

## The effect of business continuity management and technology acceptance model towards lecturers' performance moderated by servant leadership

Herson Keradjaan<sup>a\*</sup>, Bernhard Tewal<sup>b</sup>, Viktor Lengkong<sup>b</sup> and Greis Sendow<sup>b</sup>

<sup>a</sup>Fakultas Ilmu Sosial dan Humaniora, Universitas Halmahera, Indonesia

<sup>b</sup>Fakultas Ekonomi dan Bisnis, Universitas Sam Ratulangi, Manado, North Sulawesi, Indonesia

### CHRONICLE

#### Article history:

Received: July 20, 2020  
Received in revised format:  
September 10 2020  
Accepted: October 1, 2020  
Available online:  
October 1, 2020

#### Keywords:

Lecturers' performance  
Servant leadership  
Business continuity management  
Technology acceptance model

### ABSTRACT

This research investigates the effect of business continuity management and technology acceptance models towards performance of lecturers moderated by servant leadership. The research respondents were 86 Halmahera University lecturers. The research method used was quantitative method by examining the effect of moderation and the direct effect by the method of interaction. The model was tested with structural equation modeling approach by using Smart PLS software. The results proved that servant leadership was able to influence lecturer performance. Servant leadership could also moderate the effect of business continuity management towards lecturer performance. However, business continuity management and technology acceptance models did not affect lecturer performance independently. Servant leadership also failed to moderate the effect of the technology acceptance model towards lecturer performance. This study recommends that servant leadership be applied at all levels of leadership because of the very important role in triggering lecturer performance. The application of servant leadership can also be combined with business continuity management since the interaction between of the two can improve lecturer performance.

© 2021 by the authors; licensee Growing Science, Canada

## 1. Introduction

University performance in Indonesia is still far below the performance of universities in other countries. Of all the fields of science, only a few universities from Indonesia can be in the list of top-ranking universities (Kasih, 2020). The process of establishing the rank for universities involved 13,138 programs from 1,368 universities, both public and private throughout the world. The reputation of the lecturer, H-Index, the quality of academic work, and academic reputation become assessment instruments used to determine the quality of each program or college. Thus, it can be concluded that the performance of a tertiary institution is highly determined by the performance of lecturers. In addition, for research publications in Indonesia, the trend in the past five years has had an upward trend and then dropped dramatically in some years. Table 1 summarizes the number of Indonesian publications in Google Scholar and Scopus. The highest publication data was achieved in 2017, after which publication declined dramatically, both on Scopus and on Google Scholar. It needs to be observed and examined why this decline occurs. This phenomenon occurs in most institutions in Indonesia. At the University of Halmahera which is the place where this research was carried out also had the same phenomenon, especially in the performance of publications or article with scopus-indexed.

\* Corresponding author.

E-mail address: [hersonkeradjaan@gmail.com](mailto:hersonkeradjaan@gmail.com) (H. Keradjaan)

**Table 1**

Scientific publications in Indonesia (Sinta, 2020) and at the University of Halmahera (Universitas Halmahera, 2020)

No	Year	Scopus	Google Scholar	Scopus	Google Scholar
Indonesia			University of Halmahera		
1	2019	35,632	273,707	3	42
2	2018	63,726	290,836	11	43
3	2017	77,497	291,158	3	48
4	2016	68,863	236,894	4	31
5	2015	62,880	193,090	0	24

**Table 2**

Performance of Community Services in University of Halmahera (Universitas Halmahera, 2020)

No	Year	Number of Activities	Article Publication of Community Services
1	2019	32	2
2	2018	37	4
3	2017	28	2
4	2016	18	1
5	2015	3	0

There are currently 86 permanent lecturers at Halmahera University. Noting and comparing the data above, the publication performance of Halmahera University lecturers is far from expected. In 2019, there were only three Scopus publications from 86 permanent lecturers available. In 2019 the publication on Google Scholar was only 42 out of 86 permanent lecturers. Likewise, the performance of community service is still very low at Halmahera University. Of course, this record should be improved for the next period. Specific research is needed related to factors that could contribute to increase the performance of lecturers in particular and the performance of institutions in general. Jaramillo et al. (2015) research recommends that servant leadership can help improve performance, when combined with well-planned management. One form of good management in achieving organizational goals is whether the institution already has business continuity management (Aleksandrova et al., 2018). Business continuity management aims to find out all risks potential so the solutions can be anticipated and institutions are expected to be able to continue their operations. Business continuity management becomes a work reference to minimize all forms of risk that can hamper performance improvement. Furthermore, business continuity management must be supported by adequate information technology, so that it can be applied well (Järveläinen, 2013). Adequate technology means relevant technology and can be synchronized with existing academic information systems. Technological models that are relevant and acceptable to existing information systems are called technology acceptance models. Based on the previous research, recommendations for the efforts to improve lecturers' performance can be pursued by implementing business continuity management and technology acceptance models. In addition, servant leadership support is also expected to strengthen the influence of business continuity management and technology acceptance models on lecturers' performance.

There has been previous studies related to and supporting this research recommendation (as mentioned above), but there are still research gaps that have not been studied. Schätter et al. (2019) and Bajgoric (2014) stated that business continuity management impacted on increasing competitiveness, and such competitiveness will have an impact on organizational performance. However, the study has not tested the direct impact of business continuity management on lecturers' performance. Furthermore, Wicks (2019) in his research recommends that university leaders adopt holistic leadership such as servant leadership, to support the achievement of organizational goals, namely skills-based graduates. This study only examines the direct impact of servant leadership on graduate output and has not tested the impact of the application of servant leadership on lecturers' performance. However, the direct impact of servant leadership on lecturers' performance has not been studied yet. Xu and Wang (2019) recommend servant leadership to be carried out in practical implications, so that organizations can maintain and reap the benefits of a developing team and the employees active role in various processes. This research was conducted to implement the above recommendations by placing servant leadership as a moderating variable to support business continuity management and technology acceptance models in an effort to improve lecturers' performance. Marangunić and Granić (2015) explained that there is an ongoing progress in uncovering new factors that influence the Technology Acceptance Model (TAM), but there are still many areas that have not been explored and the impact of this technology acceptance model. Based on this recommendation, an exploration is carried out to fill the research gap by placing the technology acceptance model as an independent variable in an effort to support lecturer performance, where research like this has not existed before. Sutton and DeSantis (2017) recommend that leadership in higher education should be oriented towards utilization of technology for the professional development of lecturers. Based on this information, an attempt was made to fill the gap by placing the technology acceptance model as an independent variable and servant leadership as a moderating variable. The interaction of these two variables is expected to be able to answer the emptiness of the theory and become new evidence of research in this field.

Based on the description of some of the previous studies that have been described, the research has a novelty. This new model places the business continuity management and technology acceptance models placed as pairs of independent variables. Furthermore, this model places servant leadership as a moderating variable where no previous studies have done this. The

implementation of this research model is that this is for the first time such research has been carried out in the higher education industry. Along with addressing the importance of technology in the tertiary industry and the importance of managing institutional risk in a sustainable manner, this research will recommend to various universities related to the empirical results of the linkages of business continuity management, technology acceptance models and servant leadership on lecturer performance. This study collaborates the indicators of the servant leadership variable into 11 indicators. Previous researchers conducted by Barbuto and Wheeler (2006) have eight indicators while the research by Dennis et al. (2010) has 5 indicators. Between the two researchers there are two indicators which are the same or intersected. Thus, the total indicator of the result of the merger is 11 indicators. The reason for incorporating these indicators is that all indicators are relevant at this time. There is no previous research that combines these indicators, so that the merger of this research indicator is placed as a novelty. The purpose of this study is to determine and obtain empirical evidence about: 1) The influence of business continuity management on lecturers' performance, 2) the influence of technology acceptance models on lecturers' performance, 3) the effect of servant leadership on lecturer performance, 4) moderating servant leadership is able or does not strengthen the influence of business continuity management on lecturer performance, and 5) moderation of servant leadership is able or does not strengthen the influence of technology acceptance models on lecturer performance

## 2. Literature Review

### 2.1 Theory of Performance

This theory develops and connects six basic concepts toward a framework that could be used to explain about performance. Current performance actually depends holistically on six components such as knowledge level, context, skills levels, factors of personal, identity level and factors of fixed (Elger, 2007). Lecturers as individuals who are examined their performance, of course, really need these six concepts. Theory of Performance will be used as a rationale to study the performance of lecturers in this research, both related to the results of educational and teaching performance, research performance, and community service performance. The results of this study will ultimately be examined whether the results support the established grand theory or not.

### 2.2 Theory of Reason Action

This theory has been developed to help understand and predict individual attitudes and behavior. "A person's performance is determined by the goal to carry out the behavior, and the goal is determined by subjective attitudes and norms". Some determinants in determining technology acceptance behavior, among others: behavioral intention to determine behavior, when behavioral intention is combined with attitude or norm and subjective norm (Hill et al., 1977). The rationale in Theory of Reason Action is used to study the variable business continuity management and technology acceptance models. The existence of one will be a reason for education personnel to behave in accordance with existing plans, so that risks can be managed properly. The existence of a technology acceptance model that aims to efficiently and effectively apply technology in tertiary institutions, will also trigger educators to work and perform optimally. This rationale underlying this theory is used as a rationale in this study.

### 2.3 Task Technology Fit Theory

This theory is about the suitability of technological capabilities with the demands of work, or the ability of technology to support work. According to Zigurs and Buckland (1998), Task-Technology Fit is also relevant for group support systems designed for years and used across task and technology. Task-Technology Fit develops theories of task suitability and technology in an organizational environment in order to examine the relationship between tasks attribute and relevant of technology used. In higher education industry, the demand for ability in the field of technology has become imperative. Technology must be accompanied by tridarma work programs from educators. By using the Task-Technology Fit theory approach as a rationale, this study will examine the application of technology acceptance models to lecturer performance.

### 2.4 Business Continuity Management and Lecturers' Performance

Based on previous research, business continuity management was related with performance. The research article by Faertes (2015) explains that business continuity management has been widely known by many organizations especially higher education institution. The organization should pay attention the importance of strategic planning, proactive management, risks identification to globally compete and obtained the maximum performance of business. According to Kato and Charoenrat (2018) business continuity management must concern on critical factors that must be considered by institution to ensure maximum productivity as well as avoid existing risks. Considering the previous researches, the business continuity management is a very important factor to make the organization runs sustainably, including in tertiary institutions. Various types of risks can arise from the competition, from the rules and standards for the organization of higher education, and include the risk of the absence of new students. This means that business continuity management is also relevant in the higher education industry. Thus in this study, the business continuity management has the potential to directly influence lecturers' performance. Thus, we propose the following research hypothesis:

**H1.** Business continuity management affects significantly towards lecturers' performance.

### 2.5 Technology Acceptance Model and Lecturers' Performance

The relationship between technology acceptance models with performance has been discussed in previous studies. Research by Sunny et al. (2019) reports that technology acceptance and use will influence cost efficiency and performance improvement for the long-term. Melián & Bulchand's research (2016) proves that the implementation of information technology will improve performance organizational in services. Sunny et al. (2019) prove that the use of information technology or technology-based education will have an impact on operational ease and student achievement. The tertiary education industry is also in dire need of technology that can be implemented properly to support lecturers' performance and university performance. Technology Acceptance will greatly assist the education and teaching process, the research process, and the process of community service so it will raise the lecturers' performance. The technology acceptance model has the potential to directly affect lecturer performance. Thus, we propose the following research hypothesis:

**H2.** Technology acceptance model affects significantly towards lecturers' performance.

### 2.6 Servant Leadership and Lecturers' Performance

Many previous researches have related the servant leadership with performance. Chiniara & Bentein's research (2016) explains that servant leadership will increase the satisfaction of employee, and this will impact the performance of employee. Harwiki's research (2016) also proves that the performance is influenced by servant leadership. Further research by Hoch et al. (2018) compared several types of leadership which include transformational leadership, authentic leadership, ethical leadership and also servant leadership. The results prove that the best form of leadership is servant leadership since servant leadership is higher correlated with performance. Divya and Suganthi's research (2018) explains that strong leadership is needed for dynamic organizations. Servant leadership influences employee performance through organizational justice. Servant leadership is more focused on employees and this is effective to improve the performance of unit-led (Hartnell et al., 2020). Servant leadership also has an effect on employee satisfaction (Alafeshat & Aboud, 2019). Relation to this research, where current research is carried out in the higher education industry. Lecturers as educators are partners for educational institutions to achieve the performance of higher education, since the performance of lecturers will automatically become the performance of higher education institutions. Servant leadership is highly suitable to be applied in the tertiary industry and servant leadership has the potential to directly influence the performance of lecturers. Thus, following research hypothesis could be proposed as:

**H3.** Servant leadership affects significantly towards lecturers' performance.

### 2.7 Moderation from Servant Leadership over the Effect of Business Continuity Management towards Lecturers' Performance

Harwiki's research (2016) examines the effect of culture in organization and servant leadership on performance. The results proved that organizational culture did not significantly influence employee performance, while servant leadership had a significant effect on performance. Furthermore, Chiniara and Bentein's research (2018) proves that servant leadership is able to reduce gaps in teams and be able to increase teamwork. This research is also able to prove that the influence of servant leadership on performance could be mediated by teamwork. Ling et al. (2016) examined the implementation of servant leadership in top and middle management resulting in better performance behaviors from employees. Then Stollberger et al. (2019) proved the implementation of servant leadership in middle management and lower management leaders can improve employee motivation and performance. Research by Wu et al. (2020) explained that servant leadership could moderate the effect of challenges and obstacles to emotional exhaustion. Considering the previous studies, servant leadership plays a very important role and its nature is very decisive, so servant leadership also has great potential when applied in the higher education industry. This very important servant leadership position has the potential to strengthen the impact of business continuity management on lecturer performance. Thus, following research hypothesis could be proposed as:

**H4.** Servant leadership can strengthen the effect of business continuity management towards lecturers' performance.

### 2.8 Moderation from Servant Leadership over the Effect of Technology Acceptance Model towards Lecturers' Performance

Chiniara & Bentein's research (2016) shows that servant leadership is able to mediate the effect of competence on performance. Christoffels research (2019) explains that technology not only impacts leadership, but leadership also impacts technology. Leadership can be changed in accordance with technological advances that will ultimately create organizational performance. Research by Nabila et al. (2019) explain that information technology-based leadership has changed the value of information technology as supporting tool become more strategic. The approach is sustained innovation, picking risk, fast and adaptive learner, orientation to technology, and people collaboration. From this study it can be concluded the importance of information technology-based leaders to achieve organizational performance optimization. Relation to this research, where current research is conducted in the higher education industry and places servant leadership as a moderator variable between technology acceptance models and lecturer performance. The servant leadership support for technology acceptance models will potentially have a great influence on lecturer performance. Thus, following research hypothesis could be proposed as:

**H5.** Servant leadership can strengthen the effect of technology acceptance model towards lecturers' performance.

## 3. Methodology

Data retrieval is done by using an online questionnaire by distributing questionnaire links and distributed to all lecturers who are sampled and filled out by research respondents, the data is then recapitulated in Microsoft Excel, and then processed using

Smart Software pls. The informants of this study were permanent lecturers at the University of Halmahera, represented by the research sample. The research population was all 86 permanent lecturers. Because the population is only 86, this study uses a technique of saturated sampling, where we took all member of population as samples (Sugiyono, 2017). There are four variables used in this study, which form a research model, namely: Business continuity management, Technology acceptance model, Servant leadership and Lecturers' performance. The four variables in this study were measured by using indicators as follows: 1) The business continuity management variable consists of four indicators, namely the existence document of business impact analysis, a disruptive risk assessment, a business continuity strategy, and a business continuity plan that includes an emergency response plan, a crisis management plan, disaster recovery plan, and post incident plan (Zawada, 2014), 2). Technology acceptance model variable is measured by six indicators, namely subjective norm, perceived ease of use, job relevance, image, result demonstrability and output quality (Venkatesh & Bala, 2008), 3). The servant leadership variable is measured by 11 indicators which are a combination of indicators created by Barbuto and Wheeler (2006) and Dennis et al. (2010) which consists of Emotional healing, Altruistic calling, Persuasive mapping, Wisdom, Humility, Organizational stewardship, Service, Vision, Love, empowerment, and trust, 4). Teacher performance variables are measured by four main performance indicators, consisting of activities learning, research and publication, community service, and other supporting activities (Udiyana, 2019).

Data analysis used in this research is analysis of multiple regression accompanied by moderation testing using the help of Smart PLS Software. The analysis phase consists of: 1) Construct validity test, namely testing that aims to find out whether the question items presented in the questionnaire are feasible or do not represent the variables studied. The question is valid if the resulting outer loadings are at least 0.5 (Ringle et al., 2015). 2) Reliability test, which is a test that aims to find out whether the respondent's answer is consistent or not, so that the answer can be assessed reliably or not. Respondents' answers are called reliable if the results of composite reliability, Cronbach alpha, and rho score are at least 0.7 as well as the value of average variance extract (AVE) of at least 0.5 (Ringle et al., 2015). 3) Test of coefficient of determination is to find out how the endogenous variable could explain the variance of exogenous variable. Coefficient determination ( $R^2$ ) can be seen in the smart output pls (Hair et al., 2017). 4) Regression test is used to test the direct hypothesis and the moderation hypothesis. The hypothesis can be accepted by looking at the two outputs of smart pls, namely the t value of statistics and the value of level of significant. The hypothesis is supported if the t value of statistics > 1.96 and the level of significant < 0.05 (Hair et al., 2017).

#### 4. Result and Discussions

The description of the results starts from the descriptive statistics of each variable studied, especially to see the minimum value, maximum value, and mean value (See Table 3). The achievement of each variable can be calculated by dividing the average value with the maximum value that is possible to achieve. Business continuity management variable has a mean of 3.7588 with a range between 1.96 to 5. Achievement of business continuity management can be calculated by distributing 3.7588 from a maximum value of 5, 0.7518 or 75.18%. This means that the achievement of business continuity management can still be increased by 24.82% so that the maximum.

**Table 3**  
Descriptive Statistic

N	Valid Missing	BCM	TAM	Servant	Lecturers'
		Average Performance	Average Performance	Average Performance	Average Performance
		86	86	86	86
		0	0	0	0
Mean		3.7588	4.2512	3.8801	3.9298
Std. Deviation		.59227	.54262	.67623	.54843
Minimum		1.96	2.17	1.82	2.50
Maximum		5.00	5.00	5.00	5.00

The technology acceptance model variable has a mean of 4.2512 with a range between 2.17 to 5. The achievement of the technology acceptance model can be calculated by distributing 4.2512 from the maximum value of 5, 0.8502 or 85.02%. This means that the achievement of technology acceptance models can still be increased by 14.98%. The servant leadership variable has a mean of 3.8801 with a range value between 1.82 to 5. The achievement of servant leadership can be calculated by distributing 3.8801 out of a maximum value of 5 i.e. 0.7760 or 77.60%. This means that the achievement of servant leadership can still be increased by 22.40%. Performance variable has a mean of 3.9298 with a range between 2.50 to 5. Achievement of performance can be calculated by distributing 3.9298 from a maximum value of 5, 0.7860 or 78.60%. This means that the achievement of servant leadership can still be increased by 21.40% so that the maximum.

Then the validity test of the research data has been obtained and presented in Fig. 1. Validity test is used to assess the feasibility of a research questionnaire instrument. Each indicator variable is called valid if the value of outer loadings exceeds 0.5. From the results of the validity test above it could be inferred that all indicators are greater than 0.5. This means that the four indicators of business continuity management, the eleven indicators of the servant leadership variable, the six indicators of the technology acceptance model variable, and the four indicators of the lecturers' performance variable are all valid. Based on Fig. 1, the determination coefficient obtained is 0.336. This means that the variables of business continuity management variables, technology acceptance models, and servant leadership explaining lecturers' performance is 33.6%. After the validity test has been done and the values were determined as valid, the reliability test is then performed.

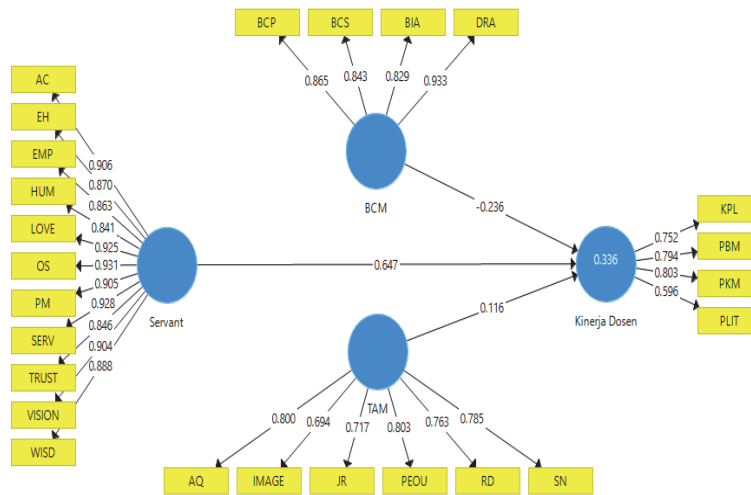


Fig. 1. Validity Test Results

Reliability test is used to assess the eligibility of the answers from respondents. Reliable answers are consistent answers and indicate the seriousness of the respondents to answer the questionnaire. The reliability test results are presented in Table 4.

Table 4  
Reliability of Test Results

	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted
BCM	0.892	0.921	0.925	0.755
Lecturer Performance	0.746	0.774	0.828	0.549
Servant Leadership	0.974	0.979	0.977	0.796
TAM	0.862	0.875	0.892	0.580

The research data is called reliable if the Cronbach's Alpha value, rho\_A value and Composite Reliability value > 0.7 and the value of Average Variance Extravted > 0.5. Noting the above results, all reliability criteria are met. This means that all variables are reliable and suitable for testing research hypotheses. Hypothesis testing is done to answer the research hypothesis. Hypothesis testing results are presented as follows:

Table 5  
Hypothesis Testing Results

	Original	Sample Mean	Std Deviation	T Statistics	P Values
BCM → Lecturers' Performance	-0.133	-0.130	0.171	0.777	0.438
Servant Moderation over the Effect of BCM → Lecturers' Performance	0.286	0.280	0.125	2.287	0.023
Servant Moderation over the Effect of TAM → Lecturers' Performance	-0.162	-0.170	0.146	1.108	0.268
Servant → Lecturers' Performance	0.765	0.735	0.196	3.908	0.000
TAM → Lecturers' Performance	0.020	0.072	0.172	0.114	0.909

Criteria for acceptance of hypotheses are accepted if the resulting statistical t value > 1.96 and P Values < 0.05. The results of testing the effect of business continuity management on lecturers' performance produce T value of Statistics 0.777 and P Values of 0.438 which means that business continuity management has no significant effect on lecturer performance. The effect of technology acceptance models on lecturers' performance has T value of 0.114 Statistics and P Values of 0.909, which means that the technology acceptance model has no significant effect on lecturer performance. Proving the influence of servant leadership on lecturer performance produces a Statistical T value of 3.908 and P Values of 0.000, which means that servant leadership has a significant effect on lecturer performance. Proving servant leadership moderation on the effect of business continuity management on lecturers' performance produces a statistical T value of 2.287 and P Values of 0.023 which means servant leadership is able to significantly moderate the effect of business continuity management on lecturers' performance. Proving servant leadership moderation on the effect of technology acceptance models on lecturer performance produces a statistical T value of 1.108 and P Values of 0.268, which means servant leadership is not able to moderate the effect of technology acceptance models on lecturers' performance.

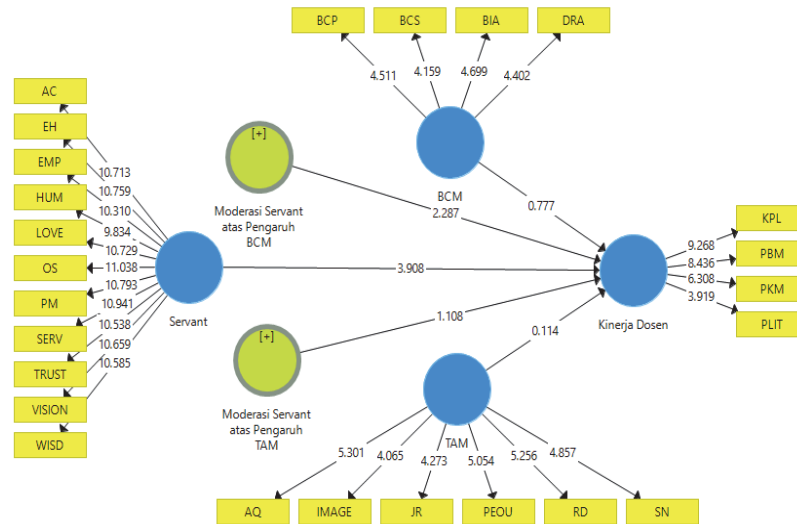


Fig. 2. Path Analysis

### Hypothesis 1

The first hypothesis in this study examines the effect of business continuity management on lecturer performance. The results proved insignificant and the first hypothesis was rejected. Implementation of business continuity management at Halmahera University has reached 75.18%. However, the implementation has not been able to affect the performance of lecturers. This means that business continuity management has no direct effect on lecturer performance. In other words there is no relationship or direct impact of business continuity management with lecturer performance. Another possible cause is that business continuity management is more about the management of risk in the future that is not related to the lecturer's performance. The results of this study contradict the results of previous studies conducted by Faertes (2015), Kato & Charoenrat (2018), and Herbane (2004).

### Hypothesis 2

The second hypothesis in this study examines the effect of technology acceptance models on lecturer performance. The results proved insignificant and the second hypothesis was rejected. The application of technology acceptance models at Halmahera University has reached 85.02%. However, this implementation has not been able to have an impact on the performance of the lecturers. This can be interpreted that the technology acceptance model is not directly related to lecturers' performance. The possibility of technology acceptance models is more widely used as supporting tools and does not have a large portion in supporting the achievement of lecturers' performance. The results of this study are not consistent with previous studies conducted by Sunny et al. (2019) and Melián & Bulchand (2016).

### Hypothesis 3

The third hypothesis in this study examines the effect of servant leadership on lecturer performance. The results proved significant with a positive coefficient which means that the third hypothesis was accepted. Implementation of servant leadership at Universitas Halmahera was 77.60%. Although this implementation is still under the application of technology acceptance models, servant leadership is able to influence lecturers' performance. This means that servant leadership is a good factor to improve lecturer performance. Servant leadership has a great impact on improving the performance of lecturers so this must be a priority in efforts to improve lecturer performance. If management wants to improve the performance of lecturers, the implementation of servant leadership becomes very strategic to be implemented. The coefficient of influence resulting from the influence of servant leadership on lecturer performance is positive. This means that every effort to improve the implementation of servant leadership will have a positive effect on lecturer performance. The higher the implementation of servant leadership, the higher the performance of lecturers produced. The results of this study are consistent and support the most recent research conducted by Hartnell et al. (2020), Alafeshat & Aboud, (2019), Hoch et al. (2018), Divya & Suganthi (2018), Chiniara & Bentein (2016), and Harwika (2016).

### Hypothesis 4

The fourth hypothesis in this study examines the moderation of servant leadership on the effect of business continuity management on lecturer performance. The results proved significant with a positive coefficient which means that the fourth hypothesis was accepted. This servant leadership position is very central and important. It not only has a direct impact on lecturer performance, but is also able to moderate the effect of business continuity management on lecturer performance. When testing directly, the effect of business continuity management on lecturer performance has a negative coefficient. But moderation from servant leadership is able to change these impacts into positive and significant impacts. This means that business continuity management will have an impact on lecturers' performance if supported by the implementation of servant

leadership. Without moderation from servant leadership, business continuity management does not have an impact on improving lecturer performance. Servant leadership is able to strengthen the influence of business continuity management on lecturer performance, which was not significantly significant before. The results of this study support and complement previous studies conducted by Wu et al. (2020), Stollberger et al. (2019), Chiniara & Bentein (2018), and Ling et al. (2016).

### Hypothesis 5

The fifth hypothesis in this study examines the moderation of servant leadership on the effect of technology acceptance models on lecturer performance. The results proved insignificant which means that the fifth hypothesis was rejected. The interaction of servant leadership and technology acceptance models did not affect lecturer performance. Implementation of servant leadership is not able to strengthen the influence of technology acceptance models on lecturer performance. This means that technology acceptance models cannot influence lecturer performance, even though the implementation of servant leadership has been carried out. The results of this study prove the technology acceptance model is not recommended to improve lecturer performance, whether accompanied by servant leadership implementation or not. The results of this study cannot support previous studies conducted by Christoffels (2019), Nabila et al. (2019), and Chiniara & Bentein (2016).

### 5. Conclusion

This study has provided five conclusions in accordance with the formulation of the problem and the proposed research hypothesis. First, business continuity management does not affect lecturer performance directly. The implementation of business continuity management is not directly related to improving lecturer performance. If we want to improve the performance of lecturers, then the implementation of business continuity management cannot stand alone to support lecturer performance. Second, the technology acceptance model does not affect the performance of lecturers. The implementation of technology acceptance models cannot improve lecturer performance. Third, servant leadership has a significant effect on lecturer performance. Servant leadership can stand on its own to influence the performance of lecturers. If we want to improve the performance of lecturers, the implementation of servant leadership is a very good and strategic choice. Fourth, servant leadership is able to moderate the influence of business continuity management on lecturer performance. The role of servant leadership becomes very important and central. Able to change the influence of business continuity management, from negative to a positive and significant influence. Fifth, servant leadership is not able to moderate the effect of technology acceptance models on lecturer performance. The interaction between the two is not able to encourage or improve lecturer performance. Overall, this research supports and complements the implementation of Theory of Performance and Theory of Reason Action which underlies the idea that servant leadership and its interactions with business continuity management can influence lecturer performance. Whereas the Fit Theory Task Technology was not supported in this study. This study recommends several things if you want to improve the performance of lecturers at Halmahera University, namely: First, implementing servant leadership to maintain and even improve lecturer performance. The application of servant leadership is very important at all leadership levels. If compiling a plan to improve the performance of lecturers at Halmahera University, the application of servant leadership occupies a priority scale. Second, business continuity management can support lecturer performance, only if it is supported by the implementation of servant leadership from university leaders

### References

- Alafeshat, R., & Aboud, F. (2019). Servant leadership impact on organizational performance: The mediating role of employee engagement. *International Journal of Human Resource Studies*, 9(3), 85-100.
- Aleksandrova, S.V., Aleksandrov, M.N., & Vasiliev, V.A. (2018). Business continuity management system. *2018 IEEE International Conference "Quality Management, Transport and Information Security, Information Technologies" (IT&QM&IS)*.
- Bajgoric, N. (2014). Business continuity management: a systemic framework for implementation. *Kybernetes*, 43(2), 156-177.
- Barbuto Jr, J. E., & Wheeler, D. W. (2006). Scale development and construct clarification of servant leadership. *Group & Organization Management*, 31(3), 300-326.
- Chen, C. F., Xu, X., & Arpan, L. (2017). Between the technology acceptance model and sustainable energy technology acceptance model: Investigating smart meter acceptance in the United States. *Energy Research & Social Science*, 25, 93-104.
- Chiniara, M., & Bentein, K. (2016). Linking servant leadership to individual performance: Differentiating the mediating role of autonomy, competence and relatedness need satisfaction. *The Leadership Quarterly*, 27(1), 124-141.
- Chiniara, M., & Bentein, K. (2018). The servant leadership advantage: When perceiving low differentiation in leader-member relationship quality influences team cohesion, team task performance and service OCB. *The Leadership Quarterly*, 29(2), 333-345.
- Christoffels, M. (2019). A framework for managing change leadership in a digital transformation environment. *Proceedings of the 15th European Conference on Management, Leadership and Governance, ECMLG 2019*. <https://doi.org/10.34190/MLG.19.011>
- Davis, H. J. (2018). Servant-leadership decision-making rubric: A greenleaf-inspired assessment tool for employee-based issues. *The International Journal of Servant-Leadership*, 12(1), 149-172.



- Dennis, R. S., Kinzler-Norheim, L., & Bocarnea, M. (2010). Servant leadership theory. In *Servant leadership* (pp. 169-179). Palgrave Macmillan, London.
- Divya, S., & Suganthi, L. (2018). Influence of transformational-servant leadership styles and justice perceptions on employee burnout: a moderated mediation model. *International Journal of Business Innovation and Research*, 15(1), 119-135.
- Elger, D. (2007). Theory of Performance, A comprehensive tool for improving faculty performance. In S. W. Beyerlein, C. Holmes, & D. K. Apple, (Eds.), *Faculty Guidebook*, Pacific Crest, Faculty Development Series, University of Idaho, 4th Edition, 11-14.
- Faertes, D. (2015). Reliability of supply chains and business continuity management. *Procedia Computer Science*, 55, 1400-1409.
- Hair, J., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced Issues in Partial Least Squares Structural Equation Modeling*. Research Gate.
- Hartnell, C. A., Karam, E. P., Kinicki, A. J., & Dimotakis, N. (2020). Does servant leadership's people focus facilitate or constrain its positive impact on performance? An examination of servant leadership's direct, indirect, and total effects on branch financial performance. *Group & Organization Management*, 1059601120901619.
- Harwika, W. (2016). The impact of servant leadership on organization culture, organizational commitment, organizational citizenship behaviour (OCB) and employee performance in women cooperatives. *Procedia-Social and Behavioral Sciences*, 219(1), 283-290.
- Herbane, B., Elliott, D., & Swartz, E. M. (2004). Business continuity management: time for a strategic role?. *Long Range Planning*, 37(5), 435-457.
- Hill, R. J., Fishbein, M., & Ajzen, I. (1977). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. *Contemporary Sociology*. <https://doi.org/10.2307/2065853>
- Hoch, J. E., Bommer, W. H., Dulebohn, J. H., & Wu, D. (2018). Do ethical, authentic, and servant leadership explain variance above and beyond transformational leadership? A meta-analysis. *Journal of Management*, 44(2), 501-529.
- Jaramillo, F., Bande, B., & Varela, J. (2015). Servant leadership and ethics: A dyadic examination of supervisor behaviors and salesperson perceptions. *Journal of Personal Selling & Sales Management*, 35(2), 108-124.
- Järveläinen, J. (2013). IT incidents and business impacts: Validating a framework for continuity management in information systems. *International Journal of Information Management*, 33(3), 583-590.
- Kasih, A. P. (2020). Universitas Terbaik Indonesia Versi QS World University Rankings 2020. Kompas.Com, Selasa, 10, 1.
- Kato, M., & Charoenrat, T. (2018). Business continuity management of small and medium sized enterprises: Evidence from Thailand. *International Journal of Disaster Risk Reduction*, 27, 577-587.
- Ling, Q., Lin, M., & Wu, X. (2016). The trickle-down effect of servant leadership on frontline employee service behaviors and performance: A multilevel study of Chinese hotels. *Tourism Management*, 52, 341-368.
- Marangunić, N., & Granić, A. (2015). Technology acceptance model: a literature review from 1986 to 2013. *Universal Access in the Information Society*, 14(1), 81-95.
- Melián-González, S., & Bulchand-Gidumal, J. (2016). A model that connects information technology and hotel performance. *Tourism Management*, 53, 30-37.
- Nabila, R., Setyaningrum, I. Z., Alallah, M. S. M. A. M., Farani, W., Haris, V., Shihab, M. R., & Ranti, B. (2019, August). Impact of IT Leadership on Transformation of the Role of IT in An Organization: Case Study of the Directorate General of Taxes. In *2019 International Conference on Information Management and Technology (ICIMTech)* (Vol. 1, pp. 212-217). IEEE.
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). *Smart PLS 3*. In SmartPLS GmbH, <http://www.smartpls.com>.
- Schätter, F., Hansen, O., Wiens, M., & Schultmann, F. (2019). A decision support methodology for a disaster-caused business continuity management. *Decision Support Systems*, 118, 10-20.
- Stollberger, J., Las Heras, M., Rofcanin, Y., & Bosch, M. J. (2019). Serving followers and family? A trickle-down model of how servant leadership shapes employee work performance. *Journal of Vocational Behavior*, 112, 158-171.
- Sugiyono. (2017). *Metode Penelitian Bisnis*. In Bandung: Alfabeta. <https://doi.org/10.1016/j.maturitas.2005.10.005>
- Sunny, S., Patrick, L., & Rob, L. (2019). Impact of cultural values on technology acceptance and technology readiness. *International Journal of Hospitality Management*, 77, 89-96. <https://doi.org/10.1016/j.ijhm.2018.06.017>
- Sutton, K. K., & DeSantis, J. (2017). Beyond change blindness: embracing the technology revolution in higher education. *Innovations in Education and Teaching International*, 54(3), 223-228. <https://doi.org/10.1080/14703297.2016.1174592>
- Udiyana, I. B. G. (2019). Prosedur dan unsur penilaian beban kerja dosen dan laporan kinerja dosen. *Sosialisasi Dan Pelatihan BKD-LKD Di Lingkungan LLDIKTI Wilayah VIII Bali*.
- Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision sciences*, 39(2), 273-315. <https://doi.org/10.1111/j.1540-5915.2008.00192.x>
- Wicks, J. (2019). *Servant Leadership, the College Bubble, and Saving Higher Education*. College and University.
- Wu, H., Qiu, S., Dooley, L. M., & Ma, C. (2020). The relationship between challenge and hindrance stressors and emotional exhaustion: The moderating role of perceived servant leadership. *International Journal of Environmental Research and Public Health*, 17(1), 282. <https://doi.org/10.3390/ijerph17010282>
- Xu, A. J., & Wang, L. (2020). How and when servant leaders enable collective thriving: The role of team-member exchange and political climate. *British Journal of Management*, 31(2), 274-288. <https://doi.org/10.1111/1467-8551.12358>
- Zawada, B. (2014). The practical application of ISO 22301. *Journal of Business Continuity & Emergency Planning*, 8(1), 83-90.

Zigurs, I., & Buckland, B. K. (1998). A theory of task/technology fit and group support systems effectiveness. *MIS quarterly*, 22(3), 313-334. <https://doi.org/10.2307/249668C>



© 2020 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).