
Longitudinal Analysis of Universities Management Maturity in Indonesia

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Abstract

The maturity of the management of public service agencies greatly determines quality and competitiveness. The main objective of this research is to assess the management maturity level of public service agencies in Indonesian state Islamic universities using the BLU-Maturity-Rating Model. The research design uses a mixed-methods research paradigm with a sequential approach, which collects quantitative data followed by qualitative data. The researchers collected quantitative data from secondary data published by the Directorate of Public Service Agencies, Ministry of Finance of the Indonesia Republic. Unstructured in-depth interviews were collected for qualitative data. Key informants are officials who are actively involved in the operations of public service agencies at their universities. Qualitative data analysis uses content analysis, while quantitative data uses tabulation analysis. The research results show that public service agencies' majority level of management maturity is at the second level (managed). The low level of maturity is due to a normative, sceptical and indifferent attitude to wards the demands of management maturity. This condition impacts the low performance of public service bodies at state Islamic universities in Indonesia.

Keywords: assessment, management maturity, higher education organization, maturity level, PSA-maturity-rating

1. Introduction

In Indonesia, there are three models of State Higher Education Organizations (SHEO): the state financial management model, the Public Service Agency (PSA) model and the legal entity model (Indonesia Government, 2014). The three organizations models have different management models. In the PSA model, SHEO uses a company management approach that prioritizes efficiency, productivity and good business practices (Indonesia Government, 2012). The State Islamic University (SIU) is one of the SHEO in Indonesia, under direct guidance by the Ministry of Religion. Since 2008, 28 SIUs have used the PSA approach in their management (DJPBN, 2023). In 2021, PSA's Financial Management Advisory Directorate measured management maturity at SIU. Measurements evaluate financial and service performance and are called results-

based. On the other hand, these steps also assess process-based aspects (including internal capacity, governance and leadership, innovation, and environmental management) to improve service quality through continuous improvement (Dit. PPK BLU, 2020). Therefore, it is important to measure management maturity to continuously improve and gradually increase the quality and performance of higher education services.

The importance of management maturity in HIE lies in its ability to improve processes, ensure quality, and strengthen its quality culture. Measuring maturity is useful for assessing the process of improving SHEO's capabilities and service quality as an organization. The specific interpretation of this measure depends on the social complexity of SHEO (Nelson et al., 2013). In order to assess the overall maturity of growth maturity in the SHEO system, the maturity model must be adjusted to the uniqueness of SHEO culture and meet certain criteria (Robertson & Larkin, 2019). Most maturity models adapt the integration of capacity maturity models to meet the specific goals and needs of different types of SHEO (Duarte & Martins, 2013). The application of maturity models to SHEOs is an important tool for strengthening quality culture, including formal structural elements at the regulatory, strategic and operational levels of SHEOs (Verschuere et al., 2023). Therefore, SHEOs must use appropriate management maturity models. Thus, measuring the maturity of SHEO management becomes essential.

The aim of measuring management maturity is to assess business processes, processes, and organizational performance, determine maturity levels, determine the impact of business process management maturity on overall business performance (Dijkman et al., 2016), create perfect conditions to achieve organizational objectives (Xerri et al., 2015), identify areas of improvement, measure progress and impact, set improvement objectives, and align with strategic objectives (Thiry, 2016). In the context of the SHEO, one of the objectives of measuring maturity is to assess the ability of SHEO to manage student activities, participation, success and retention and to identify areas for improvement. The benefits include competitive advantages, improved organizational performance, increased productivity, reduced waste, and increased customer satisfaction (Nelson et al., 2013). One model can be the capacity maturity model for active learning. The model aims to evaluate the maturity of various aspects of higher education, including learning processes, project management, team development, resource allocation and evaluation methods (Garbin et al., 2022). As a result, management maturity measures vary greatly depending on the goals and type of organization.

This research aims to measure, map, and analyze the maturity level of SIU management using the PSA-Maturity-Rating Model. This argument is based on the fact that performance measurement in SHEO has received much attention. The PSA model requires SIUs to apply corporate management ideas to their organizational management activities. On the other hand, they gain greater flexibility in handling public budgets. Therefore, monitoring the maturity of SIU management is very necessary. Research questions aim to answer this main objective: (1) How mature is SIU management based on the PSA-Maturity-Rating Model? (2) What is the attitude of the PSA management authority towards implementing the PSA Maturity Rating instrument?

1.1 Maturity Theory

Maturity is the measure of mental and emotional behaviour (Cambridge. Dictionary, 2023). Maturity is the ability of the organization to improve continuously. The lower the maturity, the greater the probability of an incident or error (Wikipedia.org, n.d.). Chris Argyris' theory suggests that the maturity of a person is reflected in his development, starting with the situation of immature to maturity. Adults are described as active, independent, self-confident, and able to control themselves (Prasad & Prasad, 2010). In contrast to Agrigius, Robert Kegan's theory of social maturity emphasizes that maturity is not a continuous process but a period of stability and growth (Kegan, 1982). In the strengthening of Kegan's theory, Lederer (1984), he explained that maturity is developed through the "balance" of an increasingly individualistic self in an increasingly developed life and world. This balance is different between inclusion and autonomy. In Bauger et al. (2021), Berger and his colleagues used Kegan's theory to study the relationship between age and subjective well-being. The relationship between psychological maturity and subjective well-being was found to be balanced, and psychological maturity predicted subjective well-being associated with age. As a result, the maturity of individuals and the maturity of organizations differed. Persons' maturity develops in line with age. The maturity of the organization is in line with continuous improvement, integration, and autonomy.

1.2 Models and Aspects of Higher Education Management Maturity Assessment

Measuring the maturity of an SHOI as an organization is an assessment of the operational quality of the organization (Eby, 2022). He describes the evolutionary process of building human resources, processes, preparation, and technological capacity, emphasizing continuous improvement, stakeholder engagement, improving governance, adapting to innovation and challenges and focusing on continuous improvement efforts (Duarte & Martins, 2013; Eby, 2022; Presecan, 2021; Soni, 2024). This is closely related to management maturity regarding the development, effectiveness and sophistication of management processes and production practices (Bougoulia & Glykas, 2023; Deszczyński, 2021; Fabbro & Tonchia, 2021; Ouazzani-Chahidi et al., 2023). Adapting Argyris' maturity theory (Argyris, 1973), the purpose of measurement is to change SHEO management from passive to active, dependency to independence, one strategy to many strategies, low motivation to high, and current perspective to future perspective. Therefore, Duarte and Martins (2013) emphasize the importance of measuring SHEO maturity using appropriate relevant models. Therefore, models and aspects must be taken into account when measuring the maturity level of SHEO.

Various maturity models have been developed to evaluate SHEO maturity. Among the management maturity models is the maturity model with a marketing mix approach. This model aims to assess the effectiveness of educational organization service facilities based on aspects of product measurement, price, promotion and location. The results of these measurements are to identify areas of improvement in these four areas (Gonda & Poór, 2023). The Engineering Education Capacity Maturity Model is a five-level maturity model (start, manage, determine, manage quantitatively, and optimize). This model aims to measure the maturity of SHEO management (Petrie et al., 2009). The Business Process Maturity Model is a maturity model designed to improve the business processes of all SHEO units, from Level 2 (management) to Level 3 (standardized) (Duarte & Martins, 2014). He emphasized the importance of total quality

management principles in the industry to gain benefits from implementing the Capacity Maturity Model insertion. Another maturity model is the assessment system maturity matrix (Verschueren et al., 2023). This model focuses on assessing the maturity of independent learning in higher education and identifying areas that require improvement. Thus, management maturity models are quite diverse. The measurement aspect and measurement objectives greatly determine the use of the SHEO management maturity model.

1.3 PSA-Maturity-Rating Model

The PSA-Maturity-Rating Model is a model developed by the PSA's Financial Management Advisory Directorate, Ministry of Finance of the Republic of Indonesia (Dit. PPK BLU, 2020). The targets of this model are public institutions that have been designated as Work Units of PSA by the government, one of which is the state SHEO. There are two areas of maturity measurement in this model, namely result-base and process-base. Result-based measures measure the maturity level of financial aspects (20%) and services (25%). Process-based measures have four aspects: internal capability (20%), governance and leadership (20%), innovation (10%), and environmental aspects (10%). Table 1 explains the objectives and indicators of these two areas. Assessment of the maturity level of each aspect uses a five-level approach, namely initial or ad-hoc, managed, defined, predictable, and optimizing (in detail explained in Table 2).

1.4 Management Maturity and Performance

Many previous studies have explained the relationship between management maturity and the performance and competitiveness of an organization. A study exploring the impact of business process management maturity on organizational performance has provided evidence that a high level of business process management maturity impacts better processes and organizational performance. In addition, innovative organizations tend to have a higher level of business process management maturity (Dijkman et al., 2016). Similarly, it is also stated that project management maturity has a significant relationship with increasing internal and external business performance but is unrelated to project performance (Yazici, 2008). Other studies also show that the level of maturity in the management process significantly impacts an industry's performance. A higher level of management maturity allows an organization to achieve continuous process improvement and achieve its global vision, prioritize focus areas, and move to a higher level of maturity (Ouazzani-Chahidi et al., 2023). Competitive advantage is also strongly influenced by management maturity and staff competency (Huang et al., 2023). On the other hand, low management maturity hurts project success (Katane, 2017). He emphasized the importance of organizational culture, management maturity, communication, trust, leadership, and efficient use of technology. Thus, there is a significant correlation between SHEO management maturity and its performance.

Table 1. PSA-Maturity-Rating Measurement Indicators

No	Area	Aspect	Objective	Indicators
1.	Result-base is an area for assessing public institutions' maturity based on targets set at each maturity level. In this context, maturity assessment is carried out based on the output produced from an activity and is quantitative.	Finance	The financial aspects assessment aims to ensure that the PSA's financial management reaches the predetermined targets, thus creating transparency in public financial management.	<ol style="list-style-type: none"> 1. Liquidity 2. Activity 3. Efficiency 4. Level of Independence
		Services	The service aspect assessment aims to help the PSA create additional service roadmaps and maximise the services.	<ol style="list-style-type: none"> 1. Stakeholder Satisfaction Index 2. Service Efficiency 3. Service Complaint System 4. Level of Success in Service Fulfillment
2.	Process-based is an area for assessing the maturity of public institutions based on the level of process depth. Maturity assessment is based on input and output that describes the overall process.	Internal Capabilities	Internal capacity measures the organizational ability to manage human resources, business processes, and technology and provide community services.	<ol style="list-style-type: none"> 1. Human Resources 2. Business Process 3. Technology 4. Customer Focus
		Innovation	The focus of innovation is to promote economic growth and development and to create broader innovation.	<ol style="list-style-type: none"> 1. Service User Involvement 2. Innovation Process 3. Knowledge Management 4. Change Management
		Government & Leadership	Governance and leadership aim to improve organizational performance, contribute to growth and sustainability, and increase stakeholders' confidence.	<ol style="list-style-type: none"> 1. Strategic Planning 2. Business Ethics 3. Stakeholders Relationship 4. Risk-Management 5. Monitoring and Reporting
		Environment	The environmental aspect is to assess the organization's awareness and responsibility for the impact of its ecological activities.	<ol style="list-style-type: none"> 1. Environmental Footprint Management 2. Resource Usage

Resources: (Dit. PPK BLU, 2020)

Table 2. Level of Maturity in the PSA-Maturity-Rating Model

Level	Meaning	Result-based (based on performance)	Process-based (based on evidence/document)
1. Initial ad-hoc.	At this level, the initial level of an organization performing an activity used as the basis for maturity measurements is still ad hoc.	The performance measurement results need to meet the targets or indicate negative trends.	Business processes are ad-hoc and irregular.
2. Managed	At this level, the organization can carry out repeatable activities, even though they have yet to be documented and standardized.	Performance measurement results do not meet relevant targets and show a stable trend.	Business processes are limited to following regulatory patterns.
3. Defined	At this level, the organization can standardize activities at level 2 and document them as standard operational procedures.	The performance measurement results do not meet the relevant objectives but show a positive trend.	Business processes have been well documented and communicated.
4. Predictable	At this level, the organization can define, control, and predict processes to maintain the quality of services and output provided to the public.	Performance measurement results are mostly relevant and show a substantial improvement trend.	Business processes are well monitored, controlled and measurable.
5. Optimizing	At this level, the organization has reached the perfection stage and is oriented towards innovation and continuous improvement.	Performance measurement results have met all targets and show sustainable target achievement.	The business process has become a good practice and is automatically executed with the support of information technology.

Resources: (Dit. PPK BLU, 2020)

2. Method

This study uses a mixed-method research design paradigm with a sequential explanatory approach. The purpose of the research design in this study is to gain a comprehensive understanding of university management maturity and, at the same time, also explore the problems of implementing the PSA-Maturity-Rating instrument as required by the Directorate of Public Service Agency Development, Ministry of Finance. Creswell (2014) stated that the sequential explanatory approach is to collect and analyze data first, followed by collecting and analyzing qualitative data to explain quantitative results. Quantitative studies in the form of measuring the level of management maturity involve 28 SIUs in Indonesia that have PSA status. Quantitative data are sources from secondary data from the PSA's Financial Management Advisory Directorate. Quantitative data collection uses a longitudinal study approach. As stated by Menard (2002), the type of longitudinal study is repeated measurements of the variables

analyzed over a long period. In this study, data was collected during two periods (2021 and 2022) of measurement of management maturity at SIU by the PSA's Financial Management Advisory Directorate.

Meanwhile, researchers collected qualitative data through interviews using an unstructured, in-depth interview approach. This strategy fosters a relaxed atmosphere between researchers and informants while avoiding suspicion. During the conversation, researchers continuously reflect on respondents' answers. The construction of interview guidelines is based on the results of the analysis and findings of quantitative research. Informants in the qualitative study were PSA managers from three universities who had obtained PSA status for over ten years. At the same time, they were also involved in the PSA-Maturity-Rating assessment process.

Quantitative data analysis uses the tabulation method. This method systematically and logically represents numbers in rows and columns to facilitate statistical analysis and interpretation. Qualitative data uses qualitative data analysis with a content analysis approach. Qualitative data analysis was carried out through several stages: collection, reduction, and display. During the data collection process, the researcher reflected on the data obtained. The second is data reduction. In data reduction, researchers sort the data to get data that genuinely answers the research objectives. During data reduction, researchers used a content analysis approach. This approach aims to 'read between the lines' and determine answers to questions where the text implies something and is not stated explicitly. Third, the data should be presented in narrative form, and finally, conclusions should be drawn and verified before publication.

3. Results

This study was carried out in two stages. The first step is to analyze data from the assessment of SIU management maturity. The second step involves collecting qualitative data from key informants on the various stages of strategy in order to internalize the PSA-Maturity-Rating Model. Table 3 contains a description of the SIU that is currently designated as a PSA work unit.

Table 3: State Islamic University as a Work Unit of the Public Service Agency

No	Become a PSA	Amount of SHEO
1.	≥ 15 years	4
2.	$10 \text{ years} \geq \text{become a PSA} < 15 \text{ years}$	11
3.	$5 \text{ years} \geq \text{become a PSA} < 10 \text{ years}$	4
4.	< 5 years	9
Jumlah		28

Sources: Secondary data (processed, 2024)

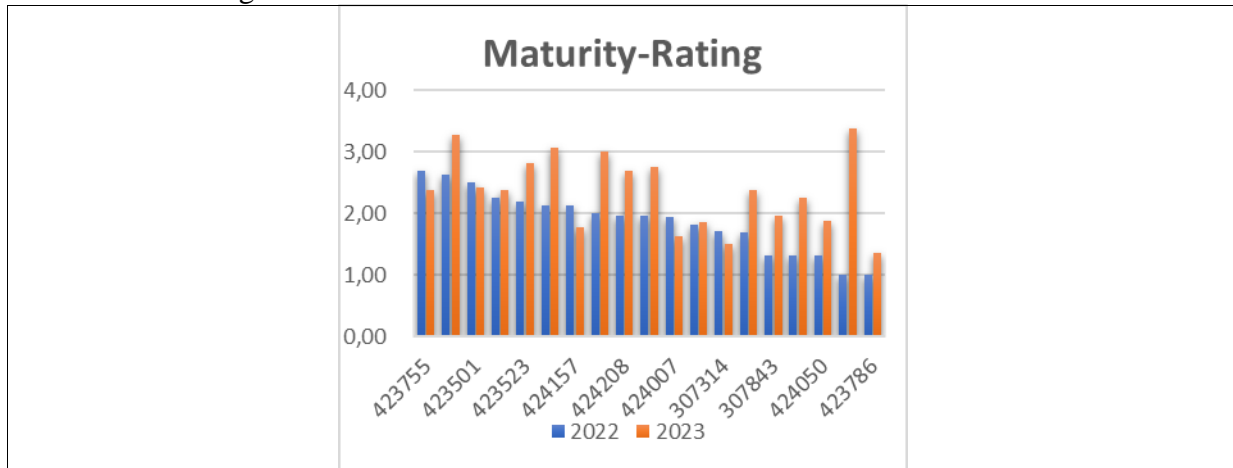
According to the PSA-Maturity-Rating Model, Table 4 depicts the many phases of developing SIU management maturity.

Table 4: Results of State Islamic University Management Maturity Level of 2022-2023.

No	Code of SHEO	Maturity-Rating		Assessment Aspects											
				Finance		Services		Internal Capabilities		Governance & Leadership		Innovation		Environment	
		2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
1.	423755	2.41	2.86	1.72	2.38	2.63	3.35	2.75	3.00	2.80	3.00	2.50	3.00	1.00	1.00
2.	424075	2.32	2.54	2.69	3.28	2.65	3.44	1.75	2.00	2.60	2.00	1.50	1.75	2.00	1.00
3.	423501	2.30	2.72	2.63	2.41	1.50	3.48	2.50	3.25	3.00	2.20	1.50	1.50	3.00	2.50
4.	423611	2.29	2.51	2.50	2.38	1.96	3.31	2.50	1.75	2.40	2.80	2.00	1.50	2.50	3.00
5.	423523	2.26	2.41	1.97	2.81	3.04	3.44	2.00	2.00	2.40	1.80	1.50	1.50	1.50	1.50
6.	423792	2.18	2.41	1.31	3.06	3.42	3.67	1.75	1.75	1.80	1.40	2.25	1.50	2.50	2.00
7.	424157	2.16	2.28	1.69	1.78	2.25	3.35	2.50	1.50	2.40	2.40	1.75	2.00	2.00	2.00
8.	423812	2.15	2.78	2.25	3.00	2.08	3.10	2.50	2.75	2.00	2.40	1.75	2.25	2.00	3.00
9.	424208	2.14	3.04	1.81	2.69	2.92	3.56	1.75	2.75	2.60	3.20	1.25	2.75	1.00	3.00
10.	424188	2.13	2.37	2.13	2.75	1.96	3.29	2.50	1.75	2.20	2.00	1.75	1.50	2.00	2.00
11.	424007	2.12	2.28	2.00	1.63	2.85	3.29	2.50	2.00	1.80	2.40	1.00	2.00	1.00	1.00
12.	423925	2.03	2.05	1.94	1.85	1.69	3.19	2.25	1.25	2.60	1.80	2.00	2.00	1.00	1.50
13.	307314	1.86	2.25	1.97	1.50	1.83	2.75	1.75	2.25	2.40	2.80	1.25	1.75	1.00	1.50
14.	423770	1.84	2.51	1.00	2.38	1.40	2.92	2.50	2.50	2.60	2.40	2.00	2.00	1.50	2.50
15.	307843	1.72	2.01	2.13	1.97	1.38	2.77	2.50	2.25	1.40	1.60	1.25	1.00	1.00	1.00
16.	423548	1.67	2.01	1.00	2.25	1.50	3.06	2.25	2.00	2.20	1.20	1.50	1.00	1.00	1.00
17.	424050	1.65	2.03	1.31	1.88	1.75	2.40	2.25	2.25	1.60	1.80	1.25	2.00	1.00	1.00
18.	424260	1.57	2.50	2.19	3.38	1.33	2.50	1.50	2.00	1.60	2.60	1.00	1.50	1.50	2.50
19.	423786	1.52	2.00	1.31	1.35	2.83	3.69	1.00	1.50	1.00	1.80	1.00	1.00	1.00	1.00

Sumber: Secondary Data (processed, 2023)

A comparison graph of the SIU management maturity level ratings for every assessment aspect can be found in Figure 1.





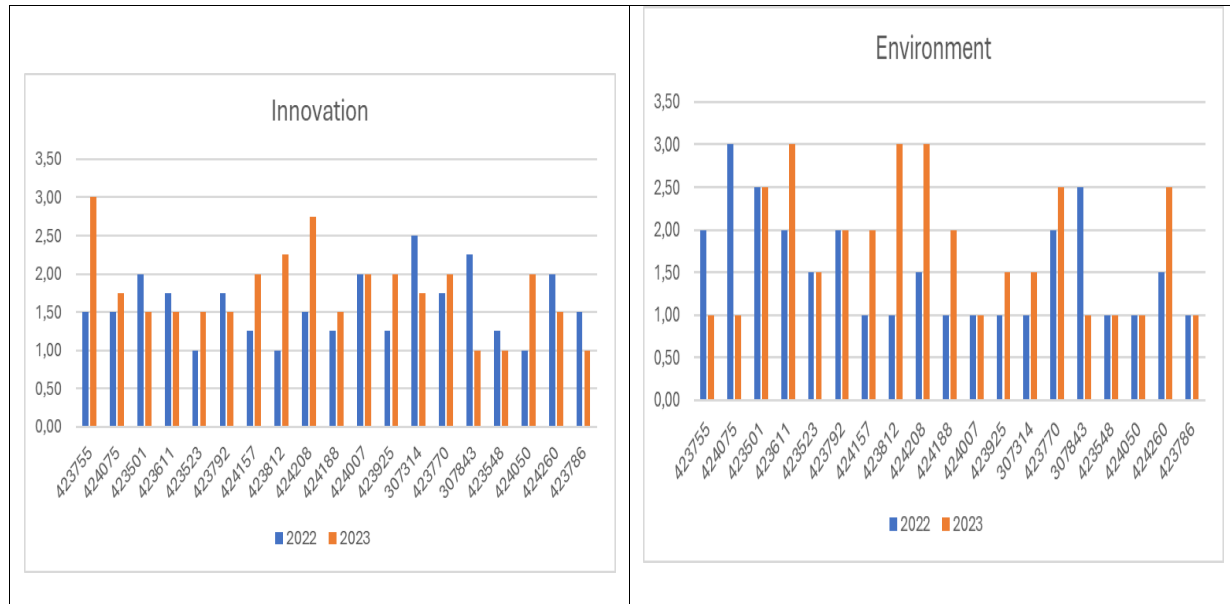


Figure 1: Comparison of Maturity Level Scores for Each Measurement Aspect

With reference to Table 4 and Figure 1, it is evident that the SIU, designated as a PSA Work Unit, has very variable results for every dimension of the maturity assessment. Put otherwise; there is variation in the scores of the six components used by the PSA-Maturity-Rating Model to assess the maturity degree of SIU management.

The five main stages of maturity for each measurement feature are grouped in Table 5. For instance, SIU, which has the code "423755", comes in first for both innovation and internal capabilities. Aspects of leadership and governance come in second. Aspects related to finance, services, and the environment are not among the top five categories.

Table 5. State Islamic University Management Maturity Level Score Map of 2022-2023.

No	Code of SHEO	Maturity-Rating	Assessment Aspects												
			Finance		Services		Internal Capab.		Governance & Leadership		Innovation		Environment		
			2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	
1.	423755	2	2	-	-	-	-	1	2	2	2	1	1	-	-
2.	424075	3	5	1	2	-	5	-	-	3	-	-	-	4	-
3.	423501	4	4	2	-	-	4	3	1	-	-	3	-	2	4
4.	423611	-	-	3	-	-	-	3	-	-	3	3	-	2	1
5.	423523	-	-	-	5	2	-	-	-	-	-	-	-	-	-
6.	423792	-	-	-	3	1	2	-	-	-	-	2	-	3	-
7.	424157	-	-	-	-	-	-	4	-	-	-	-	4	5	-
8.	423812	-	3	4	4	5	-	-	3	-	-	-	3	-	2
9.	424208	5	1	-	-	3	3	-	4	4	1	-	2	-	3
10.	424188	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.	424007	-	-	-	-	4	-	-	-	-	-	-	5	-	-
12.	423925	-	-	-	-	-	-	-	-	5	-	4	-	-	-
13.	307314	1	-	-	-	-	-	-	-	-	4	-	-	-	-

No	Code of SHEO	Maturity-Rating	Assessment Aspects					
			Finance	Services	Internal Capab.	Governance & Leadership	Innovation	Environment
14.	423770	- -	- -	- -	- 5	- -	- -	- 5
15.	307843	- -	- -	- -	- -	- -	5 -	- -
16.	423548	- -	- -	- -	- -	- -	- -	- -
17.	424050	- -	- -	- -	- -	- -	- -	- -
18.	424260	- -	5 1	- -	- -	- 5	- -	- -
19.	423786	- -	- -	5 1	- -	- -	- -	- -

Resources: Processed, 2023

Following is the interview with one of the SHEO management:

“We carried out evaluation of this PSA-Maturity-Rating instrument last year by inviting a team from the PSA's Financial Management Advisory Directorate that are competent in formulating and filling in the instrument. During the evaluation we went through each available instrument to acquire an understanding as a guidance to fill in the instrument.” (SHEO Management code UIY.015.070923).

Consistent with the SHEO code 423755, the informant from SHEO code 423812 likewise made a tangible effort to internalize the PSA-Maturity-Rating Model instrument within colleges, schools, and other organizations. He reported that:

“We have conducted workshop and focus group discussion twice to ensure that the PSA-Maturity-Rating instrument required by the PSA's Financial Management Advisory Directorate was done and became the culture of university management. We will conduct such event annually since along the way we learned that the PSA-Maturity-Rating instrument is an organization learning process. Our university has a special organization to internalize the instrument, including control and measures.” (SHEO Management code UIM.021.080823).

However, most SIUs have yet to internalise the PSA-Maturity-Rating Model tool; Rather, they are generally normative and uninterested, according of claim their claims.

“Technically we prepare a report to fill in the PSA-Maturity-Rating instrument in real terms. Since the majority of event reports have been written before the disbursement process, whenever we need to fill in the PSA-Maturity-Rating instrument we will do so following the available report if applicable.” (SHEO Management code UISE.017.050923).

Furthermore, another informant also stated:

“However if there is an urgent matter that has no supporting data, we will make reasonable efforts. If we find it difficult, we will skip that. At the end of the day the result or the maturity value will not affect the organization. After the assessment, what's next? It is similar to those assessment from vertical agency that is required only to collect data without any further follow up for continuous improvement.” (SHEO Management code UISE.019.060923).

Meanwhile, informants from other universities stated:

“No data sent to bios is made up only for the maturity sake. The data is natural and as is so that there is nothing made up to boost the score.” (SHEO Management code UIT.017.270923).

According to an additional source, the PSA-Maturity-Rating instrument had yet to be used as intended. This testimony is consistent with the previous one.

“Sometimes there are activities that are not done while in fact it is done unintentionally. That means the activity is included in the instrument but not by design and the academic report is written.” (Informant of SHEO Management code UIY.015.070923).

He further added:

“This is due to the ignorance of the instrument so that it is done based on habit, for example, knowledge management where there is an instrument such as sharing sessions. Ideally those should be done by design but there is no design nor a clear governance.” (Informant of SHEO Management code UIY.015.070923).

Additionally, he said that in order to satisfy the PSA-Maturity-Rating instrument's requirement for documents as evidence, the following actions must be taken:

“There is an activity done regularly by an organization such as knowledge management. It should be mapped and included into the document based on the instrument needs, not by forcing a match between an activity in the report and the one available in the instrument. It is an exception when an activity must be reported but it is not available in the instrument such as business strategy plan, then it should be there and conducted.” (Informant of SHEO management code UIY.017.070923).

However, he showed indifference to the evaluation of the PSA-Maturity-Rating Model.

“The maturity according to us is not ready yet, incomplete, and not ideal as a benchmark.” (Informant of SHEIO management code UIY.017.070923).

The following quote from an informant exemplifies the apathetic nature:

“The university does not know yet what the benefit of the maturity for the organization. It is different from accreditation where there will be scores and it is beneficial for both students and the academic community.” (Informant of SHEO management code UIY.019.080923).

The reason for apathy is that measuring management maturity has no impact on rewards and punishment for them, as follows:

“There is a reasonable doubt when filling in the maturity since it has no direct impact, no reward, and no punishment. For example, when the PSA-Maturity-Rating score is high there will be an additional budget, remuneration, etc. On the contrary, if the score is low there will be punishment. Due the absence of both, the maturity process does not happen. All in all, we still doubt the benefit and drawback of the maturity.” (Informant of SHEO management code UIY.019.080923).

Similar statements were also expressed from other SHEO informants who stated that:

“The frequently asked question regards to the benefit of filling in various instrument for the university progress. Is it only a matter of completing documents as what we used to do so far? This leaves an impression that it burdens each unit. Moreover, there is no reward nor punishment so that it is considered as a mere of administrative tasks.” (Informant of SHEO management code UISA.011.220823).

This apathetic nature can also be seen in activities at their universities, which are often carried out on an ad-hoc basis.

“The leading sector of filling in the maturity is initiated by SPI through involving key stakeholders such as Finance, Staffing, Planning, Faculty, Organizing, Centre, and related Unit. The PSA-Maturity relates as to how to create a good governance as a PSA Work Unit. It is in line with the SPIP which is also coordinated by SPI legally regulated in Performance Agreement.” (Informant of SHEO management code UIB.019.160923).

However, they also said that they needed help with using the PSA-Maturity-Rating instrument because it was applicable to all kinds of public organizations.

“Some obstacles emerged are the difficulties in standardizing documents. Each related unit sometimes fill the data in as they wish because they do not understand it yet. So, when an independent assessment is conducted, it does not meet the target. Many document are not related to the instrument in matrte. We had a score of 3.2 during the independent assessment and when the PSA's Financial Management Advisory Directorate assess us, we had a score under 3.” (Informant of SHEO management code UIB.015.150923).

According to this study's quantitative findings, SIU's management maturity score remained at the second level (managed) in 2022, with 100% of the population, and in 2023, it was at the same level at 89%. Thus, SIU management maturity is still classified as low. Qualitatively, this study discovered that PSA managers' normative, suspicious, and apathetic approaches to understanding and applying the PSA-Maturity-Rating Model instrument were the root reason for the low maturity score. Not all SIUs have fully and optimally integrated the PSA-Maturity-Rating Model instrument into their management practices. As a result, SIU management must focus on and enhance several areas and dimensions. The technical ministry needs to provide profound and comprehensive guidance so that SIU management has a better level of SHEO management maturity. Thus, SIU has yet to be able to compete on the global stage.

4. Discussion

This study discovered two findings: a low SIU management maturity score, which remains at the second level (managed), and the presence of normative, sceptical, and apathetic thinking when adopting the PSA-Maturity-Rating instrument. Meanwhile, firms and public institutions have long conducted management maturity assessments. They know the need to assess management maturity in the competitive landscape. They recognise that for their organisation to be competitive, managerial maturity must be increased constantly. Universities, being public

institutions, compete on a local, regional, and global scale. Even if university management styles vary, it ultimately comes down to providing academic and non-academic services that meet the wants and needs of international students. Students can choose higher education as a location to learn and grow their professions. As a result, they choose colleges that can offer superior academic and non-academic services, facilities, credibility, reputation, and alums performance. Assessment of managerial maturity in universities with PSA Work Unit status is a technique for meeting these expectations while also increasing global competitiveness.

The findings of this study demonstrate that SIU needs to prepare to compete worldwide or to have a world-class university ranking. A world-class university, the management and governance ecology, policies, resources, and quality assurance must be reformed to adequately support high-performing universities. An organization's level of management maturity has a strong correlation with its competitive advantage. Management maturity is a critical aspect in the age of global competition since it directly influences an organization's capacity to create and maintain a competitive advantage (Huang et al., 2023). Mature management and governance systems provide a basis for universities to handle complexity, pursue excellence, and retain their global image. Management maturity can optimize business processes to achieve better performance (Dijkman et al., 2016). Management maturity models play an important role and have a significant impact on performance (Brookes et al., 2014), one of which is the PSA-Maturity-Rating Model (Directorate General of Treasury, 2020). Therefore, to measure SHEO management maturity it is necessary to consider models and objectives to find areas of continuous improvement.

Organizational culture is one of the causes of the low level of management maturity indicated by the PSA-maturity-rating score. Organizational culture plays an important role in shaping management practices. Understanding management maturity accompanied by organizational cultural orientation is the best strategy for performance-based organizations (Yazici, 2008); it influences the level of management maturity of an organization (Katane, 2017). Lack of clear standardization of business process service functions also causes low management maturity (Duarte & Martins, 2013). Standardization of business processes is very important to create a foundation for consistency, efficiency and quality in higher education administration. He added that strong governance structures and effective leadership can help the development of mature management practices in SHEO. The absence of a strong performance measurement mechanism also causes low management maturity. This measurement can increase the maturity of SHEO management (Cooke-Davies, 2004). On the other hand, the lack of a comprehensive maturity model to assess the application of technology and information systems in higher education has an impact on low maturity (Carvalho et al., 2020). Therefore, to improve good maturity, SHEO need to have a good organizational culture, a strong leadership and governance structure, clear standardization, and clear systematic procedures.

Studies on maturity assessment tend to be more specific, for example, in the scope of knowledge management (Abu Naser et al., 2016; Khatibian et al., 2010; Kulkarni et al., 2003; Pereira et al., 2021). It needs to be assessed for its maturity in improving management functions, identifying gaps, and improving organizational performance (Abu Naser et al., 2016; Khatibian et al., 2010).

Because, knowledge is a valuable asset in a competitive environment (Pereira et al., 2021). Abu Naser et al. (2016) emphasized the importance of knowledge management in SHEO to build a dynamic learning environment, increase knowledge, and improve overall performance. Maturity assessment in the scope of risk management (Marliyah et al., 2023; Salawu & Abdullah, 2015). Marliyah et al. (2023) highlight the importance of integrating risk management practices to increase the level of management system maturity and better higher education governance. The application of information technology is the scope of maturity assessment (Ekuobase & Olutayo, 2016; Kyriakidou et al., 2013). This study is more comprehensive in assessing the maturity of SHEO management. Management maturity assessment in this study involves six aspects, namely finance, services, internal capabilities, governance and leadership, innovation, and environment. These include assessing risk management, knowledge management, and information technology.

Higher education leaders must develop their maturity by implementing appropriate models. The approach enables executives to measure and visualise the overall level of management maturity across multiple dimensions and identify areas of weakness that require improvement. These activities include setting the correct goals, establishing responsibility, constantly improving people resources, and focusing on the right mix of culture and strategy. Determine essential performance indicators for measuring progress. Maintain leadership accountability for meeting performance targets and maturity goals. Leadership and staff work together to build a culture of continuous improvement, assess progress regularly, and track the finest innovations in SHEO worldwide. Leaders in higher education must critically evaluate change and lead transformation processes to prepare their organizations for future success (Hickman, 2023), as well as practice flexible leadership at a university to foster effective leadership in the changing landscape of higher education (Siason & Tangco-siason, 2023). It is also critical to regularly assess present conditions, identify areas for improvement, and focus on building a quality culture as well as tactics for gaining a competitive advantage. Leaders can continually improve the maturity of their higher education management by employing the correct tactics, resulting in a more effective and responsive corporate culture.

5. Conclusion

Management maturity is an essential aspect of improving competitiveness and quality in higher education. This analysis discovered that SHEO needs to prepare to compete worldwide since it is still at the managed level. To compete with world-class SHEO, SHEO management maturity must be optimal. Many factors contribute to the low level of SHEO management maturity, such as complexity, organisational culture, lack of clarity in establishing and standardising business processes, weak leadership commitment, weak support for integrated information technology, lack of performance measurement mechanisms, failure to do what should be done, lack of finding innovations, the lack of continuous improvement in the quality of higher education services, and weak analysis as an evaluation measure to find areas of improvement also contribute to the low maturity of their higher education management. As government institutions, they tend to be more "normative", "sceptical", and "apathetic" towards the importance of management maturity in providing higher education.

This study demonstrates the necessity of management maturity at public universities. Remember that the competitive landscape of higher education at the local, regional, and global levels is an unavoidable component of today's SHEO management. The management model of state universities is urged to combine corporate management with an entrepreneurial bureaucratic system. Higher education leaders must be forced to adapt management maturity models that apply to providing higher education. The mature, ad-hoc, controlled, defined, predictable, and optimising model is one of the process evolution models, demonstrating management capabilities over time and providing a roadmap for advancement through various stages of maturity. The maturity model identifies the key traits, processes, and performance indicators for each level. This model allows higher education leaders to identify areas for improvement at each maturity level (both in terms of finance, services, internal capabilities, governance and leadership, innovation, and the environment), set reasonable expectations, understand the steps required for improvement, create an evaluation system, and report progress on a continuous basis. This goal is to reach an optimal degree of higher education management maturity by optimizing educational resources and overall higher education performance.

This study is limited to SIU under the Ministry of Religion of Indonesia. It does not include SHEO under other ministries transforming the same PSA Work Unit or, in a broader context, private higher education organizations. Differences in local contexts, including diverse cultures, organizations, structures, politics, mindsets, and paradigms in higher education management, will undoubtedly bring varied nuances and perspectives on the relevance of maturity in providing higher education. In line with this, other studies are urgently needed, particularly those that account for the various characteristics and types of SHEO, to gain a more in-depth and comprehensive understanding of the level of maturity in providing higher education. Further research should be conducted on maturity levels in advanced organizations of various sorts and personalities, as well as on the concepts, methods, and tactics used to obtain an optimal level of maturity.

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References

- Abu Naser, S. S., Al-Shobaki, M. J., & Abu Amuna, Y. M. (2016). Knowledge Management Maturity in Universities and its Impact on Performance Excellence “Comparative study.” *Journal of Scientific and Engineering Research*, 3(4), 4–14. www.jsaer.com
- Argyris, C. (1973). Personality and Organization Theory Revisited. *Administrative Science Quarterly*, 18(2), 141. <https://doi.org/10.2307/2392060>
- Bauger, L., Bongaardt, R., & Bauer, J. J. (2021). Maturity and Well-Being: The Development of Self-Authorship, Eudaimonic Motives, Age, and Subjective Well-Being. *Journal of Happiness Studies*, 22(3), 1313–1340. <https://doi.org/10.1007/s10902-020-00274-0>
- Bougoulia, E., & Glykas, M. (2023). Knowledge management maturity assessment frameworks: A proposed holistic approach. *Knowledge and Process Management*, 30(4), 355–386. <https://doi.org/10.1002/kpm.1731>

- Brookes, N., Butler, M., Dey, P., & Clark, R. (2014). The use of maturity models in improving project management performance: An empirical investigation. *International Journal of Managing Projects in Business*, 7(2), 231–246. <https://doi.org/10.1108/IJMPB-03-2013-0007>
- Cambridge.Dictionary. (2023). *Maturity*. Cambridge University Press & Assessment 2023. <https://dictionary.cambridge.org/dictionary/english>
- Carvalho, J. V., Pereira, R. H., & Rocha, Á. (2020). A systematic literature review on maturity models for information systems in higher education institutions. *Innovations in Education and Teaching International*, 57(4), 434–449. <https://doi.org/10.1080/14703297.2019.1648219>
- Cooke-Davies, T. (2004). Maturity and measurement: what are the relevant questions about maturity and metrics for a project-based organization to ask, and what do they imply for project management research? *Research Conference*. <https://www.pmi.org/learning/library/maturity-measurement-reorganization-pm-research-8338>
- Creswell, W. J. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (IV). SAGE Publications Ltd.
- Deszczyński, B. (2021). *Firm Competitive Advantage Through Relationship Management: A Theory for Successful Sustainable Growth*. Palgrave Macmillan.
- Dijkman, R., Lammers, S. V., & de Jong, A. (2016). Properties that influence business process management maturity and its effect on organizational performance. *Information Systems Frontiers*, 18(4), 717–734. <https://doi.org/10.1007/s10796-015-9554-5>
- Directorate General of Treasury. (2020). *Public Service Agency Maturity Rating Assessment Tools and Evaluation*. Finance Ministry of Indonesia.
- Dit. PPK BLU. (2020). *Guideline Book – BLU Maturity Rating Assessment Tools and Evaluation*. Kementerian Keuangan.
- DJPBN. (2023). *Public Services Agency*. Direktorat Pembinaan Pengelolaan Keuangan BLU, Direktorat Jenderal Perbendaharaan. http://blu.djpbk.kemenkeu.go.id/index.php?r=publication/blu/index&Blu_sort=title&Blu_page=5
- Duarte, D., & Martins, P. V. (2013). A Maturity Model for Higher Education Institutions. *CEUR Workshop Proceedings*, 1(1), 25–45.
- Duarte, D., & Martins, P. V. (2014). Higher education business process improvement: Achieving BPMM level 3. *Proceedings - 2014 9th International Conference on the Quality of Information and Communications Technology, QUATIC 2014*, 18–27. <https://doi.org/10.1109/QUATIC.2014.10>
- Eby, K. (2022, June). The Complete Guide to Organizational Maturity: Models, Levels, and Assessments. *SmartSheet*. <https://www.smartsheet.com/content/organizational-maturity#:~:text=Organizational maturity is the measure, process that emphasizes self-improvement>
- Ekuobase, G. O., & Olutayo, V. A. (2016). Study of Information and Communication Technology (ICT) maturity and value: The relationship. *Egyptian Informatics Journal*, 17(3), 239–249. <https://doi.org/10.1016/j.eij.2015.12.001>

- Fabbro, E., & Tonchia, S. (2021). Project management maturity models: literature review and new developments. *Journal of Modern Project Management*, 8(3), 31–45.
- Garbin, F. G. de B., ten Caten, C. S., & Jesus Pacheco, D. A. de. (2022). A capability maturity model for assessment of active learning in higher education. *Journal of Applied Research in Higher Education*, 14(1), 295–316. <https://doi.org/10.1108/JARHE-08-2020-0263>
- Gonda, D., & Poór, P. (2023). Use of Maturity Model to Create an Effective Marketing Mix with a Focus on Educational Facilities. *Sustainability (Switzerland)*, 15(8), 1–22. <https://doi.org/10.3390/su15086806>
- Hickman, X. (2023). A Challenge for Higher Education Leadership: The Multi-Faceted and Irreversible Impact of the COVID-19 Pandemic. *Journal of Higher Education Policy And Leadership Studies (JHEPALS)*, 4(4), 147–158. <https://doi.org/10.61186/johepal.4.4.147>
- Huang, G., Lee, S. M., & Clinciu, D. L. (2023). Competitive advantages of organizational project management maturity: A quantitative descriptive study in Australia. *PLoS ONE*, 18(6 JUNE), 1–10. <https://doi.org/10.1371/journal.pone.0287225>
- Indonesia Government. (2012). *Government Regulation of the Indonesia Republic 74 of 2012 about Amendments to Regulation of Government Number 23 of 2005 regarding Financial Management of Public Service Agencies*.
- Indonesia Government. (2014). *Government Regulation of the Republic of Indonesia Number 4 of 2014 concerning the Implementation of Higher Education and Management of Higher Education*.
- Katane, J. (2017). The Influence of Organizational Culture and Project Management Maturity in Virtual Project Teams. *University of Johannesburg, Johannesburg, Gauteng, South Africa, September*, 1–10. <https://www.researchgate.net/publication/319528141>
- Kegan, R. (1982). *The evolving self: Problem and process in human development*. Harvard University Press.
- Khatibian, N., Hasan gholi pour, T., & Abedi Jafari, H. (2010). Measurement of knowledge management maturity level within organizations. *Business Strategy Series*, 11(1), 54–70. <https://doi.org/10.1108/17515631011013113>
- Kulkarni, U., St Louis, R., Kulkarni P Carey, U. W., & St Louis P Carey, R. W. (2003). Association for Information Systems AIS Electronic Library (AISeL) Organizational Self Assessment of Knowledge Management Maturity ORGANIZATIONAL SELF ASSESSMENT OF KNOWLEDGE MANAGEMENT MATURITY. *Americas Conference on Information Systems (AMCIS)*, 2542–2551. <http://aisel.aisnet.org/amcis2003%5Cnhttp://aisel.aisnet.org/amcis2003/332>
- Kyriakidou, V., Michalakelis, C., & Spicopoulos, T. (2013). Assessment of information and communications technology maturity level. *Telecommunications Policy*, 37(1), 48–62. <https://doi.org/10.1016/j.telpol.2012.08.001>
- Lederer, W. (1984). Review of The evolving self: Problem and process in human development [Review of the book The evolving self: Problem and process in human development, by R. Kegan]. *American Journal of Orthopsychiatry*, 54(1), 177–180. <https://doi.org/https://psycnet.apa.org/doi/10.1037/h0098820>

- Marliyah, M., Dharma, B., & Syarbaini, A. (2023). the Maturity of Risk Management in Indonesian Islamic Universities. *Jurnal Riset Bisnis Dan Manajemen*, 16(2), 117–125. <https://doi.org/10.23969/jrbm.v16i2.7296>
- Menard, S. (2002). *Longitudinal Research* (Second). SAGE Publications Ltd.
- Nelson, K., Clarke, J., & Stoodley, I. (2013). An exploration of the maturity model concept as a vehicle for higher education institutions to assess their capability to address student engagement: a work in progress. *Ergo*, 3(1), 29–35. <http://www.ojs.unisa.edu.au/index.php/ergo/article/view/939/669>
- Ouazzani-Chahidi, A., Abdellatif, L., Jimenez, J. F., & Berrah, L. (2023). Maturity levels of management process for improving industrial performance. *Scientific African*, 21(August), e01852. <https://doi.org/10.1016/j.sciaf.2023.e01852>
- Pereira, L., Fernandes, A., Sempiterno, M., Dias, Á., da Costa, R. L., & António, N. (2021). Knowledge management maturity contributes to project-based companies in an open innovation era. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 3–11. <https://doi.org/10.3390/joitmc7020126>
- Petrie, M. M. L., García, V. H. M., & Giraldo, G. M. (2009). Modelo de Registro y Acreditación de Instituciones de Educación Superior basado en el Modelo CMMI. *Seventh LACCEI Latin American and Caribbean Conference for Engineering and Technology (LACCEI'2009) "Energy and Technology for the Americas: Education, Innovation, Technology and Practice,"* 8. <http://lacei.org/LACCEI2009-Venezuela/Papers/p116.pdf>
- Prasad, & Prasad. (2010). *Administrative Thinker*.
- Presecan, M. (2021, April). Five Levels of Organizational Maturity: Performance Management Perspective. *The KPI Institute*. <https://www.performancemagazine.org/five-levels-of-organizational-maturity-performance-management-perspective/>
- Robertson, R. L., & Larkin, M. J. (2019). Developing an Instrument to Observe and Evaluate Assessment System Maturity. *Journal of Educational Research and Practice*, 9(1), 55–80. <https://doi.org/10.5590/jerap.2019.09.1.05>
- Salawu, R. A., & Abdullah, F. (2015). Assessing Risk Management Maturity of Construction Organisations on Infrastructural Project Delivery in Nigeria. *Procedia - Social and Behavioral Sciences*, 172(2006), 643–650. <https://doi.org/10.1016/j.sbspro.2015.01.414>
- Siason, N. D., & Tangco-siason, A. (2023). Institutional Leaders ' Employment of Flexible Leadership in a Philippine State University. *Journal of Higher Education Policy And Leadership Studies (JHEPALS)*, 4(4), 51–67. <https://doi.org/10.61186/johepal.4.4.51>
- Soni, S. (2024, January 4). Transforming Higher Education Governance: Higher Education Process Maturity Model (HEPMM). *LinkedIn*. <https://www.linkedin.com/pulse/transforming-higher-education-governance-process-maturity-soni-bcobj/>
- Thiry, M. (2016). Measuring and increasing Program Management Maturity. In *LinkedIn*. <https://www.linkedin.com/pulse/measuring-increasing-program-management-maturity-michel-thiry/>
- Verschuere, N., Van Dessel, J., Verslyppe, A., Schoenesters, Y., & Baelmans, M. (2023). A Maturity Matrix Model to Strengthen the Quality Cultures in Higher Education. *Education Sciences*, 13(2). <https://doi.org/10.3390/educsci13020123>

- Wikipedia.org. (n.d.). *Maturity model*. Wikipedia. https://en.wikipedia.org/wiki/Maturity_model
- Xerri, M. J., Nelson, S. A., & Brunetto, Y. (2015). NPM and change management in asset management organisations. *Journal of Organizational Change Management*, 28(4), 641–655.
- Yazici, H. J. (2008). Project Portfolio Control and Portfolio. *Project Management Journal*, 39(3), 28–42. <https://doi.org/10.1002/pmj>