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STRATEGIC PLANNING AND PERFORMANCE MEASUREMENT FOR PUBLIC UNIVERSITIES IN SULAWESI, INDONESIA; QUANTITATIVE APPROACH

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Abstract

The purpose of the study is to examine the real process of strategic planning and performance measurement within public universities in Sulawesi, Indonesia. The specific objective is to focus on strategic planning, performance measurement and associate the findings with the objectives of Higher Education Long Term Strategy from Indonesian Directorate General Higher Education. Quantitative methodology approach with an empirical survey was conducted based on questionnaires. The findings revealed that the process of strategic planning in public universities was consistent with the Higher Education Long Term Strategy guidelines. However, public universities faced challenges to their achievement of all targets. The relationships between strategic planning and performance measurement were positively related, however, the organisational performance could be improved if programs in strategic planning could be more fully implemented. This influenced the refinement of the balanced scorecard approach into a performance measurement model for public universities. The study culminated in the development of a performance measurement model.

Keywords

Strategic planning, Performance measurement, Balanced scorecard, Higher education, Indonesian public universities, Qualitative methodology

1. Introduction

The fundamental purpose of strategic planning in higher education is to provide an ongoing process of examination and evaluation of an institution's strengths, weaknesses, goals, resource requirements and prospects. It sets out a coherent plan to respond to the findings to build a stronger and more effective institution. Strategic planning is designed to strengthen and enhance the performance and quality of an institution (Hayward, Johnson & Ncayiyana, 2003). The most important issue to address, from a research standpoint, is the relationship between strategic planning and organisational performance. In related work, Goldman & Salem, 2015, describe that strategic planning can inspire the material for decision making set the foundation for performance measurement which enable the leaders to monitor progress, identify the deviation of the plan and make correction, decide the resource allocation and make sure to aligned decisions with defined goals.

Strategic planning and performance measurement in higher education should be designed in unique and specific way because higher education is managed differently than business enterprises. In the context of Indonesia, the strategic planning guidelines for higher education is determined by central government. The strategic planning was implemented in Indonesian higher education and has become compulsory.

In measuring performance and the linkage with strategic planning, the balanced scorecard approach can be developed to measure both quantitative and qualitative measures. There are multiple approaches to performance measurement, including: Benchmarking; Total Quality Management (TQM); The European Foundation for Quality Management (EFQM); Performance Prism; and the Balanced Scorecard. However, the balanced scorecard (BSC) is one of the most commonly used approaches that accentuates the need for multiple performance indicators (Kaplan & Norton, 1992). The focus for utilising BSC in an educational institution is because BSC affords to manage or measure performance, and offers continuous improvement of higher education institutions and its quality, which can be related to their organisational vision and mission (Stephenson, 2014). Therefore, to guide this study, the approach of the balanced scorecard proposed by Kaplan & Norton (1992) has been employed. The concept of balance scorecard by Kaplan & Norton, 1996, which combines financial and non-financial measures of performance is considered practical. This approach has been adopted in designing research instruments and has provided structure to the data analysis.

The above reasons represent the driving forces for conducting this research. It is intended to evaluate the strategic planning process and its implementation, to examine

organisational performance measurement within public universities in Sulawesi, and to provide a basis for the development of similar future research in Indonesia.

1.1 Problem Identification

Since strategic planning was implemented in Indonesian higher education it has become compulsory. The time frame of Higher Education Long Term Strategy (HELTS), which was envisioned by Directorate General Higher Education (DGHE), expired in 2010. However, no studies or research have been undertaken to examine the effectiveness of the implementation of the strategic planning guidelines or the organisational performance measurements. This study investigates the strategic planning process and its congruence with HELTS's guidelines, explores the relationship between strategic planning and organisational performance. Moreover, it aims to determine the indicators for checking performance against strategic planning, and to design a model of performance measurement for consideration, and possible implementation, by public universities in Sulawesi, and Indonesia in general.

1.2 Research Objectives

The main purpose of this study is to investigate the strategic planning process and implementation in public higher educational institutions in Indonesia. This includes ascertaining whether the objectives and goals have been achieved, according to HELTS and as set out in the Indonesian DGHE guidelines, by examining organisational performance measurements. The specific objectives to be achieved are to: examine the processes of strategic planning, examine whether the objectives and goals of the strategic planning are congruent with the Indonesian Higher Education Long Term Strategy, evaluate the relationships between strategic planning, implementation and organisational performance, examine the relations between strategic planning and performance measurement, determine the performance measurement indicators employed by public universities in Sulawesi and identify the features that are needed to develop an appropriate performance measurement model for possible implementation in public universities in Sulawesi.

2. Strategic Planning in Higher Education

The Higher Education Funding Council for England (HEFCE), states that strategic planning is concerned with identifying the long-term direction of the institution, generating ideas and choices, taking the necessary steps to achieve the stated goals and monitoring progress to adopt a future strategy (Tolmie, 2005). Conway, Mackay & Yorke, 1994 argue that higher education institutions must struggle for funds from both the public and private

sectors and then compete for potential students. Universities in Asia, for example Japan and Thailand, also experienced similar circumstances which led to the competition between private and public universities to attract more students, due to gradual budget cuts from government (Gamage, Hada, Sekikawa, Suwanabroma & Ueyama, 2008).

The challenge of decreasing budgets in the education field urges higher education institutions to think and act more strategically. It bestows a substantial change in the management of higher education institutions. The decision to adopt strategic planning plays an important part in surviving and competing globally. The goals set are crucial to institutional success, and contribute to a universities' development, but they should consider that the strategic plan must be realistic and compatible with the organisation's environment. Therefore, universities should create clear mission statements to meet their stakeholders' needs. Moreover, universities should acknowledge and recognise the market mechanisms and put their efforts to improving the quality of services (Gamage et al., 2008). The mission statements in higher education should clearly reflect the institution's values and principles. It has a clear direction to approach the future and should synchronise the statements with institution's strategy (Gordan & Pop, 2013).

The main purpose of strategic planning in Higher Education is to guide the institution and develop strategies with measurable goals to reach universities' missions and visions. As Goldman & Salem, 2015, assert that universities comprise of multiple colleges, departments, units which has autonomy in their operation, so it is necessary to develop university strategic plan which align with strategic and action plan. These elements will show the ongoing work of university to accomplish their goals. Therefore, they should have strategic planning that lead their contribution to the universities mission.

Strategic planning as an important entity in institution deals with identification, implementation and monitoring strategies which describe the characteristic of the institution under the changing and uncertain environmental conditions. The management should outline the institutions' mission, vision, basic values, and strategies to achieve their goals. Strategic planning is designing the future of the institution by analysing the present situation. It emphasises the targets, how to attain these targets, and the use of resources in effective and efficient way (Arslankaya & KorkusuzPolat, 2010; Akyel, KorkusuzPolat & Arslankaya, 2012). Gordon & Fischer, 2015, also state that strategic planning with the identification of measurable goals offers the context and the logic for goals to measure the organisational success. The management should focus on the results and associate it with plan so the corrective actions can be executed if necessary.

The literature discussed above is important to this research context, particularly in that public universities in Indonesia have also experienced similar situations. Due to the pressure of government funding, higher education institutions must struggle to overcome budget constraints and at the same time should improve their quality. Public universities may have several sources of funding but they are not profit oriented businesses. However, the world changing situation and influence of globalisation has impacted on higher education, urging the universities to adopt the corporate nature of efficiency and profit oriented management (Zajda, 2009). Therefore, to cope with this situation, public universities should adopt business like management to direct the institution. Systems such as strategic planning and performance measurement are needed at a fundamental level.

3. Performance Measurement in Higher Education and the Practice of the Balanced Scorecard

Through the development of the New Public Management approach in the 1980s, and the introduction of rational ‘businesslike’ management practices, many universities have established their management and control systems to include performance measurement (Bogt & Scapens, 2009). Jarrar & Schiuma (2007) argue that a challenge for the adoption and implementation of performance management systems in the public sector is the ability to evaluate and manage knowledge and intangible resources. Therefore, knowledge of the economy is also important for public sector organisations to represent strategic resources. According to Canibano & Sanchez (2009), universities have similar concerns to companies. Both are operating in a global market, competing, innovating and struggling for funds, good employees (in universities lecturers and researchers), customers (students) and partners. Although, some scholars envisage that students are not suitable to be considered as customers (Svensson & Wood, 2007). Higher education should take responsibility and initiative for quality and performance improvement and be accountable to the state, market and to the institution (Sarrico, 2010).

It is crucial for the universities to set up their performance measurements similarly to the private sector. In this context, universities may adopt the performance measurement model that fit to their condition. Universities are now forced to evaluate improvement and observe trends through the reliable information provided by performance measurement. As Coste & Tudor (2015) confirm that public universities should be responsible for using public fund and provide evidence how they allocate the resources and should demonstrate their

accountability. To gain a successful accountability, public universities should organise the relevant information through performance measurement.

Although the balanced scorecard has been successfully implemented and is well documented in the business sector and other for-profit organisations, there is still very limited research regarding the application of the balanced scorecard in the education sector (Eftimov, Trpeski, Gockov & Vasileva, 2016; Karathanos & Karathanos, 2005; O'Neil, Bensimon, Diamond, & More 1999; Rompho, 2004; Shuterland, 2000). Many universities worldwide have successfully implemented the balanced scorecard in their institutions in the past decade but only a few studies of their specific experiences and implementation process proceed to published papers (Eftimov et al, 2016).

The recent study in the United States of America undertaken by Stephenson (2014) reveals that higher education institutions measure their performance relative to cause-and-effect strategies by using the balanced scorecard conceptual framework. The study suggests that the balanced scorecard can be a modern managerial approach to replace the traditional fund accounting operating model. The balanced scorecard approach offers a promising and valuable tool for implementing a strategic performance measurement system in a college of business (Papenhausen & Einstein, 2006, p.19). In the context of higher education institutions, recent study by Eftimov et al., 2016, affirm that almost all outcomes and experiences of the balanced scorecard have positive results and successful.

Coste & Tudor, 2015, also state that among the four models for measuring performance in universities, such as performance pyramid, results and determinants framework, balanced scorecard and performance prism, the most used and complete model is balanced scorecard. The main benefit of this model because it has internal and external issues, financial and non-financial indicators, and is built on balanced set of measures.

3.1 Performance Indicators in Higher Education

The balanced scorecard is also a mechanism to display an institution's key performance indicators (KPIs). The performance indicators are presented numerically and are usually aggregated or summarised (Lyddon & McComb, 2008). Key performance indicators in balanced scorecards represent a balanced perspective are as follows: (1) Stakeholder indicators: present what is important to stakeholders in strategic plans, for example: student satisfaction, student retention, graduation rates and community support, (2) Process indicators: show how the institution's processes are performing in the context of outcomes, such as the time range needed to complete education and an efficiency measurement for the number of students, (3) Learning and innovation indicators: show how well people, groups

and the overall institution are learning and innovating to achieve the desired outcomes, for example: professional development impacts, continuous improvement and knowledge management, (4) Resources indicators: show what resources are required to achieve the desired outcomes, for example: student enrolments, funds available and budgets balanced. (Kaplan & Norton, 1996; Niven, 2003, Lyddon & McComb, 2008).

4. Brief Overview of Higher Education in Indonesia

Recently, higher education in Indonesia has grown, with 140 public institutions and more than 3400 private institutions, which vary in size, structure and quality (Royono & Rahwidiati, 2013). The provision of higher education is governed by the Ministry of National Education through the Indonesian Directorate General of Higher Education and other ministries, such as the Ministry of Religious Affairs and the Ministry of Finance. Since October 2011, the Indonesian Ministry of National Education has changed into The Ministry of Education and Culture and in October 2014 has been changed into The Ministry of Research Technology and Higher Education. However, the term Ministry of National Education is being used throughout this paper as the rules and regulations discussed in this study were developed under the Ministry of National Education. The Ministry of National Education is an Indonesian government department which assists the president in educational affairs. This department has the responsibility to improve educational service, equity in education access, quality in education and sustain Indonesian language and culture (Kemendikbud, 2014). The Directorate General of Higher Education is a government department under the Ministry of Education, which directs the higher education system in Indonesia. In 2014 The Ministry of Education and Culture was transformed into The Ministry of Research, Technology and Higher Education.

The Indonesian Directorate General of Higher Education has rolled out a Higher Education Long Term Strategy for the period 2003 – 2010 as a guideline for universities to generate their strategic plans. Following the Higher Education Long Term Strategy 2003-2010, Directorate General of Higher Education outlined Higher Education Long Term quality assurance and developing a higher education institutions data base (Iskandar, 2009). Under Higher Education Long Term Strategy 2003-2010, each university could determine the planning process to achieve the objectives outlined in the strategy. Generally, it was a four-year strategic plan which was suitable to its context, ability and situation. In 2003, the Government launched the 2010 vision for Indonesia's higher education system. By 2010,

higher education in Indonesia was expected to have improved significantly to contribute, and improve, the nation's competitiveness at the international level. This vision was then shared with all Indonesian universities, as the main guide to assist them in the formulation of their own strategies to meet their contexts in relation to the Government's plan (Direktorat Jenderal Pendidikan Tinggi, 2004). However, the vision seems a far cry from reality, as Altbach, 2010 argues that higher education in Asian countries, particularly Indonesia, India and Vietnam still have a very long way to go, and face many obstacles to achieving world class status. Therefore, more experts and improved research are greatly needed to improve the future standing of Asia's higher education institutions. A recent study in 2013 also showed that most of universities in Indonesia are still not able to perform in a high-quality research and teaching environment. Indonesian universities need to improve their quality, and conduct substantial reforms in funding, regulatory arrangements, academic and institutional quality and access to have a better position in the regional and global arenas (Hill & Wie, 2013).

Strategic planning and performance measurement have become important issues in Indonesian higher education. The process of strategic planning and its linkage to performance measurement needs to be examined, as well as the performance indicators, so that an enhanced model of performance measurement for higher education, particularly for public universities, can be designed.

5. Methodology

Quantitative approach was used in this study and data was gathered from questionnaire, the sample was drawn from both academic staff and administrative staff. The factors of strategic planning and performance measurement applicable to this study were identified, based on the literature review. These factors formed the framework of the questionnaire used in this study. The purpose of this questionnaire was to investigate the strategic planning process and implementation at public universities in Indonesia. It also functioned to ascertain whether the objectives and goals have been achieved according to the Higher Education Long Term Strategy guidelines, by examining the organisational performance measurement.

The questionnaire was designed and developed based on several studies that have been conducted in this area using a similar strategy. The questionnaire was modified to suit the Indonesian public universities' context. Kriemadis, 1997, used a similar method to study

the strategic planning process in higher education athletic departments in the USA. Another study using this strategy was conducted by Alashloo, Catska and Sharp, 2005 which aimed to identify the impediments to strategy implementation in the higher education sector of Iran. The studies by Al-Omari and Salameh, 2009, Cotter & Paris, 2007 and Bailey, Chow & Haddad, 1999, also influenced the content of the questionnaire.

The sample was drawn from both academic and administrative to ensure that at least two different perspectives could be collected during the study. The population of academic and administrative staff in the five public universities is estimated to be slightly less than 5,000. The information relating to the administrative and academic staff can be downloaded from university website.

The sites of this study were five major public universities in Sulawesi, Indonesia. All data collection was conducted on campus. These universities were chosen due to their similarity in characteristics to public universities in eastern part of Indonesia, and because they were geographically established on one island. Therefore, the results of the study can only be applied to these universities. The results of the study are based on the research findings from the thesis (Usoh, 2014).

5.1 Response Sample

A total of 600 questionnaires were distributed and 468 completed questionnaires were obtained, an effective overall response rate of 78%. The respondents' information analysed in this study included: gender, position, years of experience in strategic planning and their role in strategic planning. Two-thirds of respondents were males and one-third females. Almost two-thirds of the respondents were academic staff, approximately one-third from middle management, and very few from senior management. In relation to the respondents' positions, the highest numbers of responses were from academic staff (65%) and the fewest was from the group of vice rector, dean, vice dean (1.5%). The results also indicate that the heads of department group had 6% of the respondents in the survey and the heads of program group had 27.6%.

In terms of experience and role in strategic planning, almost one-half stated that they had experience in strategic planning, and more than one-third stated that they had a role in strategic planning. All the heads of department had experience in strategic planning, but only some of the academic staff did. These results indicate that the respondents had educational administration experience.

6. Findings

6.1 Descriptive Statistic

The questionnaire was structured in five parts, Sections A, B, C, D and E. Sections A and B were designed as closed questions with single responses quantified using a Likert scale, with four possible answers. Sections C and D were designed with closed and open questions, and Section E was an open question. The questionnaires were structured based on the research questions, which focus on five key issues: (1) the processes of strategic planning at public universities in Sulawesi (Section A), (2) the congruence of these with the objectives and goals set out in the Higher Education Long Term Strategy (HELTS) guidelines (Section A), (3) the relationship between strategic planning and implementation with organisational performance in public universities in Sulawesi (Section B), (4) the importance of the performance measurement indicators that are being employed by public universities in Sulawesi (Section C), (5) the features that should be included in an appropriate performance measurement model for implementation by public universities in Sulawesi (Sections D and E).

The statistical techniques used for the questionnaire data included descriptive statistics such as frequencies, means and standard deviations. Subsequent analyses utilised factor analysis to determine construct validity and inform scale development. Scale scores were created and t-test and ANOVA were used to examine differences between means. All analysis was performed using the Statistical Package for Social Science (SPSS).

The descriptive statistic for frequencies, means and standard deviation is presented in subsequent tables and divided based on its sections.

1. Section A. The processes of strategic planning at public universities in Sulawesi and the congruence of these with the objectives and goals set out in the Higher Education Long Term Strategy (HELTS) guidelines.

Table 1 shows that, in the opinions of the respondents, the processes of strategic planning at public universities in Sulawesi, and the congruency with the objectives and goals of the Higher Education Long Term Strategy guidelines were accomplished well to some extent. All item mean scores were above 2.5 on the Likert scale, which is the mid-point between agreement and disagreement. Most of the respondents believed that the strategic planning process produced a very high contribution to the university (means 3.62). However, some respondents show lower levels of agreement about whether the process of strategic planning had developed appropriately; the conduct of monitoring and evaluation of strategic planning objectives and goals; and the dissemination of strategic planning goals (mean 2.91,

2.97, 2.87). These tables further show that more than 20% of respondents disagreed with these three items.

Table 1: *Distributions of Responses to the Processes of Strategic Planning and Their Congruency with Higher Education Long Term Strategy Guidelines*

Items (Section A)	Strongly Agree (4)		Agree (3)		Disagree (2)		Strongly Disagree (1)		Mean	SD
	N	%	N	%	N	%	N	%		
1. Strategic planning process as a great contribution	305	65.2	146	31.2	17	3.6	-	-	3.62	.557
2. Existence of strategic planning as a systematic process	151	32.3	282	60.3	33	7.1	2	0.4	3.24	.593
3. The implementation of strategic planning as continual process	126	26.9	297	63.5	45	9.6	-	-	3.17	.580
4. Process of strategic planning developed appropriately	67	14.3	296	63.2	103	22.0	2	0.4	2.91	.611
5. Procedure of goals achievement clearly stated	98	20.9	273	58.3	93	19.3	4	0.9	2.99	.666
6. Conducting monitoring and evaluation of strategic planning objectives and goals	114	24.4	230	49.1	118	25.2	6	1.3	2.97	.740
7. Resources for strategic planning activities provided by university	122	26.1	259	55.3	76	16.2	11	2.4	3.05	.718
8. Strategic planning goals disseminated	89	19.0	235	50.2	138	29.5	6	1.3	2.87	.721
9. Institutional research is part of strategic planning process	134	28	279	59.6	51	10.9	4	0.9	3.16	.636
10. University allocating resources to improve the weakness of strategic planning	140	29.9	272	58.1	47	10.0	9	1.9	3.16	.672
11. Changes through evaluation of strategic planning result	122	26.1	254	54.3	80	17.1	12	2.6	3.04	.731
12. Higher Education Long Term Strategy from Directorate General of Higher Education has been disseminated	111	23.7	245	52.4	99	21.2	13	2.8	2.97	.748
13. Consistency of vision, mission with Higher Education Long Term Strategy	172	36.8	265	56.6	22	4.7	9	1.9	3.28	.642
14. Consistency objectives and goals with Higher Education Long Term Strategy	154	32.9	280	59.8	30	6.4	4	0.9	3.25	.606

2. Section B. The relationship between strategic planning and implementation with organisational performance in public universities in Sulawesi (Section B).

Table 2 shows that, in the opinion of the respondents, the relationship between strategic planning and implementation with organisational performance was significant to some extent. Although all item mean scores were below 3 on the Likert scale, they were above the neutral value of 2.5. In each case, a minority of respondents (between one fifth and more than a quarter) considered the relationship between strategic planning implementation and organisational performance to be insignificant. The table indicates that the relationship between strategic planning and organisational performance had the highest significance level, with more than 75% of respondents choosing this item as very significant.

Table 2: *Distribution of Responses to Strategic Planning and Organisational Performance*

Items (Section B)	Very Significant (4)		Significant (3)		Insignificant (2)		Very Insignificant (1)		Mean	Median	SD
	N	%	N	%	N	%	N	%			
1. Improvement of university with strategic planning implementation	73	15.6	264	56.4	129	27.6	2	0.4	2.87	3.00	.658

2. Value of strategic planning in organisational performance	56	12.0	301	64.3	109	23.3	2	0.4	2.88	3.00	.596
3. Relationship between strategic planning and organisational performance	77	16.5	292	62.4	95	20.5	4	0.9	2.94	3.00	.632

3. Section C. The importance of the performance measurement indicators that are being employed by public universities in Sulawesi.

Generally, the mean scores for the financial perspective, customer/stakeholder's perspective, internal process perspective and learning and growth perspective (Table 3 to Table 6) are above 3 on the Likert scale. This indicates that most respondents perceive that the four perspectives, and the variables, were significant enough to be applied to the university performance measurement indicators

Table 3: Distribution of Financial Perspective

Items (Section C, financial perspective)	Very Important (4)		Important (3)		Less Important (2)		Not Important (1)		Mean	SD
	N	%	N	%	N	%	N	%		
1. Surplus rate	214	45.7	226	48.3	24	5.1	4	0.9	3.39	.626
2. Tuition fee	245	52.4	213	45.5	10	2.1	-	-	3.50	.542
3. Amounts of grants	233	49.8	220	47.0	15	3.2	-	-	3.47	.560
4. Business fund	216	46.2	234	50.0	13	2.8	5	1.1	3.41	.602
5. Balance budget	309	66.0	155	33.1	4	0.9	-	-	3.65	.495
6. Deficit budget	198	42.3	225	48.1	30	6.4	15	3.2	3.29	.728
7. Funds totally accountable	298	63.7	169	36.1	1	0.2	-	-	3.63	.486
8. Efficiency and effectiveness of budget	333	71.2	133	28.4	2	0.4	-	-	3.71	.465

Table 4: Distribution of Customer/Stakeholder Perspective

Items (Section C, customer/stakeholder perspective)	Very Important (4)		Important (3)		Less Important (2)		Not Important (1)		Mean	SD
	N	%	N	%	N	%	N	%		
1. Number of students	282	60.3	180	38.3	6	1.3	-	-	3.59	.518
2. Quality of student	361	77.1	96	20.5	6	1.3	5	1.1	3.74	.533
3. Market share of student enrolment	257	53.9	207	44.2	2	0.4	2	0.4	3.54	.532
4. Geographic draw area	213	45.5	222	47.4	31	6.6	2	0.4	3.38	.628
5. Graduate effectiveness	325	69.4	135	28.8	8	1.7	-	-	3.68	.503
6. Employers survey	272	58.1	178	38.0	18	3.8	-	-	3.54	.571
7. Community perception of community and staff	252	53.8	198	42.3	16	3.4	2	0.4	3.50	.587
8. University outreach programs for community	239	51.1	215	45.9	14	3.0	-	-	3.48	.557
9. Parents response to university survey	167	35.7	268	57.3	31	6.6	2	0.4	3.28	.601
10. Participation in decision making	268	57.3	190	40.6	10	2.1	-	-	3.55	.539
11. Encouragement of research	280	59.8	171	36.5	17	3.6	-	-	3.56	.565
12. Attendance of conference	184	39.3	229	48.9	51	10.9	4	0.9	3.27	.683
13. Level of publication	226	48.3	214	45.7	24	5.1	4	0.9	3.41	.630
14. Student/teacher ratio	248	53.0	205	43.8	13	2.8	2	0.4	3.49	.576
15. Percentage of doctoral	259	55.3	185	39.5	20	4.3	4	0.9	3.49	.623
16. Quality of faculty and accreditation status	323	69.0	137	29.3	6	1.3	2	0.4	3.67	.523

Table 5: Distribution of Internal Process Perspective

Items (Section C, Internal process perspective)	Very Important (4)	Important (3)	Less Important (2)	Not Important (1)	Mean	SD
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	N	%	N	%	N	%	N	%		
1. Student satisfaction	310	66.2	148	31.6	10	2.1	-	-	3.64	.523
2. Evaluation by external reviewers and employers	210	44.9	22.3	47.6	31	6.6	4	0.9	3.37	.645
3. Peer review	168	35.9	251	53.6	49	10.5	-	-	3.25	.632
4. Quality and technological level of computer and library	293	62.6	160	34.2	15	3.2	-	-	3.59	.553
5. Periodic review of each program	263	56.2	178	38.0	25	5.3	-	-	3.51	.598
6. Number of new courses developed	185	39.5	259	55.3	24	5.1	-	-	3.34	.574
7. Degree of innovation	260	55.6	192	41.0	16	3.4	-	-	3.52	.564
8. Updated curriculum with educational business and commercial trends	280	59.8	170	36.3	16	3.4	2	0.4	3.56	.585
9. Faculty development plans and outcomes	275	58.8	173	37.0	20	4.3	-	-	3.54	.578
10. Contact with business and industry	252	53.8	181	38.7	29	6.2	6	1.3	3.45	.670
11. Multimedia used in classroom	260	55.6	182	38.9	24	5.1	2	0.4	3.50	.616
12. Degree duration	198	42.3	245	52.4	23	4.9	2	0.4	3.37	.597
13. Percentage of student completing program in 4 years	215	45.9	208	44.4	34	7.3	9	1.9	3.35	.700
14. Percentage of budget for learning	248	53.0	194	41.5	14	3.0	12	2.6	3.43	.680
15. Availability of internship	189	40.4	235	50.2	32	6.8	12	2.6	3.28	.704

Table 6: Distribution of Learning and Growth Perspective

Items (Section C, learning and growth perspective)	Very Important (4)		Important (3)		Less Important (2)		Not Important (1)		Mean	SD
	N	%	N	%	N	%	N	%		
1. Grants for research travel, library, computer	259	55.3	183	39.1	24	5.1	2	0.4	3.49	.616
2. Teaching assessment	254	54.3	198	42.3	16	3.4	-	-	3.51	.565
3. Level of equipment	201	42.9	246	52.6	19	4.1	2	0.4	3.38	.586
4. Number of new initiatives, courses, programs	185	39.5	247	52.8	34	7.3	2	0.4	3.31	.622
5. University innovation versus other universities	238	50.9	200	42.7	26	5.6	4	0.9	3.44	.640
6. Adequacy of classrooms, equipment, computers and library resources	316	67.5	119	25.4	29	6.2	4	0.9	3.60	.646
7. Percentage of budget for improved facilities	334	71.4	107	22.9	25	5.3	2	0.4	3.65	.600
8. Evaluation of strategic planning result	287	61.3	144	30.8	37	7.9	-	-	3.53	.639

4. Section D and E. The Features of the Performance Measurement Model

Table 7 shows that respondents agreed, at some level, with the features listed for possible inclusion in an appropriate performance measurement. All item mean scores were above 3 on the Likert scale. Most of the respondents agreed that the new features listed in Section D of the questionnaire should be included in the performance measurement model. Table 7 also indicated that the item of performance measurement should be modified as strategic objective change had the highest level of agreement from respondents (mean score 3.46). The disagreement level from respondents was low, with the percentage below 5.5%.

Both other items had mean scores very close to this item, indicating a high level of agreement.

Table 7: Distribution of Responses to Features in a Performance Measurement Model

Items (Section D)	Strongly Agree (4)		Agree (3)		Disagree (2)		Strongly Disagree (1)		Mean	SD
	N	%	N	%	N	%	N	%		
1. A new model of performance measurement should be developed	227	48.5	216	46.2	25	5.3	-	-	3.43	.594
2. Performance measurement should be modified when strategic objectives change	234	50.0	215	45.9	17	3.6	2	0.4	3.46	.589
3. University utilises performance measurement to identify a strategic focus	229	48.9	220	47.0	19	4.1	-	-	3.45	.574

The results from the open-ended sections of the questionnaire in Table 8, also showed that the respondents realised specific important factors and features required in strategic planning and performance measurement. The important factors in strategic planning could be an additional team member who is involved in the strategic planning processes, improvement in strategic planning implementation and the strategic planning implementation should be conducted in an accountable and appropriate way.

Table 8: Results of the Open-Ended Questionnaires (Section E)

Questions	Comments
Aspects of performance indicators that can be adopted	<ul style="list-style-type: none"> -Graduates employability -Number of publications and research -Number of patents -Accreditation status -Student's GPA -Community service activities -Staff achievements -International collaboration
Persons that should be involved in strategic planning and performance measurement	<ul style="list-style-type: none"> -Management level in faculty and university - The board of quality assurance -Stakeholders -Academic staff -Administration staff -Strategic planning expert -Research centre department -Students representative and alumni
Significant features of performance measurement	<ul style="list-style-type: none"> -Progress report in one year plan -Applicable research for community service -University ranking
Years of strategic planning	<ul style="list-style-type: none"> -3 years -4 years -5 years
Years of performance measurement	<ul style="list-style-type: none"> -1 year -2 years
Further comments relating to strategic planning and performance measurement	<ul style="list-style-type: none"> -Strategic planning and performance measurement assist the university to be accountable and transparent -Strategic planning should focus on three functions of higher education: education and learning, research and community service

6.2 Factor Analysis

The variables in the questionnaire were subjected to a Principal Components Factor Analysis. Hair, Anderson, Babin, Black & Tatham (2006) suggest that when using factor analysis to develop scales, variables with factor loadings above 0.3 to 0.4 are the minimum level, and above 0.5 are considered practically significant. Therefore, variables with low

factor loadings were eliminated and those with a factor loading of more than 0.5 were retained.

Based on factor analyses, 13 scales were developed as measures of the perceptions of respondents concerning strategic planning. The significance indication in relation to gender and position for these scale scores shows in Table 9.

The 13 scales had acceptable to very high reliabilities, and scale mean scores were calculated. Differences in the 13 scale scores based on gender and positions held were tested using t-tests and one-way ANOVAs. Differences of perception based on gender were discovered for the scale scores of strategic planning contribution, and the customer/stakeholder's perspective. Differences in perceptions by positions were discovered in the scale scores of the financial perspective, the customer/stakeholder's perspective, the internal process perspective, the learning and growth perspective and the performance measurement model.

Table 9: Scale Scores, Gender and Position Differences

No	Scale Scores	Gender/ Position	Significant	Not Significant
1.	The contribution of strategic planning	Gender	*	
		Position		*
2.	The procedure of strategic planning	Gender		*
		Position		*
3.	The evaluation of strategic planning	Gender		*
		Position		*
4.	Strategic planning implementation and performance	Gender		*
		Position		*
5.	University revenues	Gender		*
		Position		*
6.	University budget	Gender		*
		Position	*	
7.	Student development	Gender		*
		Position		*
8.	Community participation and staff development	Gender	*	
		Position	*	
9.	Research development	Gender		*
		Position	*	
10.	University improvement and assessment	Gender		*
		Position	*	
11.	Academic improvement	Gender		*
		Position	*	
12.	Facilities improvement and achievement	Gender		*
		Position	*	
13.	Performance measurement model	Gender		*
		Position	*	

7. Discussion

This section provides an integrated discussion, based on the major findings from the questionnaires. There were thirteen scale scores developed from the survey. The developing scale scores covered the areas of strategic planning, budget, university development, improvement, achievement and the performance measurement model.

The finding of the processes of strategic planning at public universities in Sulawesi, showed that variables such as strategic planning development, information to disseminate the program, plan activities to all working units in university, and targets achievement of Higher Education Long Term Strategy were not fully accomplished. Some respondents thought that the universities should be more concerned with the improvement of research collaboration, facilities improvement, international journal publication and government or private sector partnerships. The findings are generally in agreement with the report from The Organisation for Economic Co-operation and Development (OECD), which concludes that higher education in Indonesia needs improvement. The quality of Indonesian higher education was still well behind international standards compared to developed countries, which makes it difficult for Indonesian universities to get international recognition (OECD, 2012).

In terms of the congruence of strategic planning with the objectives and goals that are set out in the Higher Education Long Term Strategy guidelines, universities develop their own strategies as a requirement to produce formal strategic plans. The level of congruency between strategic planning and the Higher Education Long Term Strategy guidelines seemed markedly high because there was a requirement for universities to comply with central government requirements.

In the performance measurement process, the accreditation agency (National Accreditation Agency for Higher Education) can gauge how far the targets have been achieved in accordance with the university's strategic planning. After the assessment process, the accreditation status then will be determined. The study of Baskoro, 2009, affirms that higher education institutions have a right to autonomy but must follow rules and regulations from central government to ensure quality because if they fail to follow the rules and regulations from Directorate General of Higher Education, they will be not considered as qualified. Thus, the congruence of the universities' strategic planning with the Higher Education Long Term Strategy guidelines had been followed mainly for compliance with the regulation, even though the targets from Directorate General of Higher Education were considered high.

The findings of the relationship between strategic planning and implementation with organisational performance in public universities in Sulawesi, Indonesia showed that most respondents (more than three-quarters) considered the relationship between strategic planning implementation and organisational performance was important. However, that still left a substantial minority who considered that the relationship was not important. It can be interpreted that the performances of the universities were not improved as much as expected

with strategic planning. The universities expected through strategic planning implementation that organisational performance could be improved. However, the universities' performance was still left behind as there were some important targets in strategic planning, such as world class university status, international journal publication, international collaboration and maximum facilities improvement, which had not been adequately achieved.

This view concurs with the work of Wicaksono & Friawan (2011), who conclude that public higher education institutions in Indonesia are of poor quality, which can be seen from the low qualification levels of teaching staff, insufficient laboratory equipment and limited library resources.

Regarding the performance measurement indicators that are being employed by public universities in Sulawesi, Indonesia, this presents a description of the key elements in the performance measurement indicators from the four perspectives of the balanced scorecard approach (financial, customer/stakeholders, internal process, and learning and growth).

The key elements above agreed with the study by Ruben, 1999, about the use of the balanced scorecard approach for higher education, particularly about the framework of indicators which proposes the possible cluster measures for a higher education dashboard as an excellent measurement framework. This is also similar to the study of Chen, Wang, & Yang, 2009 about the application of performance measure indicators for universities. Chen et al., 2009, revealed the lead indicators to measure performance by using the balanced scorecard approach. These circumstances also related to the study by Stukalina, 2014, who confirms that the available resources in higher education institutions such as education and research, university services and facilities, and university academic staff should be given specific attention to stimulate universities' excellence.

Concerning the features that should be included in an appropriate performance measurement model for the implementation by public universities in Sulawesi, Indonesia, the key element, as developed from the scale scores was: a performance measurement model. Based on position level, the results indicated that the head of program and academic staff groups agreed more strongly with the new features in the performance measurement model, compared to other groups (vice rector, dean, vice dean, and department heads).

The study by Sudirman, 2012, in one public university in Indonesia confirmed that the balanced scorecard is a performance management system that can be used to improve accountability and lead to more improvements in higher education institutions. It helps the university to transform the vision and mission in strategic planning into a series of performance indicators. Therefore, it is necessary for each university to identify specific key

success factors, according to their vision. The university that implements the balanced scorecard approach has obtained benefits in resolving problems and better managing the institution.

The literature review also highlighted the fact that balanced scorecards were applicable in higher education performance measurement. Binden, Mziu & Suhaimi, 2014, state that the balanced scorecard approach has been commonly utilised as an effective business tool in business corporations. Many academic institutions around the world have been adopting the balanced scorecard successfully by aligning the four perspectives with their strategic plan (university's mission, policies and goals).

Based on the major findings, the proposed performance model can be seen in Figure 1.

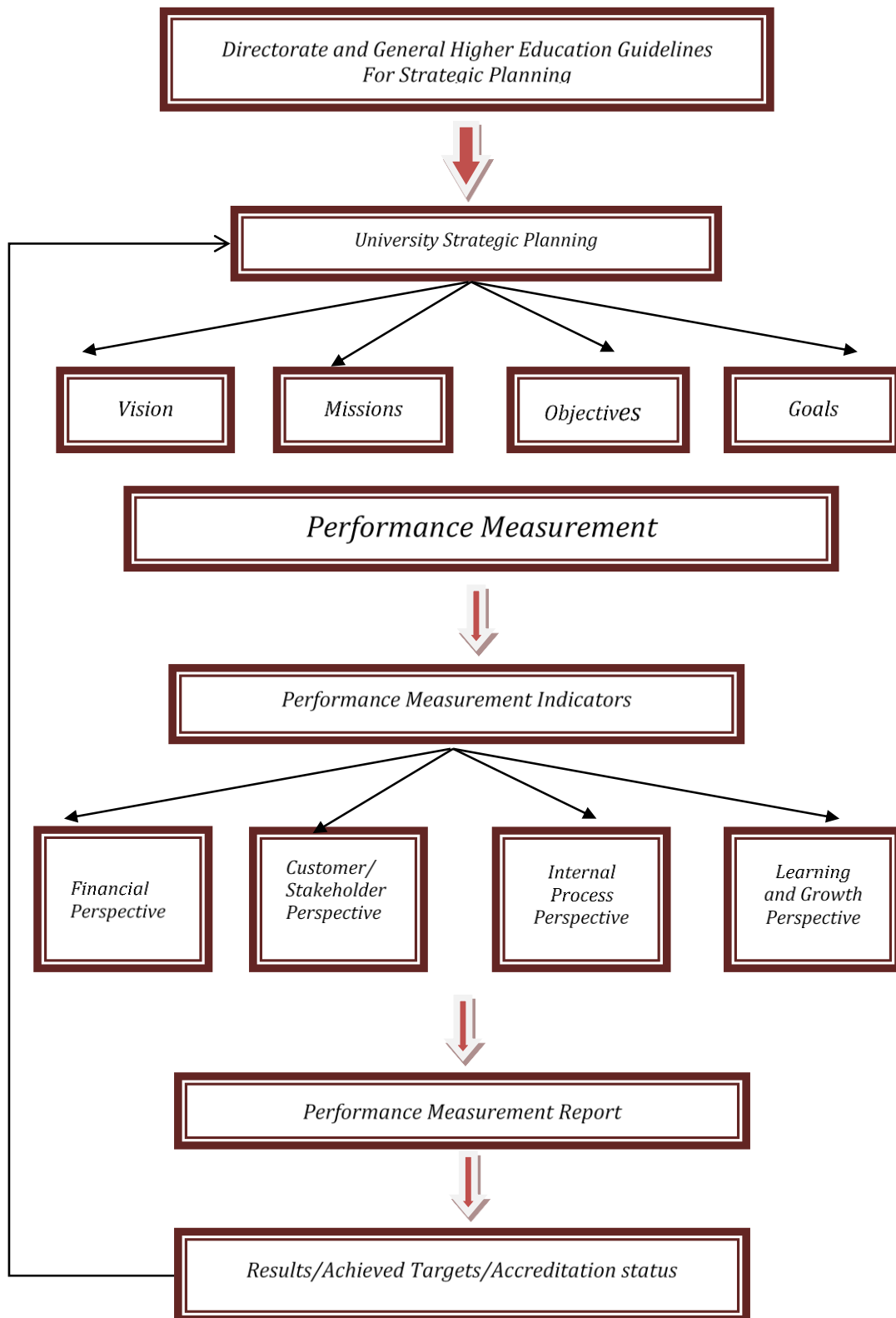


Figure 1: *Proposed Performance Measurement Model*

The proposed performance measurement model was initially developed by identifying the guidelines from Directorate General of Higher Education and what a university may

initiate in their own strategic planning. The performance measurement process can be conducted according to the vision, missions, objectives and goals that are set out in the strategic planning. Performance measurement in public universities may adopt the balanced scorecard approach and set performance measurement indicators based on a financial perspective, a customer/stakeholder perspective, an internal process perspective and a learning and growth perspective.

In the next stage, the university can measure whether targets are achieved and can carry out their performance measurement report. The results may lead to the university gaining accreditation status. The process of strategic planning then begins again after one cycle of the strategic plan has been completed. The main difference between the proposed model and the performance measurement model from National Accreditation Agency for Higher Education is that the proposed model contains the feature of a balanced scorecard to measure performance.

8. Conclusions and Recommendations

The results of this study provide insights into how public universities in Sulawesi manage their strategic planning and performance measurement. Each institution's strategic planning document is a crucial document in higher education. Strategic planning should not only be a compulsory document but also must represent an image of the university's excellence in the future, with realistic targets to be achieved. The noticeable indicator of whether strategic planning can be successfully implemented is the ability to select the right strategic targets and provide adequate resources to fulfil the targets. This condition leads to the improvement of organisational performance.

Strategic planning is not a one-stop attempt to guide, direct and envision the future of institutions. Evaluation and assessment of strategic planning should be followed by performance measurement. The indicators of performance measurement in higher education institutions are complex and unique making them different from other profit-making organisations. However, business-like performance measurement, such as the balanced scorecard approach, can be valuable to determine and group higher education performance measurement indicators into specific areas. The balanced scorecard approach can be inserted in the current performance measurement system to create a new modified model of performance measurement.

The proposed model may assist public universities to carry out their performance measurement reports and eventually will provide a positive impact on their accreditation status. This study has the potential to provide a contribution to the improvement of the strategic planning and performance measurement in public universities in Sulawesi.

In conclusion, strategic planning is not a way out of a predicament but it has a purpose in choosing the right strategic targets and in organising resources to engage with the targets set. The relationship between strategic planning and performance measurement is critical. Performance measurement should be used as a tool to monitor the achieved targets of the strategic planning. The combined use of the balanced scorecard approach in performance measurement emphasises that this approach can be used in non-profit organisations such as public universities, particularly in Sulawesi.

9. Limitations and Further Research

The first limitation was a geographic issue that makes it difficult to undertake a nationwide study, as Indonesia is a country that has five major islands (Sumatera, Kalimantan, Java, Sulawesi, Papua) and around 6000 inhabited small islands. The sample included data only from one specific island of Indonesia (Sulawesi). The organisational culture and personal characteristics of the respondents, which were different compared to the other universities outside Sulawesi. The second limitation is the small sample size. The study was undertaken in only five public universities, one each from the five provinces where public universities are established in Sulawesi. Despite similarities between universities, the small sample size may limit acceptance of the findings among other public universities.

It will be an opportunity for future researchers to conduct further study on other islands of Indonesia to obtain more comprehensive results regarding strategic planning and performance measurement. The methodology of the study could be applied in the context of similar public universities, particularly those located in the Eastern part of Indonesia. To expand and validate the findings of this study it may be appropriate to undertake a similar study in the private university sector.

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