# UNIVERSITY SUPERIOR PERFORMANCE BASED ON BALANCE SCORECARD: THE ROLE OF MANAGERIAL COMPETENCE AND MANAGEMENT CONTROL SYSTEM

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#### **ABSTRACT**

This study aims to develop a Balanced Scorecard (BSC) model as a University performance management system with the implementation of managerial competencies and the role of management control systems. The unique potential of resources at state universities that have been incorporated (PTNBH) is managed effectively to support performance achievement. In order to achieve these achievements, the quality of the availability of appropriate human resources is needed in meeting managerial criteria such as competence, expertise and experience and the role of the management control system is needed as an effort to produce university performance. The population of this study is all leaders within Semarang State University. The sampling technique used a purposive sample of 236 people with statistical data analysis using SEM Partial Least Squares (PLS). The results showed that managerial competence and management control systems have a positive and significant effect on performance achievement, meaning managerial competencies that meet qualifications and are qualified followed by performance achievements based on balance scorecards. Similarly, the implementation of an effective control system leads to the achievement of performance. Research advice for leaders in the university environment should be in implementing the selection of human resources for managerial must consider work experience factors besides that future researchers can add or combine models with other predictor variables and conduct research on different objects, for example in other government-owned service institutions or it could also be in private companies so that the study of performance concepts is stronger and can generalized.

**KEYWORDS-** Balance scorecard, University Performance, Managerial competence, and Management Control System

#### INTRODUCTION

Performance plays an important role as a system of evaluation and improvement of the past (as a prediction of future work productivity and to maintain and improve the stability of the institution's reputation (Robert et al., 2005). Universities play an important role in the development of a country. The success of Higher Education Institutions is the foundation for the growth of human resource capacity needed to support growth in various sectors (Peter, 2022). University performance must be evaluated through appropriate methods, the implementation of a strong performance measurement system is key to improving the university's competitive status, both locally and internationally, while maintaining academic excellence (Chen et al 2009 in Peter 2022). To adapt to the fierce competition from all over the world, it is necessary to improve the quality of higher education which is important and immediate to meet international academic trends and improve academic standards and overall quality of education including in implementing a Balance scorecard-based evaluation of higher education performance. According to Peter (2022) explained that the Balanced Scorecard as a key strategic approach through a balanced set of performance indicators to ensure that these actions meet strategic objectives, while demonstrating that the institution meets accountability and reliable expectations. The Balance scorecard approach is not only implemented in manufacturing companies but in an increasingly dynamic era, this approach is still widely used to measure performance, including in educational service companies (Justyna. F. & Oliveira. C, 2018).

Development of Balanced Scorecard in State Universities As a non-profit organization, state universities must establish an effective measurement system to ensure the achievement of goals. Public universities need to increase student numbers and specializations to ensure they remain competitive in teaching and education programs (Hussein et al., 2021). Therefore, they should establish a series of performance evaluation techniques to achieve educational goals using key performance measures consistent with the mission and core values of the institution. However, in fact, the main performance achievements have not been optimally fulfilled, this result can be seen in the results of marketing performance or University promotion performance, it can be seen that the impact on the number of graduates absorption in the world of work has not met expectations, lecturer competency qualifications have not met the ideal ratio, low lecturer scientific publications and still low participation in campus activities. This fact indicates that the university's performance achievements based on marketing and promotional orientation have not been effectively achieved. The Balanca scorecard evaluation offers opportunities to improve the superior performance of universities from HR orientation and operational orientation to the quality of academic governance and HR governance which requires competency standardization and management control systems as controls to support performance achievements (Hussein, 2021). Not a few human resources in the selected university environment have an understanding and knowledge of their work, even the competencies of most leaders are inadequate, including academic understanding of curriculum structure, assessment of learning performance, how to compile and align vision, mission and goals with the university (Husein et al., 2021). Meanwhile, the university as a higher education institution continues to strive to improve human resources and sarpras by providing skills training training, FGD, workshops, further studies, expert certification for its employees. Similarly, the management control system continues to be carried out periodically by implementing work standardization which is monitored directly by the university's quality guarantor, but these efforts have not been able to optimize the main performance achievements fulfilled. The main role of the management control system is to help implement the chosen organizational strategy or approach. Strategy as an interactive control tool where leaders with knowledge and skills can implement work ideas or ideas and are supported by work creativity so that they become more productive (Ali Muktiyanto et al, 2020). Determination and implementation of appropriate organizational strategies such as task-oriented, process-oriented, results-oriented strategies can lead to the success of university performance achievements. In line with J. Boyers' (2022) explanation that university strategy is a training and learning approach designed to improve employee skills so that companies can utilize this approach to improve employee performance, retain top talent, and develop future leaders.

This study uses a quantitative approach where conducting this research requires hypothesis testing involving the relationship between the role of managerial competence and the role of management recognition systems to support the university's main performance achievements based on performance balance (Balance scorecard) in each work unit and individuals who are still interesting and complex issues where these problems repeatedly continue to occur so that problem solving is not optimal Resolved. On the other hand, the role of the management control system to build superior academic governance and human resources in the university environment leads to improved performance and is still a problem. The purpose of this study is to test and analyze the role of managerial competence and management control systems on University performance achievements based on the Balance Scorecard. This research study focuses on the implementation of managerial competence and the role of management control systems within Semarang State University to support the achievement of superior university performance as an issue of the novelty of this research.

#### Resource Based View (RBV Concept)

In the creation of competitive advantage, the Resource-Based View (RBV) is used in this study in directing and shaping research, and the theory asserts that organizations can have a competitive advantage through the development of unique and diversely distributed resources. RBV defines resources as assets, processes, and capabilities. positing the sustainability of organizational performance excellence by securing scarce resources of economic value and resources that cannot be imitated, duplicated, or imitated by competitors (Barney & Clark, 2007). Organizational resources are processed through ownership and control, whereas capability uniqueness is said to be the ability of an organization to combine resources and utilize them adequately.

RBV identifies that various potential resources can lead to the achievement of organizational goals while others do not. Therefore, the fundamental challenge for organizations is to identify resources that will lead to the realization of overall performance goals (Ahmed Abubakar &; Haim Hilm, 2017). RBV can underlie the relationship between these research

variables by explaining the relationship between organizational resources and the sustainability of modest profits from superior companies.

Resources are categorised differently by many researchers, some of which are tangible resources, such as financial, organizational, physical and technological; Knowledge resources, such as system resources (including management control systems) and procedural; ability and experience (competence); network resources and potential dynamic capabilities; cultural values and resources; and intangible resources, such as innovation, human resources, and reputation. Others related to resources being tangible, intangible, and capable. RBV has a focus on organizations to develop and deploy core resources to achieve effective and efficient results (A. Ahmed et al., 2018). Thus, resources become important organizational points involved in the process of organizational activity to improve competitiveness and performance. By looking at the role of the RBV concept, the RBV concept is appropriate to be used to underlie the role of competence variables, management control systems and performance in this study.

#### **Management Competence**

The term HR competency is generally referred to as "capability to perform" which indicates that HR competence consists of various variables. Competency is a collection of knowledge, skills and attitudes that exist in a person to carry out activities effectively in a job or job function which is the standard expected of employees. Competencies are also used for individuals to guide self-improvement (R. Zacca &; M. Dayan, 2018).

Competence is defined by Ruba O.H. et al., (2015) as the underlying characteristics of an individual that are causally related to effective performance referred to criteribly and or superior in a job or situation or as the basic characteristics that a person possesses to achieve outstanding performance. Departing from this understanding, the competence of an individual is something inherent in him that can be used to predict the level of performance.

Managerial competence is a very important point in an organizational unit because it is considered to support the improvement of employee performance and contribute to determining the future of the organization. So efforts are needed to further maximize the performance results achieved. An employee needs special competencies, while a leader needs managerial competencies combined with technical and socio-cultural competencies to improve the performance of organizational units (R. Zacca &; M. Dayan, 2018).

The indicator of managerial competence in this study used is manager competence / managerial competency. The indicators that a competent manager should have are as follows: Impact and Influence, Achievement orientation, Teamwork and cooperation, Analitical thinking, Initiative, Developing Other, Self Confidence. Directiveness/Assertiveness, information Seeking, Team Leadership, Conceptual Thinking (R. Zacca & M. Dayan, 2018; Ruba O.H. et al., (2015).

# **Management Control System**

Management control is defined as the process by which management influences other members of the organization to implement organizational strategy (Norazlina et al., 2016). Management Control System (MCS) is a formal system that provides information to managers for planning, controlling, and decision making. The main role of the management control system is to ensure the implementation of the selected strategy runs well. The implementation of a management control system in a company is very important because this system affects human behavior. The control system has two objectives, namely personal goals and organizational goals (Norazlina et al., 2016). Then the control system is designed to achieve alignment between the achievement of personal goals and achieving organizational goals. Universities can develop strategies that include the determination and implementation of policies, general guidelines for action, and programs of activities to achieve goals. For universities to develop an effective management control system, they must have clear policies and realistic programs depending on clearly communicated and undoubtful goals (Ali Muktiyanto et al., 2020).

Management control system consisting of formal and informal control. Formal controls of an organization include explicit rules, procedures, performance measures, and incentive plans that guide the behavior of managers and other employees. A formal control system consists of several systems, such as a management accounting system, which provides information on costs, revenues, and revenues; human resources system, which contains information on

recruitment, training, absenteeism and accidents; and quality systems, which provide information regarding results, defective products, and delivery delays to customers (Norazlina et al., 2016). On the other hand, informal management control systems include shared values, loyalty, and commitment among members of the organization, organizational culture, and unwritten norms of acceptable behavior of people in the organization. In research conducted by Norazlina et al (2016) revealed that the implementation of a directed management control system will affect organizational performance. Management control that includes internal and external organizations that are managed systematically and effectively can lead to the achievement of effective performance. The basis of the process of the management control system is any effort that leads a set of variables towards the goal. Human resources are variables that must be directed, guided or stimulated to achieve goals (Norazlina et al (2016). Four dimensions of the management control system as indicators include Trackers (detectors) or sensors, Assessors (assessors), Effectors and Comunicator networks.

#### **Balance Scorecard Performance**

Performance is defined as a display of the overall state of the institution over a certain period of time, is a result or achievement that is influenced by the operational activities of the institution in utilizing its resources (Ismail, T. H., &; Al Thaoiehie, M, 2015). Performance is a quality of behavior that is task- and work-oriented (Sudarmanto, 2014). According to (Justyna. F. & Oliveira. C, 2018) explains that performance management is a process designed to improve organizational performance. Thus it can be defined that performance appraisal becomes a periodic determination of the operational effectiveness of the organization, parts of the organization, and its employees based on goals, standards, and The main purpose of performance appraisal is to motivate personnel in achieving organizational goals and in complying with behavioral standards in the form of management policies or formal plans outlined in the previously established organizational budget, in order to produce actions and results that desired by the organization.

Related performance in the perspective of the Balance Score card is elaborated by Kaplan and Norton, in Justyna. F. & Oliveira. C, (2018) implies that the balanced scorecard is a strategic management system derived from vision and strategy and reflects the most important aspects of organizational governance. The balanced scorecard approach measures performance based on financial and non-financial aspects. Non-financial aspects get attention because basically the improvement of financial performance comes from non-financial aspects, namely increasing process effectiveness, organizational commitment and customer trust in products / services (Justyna. F. & Oliveira. C, 2018). Balanced Scorecard, there are four different perspectives of a company's activities that can be evaluated and adopted as indicators in this study, including Financial Perspective, Customer Perspective, Internal Process Perspective and Learning and Growth Perspective.

The financial perspective or finance in higher education is related to the amount of college income, expenses and financial management. The customer's perspective is related to customer satisfaction who receive academic services, the effectiveness of the use of promotional media and the number of students accepted. The perspective of internal processes related to management effectiveness and efficiency activities including the management control system used and the perspective of learning and growth is related to the satisfaction of lecturers and education staff, the development of the self-potential of lecturers and education staff with various opportunities such as attending training, further studies, workshops and certifications supporting professional competencies. These four perspectives support the evaluation of the success of university performance.

#### The Influence of Managerial Competence on University Performance

Manager capabilities have a certain set of competencies to support improving institutional performance (H. Amanirullah, 2021). The phrase majerial competence is often used by managers in developing abilities in their relevant work areas, generally in relation to the revamping and improvement of their performance decisions and tasks (Gilmore, 1998 in H. Amirullah, 2021).

According to H. Amirrullah (2021) assesses that predictions and interventions to improve managerial performance can obtain a very large right of managerial competence. Previous research has also proven the influence of managerial competence on performance (Lakshminarayanan &; amaprasad (2016). Similarly, in research H. Amirullah (2021) found that managerial competence has a positive effect on performance (either followed by an increase in financial perspective or high college income, the number of customers received and satisfied with services, an increase in the number of competencies of lecturers / education staff who meet the qualifications and the level of employee satisfaction

with their work and the effectiveness and efficiency of management applied). Based on the involvement of managerial competence with performance, this research hypothesis can be developed as follows:

#### H1: Managerial competence has a positive effect on the performance of BLS-based universities

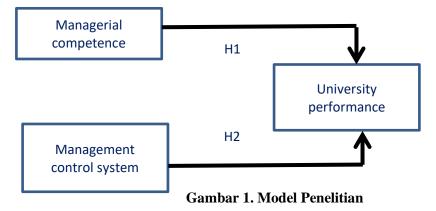
# The influence of management control systems on university performance

The management control system is needed to provide assurance through the managers of the organization to improve employee performance in the company effectively and efficiently. By implementing a management control system in the company will enable the company to move forward in supporting the achievement of the company's target goals. This is in line with research (Daromes, 2021) that a management control system is a mechanism that can be used to encourage the strengthening and internalization of organizational culture to achieve performance. The management control system has a positive effect on performance. Conversely, if in a company there is no management control, then automatically the company will be very vulnerable to setbacks. Conversely, if the control system in an enterprise is very good, then the company will be very developed.

The implementation of good MCS practices among developing companies in collaboration with the resources available in the company will serve as capabilities that can improve the company's performance. The implementation of good management control elements will improve the company's ability to assess the internal and external environment to utilize the remaining resources that can be used to achieve better performance (Nasiru Aminu Ahmad &; Rapiah Mohamed, 2018). Thus the hypothesis developed in this study is:

H2: Management control system has a positive effect on the performance of BLS-based universities

Based on the relationship between variables supported by literature review, the relationship between these variables can be drawn as in Figure 1.



### Method

The population of this study was all Unnes employees, with data collection using purposive sampling techniques, namely sampling by considering the criteria where they are civil servants and are currently serving structurally at the study program level and other units within Semarang State University totaling 236 respondents.

The measurement of variables in this study includes independent variables of managerial competence measured by Achievement orientation, Teamwork and cooperation, Analytical thinking, Initiative, Developing Other, Self Confidence. Directiveness/ Assertiveness, information Seeking, Team Leadership, Conceptual Thinking (Zacca &; M. Dayan, 2018; and Ruba O.H. et al., 2015). And management control system variables measured by indicators: detector, assessor, effector and comunicator network (Norazlina et al., 2016 and Ali Muktiyanto et al., 2020). Variables tied to University performance based on the Balance Scorecard are measured by financial perspective or orientation, consumer satisfaction orientation, process orientation, and learning and growth orientation (Justyna. F. & Oliveira. C, 2018). Measurement of research instruments using a Likert scale of 1-5.

The results of the validity test of research instruments using the SEM PLS t program are seen in Table 1 below:

**Table 1 Instrument Validity Test Results** 

NO KUES	Kompetensi manajerial	Sistem pengendalian manajemen	Kinerja berbasis BLS
K1			0.839
K2			0.801
K3			0.832
K4			0.832
KM1	0.714		
KM2	0.753		
KM3	0.763		
KM4	0.646		
KM6	0.699		
KM7	0.645		
KM8	0.804		
SPM2		0.658	
SPM3		0.811	
SPM4		0.841	

(Data yang diolah, 2023)

Based on the results of the instrument test in Table 1.shows all outer loading values of research variable instruments > standard value of 0.60, this result means that all research instruments are declared to meet convergent validity. Convergent validity testing through Average variance Exstrach (AVE) test results can be seen in Table 2.

Table 2 Convergent, Discriminant &; Reliability Validity Test Results

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Kinerja BSC	0.845	0.852	0.896	0.682
Kompetensi manajerial Sistem Pengendalian	0.815	0.818	0.878	0.643
Manajemen_	0.827	0.828	0.897	0.743

(Data yang diolah, 2023)

It is known that the AVE value of the research variable instrument > a standard value of 0.50, this result shows that all research instruments are declared to meet the convergent validity test. Obtained the value of Cronbach's Alpha research variable instrument > a standard value of 0.70, this result shows that all research instruments meet reliability. For discriminant testing, validity can be seen in Table 3 of Fornel Locker values. It is known that the AVE value of the research variable instrument > a standard value of 0.50, this result shows that all research instruments are declared to meet the convergent validity test. Obtained the value of Cronbach's Alpha research variable instrument > a standard value of 0.70, this result shows that all research instruments meet reliability. For discriminant testing, validity can be seen in Table 3 of Fornel Locker values.

**Table 3 Fornell Larcker Test Results** 

	Kinerja	Kompetensi manajerial	Sistem Pengendalian manajemen
Kinerja	0,821		
Kompetensi manajerial	0,094	0,854	
Sistem Pengendalian			
manajemen	0,141	0,286	0,804

(Data yang diolah, 2023)

Based on the results of the Fornell Larcker Criterion test, it is explained that the value of the construct is greater than the correlation between the construct and other constructs. Thus, it can be concluded that the indicators used in this study meet the validity of discrimination. The amount of contribution or contribution of predictor variables to performance can be seen in the value of the coefficient of determination R Square in Table 4

**Table 4 Determination Test Results** 

	R Square	R Square Adjusted
Kinerja BSC	0.812	0.81

(Data yang diolah, 2023)

The value of performance variables was explained by the contribution of managerial competence variables and management control systems by 81.2% and the remaining 18.8% was explained by other variables outside this research model.

#### **Hypothesis**

The results of hypothesis testing can be shown in the Direct Effect Coefficient Table summarized in Table 5.

**Table 5 Partial Hypothesis Test Results (Direct Effect)** 

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values	Hipotesis
Kompetensi manajerial ->						
Kinerja BSC	0.265	0.268	0.066	4.019	0.000	H1 diterima
Sistem Pengendalian Manajemen>						
Kinerja BSC	0.667	0.66	0.066	10.029	0.013	H2 diterima

(Data yang diolah, 2023)

Based on the results of the direct test, the statistical T value of managerial competence on performance of 4,019 > 1.96 and p values of 0.000 < 0.05, then hypothesis one (H1) which states managerial competence directly affects performance is accepted. Based on the results of direct tests, statistical T values can be obtained, calculate workplacement on work effectiveness of 10,029 > 1.96 and p values of 0.013 < 0.05, then hypothesis two (H2) which states the System Management control directly affects performance is acceptable

#### DISCUSSION

Based on the results of the hypothesis test one that states managerial competence has an effect on balance scorecard-based performance is accepted. This result can be explained that the managerial competencies applied by leaders in Semarang State University are oriented towards achieving achievements such as finding effective and efficient ways to complete work where leaders can build teamwork such as providing opportunities for their members to create, argue, and implement new methods. Leaders analyze every problem such as thinking far ahead about the progress of the institution, developing other potentials for achieving goals such as providing feedback or responding to input from

community leaders and cooperation partners, being active in extracting information, positively appreciating the work produced by its members, and managing knowledge as a basis for making and making decisions.

From this explanation, leaders in each work unit within the university have met managerial competency standards well. Although there are still several other competencies that need to be optimized, these results are seen in indicators of initiative attitude, such as speed of seizing opportunities, speed of anticipation and self-confidence and assertiveness still need to be improved. The results of this study are in line with the research of Lakshminarayanan, et al (2016) who found that managerial competence affects organizational performance. This means that all the potential possessed by a person includes education accompanied by the support of expertise, and skills both technical, functional and social skills lead to the achievement of effective performance.

Based on the results of the test, hypothesis two which states that the management control system has an effect on balance-based performance, the scorecard is accepted. This result can be explained that leaders in the university environment implement a management control system by implementing an activity tracking system to support performance achievement and modifying methods / approaches for work supervision. These results support previous research in which the implementation of appropriate management control systems can contribute to performance. However, the assessment indicators (assessors) of the management control system within the university have not been optimally implemented. This means that it needs clarity on target assessment of the work points evaluated or assessed. In general, the acceptance of hypnosis is in line with the findings of previous research results that show that appropriate management control systems lead to performance achievements.

In general, the results of this research are in line with the concept of Resource base view (RBV) that empowers or utilizes university resources such as the role of potential human resources, the role of leaders, approaches or strategies used, optimal management systems or management are able to support the achievement of superior and competitive university performance (Barney &; Clarck, 2007; Putri et al, 2014; A. Abubakar &; Halim, 2018; ).

#### **CONCLUSION**

The results of this study can be concluded that: It is proven that managerial competency strategies affect university performance, meaning that the more they meet the managerial competency criteria, the more they can improve university performance based on a balance scorecard. Likewise, the management control system is proven that the management control system affects performance. This means that the better the management control system is implemented, the better performance achievement is followed.

Efforts to achieve and improve performance based on the Balance Scorecard in the university environment are recommended that leaders continue to strive to implement a management control system in work units and individual employees by optimizing the evaluation system carried out by assessors / leaders so that the role of control and supervision is carried out gradually and continuously. Similarly, related to managerial competence when improving the capabilities of prospective managers in work units, Unnes can develop managerial potential and competence by providing coaching, education, socialization, including managerial training in building confidence with increased insight and firmness in decision making.

Based on the contribution of R Square, there are still opportunities for other predictor variables that also affect performance achievement that are not included in this research model. So that researchers can then develop or combine with other relevant variables to contribute to the achievement of performance. Other opportunities test the same research on different objects so that this research can be generalized.

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