

PERFORMANCE MEASUREMENT OF PUBLIC SERVICE AGENCY IN HIGHER EDUCATION INSTITUTIONS: A Balanced-Scorecard Model Approach

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Abstract

This study aims to develop a framework for measuring higher education performance as the Public Service Agency. The authors adapted one of the measurement models, namely the Balance Score Card Model. This is a qualitative study with library research type. The data collection uses literature documents related to the discussion subject. The results show that the Balanced Scorecard Model could be used to measure the performance of higher education institutions that has the mandate as the Public Service Agency. The target of the Balanced Scorecard Model is developed to measure the corporation. Corporations and public institutions have different objectives, characteristics, and philosophies. However, the model can be utilized to measure the performance of public institutions by adapting the components from each perspective. This study contributes to the development of higher education performance measurement framework serving as the Public Service Agency.

Kajian ini bertujuan untuk mengembangkan kerangka kerja pengukuran kinerja Perguruan Tinggi dengan Mandat Badan Layanan Umum. Penulis mengadaptasi salah satu model pengukuran yaitu Balance Score Card Model. Metode penelitian yang dipilih adalah kualitatif dengan jenis library research. Teknik pengumpulan data menggunakan dokumen

literatur yang sesuai dengan pokok bahasan. Hasil kajian ini menunjukkan bahwa Balance Scorecard Model dapat digunakan untuk mengukur kinerja perguruan tinggi dengan mandat Badan Layanan Umum. Sasaran Balance Scorecard Model yaitu digunakan untuk mengukur korporasi. Korporasi dan institusi publik memiliki perbedaan tujuan, karakteristik dan filosofi. Namun demikian, Balance Scorecard Model dapat digunakan untuk mengukur kinerja institusi publik dengan adaptasi komponen pengukuran dari masing-masing perspektif. Kontribusi dari kajian ini yaitu pengembangan framework pengukuran kinerja perguruan tinggi dengan mandat Badan Layanan Umum.

Keywords: *balanced scorecard; framework; higher education; performance measurement; public service agency*

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Introduction

To improve services to public institutions, since 2005, the government has issued a policy through the Government Regulation of the Indonesia Republic Number 23 of 2005 about Financial Management of Public Service Agencies (2005), updated through the Government Regulation of the Republic of Indonesia No. 74 of 2012 on the Amendments to the Government Regulation No. 23 of 2005 concerning the Financial Management of Public Service Agencies (2012). It is supported by the Regulation of the Minister of Finance No. 129/Pmk.05/2020 concerning the Guidelines for Public Services Agency Management (2020). The Public Service Agency is a government agency formed to provide public services in the form of goods and/or services without prioritizing profit with the principles of efficiency and productivity (Regulation of the Minister of Finance No. 129/Pmk.05/2020 concerning the Guidelines for Public Services Agency Management (2020). The objective is to improve public services for public welfare and educate the nation by providing flexibility in financial management based on economic and productivity principles and the application of a healthy business practices (Government Regulation No. 23 of 2005 concerning the Financial Management of Public Service Agencies, 2005).

Public institutions that have received the mandate as the Public Service Agency can manage their finances in the form of the flexibility to implement healthy business practices (The Government Regulation No. 74 of 2012 on the Amendments to the Government Regulation No. 23 of 2005 concerning the Financial Management of Public Service Agencies 2012). Juridically, the Public Service Agency is a work unit of the ministry/agency/local government. Its management is based on the authority delegated by the central agency. Financial management is inseparable from the ministry/agency/local government as the main institution (The Government Regulation No. 23 of 2005 concerning Financial Management of the Public Service Agencies 2005). Thus, a government policy creates the Public Service Agency in public institutions in Indonesia to improve public services through independence in financial management. One of the public institutions serving as the Public Service Agency is a higher education institution.

Higher education institution is an academic unit that organizes tertiary schools. There are three models of higher education in Indonesia; *first*, the business model of higher education guided by state financial management regulations; *second*, higher education based on the concept of the Public Service Agency; and *the last*, the one based on the concept of Legal Entity Higher Education (The Government Regulation No. 4 of 2014 concerning the Implementation and Management of Higher Education 2014). The issuance of the Government Regulation No. 23 of 2005 concerning Financial Management of Public Service Agencies (2005) makes higher education institutions more independent in their management. For higher education administrators, the mandate of the Public Service Agency is both an opportunity and a challenge. The opportunity is in the form of autonomy in managing higher education resources independently. Meanwhile, the challenge is how to make higher education to be qualified and competitive in the level of national, regional, and global. Hence, higher education with the Public Service Agency status must be managed by adapting corporate management.

Referring to Indrajit, Eko & Djokopranoto (2006, 35-40), they upheld that there are five dimensions attached to higher education, namely (i) The scientific dimension (science and technology). Higher education is an academic society that is considered as a scientific community. It has scientific autonomy in the form of academic freedom in each discipline according to the principles and rules; (ii) The

educational dimension. Higher education is a process of preparing humans to be mature, independent, and responsible. Unfortunately, the learning process in higher education is generally formal; (iii) The social dimension. Higher education institutions have a responsibility to prepare students to take on responsibilities within society; (iv) The corporate dimension. Higher education institution, as a corporate, has a product (commodity) as their primary business, specifically science. Therefore, the institution has customers, faces competition, manages organizational resources, and runs promotions (promotes its business); (v) The ethical dimension. Higher education is a center for creativity and the dissemination of science and technology. It has a role in protecting human dignity and the moral responsibility of science and technology. Because higher education institutions have a corporate dimension, it is imperative to measure their performance. One model that can be adapted is the Balanced Scorecard Model.

The balanced scorecard was first formulated to measure the performance of business organizations/corporations to compete in the information era (Kaplan & Norton 1996, 3). They further stated that in a competition, corporations must develop a good strategy, apply appropriate tactics, and measure their performance strategically. The Balanced Scorecard Model is a comprehensive framework for measuring performance; it is directly associated with the targets and strategies that have been set. R. S. Kaplan & Norton (1996, 3) argued that business organizations, both the manufacturing and the service sectors, require new abilities or competencies to achieve competitive success in the information age. Capabilities that are mobilized and exploited are intangible or invisible assets that have become much more crucial than investing and managing physical or tangible assets. Intangible assets enable organizations to (a) develop customer relationships by enabling more efficient and effective new customer and market segments; (ii) introduce product and service innovations needed by customers; (iii) produce high-quality products and services; and (iv) mobilize the skills and motivation of employees through continuous improvement in the process of capability, quality, and time. As a result, the balanced scorecard model is relevant to higher education institutions' performance measurement as public institutions.

This study aims to develop a performance measurement framework for higher education with the public service agency status. This goal argues that a comprehensive framework for measuring higher education institution performance has not been unearthed. Corporations and higher education institutions are two different organizations in terms of systems, governance, structure, business models, business processes, and objectives. This is where the performance measurement framework for measuring performance by adapting the balanced scorecard model becomes vital to explore.

Discussion

The Concept of Public Service Agency in Higher Education

Higher education institution is an educational unit that organizes higher education in the form of universities, institutes, polytechnics, academies, and high schools. It has some programs, namely specialist programs, professional programs, doctoral programs, master programs, undergraduate programs, and diploma programs. Management wise, it has some authorities, namely (i) autonomy; (ii) management model; (iii) governance (governance); and (iv) accountability to the public (The Government Regulation No. 4 of 2014 Concerning the Implementation and Management of Higher Education 2014). In the context of autonomy, higher education institutions gain the autonomy rights in academic and non-academic fields. Autonomy in the educational field is related to technical norms and policies in the implementation of higher education, especially activities related to the *Tri Dharma Perguruan Tinggi* (The Three Pillars of Higher Education). Meanwhile, autonomy in the non-academic field relates to technical norms and policies in the aspects of organizations, finance, student affairs, employment, and educational infrastructure. Higher education is an institution that leads to academic qualifications, such as degrees, awarded by the institutions. Most higher education programs provide a professional education so the graduates have the opportunity to select many more jobs compared to high school graduates. Higher education graduates generally earn better salaries than graduates of lower levels of education.

Higher education institutions are service industry sectors (Indrajit, Eko & Djokopranoto 2006, 39; Tampubolon 2001, 69), such as hospitals, hotels, banking, airlines, etc. Their services involve feelings, thoughts, and bodies for service users. Additionally, satisfactory service

has an impact on positive feelings towards the service received and vice versa (Tampubolon 2001, 70). Higher education products are entirely higher education services (Indrajit, Eko & Djokopranoto 2006, 37; Sutarso 2007; Tampubolon 2001, 71), which include services in terms of academics, research, community service, administrative services, and student activity services (Tampubolon 2001, 71-72) and the final product is science, education, and graduates (Indrajit, Eko and Djokopranoto 2006).

As cited by Lovelock (1983) in Wahid (2004), there are five characteristics of higher education, (i) the education service is intangible; (ii) it has a relationship with the user or student (the relationship with the customer); (iii) ratings of educational services vary widely; (iv) there are limitations to the demand for education services that exceed the quota and cannot be met in the short term; and (v) service methods for education service users are required to come to the organizer's location. However, in the development of information and communication technology, education can now be conducted from distance. Nonetheless, each higher education institution can develop a diverse higher education business model.

The business model of state higher education with the Public Service Agency status is different from the institutions with PNB (Non-Tax State Revenue). According to the Government Regulation of the Indonesia Republic Number 23 of 2005 concerning the Financial Management of Public Service Agencies (2005), the Public Service Agency prioritizes the principles of efficiency, effectiveness, and productivity in conducting healthy business practices. In other words, the Public Service Agency-based higher education institutions are encouraged to do management transformations in higher education with a corporate management approach. Financial management independence is a catalyst in transformation. This catalyst is exposed in (i) receiving the revenue which is no longer deposited into the state treasury; (ii) being able to conduct business practices outside the core business of the higher education institutions; (iii) having the autonomy to improve the quality of education to increase the income; and (iv) being able to improve welfare through the income they receive. Consequently, higher education institutions with the said status retain the flexibility to develop corporate-style higher education management.

The Business Process for Higher Education Implementation

Hammer and Champy defined a business process as a collection of activities requiring one or more inputs to create containing higher value to customers or stakeholders. Business processes hold purposes influenced by occasions that occur both internally and externally in the organization. As alleged by Kaniški & Vincek (2018), a business process is a series of activities that are united to create added value for specific customers or markets. Additionally, business processes can be defined as (i) conducting a series of closed activities in response to certain events to produce outputs; (ii) doing everything necessary to ensure that people interested in the process get the desired results; and (iii) interactions between people, equipment, methods, and regulations to achieve specific business objectives. The essential elements of a business process consist of: objectives, available resources, activities, indicators, and focus on buyers, and stakeholders (Hammer & Champy 1993, 32).

An approach used to identify the business process of providing education is the Value Chain Model formulated and introduced by Porter (Porter 1985, 33). Value Chain Model is a strategy to analyze the organization's internal activities. The model consists of the core activities and supporting activities. Core activities are directly related to creating value and making products. They contain five stages, i.e., inbound logistics, operational, outbound logistics, marketing and sales, and services. Meanwhile, supporting activities generally involve procurement, technology development, including R&D (research and development), human resources management, and infrastructure. In higher education management, the function of the Value Chain Model is to identify all activities in higher education services, both core and supporting activities. Core activities in higher education management are activities that are directly related to higher education services to students. The activities are directly related to value creation. Value creation is defined as a process of changing attitudes, behavior, and mindsets formed through science or other meanings, for example, the process of humanizing humans.

The measure of core activity results is graduates who gain the worthy competencies, attitudes, and behaviors. Core activities adopt the support of educational resources. Educational resource management is called as a supporting activity. This activity provides educational resources so that core activities can be produced in accordance with the

vision and mission. The components in the supporting activity consist of human resource management, financial management, facilities and infrastructure management, material management, curriculum management, public relations management, and information management. The size of the scope of supporting activities seems strongly influenced by the implementation size of higher education. The larger the higher education institutions (indicated by the number of students), the more the components of supporting activities they organize.

The Purpose of Measuring the Performance of Higher Education Implementation

Performance is the result of quality work achieved by a person (Mangkunegara 2013) and it is obtained by the organization, both business and public organizations, within a certain period. Wibowo (2013) explains that performance is a process of how to do work and the results achieved. Meanwhile, another expert describes the performance as what is done or not done in carrying out the main task (Nawawi 2006). It can be inferred that performance is a description of the implementation achievement of a program and activity in realizing the organization's targets, objectives, vision, and mission outlined in strategic planning (Moeheriono 2012).

A higher education institution works on a non-profit basis. As part of the public sector, performance measurement aims to: (1) determine the level of achievement of organizational objectives; (2) provide employee learning facilities; (3) improve the performance of the upcoming period; (4) afford systematic consideration in making decisions on the provision of rewards and punishments; (5) motivate employees; and (6) create public accountability (Mahmudi 2013). Therefore, measuring the performance of higher education institutions with the Public Service Agency status is necessary to find out how high the level of success is in achieving the vision and effectiveness in carrying out the mission.

The Balanced-Scorecard Model

The performance measurement model with the Balanced Scorecard Model approach emphasizes measuring the performance of financial and non-financial aspects (Kaplan & Norton 1996, 8). There are four measurement perspectives in the Balanced Scorecard, namely (i) financial perspective; (ii) internal business process perspective; (iii)

customer perspective; and (iv) organizational learning and growth perspective. The four perspectives are connected with the organization's vision and strategy. Figure 1 describes the relationship between the four measurement perspectives and the organization's vision and strategy.



Figure 1. *The Balanced Scorecard Model*

The Relationship among the Balanced Scorecard Model Perspectives

The Balanced Scorecard model is an instrument that reveals a causal relationship scenario in the strategic management structure (Kaplan & Norton 2001). The causal relationship is portrayed in Figure 2. The internal organizational process perspective and the learning and growth perspective contribute to the customer and financial perspectives; although, learning and organizational growth also have implications for the perspective of the organization's internal processes. Furthermore, the customer perspective adds a meaningful correlation to the financial perspective. Thus, the internal structure of the organization has a direct relationship with the results offered to external customers (Kaplan & Norton 2004, 55).

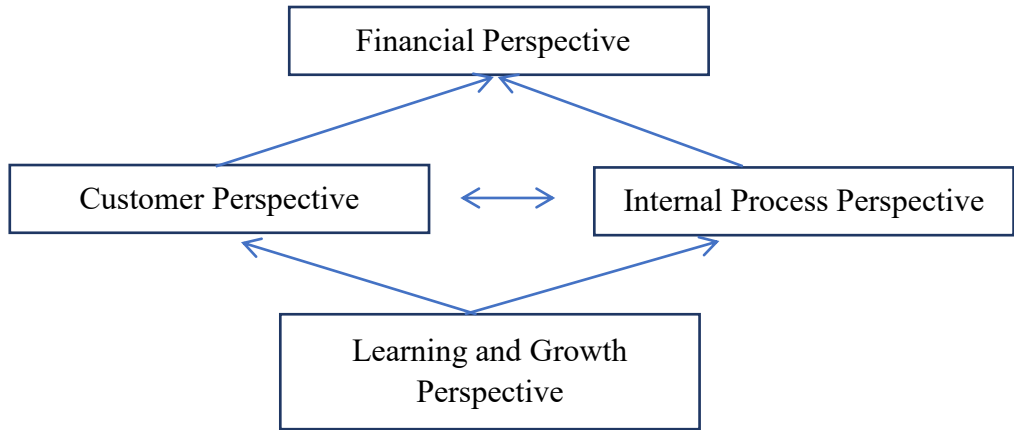


Figure 2. The Relationship among the Balanced Scorecard Model Perspectives
 Source: (Park & Gagnon 2006, 97).

Financial Perspective. The financial perspective is considered the most critical perspective. This is usually actualized into mission and vision statements and the transformation of the organization into sustainable objectives (Niven 2011, 163). The trend of cause-and-effect relationships can be seen through financial indexes, both tangible and intangible assets. In addition, the financial perspective can be used to increase the value of long-term stakeholder interests, expand markets, and reduce costs. Besides that, Ronchetti (2006) affirmed that the financial perspective is a strategic objective and a measurement of financial performance. Financial performance is a measure of the increase or decrease in profitability; consequently, achieving financial strategic objectives is the primary means of realizing the mission of a business organization with the support of other perspectives.

Customer Perspective. Kaplan & Norton upheld that there are two measurement standards in this perspective. First, the "core size group" includes customer retention, market share, customer satisfaction, customer acquisition, and customer profitability. Subsequent performance drivers guide the organization to a customer value position, including time, quality, product and quality attributes, image, and relationships (Kaplan & Norton 1996, 73-74). Therefore, Robert S Kaplan & Norton (2001) maintained that the performance could be achieved with the proper choice of customers with the highest value

proposition. These values can be accomplished in one of three ways (Niven 2011, 17): (i) performing operational excellence on reasonable prices and fast response, (ii) making a change in the innovation-driven by product leadership towards improving both product and service quality of the organization, and (iii) creating possible customer intimacy based on long-term relationships and understanding customer needs.

Internal Process Perspective. Organizations must continuously innovate in products, services, and internal processes to create better value for customers (Kaplan & Norton 2004, 393). An innovation process guided by customer needs encapsulates four main processes, including (i) identifying the opportunities for new products and services; (ii) managing the research and development portfolio; (iii) designing and developing new products and services; and (iv) bringing new products and services to market. Therefore, the internal process can be called as the supply chain that develops services for customers. Higher education institutions must continue to add value to the process to offer better services by performing four operations, i.e., innovation, quality service, customer management, as well as regulatory and social processes.

Learning and Growth Perspective. Learning and growth are two key features that every organizational strategy should have. There are variations of indicators and intangible assets used to describe these features. According to R. S. Kaplan & Norton (2004, 102), the importance of this perspective is measured through the ability of organizational capital, humans or employees, knowledge systems, and communicating the value creation to the other side of the organization. The human indicator in this case is to emphasize on the employees who are responsible for the essential internal processes to achieve maximum level of results. The four elements of organizational capital, namely culture, alignment, leadership, and teamwork to facilitate and change the behavior of a successful organization that focuses on strategy (Kaplan and Norton 2004). The learning and growth perspective reflects employee satisfaction, motivation, empowerment, and information system capabilities (Park & Gagnon 2006, 99).

Methods

This study employs a library research design. It is research or analysis using library data as the primary data source (Hadi 2004, 721). Sekaran (2003) calls it as a literature survey. "Literature survey is the

documentation of a comprehensive review of the published and unpublished work from secondary sources of data in the areas of specific interest to the researcher” (Sekaran 2003, 63). This design is classified as qualitative research, since it emphasizes qualitative data as the unit of analysis. In terms of data sources, library research is categorized as a secondary data source. The data in the current research were collected by reading and reviewing literature related to the concept and model of the Balanced Scorecard. The authors read and examine the concepts, the business models, the business processes, and the measurements of higher education performance. Regulations relating to higher education and the Public Service Agency were also reviewed.

The data were analyzed using the content analysis approach. The content analysis is an observational research method used to systematically evaluate the symbolic contents of all forms of recorded communications. The content analysis technique enables the researcher to analyze textual information and systematically identify its properties, such as the presence of certain words, concepts, characters, themes, or sentences (Sekaran & Bougie 2016, 350). Furthermore, a synthesis of the intentions written in the thoughts or opinions is carried out. Synthesis combines various meanings and forms a unit that is in harmony with legal determination. The term synthesis means a mixture of multiple interpretations or things to be a harmonious unity (KBBI 2016). In a similar source, synthesis is defined as combining parts or elements that form a unity. The current study conducted Focus Group Discussion to validate the data.

Balanced Scorecard Model in Higher Education Institution

Many research studies discovered the possibility of the Balanced Scorecard implementation in the context of higher education. For example, studies conducted by Brown (2012) and Patro (2016) examined the application of the Balanced Scorecard in higher education institutions. In the Arab Emirates, Lassoued (2018) also uncovered the Balanced Scorecard implementation. Likewise, Al-Hosaini & Sofian (2015) reviewed the Balance Scorecard framework in the context of higher education. Furthermore, there are some aspects discussed by Ahmad & Kim Soon (2015) that must be considered in adapting the Balance Scorecard in higher education. Their study aimed to develop a higher education performance measurement framework that has been

mandated by the Public Service Agency based on the Balanced Scorecard Model. Based on the previous research, it can be concluded that higher education institutions with the mandate of the Public Service Agency have a different business model from other higher education institutions.

Based on the identification of regulatory documents regarding the main performance indicators of higher education institutions with the Public Service Agency status (Ministry of Research Technology and Higher Education 2019), it was found that there were twenty-two Key Performance Indicators of State Higher Education Institutions with the Public Service Agency Status presented in Table 1.

Table 1. The Key Performance Indicators of Higher Education Public Service Agencies

No	Key Performance Indicators	Definition	Code
1.	Number of student entrepreneur	To measure the interest and talent of students in entrepreneurship by developing the skill independently.	X.1
2.	Percentage of graduates with certified competence and profession	To measure higher education graduates who pass the competency and/or professional test organized by the national committee established by the Ministry of Research, Technology and Higher Education, professional organizations, and accredited certification agencies by the provisions of the legislation.	X.2
3.	Percentage of accredited-A study programs	To measure the performance of study programs that have been accredited A following the quality standards set by the National Accreditation Board for Higher Education and other Independent Accreditation Agencies by referring to the National Higher Education Standards.	X.3
4.	Number of excellent students	To measure the achievements of excellent students at the national and international levels. The activities carried out are in the form of competitions/ tournaments/	X.4

No	Key Performance Indicators	Definition	Code
		contests/contests/recognitions in reasoning, creativity, interests, talents, and organization.	
5.	Percentage of graduates who get a job after graduation	To measure graduates who get jobs with less than 6-month waiting period based on the Higher Education Tracer Study (TS) Report on graduates who graduate 2 years before the implementation of the Tracer Study (TS-2 period).	X.5
6.	National Higher Education Institutions Rankings	Higher education rankings at the national level by the Ministry of Research, Technology, and Higher Education.	X.6
7.	Institutional accreditation	To determine the eligibility of Higher Education as a form of an educational institution recognition that guarantees a minimum standard so that its graduates meet the qualifications to continue higher education or specialization education or be able to carry out their professional practice.	X.7
8.	Number of centers of excellence in Science and Technology	Research and development institutions, both independent and collaborating with other institutions (consortiums) that carry out international-standard research activities in multi- and interdisciplinary specific fields with very high standards of results and are relevant to the needs of users of science, technology, and innovative products.	X.8
9.	Percentage of lecturers with doctoral qualifications	Doctoral qualification at the end of the current year to the total number of permanent lecturers. Lecturers with doctoral qualifications are a benchmark on the ability of higher education institutions to develop	X.9

No	Key Performance Indicators	Definition	Code
		science and technology and implement the <i>Tri Dharma</i> of higher education.	
10.	Percentage of lecturers with the head-lector position	Percentage of permanent lecturers who have the academic position of head lector at the end of the current year	X.10
11.	Percentage of lecturers with professorship positions	The number of permanent lecturers who have academic professorship positions at the end of the current year.	X.11
12.	Number of international publications	Research results are published in international scientific journals or proceedings that have an International Standard Serial Number (ISSN) and/or books that have been published by universities or other publishers and have an International Standard Book Number (ISBN).	X.12
13.	Number of registered intellectual property	Rights arising from the ability to think and make a product that is useful for others, including patents, copyrights, brands, plant varieties, trade secrets, industrial designs, and integrated circuit layout designs.	X.13
14.	Number of research and development prototypes	The standard measurement of basic research (technology readiness level 1 to 3) or applied research (technology readiness level 4 to 6).	X.14
15.	Number of industrial prototypes	The result of technology development that has passed the test on the existing environmental system (technology readiness level 7).	X.15
16.	Several citations of scientific works.	The cumulative number of citations from articles, proceedings, or book chapters produced by universities published in scientific journals indexed by Scopus or the Web of Science	X.16

No	Key Performance Indicators	Definition	Code
17.	Number of national reputable indexed journals	The number of scientific journals accredited by the Ministry of Research, Technology, and Higher Education indexed by the Science Technology Index (SINTA).	X.17
18.	Number of international reputable indexed journals	The number of scientific journals accredited by the Ministry of Research, Technology, and Higher Education indexed by Scopus and/or Web of Science as indexers of high reputation.	X.18
19.	Number of product innovations	A product or process that has an element of novelty is utilized for economic, social, cultural, and social interests, both commercial and non-commercial, so it causes significant changes. Innovation products can be produced from research, development, study, and/or engineering of science and technology as needed that have a level-9 of technological readiness and/or at least level-3 of innovation readiness.	X.19
20.	Opinion on the assessment of financial statements by public auditors	Opinion on financial statements issued by the Public Accounting Firm.	X.20
21.	Quantity percentage of follow-up findings from the Supreme Audit Institution (BPK)	Comparison between the number of follow-ups on BPK findings for the last three years compared to the number of BPK findings over the previous three years	X.21
22.	Percentage of follow-up rupiah worthy findings by the Supreme Audit Institution (BPK)	Comparison of the value of rupiah deposits from BPK findings for the last three years compared to the value of rupiah deposits that must be deposited during the last 3 three years	X.22

Referring to the Directorate of Financial Management Development for the Service Agency of the Directorate General Treasury (Dit. PPK BLU 2020), there are two main parameters for measuring the key performance in government agencies with the Public Service Agency mandate, namely the result and the process base. Table 2 presents the more detailed measurements of each parameter.

Table 2. The Key Performance Indicators of Government Agencies with the Public Service Agencies Mandate

Parameter	Aspect	Definition	Indicators	Code
Result Base	Finance	The financial aspect assesses the level of financial soundness and trends in the development and financial performance of Public Service Agencies.	Liquidity	Y.1.1
			Effectiveness	Y.1.2
			Efficiency	Y.1.3
			Independence Level	Y.1.4
	Service	The service aspect assesses the quality-of-service provision to the community and the development trend of the Public Service Agency service quality.	Student satisfaction index	Y.1.5
			Service complaint system	Y.1.6
			Service time efficiency	Y.1.7
			Service fulfillment success rate	Y.1.8
Process Base	Internal capabilities	The internal capability aspect shows a competitive advantage as well as a benchmark for the stability of the Public Service Agency	Human Resources	Y.2.1
			Utilization of technology	Y.2.2
			Business process	Y.2.3
			Customer focus	Y.2.4
	Innovation	The innovation aspect shows the ability of the Public Service Agency to produce innovative	Service user engagement	Y.2.5
			Knowledge management	Y.2.6
			Innovation	Y.2.7

Parameter	Aspect	Definition	Indicators	Code
		services or products	process Change management	Y.2.8
	Governance and Leadership	Aspects of governance and leadership ensure the overall effectiveness of Public Service Agency management	Strategic planning Business ethic Stakeholder's relationship Risk management Controlling and reporting	Y.2.9 Y.2.10 Y.2.11 Y.2.12 Y.2.13
	Environment	The environmental aspect shows the ability of the Public Service Agency to report responsibility for the environment	Environmental Footprint Management Resource Usage	Y.2.14 Y.2.15

Based on the Law No. 12 of 2012 concerning higher education, education is a conscious and planned effort to create a learning atmosphere and learning process with the purpose of students actively developing their potential to have religious-spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation, and state. To achieve the objectives, the *Tri Dharma* of higher education must be fulfilled. The three pillars are the obligation to provide education, research, and community service as it is a core activity in higher education. Furthermore, the key success factors and key performance indicators in the *Tri Dharma* are presented in Table 3.

Table 3. The Key Success Factors and Key Performance Indicators in the *Tri Dharma* of Higher Education

Tri Dharma	Definition	Key Success Factors	Key Performance Indicators	Code
Research	Activities are carried out according to scientific principles	Lecturers; Students; Budgets	Research result Publication of scientific works	Z.1 Z.2

Tri Dharma	Definition	Key Success Factors	Key Performance Indicators	Code
	and methods systematically to obtain information, data, and explanation relating to the understanding and/or testing of a branch of science and technology.		Patent	Z.3
			Competence of lecturers and students	Z.4
			Research governance	Z.5
Community Service	Activities of the academic community that utilize science and technology to advance the welfare of the community and educate the nation's life.	Lecturers	Research result	Z.6
		Students	Science	Z.7
		Budgets	development	Z.8
			Empowerment	Z.9
			Community satisfaction	Z.10
Learning	The process of student interaction with lecturers and learning resources in a learning environment.		Competence of lecturers and students	Z.11
			Service management	Z.12
		Lecturers	Student competence	Z.13
		Students	Student achievement	Z.14
		Budgets	Student qualification	Z.15
			Graduate user satisfaction	Z.16
			Learning governance	

Based on Table 1 and Table 2, the performance indicators of the Public Service Agency higher education are in alignment with the four perspectives in the Balanced Scorecard Model. The Balanced Scorecard was developed for business organizations (corporations); however, the Balanced Scorecard has been widely accepted by all forms of organization, both corporations and public institutions (Mahmudi 2013, 19). To implement the measurement of higher education performance,

the concept and model of the Balanced Scorecard must be modified by the business model and process of higher education with the mandate of the Public Service Agency. The inherent nature of higher education is non-profit. A non-profit institution is an organization supporting government policies and is not oriented to certain profit (Religa 2022). Yet, higher education does not mean that it cannot benefit from its operations. On the one hand, as Tampubolon (2001, 84) mentioned, higher education institution profits are attained from the remaining operational costs. On the other hand, Indrajit et al. emphasize that higher education management must be managed using corporate management approaches (Indrajit, Eko & Djokopranoto 2006, 40).

Four aspects must be considered in interpreting the organization's vision and strategy from each perspective, including (a) objectives; (b) size; (c) targets; and (d) initiative. To clarify the implication of the relationship between the organization's vision and strategy, and the four perspectives, there are several things to consider, including (a) to achieve success from a financial perspective, higher education institutions must pay attention to the interests of the stakeholders, which are stated in the form of objectives, sizes, targets, and initiatives; (b) to achieve the vision, higher education institutions must pay attention to the interests of students which are affirmed in the objectives, sizes, targets, and initiatives; (c) to achieve the vision, higher education institutions must have the ability to make changes and improvements continuously which are stated in the objectives, sizes, targets, and initiatives; and (d) to satisfy higher education stakeholders and students, they are required to develop appropriate business processes and convey the process in terms of objectives, sizes, targets, and initiatives.

Concerning a measurement of the balance between results and future steps, the Balanced Scorecard is not just a technical and operational measurement instrument. However, it is also an instrument for measuring innovation by using the Scorecard as a strategic management tool for higher education in the long term. The use of the Scorecard is focused on critical management, which includes, (a) clarifying and translating the vision and strategy; (b) communicating and associating strategy objectives and measures; (c) aligning plans, targets, and strategies; and (d) improving learning and feedback strategies. Table 4 displays the alignment between the balanced scorecard perspective and

the performance of a higher education with the public service agency status perspective.

Table 4. The Alignment of the Balanced Scorecard Perspective and the Higher Education Performance Perspectives with the Public Service Agency Status

The Balanced Scorecard Perspective	Business Organization	Public Service Agency Higher Education
Financial Perspectives	This perspective is directly related to the company's financial receipts and expenditures. It also includes the company's financial growth and value for shareholders.	This perspective relates to the performance in managing finances as measured by financial ratios.
Customer Perspective	It is closely associated with the company's perspective on serving customers and customer perceptions of the services provided by the company. Companies must provide maximum service to provide satisfaction to customers. The level of measurement of customer perception can be measured from the level of customer loyalty, the level of profit earned every period, the level of customer satisfaction, and the level of customer profitability.	This perspective relates directly to stakeholders who use educational services (students), graduate users (industry), university administrators (leaders, lecturers, and employees), and communities with an interest in higher education.
Internal Operational Process Perspective	This perspective is strongly correlated to the production of products and services and how companies pay attention to the effectiveness and efficiency of the production process, from raw goods to finished	This perspective is closely connected to higher education services, including academic (core) and non-academic (supporting services).

The Balanced Scorecard Perspective	Business Organization	Public Service Agency Higher Education
	goods. This process is directly related to procedures or standard operating procedures (SOP) and guidelines that have been established based on standards. The perspective involves the service models, whether the services are carried out conventionally or electronically, and innovations related to the core or supporting products.	
Learning and Growth Perspective	The learning and development perspective is correlated with the employee's ability in the company, motivation, learning opportunities, career management, freedom of work, the existence of equal rights, and prioritizing equality.	This perspective includes the quality, quantity, performance, and career development of lecturers and employees.

The synthesis results of perspectives and performance measurement indicators (see Table 1, Table 2, and Table 3) are presented in Figure 3. It describes that there are four perspectives on the balanced scorecard, and each perspective has a measurement aspect. Those four perspectives can be adapted to the context of higher education with various aspects.

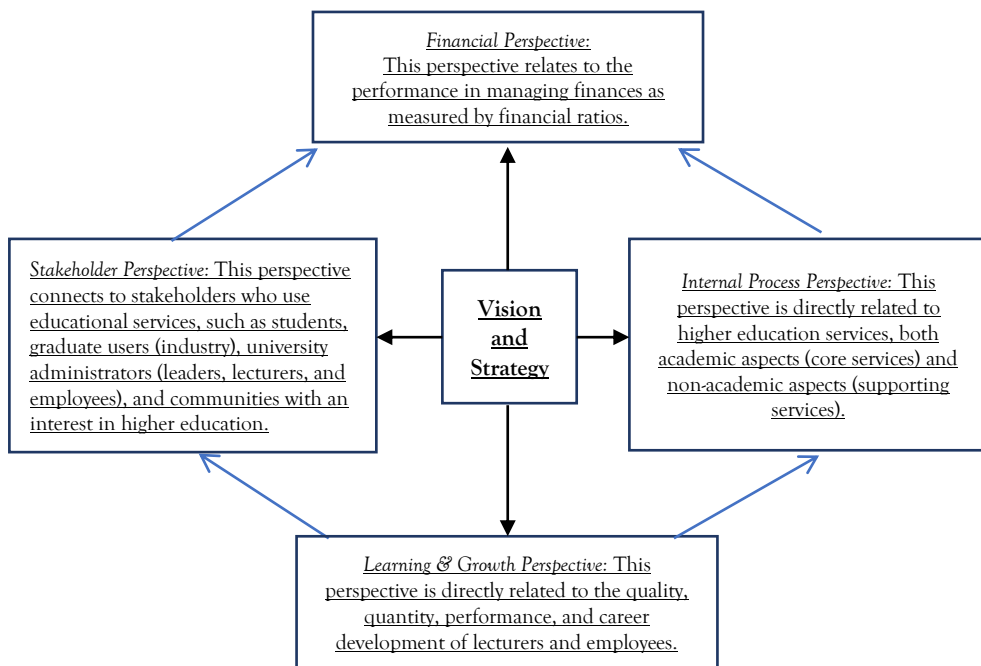


Figure 3: Higher Education Performance Measurement Framework for Public Service Agencies: Balanced Scorecard Model Perspective

Source: Adaptation of the Balanced Scorecard Model (Kaplan and Norton 1996).

Figure 3 demonstrates that the most basic perspective in the context of higher education is the learning and growth perspective with a critical success factor, namely the lecturer. If the lecturer has good qualifications, competence, and professionalism, it will have an impact on the internal process of implementing higher education. In addition, the publication of scientific works, whether in the form of teaching materials, books, research results, journal publications, or academic positions of a lecturer, also affects the internal process of implementing higher education. Thus, enhancing the quality of lecturers requires support from policies and programs formulated by higher education leaders. When this happens massively and shows better quality and quantity, it will indirectly have an effect not only on the internal process of providing better education but also on the perspective of stakeholders, especially external stakeholders.

The internal process perspective in higher education is also called the process of implementing higher education. The process of adapting the Value Chain Model theory (Porter 1985, 33) is known as the core activity. The core activity of higher education is the process of making humans more valuable in terms of competence, changes in behavior and attitudes, titles, and individual values. This value has an impact on the welfare of students, both economic and non-economic welfare. The core activity in the Value Chain Model theory consists of five stages: inbound logistics, process, outbound logistics, sales & marketing, and services. The quality of providing a higher education process is largely controlled by the perspective of learning and growth. In addition to having an impact on the process of providing higher education, learning and growth perspectives influence the level of perception of higher education stakeholders. Tampubolon (2001, 74-75) further discussed three categories of higher education stakeholders, i.e., (a) primary customers. Primary customers are students who directly influence living and utilizing higher education products and participating in the production process. (b) secondary customers. Secondary customers are higher education administrators (institutional leaders, lecturers, and administration), parents, community, aid organizations, etc.; and (c) tertiary customers. Tertiary customers are parties who have an interest in a higher education institution, for example, the world of work and academic institutions above it. Additionally, higher education stakeholders are divided into two, namely, (a) internal stakeholders i.e., faculty, operational staff, students; and (b) external stakeholders i.e., parents, alumni, community, aid providers, and other organizations (Cortese 2003).

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The level of positive or negative perception for higher education stakeholders, especially secondary and tertiary or external stakeholders, is influenced by two factors. There are factors from the perception of the internal process of implementing higher education and learning and growth perception. The better the perception of learning and growth and the perception of the internal operation of implementing higher education, the better the perception of the higher education institutions' stakeholders is. Similarly, the better the level of perception of the

internal process of higher education implementation and stakeholders' perception, the higher the level of financial perspective will be. The financial perspective in the context of higher education can be measured by increasing non-tax state revenues. In the context of universities with the mandate of the Public Service Agency, revenue is not necessarily influenced by the number of students but is also influenced by higher education management in empowering tangible and intangible assets. Therefore, universities with the mandate of the Public Service Agency in managing finances can be flexible. Flexibility means that the college can save the remaining operations into the college's treasury. Cash is no longer deposited into the state treasury. The remaining cash balance of operating costs can be used to develop or improve higher education quality. Each measurement indicator is further exposed in Table 5.

Table 5. Performance Measurement Indicators of Higher Education Public Service Agencies in the Perspective of the Balanced Scorecard

The Balanced Scorecard Perspective	Definition	Performance Measurement Indicators (see Table 1, Table 2, and Table 3)
Financial Perspectives	This perspective comprises the performance in managing finances as measured by financial ratios.	X.20; X.21; X.22; Y.1.1; Y.1.2; Y.1.3; Y.1.4
Customer Perspective	This perspective relates directly to stakeholders who use educational services, such as students, graduate users (industry), university administrators (leaders, lecturers, and employees), and communities with an interest in higher education.	X.1; X.2; X.3; X.4; X.5; X.6; X.7; Y.1.5; Y.1.6; Y.1.7; Y.1.8; Z.4; Z.9; Z.10; Z.15
Internal Operational Process Perspective	This perspective deals with higher education services, both academic aspects (core services) and non-academic aspects (supporting services).	X.8; Y.2.1; Y.2.2; Y.2.3; Y.2.4; Y.2.5; Y.2.6; Y.2.7; Y.2.8; Y.2.9; Y.2.10; Y.2.11; Y.2.12; Y.2.13;

The Balanced Scorecard Perspective	Definition	Performance Measurement Indicators (see Table 1, Table 2, and Table 3)
		Y.2.14; Y.2.15; Z.5; Z.8; Z.11; Z.12; Z.13; Z.14; Z.16
Learning and Growth Perspective	This perspective encompasses lecturers' and employees' quality, quantity, performance, and career development.	X.9; X.10; X.11; X.12; X.13; X.14; X.15; X.16; X.17; X.18; X.19; Z.1; Z.2; Z.3; Z.6; Z.7;

Conclusion

Although the Balanced Scorecard Model developed by Kaplan and Norton (1996) is for measuring the performance of business organizations (profit-oriented), the model can also be developed and adopted by public institutions (non-profit oriented). Each perspective must be adjusted by identifying and studying philosophy, system, and business process in the implementation of higher education. Higher education institutions contain diverse nature and characteristics from business organizations (corporations). However, they have similarities with corporations in terms of management. Therefore, the performance measurement framework as a contribution from this study can be used as a guide in measuring higher education performance with the mandate of the Public Service Agency in Indonesia. Performance measurement components and indicators have taken into account the primary performance of higher education institutions with the Public Service Agency status developed by the Ministry of Research Technology and Higher Education (2019) and the measurement parameters for the maturity rating in government agencies with the mandate of the Dit. PPK BLU (2020).

Besides that, the current study has a limitation as it only used the data from library research design and used focus group discussion data to deepen it. The findings of this study have not been investigated by involving the managers and stakeholders of the Public Service Agency, especially in higher education institutions. Therefore, it is recommended for further researchers or reviewers to be disclosed more deeply through

statistical and/or qualitative examination. The purpose of the follow-up test is to ensure that the measurement of higher education institution performance with the Public Service Agency status in the perspective of the Balanced Scorecard Model can be utilized accurately.

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