' productivity in producing scientific works. The research population consisted of all lecturers at Universitas Malahayati, Based on the Slovin formula, the sample size was calculated as follows:

$$n = \frac{310}{1 + 310(e)^2} = 99.9 = 100.$$

Thus, the total number of respondents used in this study was 119. while the sample was determined using purposive sampling, namely the selection of respondents based on specific criteria, such as being active lecturers at Universitas Malahayati and being involved in the *Tridharma Perguruan Tinggi* (Three Pillars of Higher Education). The determination

of the sample size referred to [31], which states that sample size should consider the population size and characteristics of the study. In this study, a total of 119 respondents were obtained as the research sample.

Primary data were collected through questionnaires using a Likert scale, while supporting data were obtained through relevant documentation and literature. The relationships examined in this study included the effects of competence (X1), workload (X2), and incentives (X3) on motivation (Z), as well as the effects of these three independent variables and motivation (Z) on lecturers' scientific work productivity (Y). Motivation was also examined as a mediating variable to determine whether competence, workload, and incentives could improve scientific work productivity through increased lecturer motivation. Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to evaluate both the measurement model and the structural model. The measurement model was evaluated through validity and reliability testing, while the structural model was analyzed using path coefficients, R^2 values, and hypothesis testing through bootstrapping [32]. The mediation effects were analyzed using the indirect effect to determine the role of motivation in the relationships between the independent variables and lecturers' scientific work productivity.

Results and Discussion

The research analysis included descriptive analysis, validity testing, reliability testing, discriminant validity using the Fornell-Larcker criterion, R-Square analysis, path coefficient analysis, and mediation analysis. Descriptive analysis was used to describe the characteristics of the data, while validity and reliability testing were conducted to ensure the quality of the research instrument. The Fornell-Larcker criterion and R-Square analysis were used to evaluate discriminant validity and the model's ability to explain the endogenous variables. path coefficient and mediation analyses were conducted to determine the direct and indirect effects among the variables in the research model.

Table 1. Descriptive Analysis of Respondents

Characteristics	Category	Frequency (N)	Percentage (%)
Age	25–35 Years	30	25.21
	36–45 Years	51	42.86
	46–55 Years	26	21.85
	>55 Years	12	10.08
	Total Valid	119	100.00
Gender	Male	60	50.42
	Female	59	49.58
	Total Valid	119	100.00
Highest Educational Qualification	Master's Degree (S2)	99	83.19
	Doctoral Degree (S3)	20	16.81
	Total Valid	119	100.00
Length Of Service	<3 Years	11	9.24
	3–5 Years	14	11.76
	6–10 Years	15	12.61
	>10 Years	79	66.39
	Total Valid	119	100.00
Academic Rank	Teaching Staff	20	16.81
	Assistant Professor (100)	6	5.04
	Assistant Professor (150)	25	21.01
	Lecturer (200)	21	17.65
	Lecturer (300)	42	35.29
	Associate Professor (550)	1	0.84
	Associate Professor (750)	1	0.84
	Professor (1050)	3	2.52
	Total Valid	119	100.00
Rank/Grade	Junior Administrator, Iii/A	13	10.92
	Junior Administrator, Grade I, Iii/B	36	30.25
	Administrator, Iii/C	29	24.37
	Administrator, Grade I, Iii/D	34	28.57
	Supervisor, Iv/A	1	0.84
	Supervisor, Grade I, Iv/B	1	0.84
	Senior Supervisor, Grade I, Iv/D	1	0.84
	Senior Supervisor, Iv/E	4	3.36
	Total Valid	119	100.00

Based on the respondents' characteristics, this study involved 119 respondents who provided complete demographic information. In terms of age, the majority of respondents were in the 36–45 age group, comprising 51 respondents (42.86%), indicating that most respondents were of productive age and had substantial academic experience. In terms of gender, the composition was relatively balanced, consisting of 60 male respondents (50.42%) and 59 female respondents (49.58%). Regarding educational attainment, the majority of respondents held a master's degree (s2), with 99 respondents (83.19%), while 20 respondents (16.81%) held a doctoral degree (s3). In terms of length of service, most respondents had worked for more than 10 years, accounting for 79 respondents (66.39%), indicating that the respondents generally had considerable professional experience as lecturers. Regarding academic rank, the largest group consisted of lecturers (300), with 42 respondents (35.29%), followed by assistant professors (150), with 25 respondents (21.01%). In terms of rank/grade, the majority were classified as junior administrators, grade i (iii/b), with 36 respondents (30.25%), followed by administrators, grade i (iii/d), with 34 respondents (28.57%). these characteristics indicate that the respondents were predominantly lecturers of productive age, with a master's degree, more than 10 years of work experience, and diverse academic ranks and professional grades. This demographic composition provides a relevant basis for examining the factors associated with lecturers' scientific work productivity at universitas malahayati.

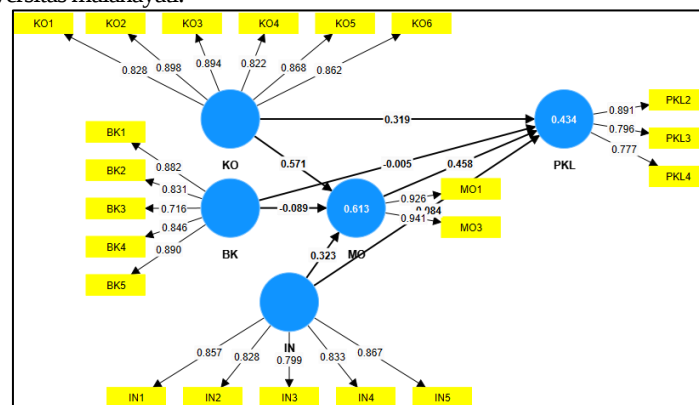


Figure 1. Sem model

Table 2. Validity and reliability test results

Construct	Indicator	Outer Loading	Cronbach's Alpha	Ave	Information
Workload (Bk)	Bk1	0.882	0.891	0.698	Valid And Reliable
	Bk2	0.831	—	—	Valid And Reliable
	Bk3	0.716	—	—	Valid And Reliable
	Bk4	0.846	—	—	Valid And Reliable
	Bk5	0.890	—	—	Valid And Reliable
Incentives (In)	In1	0.857	0.893	0.701	Valid And Reliable
	In2	0.828	—	—	Valid And Reliable
	In3	0.799	—	—	Valid And Reliable
	In4	0.833	—	—	Valid And Reliable
	In5	0.867	—	—	Valid And Reliable
Competence (Ko)	Ko1	0.828	0.931	0.744	Valid And Reliable
	Ko2	0.898	—	—	Valid And Reliable
	Ko3	0.894	—	—	Valid And Reliable
	Ko4	0.822	—	—	Valid And Reliable
	Ko5	0.868	—	—	Valid And Reliable
Motivation (Mo)	Mo1	0.926	0.853	0.871	Valid And Reliable
	Mo3	0.941	—	—	Valid And Reliable
	Pkl2	0.891	0.763	0.677	Valid And Reliable
Scientific Work Productivity (Pkl)	Pkl3	0.796	—	—	Valid And Reliable
	Pkl4	0.777	—	—	Valid And Reliable

Based on the results of the outer loading, Cronbach's alpha, and Average Variance Extracted (AVE) tests, all indicators of the Workload (BK), Incentives (IN), Competence (KO), Motivation (MO), and Scientific Work Productivity (PKL) variables were found to be valid and reliable. The outer loading values for all indicators ranged from 0.716 to 0.941, indicating that all indicators exceeded the minimum threshold of 0.70 and were able to adequately reflect the constructs being measured. The Cronbach's alpha values for each construct also demonstrated good results, with Workload at 0.891, Incentives at 0.893, Competence at 0.931, Motivation at 0.853, and Scientific Work Productivity at 0.763, all of which exceeded the recommended threshold of 0.70. Furthermore, the AVE values were 0.698 for Workload, 0.701 for Incentives, 0.744 for Competence, 0.871

for Motivation, and 0.677 for Scientific Work Productivity. All AVE values exceeded 0.50, thereby satisfying the criteria for convergent validity. Therefore, it can be concluded that all research indicators met the required validity and reliability criteria and were suitable for subsequent structural model analysis.

Table 3. Fornell-Larcker Criterion Test

Construct	BK	IN	KO	MO	PKL
BK	0.835				
IN	0.847	0.837			
KO	0.908	0.857	0.863		
MO	0.703	0.737	0.767	0.933	
PKL	0.535	0.522	0.594	0.637	0.823

Based on the Fornell-Larcker Criterion, the diagonal values of each construct represent the square root of the AVE and should be greater than the correlations with other constructs. The results indicate that the diagonal values of BK = 0.835, IN = 0.837, KO = 0.863, MO = 0.933, and PKL = 0.823 are greater than the corresponding correlations with other constructs. Therefore, each construct demonstrates adequate discriminant validity and is sufficiently distinct from the other constructs. The highest correlation between constructs was observed between Competence (KO) and Incentives (IN), with a value of 0.857.

Table 4. R-Square and Adjusted R-Square Test

Construct	R-Square	Adjusted R-Square
Mo	0.613	0.603
Pkl	0.434	0.414

Based on the r-square (r^2) results, the motivation (mo) variable has an r-square value of 0.613 and an adjusted r-square value of 0.603. This indicates that 61.3% of the variance in motivation can be explained by the independent variables in the model, namely competence, workload, and incentives, while the remaining 38.7% is explained by other factors outside the research model. This result indicates that the model has relatively strong explanatory power in explaining motivation.

Table 5: Predictive Relevance (Q^2)

Construct	SSO	SSE	$Q^2 (=1-SSE/SSO)$
BK	595	595	0
IN	595	595	0
KO	714	714	0
MO	238	115.995	0.513
PKL	357	270.684	0.242

Based on the predictive relevance (q^2) test, the results show that the q^2 values for workload (bk), incentives (in), and competence (ko) are all 0. These values indicate that the three variables are exogenous constructs and therefore do not have predictive relevance values calculated through the blindfolding procedure. Meanwhile, motivation (mo) has a q^2 value of 0.513, indicating that the model has a good predictive capability for the motivation variable. A positive q^2 value indicates that the model has predictive relevance, while a higher q^2 value indicates better predictive capability of the model for the endogenous construct.

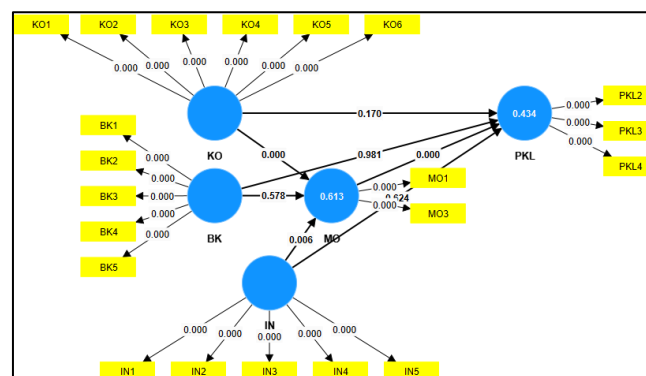


Figure 2. Sem model Bootstrapping

Table 6. Path Analysis and Specific Indirect Effects

Contruc	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
BK -> MO	-0.089	-0.075	0.161	0.556	0.578
BK -> PKL	-0.005	-0.001	0.216	0.023	0.981
IN -> MO	0.323	0.324	0.118	2.734	0.006

IN -> PKL	-0.084	-0.081	0.172	0.49	0.624
KO -> MO	0.571	0.558	0.147	3.872	0.000
KO -> PKL	0.319	0.319	0.233	1.373	0.170
MO -> PKL	0.458	0.455	0.127	3.614	0.000
BK -> MO -> PKL	-0.041	-0.041	0.08	0.513	0.608
IN -> MO -> PKL	0.148	0.15	0.077	1.932	0.053
KO -> MO -> PKL	0.261	0.257	0.106	2.455	0.014

Workload → motivation (bk → mo)

Workload has a path coefficient of -0.089, a t-statistics value of 0.556, and a p-value of 0.578. Since the t-statistics value is < 1.96 and the p-value is > 0.05, workload does not have a significant effect on motivation. The negative direction of the relationship indicates that an increase in workload tends to reduce motivation; however, this effect is not statistically supported.

Workload → scientific work productivity (bk → pkl)

The path coefficient is -0.005, with a t-statistics value of 0.023 and a p-value of 0.981. These results indicate that workload does not have a significant effect on scientific work productivity. Thus, variations in lecturers' workload have not been empirically demonstrated to directly determine their scientific work productivity in this study.

Incentives → motivation (in → mo)

The path coefficient is 0.323, with a t-statistics value of 2.734 and a p-value of 0.006. Since the t-statistics value is > 1.96 and the p-value is < 0.05, incentives have a positive and significant effect on motivation. This indicates that better incentives are associated with higher levels of lecturer motivation.

Incentives → scientific work productivity (in → pkl)

The path coefficient is -0.084, with a t-statistics value of 0.490 and a p-value of 0.624. These results indicate that incentives do not have a significant direct effect on scientific work productivity.

Competence → motivation (ko → mo)

The path coefficient is 0.571, with a t-statistics value of 3.872 and a p-value of 0.000. The results indicate that competence has a positive and significant effect on motivation. Thus, higher levels of lecturer competence are associated with higher motivation in performing academic activities.

Competence → scientific work productivity (ko → pkl)

The path coefficient is 0.319, with a t-statistics value of 1.373 and a p-value of 0.170. Although the relationship is positive, it is not statistically significant because the t-statistics value is < 1.96 and the p-value is > 0.05. Therefore, competence has not been empirically demonstrated to have a direct significant effect on scientific work productivity.

Motivation → scientific work productivity (mo → pkl)

The path coefficient is 0.458, with a t-statistics value of 3.614 and a p-value of 0.000. The results indicate that motivation has a positive and significant effect on scientific work productivity. Therefore, higher levels of lecturer motivation are associated with higher levels of scientific work productivity.

Workload → motivation → scientific work productivity

The indirect effect is -0.041, with a t-statistics value of 0.513 and a p-value of 0.608. Since the p-value is > 0.05, motivation does not significantly mediate the effect of workload on scientific work productivity. Thus, changes in workload have not been shown to influence scientific work productivity through motivation.

Incentives → motivation → scientific work productivity

The indirect effect is 0.148, with a t-statistics value of 1.932 and a p-value of 0.053. Since the p-value of 0.053 is > 0.05, motivation does not significantly mediate the effect of incentives on scientific work productivity at the 5% significance level.

Competence → motivation → scientific work productivity

The indirect effect is 0.261, with a t-statistics value of 2.455 and a p-value of 0.014. Since the t-statistics value is > 1.96 and the p-value is < 0.05, motivation significantly mediates the effect of competence on scientific work productivity. This finding indicates that competence contributes to lecturers' scientific work productivity through increased motivation.

Discussion

The Effect of Incentives on Motivation

The research findings indicate that incentives have a positive and significant effect on motivation. The path coefficient of 0.323, T-statistics of 2.734, and P-values of 0.006 indicate that the better the incentives received by lecturers, the higher their motivation. The rewards provided by the organization play an important role in encouraging lecturers' motivation. Incentives can serve as a form of institutional recognition of lecturers' contributions and achievements. When lecturers feel that their efforts and accomplishments are appropriately rewarded, they are more strongly motivated to maintain or improve their academic performance. In the context of higher education, incentives do not necessarily have to be financial. Rewards for publications, support for attending conferences, opportunities to obtain research grants, career development, academic awards, and opportunities to participate in training programs can all serve as forms of incentives that strengthen lecturers' motivation. [4], [8], [11]

The Effect of Incentives on Scientific Publication Productivity

In contrast to its effect on motivation, incentives were not found to have a direct effect on scientific publication productivity. The coefficient of -0.084, T-statistics of 0.490, and P-values of 0.624 indicate that the relationship is not statistically significant. This finding suggests that providing incentives alone is not sufficient to directly increase scientific publication productivity. [20], [21] Incentives may increase lecturers' psychological drive or motivation, but the process of producing scientific publications requires ability, time, facilities, research experience, academic support, and a relatively lengthy process. Therefore, the effectiveness of incentive policies in increasing research productivity may depend not only on the amount of incentives provided but also on the supporting systems that accompany them. Incentives combined with research mentoring, provision of facilities, academic collaboration, and publication support have the potential to generate a stronger impact on scientific publication productivity. [1], [18]

The Effect of Competence on Motivation

Competence was found to have a positive and significant effect on motivation. The test results show a coefficient of 0.571, T-statistics of 3.872, and P-values of 0.000. This relationship represents one of the strongest direct relationships in the research model. The higher the competence of lecturers, the higher their motivation. Lecturers who possess strong knowledge, skills, experience, and academic abilities tend to have greater self-confidence in carrying out their responsibilities. Adequate competence enables lecturers to deal with academic demands more effectively, thereby increasing their motivation to achieve professional goals. Competence development should therefore be considered part of a strategy to enhance lecturers' motivation. Training programs in research methodology, scientific article writing, data analysis skills, publication management, and pedagogical competence can contribute to increasing academic motivation. [17], [20], [21]

The Effect of Competence on Scientific Publication Productivity

Competence has a positive relationship with scientific publication productivity, with a coefficient of 0.319. However, the relationship is not statistically significant, as indicated by the T-statistics of 1.373 and P-values of 0.170. Conceptually, competence is expected to improve lecturers' ability to produce scientific publications. However, in this study, competence was not able to exert a significant direct effect on scientific publication productivity. This condition indicates that competence is an important factor, but it does not necessarily directly result in research productivity when other supporting factors are absent. Lecturers who possess strong research competence still require time, access to data, research facilities, funding, collaborative networks, and motivation to transform their competence into actual scientific publications. Therefore, competence development should not be implemented in isolation. Higher education institutions need to integrate competence enhancement with the creation of a conducive research environment so that lecturers' abilities can be realized in the form of scientific publication productivity. [2], [12], [20], [33]

The Effect of Motivation on Scientific Publication Productivity

Motivation was found to have a positive and significant effect on scientific publication productivity. A coefficient of 0.458, T-statistics of 3.614, and P-values of 0.000 indicate that the higher the motivation of lecturers, the higher their scientific publication productivity. These findings demonstrate that motivation is an important factor in explaining lecturers' academic productivity. [5] Motivation provides both internal and external encouragement for lecturers to set goals, complete research activities, write articles, participate in academic forums, and produce academic outputs. The research process requires perseverance, consistency, willingness to complete various research stages, and readiness to face the publication process, which often takes a considerable amount of time. Lecturers with high levels of motivation tend to be better able to sustain their efforts to produce scientific publications. efforts to increase scientific publication productivity should pay attention to motivational

aspects. Higher education institutions should not only improve lecturers' competence but also create conditions that can maintain their motivation to conduct research and produce publications. [17], [18]

The Role of Motivation in Mediating the Effect of Workload on Scientific Publication Productivity

The results of the indirect effect analysis indicate that motivation does not mediate the effect of workload on scientific publication productivity. The indirect effect value of -0.041, T-statistics of 0.513, and P-values of 0.608 indicate that the indirect effect is not statistically significant. This finding is consistent with the results of the direct effect of workload on motivation, which was also not significant. Changes in workload are not sufficiently strong to influence motivation, and therefore this pathway cannot be significantly transmitted to changes in scientific publication productivity through motivation. Workload is not the primary mechanism explaining scientific publication productivity through motivation. In other words, lecturers with different levels of workload do not automatically have different levels of motivation, and these differences therefore do not produce differences in scientific publication productivity through a motivational mechanism. [10], [16], [22]

The Role of Motivation in Mediating the Effect of Incentives on Scientific Publication Productivity

The findings indicate that motivation has not been proven to significantly mediate the relationship between incentives and scientific publication productivity at the 5% significance level. The indirect effect value of 0.148, T-statistics of 1.932, and P-values of 0.053 indicate that the P-value is slightly above the 0.05 threshold. Incentives may increase motivation and subsequently have the potential to increase scientific publication productivity. However, the statistical evidence at the 5% significance level is not sufficiently strong to establish significant mediation. The P-value of 0.053 also indicates that the relationship is very close to the significance threshold. the research result must still be categorized as not significant at $\alpha = 5\%$. It would not be appropriate to accept the mediation hypothesis solely because the P-value is close to 0.05. Incentives may increase motivation, but the increase in motivation has not been consistently translated into scientific publication productivity. Other supporting factors are required so that increased motivation can be transformed into concrete research outputs. [1], [4], [33]

The Role of Motivation in Mediating the Effect of Competence on Scientific Publication Productivity

The findings indicate that motivation significantly mediates the effect of competence on scientific publication productivity. The indirect effect value of 0.261, T-statistics of 2.455, and P-values of 0.014 indicate that the indirect effect is statistically significant. This finding is important because it demonstrates that competence can contribute to scientific publication productivity through increased motivation. Thus, competence is not only valuable in terms of technical abilities but can also strengthen lecturers' confidence and motivation to produce scientific publications. [4], [5], [7], [8], [20].

Conclusion

The findings indicate that motivation is an important variable in explaining lecturers' scientific publication productivity. Motivation has a positive and significant direct effect on scientific publication productivity, with a coefficient of 0.458. In addition, motivation also plays a significant mediating role in the relationship between competence and scientific publication productivity. In contrast, workload was not found to have a significant effect on either motivation or scientific publication productivity. This indicates that policies aimed at improving academic productivity cannot rely solely on regulating or reducing workload. Higher education institutions need to pay attention to psychological factors and human resource development, particularly competence and motivation.

Incentives were found to be capable of increasing motivation, but they did not have a significant direct or indirect effect on scientific publication productivity at the 5% significance level. This condition indicates that incentives function more as a motivational stimulus than as a direct determinant of research productivity. Therefore, strategies to improve lecturers' scientific publication productivity should be implemented through an integrated approach. Higher education institutions need to enhance research competence, foster achievement motivation, provide research support, strengthen research facilities and funding, and develop reward systems that encourage the sustainability of academic activities. Such an approach is expected to transform lecturers' competence and motivation into more tangible and sustainable scientific publication productivity.

References

- [1] H. Yu, Y. Wang, W. Wang, H. Wang, S. Zhao, dan K. Song, "Factors affecting job choices among primary health workers in China: a discrete choice experiment study," *BMC Prim. Care*, Agu 2026, doi: 10.1186/s12875-026-03505-0.
- [2] E. Arohman, "Compensation and Work Discipline as Strategies for Improving Junior High School Teacher Performance: The Mediating Role of Job Satisfaction".
- [3] N. Gulo, P. Y. Purba, M. Manik, dan M. P. Simarmata, "Enhancing Employee Performance through Motivation, Work Environment, and Training: Evidence from PT Medcomm Solution".
- [4] J. Saep, P. Rendy, G. Dayona, K. Nuradina, dan A. M. Siddiq, "Work Motivation as a Mediator of Compensation and Training Effects on Employee Productivity: A Multi-Plant Study at PT Tri Centrum Fortuna," *J. Ekon. Manaj. Dan Bisnis*, vol. 4, no. 2, hlm. 490–515, Jun 2026, doi: 10.70716/emis.v4i2.550.
- [5] A. L. Lian, E. Karunia, dan B. Hasyim, "The Role of Work Motivation Mediation in the Relationship Between Workload and Performance at Puskesmas in Tanjung Palas District, Bulungan Regency".
- [6] R. Yulianti, S. Malinda, dan M. I. Hadjri, "The Influence of Work Stress and Work Discipline on Employee Performance Mediated by Work Motivation".
- [7] R. H. Pratama, A. Nursari, H. Sejati, dan H. Wahyudi, "The Impact Of The Community Service Field Work Program (Kkl-Ppm) On Enhancing Competence And Community Empowerment In Pekon Muara Dua And Karang Rejo, Ulu Belu Regency".
- [8] Khairani Khairani, Corry Yohana, dan Christian Wiradendi Wolor, "The Influence of Compensation and Work Motivation on Teacher Performance with Work Quality as an Intervening Variable in Vocational High Schools across Grogol Petamburan District, West Jakarta," *J. Manag. Econ. Financ. Account.*, vol. 2, no. 1, hlm. 92–111, Jun 2026, doi: 10.69714/3z4yak08.
- [9] Anisa Ratna Pradanti dan Osly Usman, "The Influence of Human Resource Competence and Workload on Employee Performance with Work Motivation as an Intervening Variable at Bank Jakarta, East Jakarta Mayor Office Branch," *J. Digit. Bus. Glob. Econ.*, vol. 2, no. 3, Jun 2026, doi: 10.64243/JODIGBI.02.3.03.
- [10] Y. Abdurrahman, T. G. Sumarsono, dan S. Haryanto, "Leadership, Workload, and Motivation at Malang's".
- [11] M. Wakim, S. K. Ohoiwutun, dan H. Selanno, "Pengaruh Kesejahteraan Pegawai, Motivasi Intrinsik, Dan Beban Kerja Terhadap Produktivitas Pegawai Pada Balai Pelestarian Kebudayaan Wilayah XX Maluku," *J. Ilm. Glob. Educ.*, vol. 6, no. 3, hlm. 1629–1639, Agu 2025, doi: 10.55681/jige.v6i3.4075.
- [12] N. F. Alfawaz, R. T. R. Perdana, Y. Alyahuda, dan R. H. Pratama, "Pengaruh Pelatihan Dan Pengembangan Sdm Terhadap Produktivitas Karyawan Melalui Motivasi Kerja Di Kantor Cabang BRI".
- [13] C. F. Izuakor *dkk.*, "Promotion incentives and the dynamics of research motivation among Technical and Vocational Education and Training lecturers in Nigerian universities," *Discov. Educ.*, vol. 5, no. 1, hlm. 148, Feb 2026, doi: 10.1007/s44217-026-01201-w.
- [14] I. Manja, A. T. Junaedi, M. B. Hutahuruk, A. R. Tanjung, dan N. Renaldo, "The Effect Of Competency, Workload, And Work Environment On Employee Satisfaction And Performance Of Bkpsdm Rokan Hilir," *J. Bisnis Terap.*, vol. 5, no. 1, 2025.
- [15] R. A. Herwati dan E. Yulianto, "The Effect of Work Engagement, Intrinsic Motivation, and Job Satisfaction on Work Productivity," dalam *Proceedings of the 1st International Conference on Business, Economic, and Social Sustainability (ICOBES 2025)*, vol. 384, S. Hadi, R. Hidayat, A. Lukitaningsih, O. Lin Dar, dan T. Abd Hakim, Ed., dalam Advances in Economics, Business and Management Research, vol. 384. , Dordrecht: Atlantis Press International BV, 2026, hlm. 455–470. doi: 10.2991/978-94-6239-626-5_34.
- [16] F. Al-Ambari, "The Effect Of Work Allowances, Performance Allowances And Transformational Leadership Style On Civil Servant Performance With Work Motivation As An Intervening Variable In The Regional Secretariat Of Solok District," . *Vol.*, vol. 7, no. 2.
- [17] A. Faizah, E. Sulastri, dan A. Ruhdiyati, "Health Workers' Patient Safety Performance through Competence-," vol. 8, no. 2, 2026.
- [18] C. Jie dan L. Jinhua, "Interlinking Professional Skills, Job Satisfaction, and Performance: A Parallel Mediation Model of University Counsellors".
- [19] R. Saleh, L. Susanti, dan M. Setiawati, "The Influence of Transformational Leadership and Work Environment on Teacher Performance through Motivation as a Mediating Variable at SMA NEGERI Pasaman Regency".
- [20] Y. Erdiansari, H. Madiistriyatno, dan A. N. Sahim, "The influence of motivation and workload on the performance of outsourced nurses," *Priviet Soc. Sci. J.*, vol. 6, no. 8, hlm. 77–88, Agu 2026, doi: 10.55942/pssj.v6i8.1608.
- [21] R. H. Ariyanto dan M. Samiyah, "The Influence Of Human Resources Competence, Work Motivation, And Work Facilities On Employee Performance: A Literature Review," vol. 3, no. 1, 2026.
- [22] T. S. Sarmiento dan D. Yustiana, "The Effect of Workload and Financial Rewards on Employee Performance Through Job Satisfaction at Guido Valadares National Hospital, Timor Leste," vol. 15, no. 01, 2026.

- [23] M. D. Saputra, "ARTICLE INFO ABSTRACT," . *Vol.*, vol. 8, no. 1.
- [24] S. Sepyenita, N. Ngalian, dan A. Faizah, "Efikasi diri sebagai mediator antara insentif, lingkungan kerja, dan pengembangan karir terhadap kepuasan kerja Tenaga Kesehatan Program Nusantara Sehat di Provinsi Kepulauan Riau," *J. Manag. Digit. Bus.*, vol. 4, no. 3, hlm. 713–732, Des 2024, doi: 10.53088/jmdb.v4i3.1199.
- [25] F. Muhammad, Reza Hardian Pratama. Divianto, "*SDM UNGGUL*": *Membentuk Kekuatan Kompetitif Melalui Pelatihan Dan Pengembangan*. Rumah Cemerlang Indonesia, 2025. [Daring]. Tersedia pada: <https://www.rcipress.rcipublisher.org/index.php/rcipress/catalog/book/1235>
- [26] E. Supriyanto dan A. Fachri, "Manajemen Sumberdaya Manusia Konsepsi Dan Esensinya," 2025.
- [27] H. K. Alfredo. M. H. Reza Hardian Pratama. Mia Selvina Agus Mahardiyanto, *PERILAKU ORGANISASI Pemahaman Perilaku Organisasi, Motivasi, Dan Kepemimpinan*. Perkumpulan Rumah Cemerlang Indonesia, 2025. [Daring]. Tersedia pada: <https://www.rcipress.rcipublisher.org/index.php/rcipress/catalog/book/1420>
- [28] R. H. Pratama, A. K. Khotimah, L. Wuryanti, dan A. Nursari, "Pengaruh Beban Kerja dan Kualitas Kehidupan Kerja terhadap Kinerja Karyawan melalui Komitmen Organisasional dan Motivasi Kerja pada Rumah Sakit Pertamina Bintang Amin Kota Bandar Lampung," vol. 8, 2024.
- [29] R. H. Pratama dan M. A. Manan, "Pengaruh Program Kualitas Pelayanan Online Terhadap Kepuasan Masyarakat Dinas Pencatatan Dan Kependudukan Sipil Kota Bandar Lampung."
- [30] R. A. Noe, J. R. Hollenbeck, B. Gerhart, dan P. M. Wright, "Fundamentals of Human Resource Management".
- [31] Sugiyono. 2016, *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- [32] Noor, J. (2014)., *Metodologi Penelitian: Skripsi, Tesis, Disertasi, dan Karya Ilmiah*. Jakarta: Kencana.
- [33] I. S. Putri dan N. Hamzah, "Determinants of Employee Performance in Public Sector Organizations: The Role of Workload, Incentives, and Leadership Style".