

Measuring Bali State Polytechnic International Competitiveness through Balanced Scorecard Approach

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Article Info

Article History:

Received:
May 2019
Accepted:
Oct 2019
Published:
Nov 2019

Keywords:

*measurement performance,
international
competitiveness, BSC
perspectives, Bali State
Polytechnic (BSP)*

ABSTRACT

The current study is aimed at measuring the success of Bali State Polytechnic (BSP) international competitiveness through the employment of four Balanced Scorecard (BSC) perspectives: learning & growth, internal business process, customer, and financial. This study employs a qualitative approach that analyzed BSP performance in terms of international competitiveness. Data was collected through observation, questionnaires, and documentation. The study sample consisted of 135 respondents, recruited using judgmental and random sampling technique. Research respondents were Institution Leaders, Head of Units, Head of Departments, Head of Study Programs, as well as 35 Section Heads and 100 students. The results of the study show that BSP has performed very well in terms of growth and learning. The institution has done reasonably well in terms of financial perspective, with six out of eight indicators showing good results. However, there is still vast room for improvement for the customer and internal business perspectives, as the analysis of two perspectives showed a rather poor performance score. Poor performance has resulted in the shortage in achieving the targeted international competitiveness as stated in the strategic plan.

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INTRODUCTION

Most universities want to be ranked in the world leader. For this reason, each university must have an international standard of excellence. In building the competitiveness of Higher Education (HE), values are needed in the perspective of global teaching, competence and collaboration of countries working together across borders (Johnson, 2015). Increasing the competitiveness of HE means improving the quality of learning processes, learning content,

teaching methods and academic staff attitudes towards better student motivation to develop skills by emphasizing the practical side of the learning process (Bikse, Rizva, & Brence, 2013). Internationalization of higher education means to improve the quality of education (Jibeen & Khan, 2015). Internationalization of the competitiveness requires institutions to understand the global value chain in developing substantive skills to achieve global career preparedness competencies. Internationalization contributes strongly to the achievement of global career readiness (Yeravdekar & Tiwari, 2014). Building global competitive advantage requires commitment and spirit in building operational excellence, requires resources, specific competencies and capabilities to be able to create value.

The Bali State Polytechnic (BSP) in responding to the era of global competition suggests having international competitiveness in 2025 (according to BSP vision). The stages of achieving international competitiveness are contained in the strategic plan for the period 2011-2025. After two periods of implementation of the strategic plan from 2011 to 2017, BSP has not yet evaluated. The impact of not evaluating the achievements, institutional leaders do not know the success of the achievement of the strategies that have been set. Actually, measuring and evaluating performance plays a very important role in analyzing organizational growth, as well as the organization's response to environmental changes. The measurement system can be used as a basis for evaluating how well the progress of the results is in accordance with the stated objectives (Wheelen & Hunger, 2012).

The framework for measuring HE performance is further divided into four sub-dimensions: education, research, finance, and human resources. Educational and research activities related to science and technology transfer to provide work knowledge and skills. While management performance includes the performance of sustainable human and financial resources to provide services to the community in the long run. The performance measurement model in this study was built using a balanced scorecard (BSC) approach. BSC is a fast and comprehensive measure of performance in creating competitive advantages for organizations (Pouresia, Ahmadgouroby, & Efteghar, 2013). Performance evaluation with BSC includes four perspectives: customer, financial, internal business process, learning and growth (Kaplan & Norton, 2009). Therefore, the problem of this research is to analyze the achievement of BSP international competitiveness performance towards international competitiveness in 2025. The purpose of this study is to measure BSP performance in the context of achieving international competitiveness by using the four BSC perspectives approaches.

METHODS

This study uses a qualitative approach that analyzes the performance of the BSP towards achieving international competitiveness. The study uses a four-perspective approach from the balanced scorecard. Data collection through questionnaires and documents relating to the object of research are obtained. Primary data is collected from respondents' perceptions regarding the four perspectives of the BSC which are integrated with international competitiveness indicators. Secondary data are in the form of reviews of strategic plan documents and policies relating to the direction of developing international competitiveness. The sampling technique with the judgemental sampling for the sample management who has the authority to make decisions and random sampling for students. The number of respondents was 135 people, consist of 35 from

Institutional Leaders, Heads of Departments, Chair of Study Programs, the PNB staff, and 100 respondents from students (refers to the formulation proposed by Slovin with a precision of 10%). Measurement of perception using a Likert scale (Likert, 1932) starting from statements strongly disagree = 1; disagree = 2; agree = 3; and strongly agree = 4. The indicators of international competitiveness refer to research from Knight, (2008); Amsterdam's, (2017). Testing the validity using the Pearson Correlation method and testing the reliability of data using Cronbach Alpha.

The data were analyzed using descriptive statistics. The formula of assessment the achievement of international competitiveness (refers to Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi): $(\Sigma \text{ perception value} / \Sigma \text{ element}) \times (\text{weighted value})$. The criteria of performance achievement as shown below (Table 1).

Perception score	Interval score	Score conversion	Criteria
1	1.00-1.75	25-43.73	Not good
2	1.76-2.50	43.74-62.50	Less
3	2.51-3.25	62.51-81.25	Good
4	3.26-4.00	81.26 -100.00	Very good

Table 1: Performance achievement criteria Source: Kementerian PAN-RB [source]

RESULTS AND DISCUSSION

Validity and Reliability Test Results

Testing the validity and the reliability of the data using is done to be able to ascertain the feasibility of the data obtained from the results of the respondents' answers to the distributed questionnaire. Of the 135 questionnaires distributed to respondents the rate of return was 100%. The results of the validity test with Pearson Correlation for each indicator of the measurement variable are all above 0.3 (Pearson Corellation > 0.3) means that all measurement items are valid. Likewise for the value of Cronbach's alpha shows a result greater than 0.6 ($\alpha > 0.6$). These results illustrate that the measurement variable is reliable so that it is feasible for further analysis.

Descriptive Analysis Result

Descriptive analysis results are shown in the following Table 2 and Table 3.

	N	Mean	Std. Deviation	Std. Error Mean
Customer perspective	135	2.8074	.61442	.05288
Financial perspective	135	2.8800	.57313	.04933
Internal business perspective	135	2.8324	.49582	.04267
Learning and growth perspective	135	3.0037	.40286	.03467

Table 2: One-Sample Statistics Data Analysis [source]

The average respondent's perception of the statement given at the customer's perspective is 2.81, the financial perspective is 2.88, the internal business perspective is 2.83, and the learning and growth perspective is 3.00.

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Customer perspective	-3.642	134	.000	-.19259	-.2972	-.0880
Financial perspective	-2.433	134	.016	-.12000	-.2176	-.0224
Internal business perspective	-3.927	134	.000	-.16759	-.2520	-.0832
Learning and growth perspective	.107	134	.915	.00370	-.0649	.0723

Table 3: One-Sample Test
 Data Analysis [source]

Based on table 3, sig. value of customer, financial, and internal business perspective are smaller than 0.05 (significant). That means the three dimensions significantly different in the test value with a score of 3 (good criteria). But on learning and growth sig. value $0.925 > 0.05$ (not significant).

Customer Perspective

Measurements are carried out on the performance of BSP in providing services to stakeholders regarding efforts to achieve institutional international competitiveness, using three indicators namely: the understanding of the academic community on the concept of international competitiveness, the availability of support systems, and availability of a program that leads to the international competitiveness of institutions. The results show that the average customer perspective score is 2.81, lower than good criteria ($t = -3.64$; sig. $0.000 < 0.05$). Most respondents gave perceptions disagreeing on the statement of the internationalization services in the support system and internationalization service programs of student. On other indicators, inter-cultural programs, career development centers, and international work placements, as well as international training programs for graduates are perceived as inadequate. In other parts, the performance indicators of character and language development programs, as well as non-academic programs have shown sufficiently.

Financial Perspective

Respondents' perceptions of financial aspects are focused on two important things, that is the availability of funding sources, and budget allocation for the internationalization programs. The results of measurements on financial perspective illustrate that in terms of the availability of budgets for the development of international programs, the development of international courses and curriculum development grants is sufficient. The average financial aspect score is 2.88 ($t = -2.433$; sig. $0.016 < 0.05$), lower than good criteria (score 3). The results show that the respondent strongly agree respectively in the availability of budgets for the development of international programs, the development of international courses, and sufficient for the development of international competencies and available grants for international curriculum development. Furthermore, the respondents stated that the BSP did not have the ability to make efforts to extract funds for the benefit of developing programs and activities that lead to the interest of building international competitiveness.

Internal Business Perspective

In the context of educational institutions, it is certainly different from the internal business of profit-oriented companies. The internal business processes in this study are a series of activities in the field of higher education to create educational products/services in order to be able to compete internationally. There are eight indicators submitted to respondents to be given an assessment, among others, relating to the process of building international competitiveness from the aspects of education, research aspects, and community service. Based on table 3, average score of the internal business perspective is 2.83 ($t = -3.93$; sig. $0.00 < 0.05$), lower than good criteria. Two indicators of measurement showed unsatisfactory results such as the international curriculum development policy and the student recruitment system. But on the other hand, six indicators show quite good results in academic programs that utilize international students as a source of learning, adequate information systems, collaborative research, conferences, and other internationalization efforts in the form of community service in the Asian region in the form of the implementation of appropriate technology involving several universities in the ASEAN region and South Korea.

Growth and Learning Perspective

Measured using four indicators in terms of efforts from BSP to encourage capabilities of human resources owned and institutional capacity. Measurement indicators include staff development programs, development of staff insights and experiences, and policies that encourage the achievement of international competitiveness. In general, respondents' perceptions of efforts BSP in strengthening the capabilities of human resources towards strengthening international competitiveness have been seen significantly. The average score of growth and learning perspective is 3.01 same with the criteria ($t = 0.107$; sig. $0.015 > 0.05$). Viewed from the side of institutional support to take part in international activities. BSP clearly formulates a policy that encourages the development of international competitiveness as stated in the strategic plan and mission.

Based on the results of processing perceptual data from respondents, the results of the performance achievement assessment obtained on four BSC perspectives as shown below.

Perspective	BSP Score	Criteria
Customer	37.90	Not good
Financial	62.21	Less
Internal business	38.24	Not good
Growth and learning	81.10	Good

Table 4: Performance achievement of BSP International Competitiveness
Data Analysis [source]

DISCUSSION

Assessment indicators refer to the concept of higher education international competitiveness proposed by Knight, (2008); Amsterdam, (2017), while the measurement approach refers to the BSC approach. BSP set the targets and programs that have been developed towards international competitiveness based on the potential of Bali's local value. Six other indicators that are used as benchmarks for achieving competitiveness are expressed as lacking or doubting their abilities. That is still considered lacking include system performance, student organization

program, and internationalization programs through intercultural exchanges, career guidance and international work placements, and other programs that provide support for BSP graduates.

From the customer perspective, the most basic weakness that drives the poor performance of BSP international competitiveness. Based on a review of policy documents that lead to international competitiveness, it has been explicitly stated in the Strategic Plan and Master Plan for BSP Development for 2011-2025. In this document the annual targets and targets for competitiveness to be achieved by the institution have been stated (competitiveness built into the Asia-Pacific region). The roadmap and strategy for achieving international competitiveness have been clearly shown. The problem is at the level of implementation that has not been elaborated in the form of an action plan. The program activities have not been systematically described and synergized with other supporting aspects which are expected to create value for stakeholders to increase institutional competitiveness. As revealed by Altbach (2013), that internationalization refers to policies and initiatives formulated systematically in accordance with the global trend. In the context of developing programs and activities, as stated by Knight, has not been well organized. Internationalization at home which is oriented towards developing international understanding and intercultural skills (curriculum-oriented) and which prepares students, lecturers, and educational staff to be active in many ways in the global world has been attempted. The programs and activities that have been carried out have not shown any alignment with the planned strategic policies. The programs and activities targets are made less in-depth and measurable according to the strategic plan.

Business processes build the international competitiveness of HE grouped into two dimensions, such as building competitive advantage through integrating international, intercultural or global dimensions into the goals and functions of HE, as well as policies that promote higher education internationally. Integrating the international dimension into educational goals has been consistently stated in the policy. The strategic objectives contain three objectives that BSP wants to achieve: international quality standard in the field of applied science and technology, producing applied research with international recognition, cooperation in achieving equality with countries in the Asia-Pacific region, and management of international quality standard. The strategic objectives of education in accordance with the concept of internationalization have been clearly stated in the strategic plan. But the results obtained at the internal business process performance have not shown satisfactory results. Based on analysis of the program planning document and activities followed up by conducting depth interviews with respondents it is known that there are still weaknesses. The design of the program and activities are not in line with the strategic plan.

Several aspects that become weaknesses of the internal business processes, such as the international curricula, and student recruitment systems with the dimensions of international education. Six indicators provide relatively good results, in academic programs, committees for the development of international curricula, the international competencies, adequate information system support, cooperation program for foreign student admissions, and research collaboration, conferences, and efforts that prepare students to be active in many ways in the global world including collaborating in community service activities. The two components show a fairly good performance are research and international seminars have been routinely

held every year, as well as in internationalization activities in the form of service that has been running periodically through a "creative station" program involving several universities in the ASEAN region and South Korea.

However, some of the international competitiveness performance still needs to be improved more intensively. Based on the observation of the operational plan documents was identified that this incompatibility occurred as a result of the weak implementation of the plans. There is a mismatch between program planning and the implementation of activities. So that what is being targeted cannot be achieved. Program design towards international competitiveness through abroad internationalization not explicitly contained in the planning design. In fact, student exchanges have indeed been carried out by BSP, but the quantity is still relatively small and not planned massively every year. Other activities in the context of internationalization have not gone well. No specific program planning is proposed in annual programs and activities to efforts to achieve international competitiveness especially in cross-border education programs, exchange of students, scientists, and program collaboration with universities abroad, and possibly open campus branches abroad (Altbach, 2013).

The ability of funding as a supporting aspect is crucial to developing international competitiveness. HE must have allocation funding sources in order to support the development of internationalization and graduate competitiveness (Pawar, 2016). Based on respondents' perceptions that the BSP's financial performance is still in less. Its need to be prepared in the context of funding is how the budget can be allocated (use of funds) and adequate budgetary ownership of resources. BSP actually has an adequate budget to develop international activities to prepare students to be active in many ways in the global world. But, three indicators such as grants for study programs in the development of international curricula, and budget support for collaborative research abroad is still weak. The sources of funding for collaboration support are still very small and there is almost no revenue from the results of the collaboration. Surely, this is a note for BSP to explore potency and innovation in order to create sources of income from non-students.

From the perspective of growth and learning directed at efforts to strengthen institutional capabilities through the design of international training programs for graduates, lecturer, and staff in strengthening foreign language skills, career development with job placement and guidance-oriented skills of the international life. In the strengthening of HR capacity, BSP has strategic policies in the strategic plan. One of the goals to be achieved is the availability of professional and competent lecturers who have international insight. Towards growth and learning in capacity building as outlined in the three pillars of BSP development policy, through the availability of staff who have international-standard insight and skills. The direction of developing HR capacity towards the ability to compete internationally, achieving performance in this perspective still requires strengthening, although overall performance achievement in this perspective is actually good. Based on the results of observations and interviews with respondents who are still obstacles, the effectiveness of the implementation of programs and activities.

CONCLUSION

Referring to the BSC perspective, BSP international competitiveness from growth and learning, and financial perspectives are already considerable commendable. Though the study still identified some areas for improvement. Whereas for the customer and internal business perspectives, their performances are fairly inadequate. Hence more substantial improvements are needed for customer and internal business perspectives. BSP deficient performance has impacted the achievement of target performance indicators in BSP's strategic plan. There are still weaknesses in terms of building academic, research, and service excellence. From the results of the discussion, it is recommended that BSP must strengthen its programs and activities planning, and management systems, in an integrated and comprehensive manner. That will include intensive monitoring of international competitiveness targets. BSP needs to sharpen international competitiveness performance indicators. Reformulation of more effective strategies in achieving international competitiveness in accordance with existing concepts is imperative. In addition, strengthening steps in monitoring and evaluating BSP's international competitiveness need to be designed to be more intensive. Most importantly, the above steps need to be complemented with strong commitment and appreciation by all academics towards the direction of institutional development towards sustainable international competitiveness.

REFERENCES

- Altbach, P. G., & Reisberg, L. (2013). The pursuit of international students in a commercialized world. *International Higher Education*, 73, 2–4.
- Amsterdam's, U. (2017). *Strategic Framework for Internationalization*. Amsterdam: University of Amsterdam.
- Bikse, V., Rizva, B., & Brencce, I. (2013). Competitiveness and quality of Higher Education: Graduates evaluation. *Journal of Teacher Education for Sustainability*, Vol. 15, No. 2, 52–66.
- Jibeen, T., & Khan, M. A. (2015). Internationalization of Higher Education: Potential Benefits and Costs. *International Journal of Evaluation and Research in Education (IJERE)* Vol.4, No.4, pp. 196–199
- Johnson, S. (2015). Education and international competitiveness. *Journal of Initial Teacher Inquiry*, 22–24.
- Kaplan, R. S., & Norton, D. P. (2009). *The Execution*. Translated by Mohamad Rexa Atefi 1st printing. Nab Group.
- Knight, J. (2008). *Higher Education in Turmoil: The changing World of Internationalization*. Rotterdam, Netherlands: Sense Publishers.
- Likert, Rensis (1932), "A Technique for the Measurement of Attitudes", *Archives of Psychology*, 140: 1–55
- Pawar, S., (2016). Internationalization of Higher Education in India: Pathways and Initiatives. *IOSR Journal of Research & Method in Education (IOSR-JRME)* Volume 6, Issue 3 Ver. II, pp 53-59
- Pouresia, A., Ahmadgouroby, M. A., & Efteghar, A. (2013). Balanced scorecard; A new tool for performance evaluation. *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 5, No. 1, 974-978.
- Wheelen, T., & Hunger, J. (2012). *Strategic Management and Business Policy: Toward Global Sustainability*. New Jersey: Pearson Education.
- Yeravdekar, V. R., & Tiwari, G. (2014). Internationalization of Higher Education and its Impact on Enhancing Corporate Competitiveness and Comparative Skill Formation. *Procedia Social and Behavioral* 157, (pp. 203-209).