

Developing a Model of Sustainable Competitive Advantage (Causal Empirical Case Studies from Indonesia)

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The objective of the study was to develop a model of sustainable competitive advantage as a form of excellence in creating a college-based resource strategy; explanatory through the operational direction of research variables based on the variables of growth and learning perspective, financial perspective, customer perspective, and internal/internal business perspective as the independent variable. Further variables related to issues of research from the sustainability perspective as a dependent variable. The research method uses explanatory survey method (explanatory survey method) containing the description, and relational research focused on the explanation of the relationship between variables. Financial Sustainability was found to not affect Sustainability Perspectives because it is already fixed as handled by the foundations. So the conclusion of this research can be seen from the development of that model that there are three main pillars in continuous work improvement in private universities through Learning measurement, Research and Community Engagement. The three pillar's functions are supported by shared work sustainability as presented, together with supporting tools which can be implemented in private higher universities.

Key words: *Sustainability, Growth & Learning, Finance, Customer, and Internal Business.*

Introduction

In order to develop a superior university, competitive and trustworthy community (stakeholder) needs must be considered in formulating an effective strategy. The concept of an effective, superior, competitive and credible strategy of the community rests on the main strategies of competitiveness, muscularity, decentralization, and organizational health. The concept of this first strategy of university competitiveness in line with the vision and mission is reflected by its graduates and its outcomes (Taylor, 2004). Both the autonomy and decentralization of universities based on the accuracy of selecting and defining each focus for the potential, uniqueness and values of local universities; and the three health organizations in which there is a state or context which functions optimally in realizing the vision and mission that has been determined (Orr et al. 2007).

The issue with competitive advantage in the gap between estimation and reality: challenges, biased of education system rules (between academics and foundation rules), lack of human resources, development of rapid technology and innovation, and less that of enterpreuner perspective. This research is expected to run a process to realize the vision of universities, the process of value benefits and the process of a sustainable plan of action. The sustainability indicators of universities are reflected by compliance (Taylor, 2004; Lozano, 2011), which includes: academic areas, i.e. nationally integrated databases, lecture performance, academic regulations, and the running of guarantee mechanisms as quality assurance for universities. The problem or gap between reality and hope arises because of the challenges, doubts, and ambiguities of sustainability in a private university (Ceulemans et al., 2015). The gap as a result of changes in the connected world is growing rapidly and on the other side is the scarcity of resources to respond appropriately to changes and accelerated developments in science and technology (Zaitseva et al., 2016; Akkuzova et al., 2018).

Literature Review

Sustainability Perspective

According to Des Jardens, (2016), the concept of "Sustainability" has become ubiquitous within the business, with virtually every company division across a broad range of industries developing "sustainable" models and practices. While the original Brundtland idea of sustainable development has the potential to do much good in guiding business practice, this potential is being undermined by the systematic use, misunderstanding, and flawed application of the concept in many business settings (desJardins, 2016). According to A Wiek et al. (2011), Brundtland is one of the world commissions that deal with the sustainability of development under the management of the United Nation which was previously known as the World Commission on Environment and Development (WCED) (Kharusi & Murthy, 2019).



A sustainability report perspective ensures a reporting principle that reports the company's efforts on economic, social and environmental aspects in order to ensure the sustainability of the company in a sustainable way. On the other hand, social responsibility entails that a CSR program conducted by the company fulfill a social responsibility to the community (Carroll, 2010), therefore, CSR reports are also included in the sustainability report.

Growth & Learning Perspective

Bakar et al (2010), studied how student's achievability becomes the most common problem, especially related to the continuity of the education system, therefore efforts should be made by all instructors to augment student attitudes and motivation towards learning as these would propel them to achieving higher in the learning process. However, further research needs to be conducted to investigate the relationships and plausible causes for academic achievement among university students. The growth and learning perspective is a perspective that provides infrastructure for the three previous perspectives and for generating growth and long-term improvement (Kaplan, 1996; Baci, 2012; Ceulemans, 2015)

Financial Perspective

The financial perspective is an approach to management strategies to find a balance between financial and non-financial performance (Gutherie, 2007), short-term and long-term using financial performance benchmarks of net income and Return on Investment (Cullen et al. 2003), since these benchmarks are commonly used in firms to know earnings. This financial benchmark alone cannot describe the causes that made the change of wealth created by companies or organizations (Gutherie, 2007).

Customer Perspective

The customer perspective is a perspective in determining which market segments and customers are targeted for the organization or business entity. Kaplan (1996), states that managers are the ones who set the best gauge for measuring the performance of each unit of operation and in order to achieve superior financial performance over the long term, they must present a new product/service that is better value to the customer. They also pose that each company has a unique set of value creation processes for its customers, such as: Process innovation, operation process; and after sales service (Kaplan, 1996; Wiek, 2011; Baci, 2012).



Methodology

The methodology of research is triangulation research, where it is a research method using data validity checking techniques that utilize something other than the data for the purpose of checking or comparing the data. The research uses primary data taken from private universities in the South of Sumatra-Indonesia. There are 98 respondents and the data is analysed using a qualitative and quantitative approach, a mixed methodology. The research also will explore the program in the form of models, programs, and applications based on information technology that aligned with the virtual office to support the sustainability of a competitive high-rise.

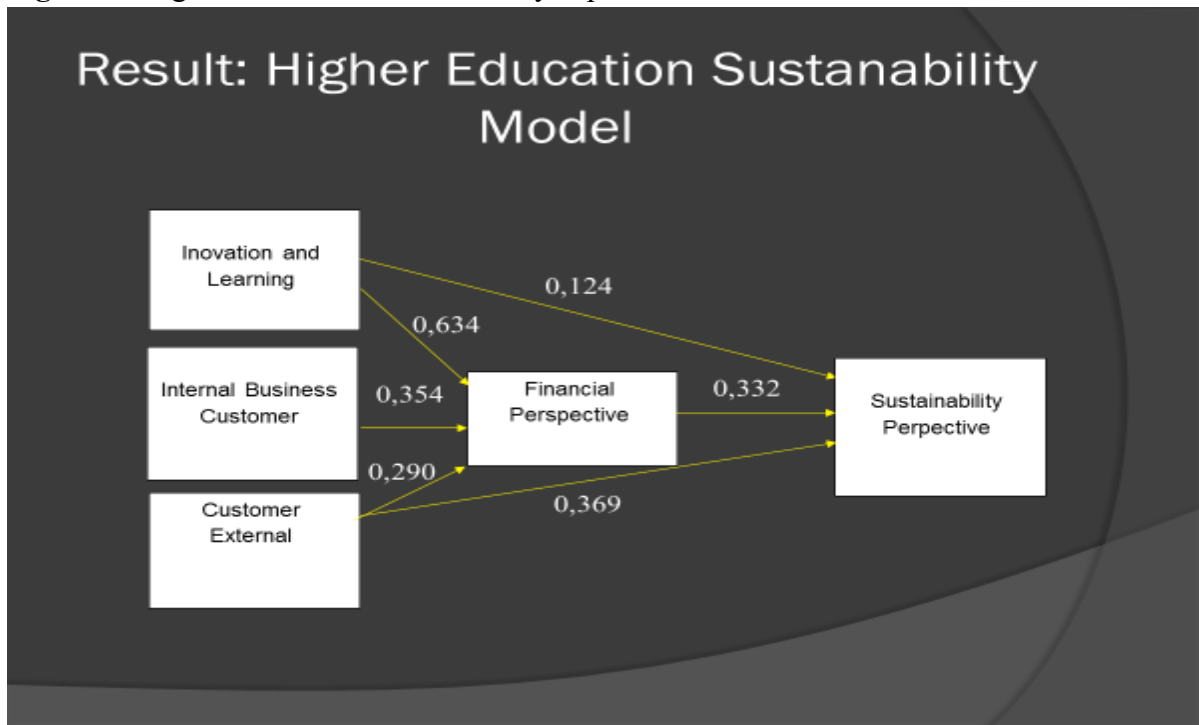
Results and Discussion

Determination Analysis of Operational Variables Perspective of Sustainability

The effective application model of higher management has been formulated to reflective the prespective of a sustainable model from a range of perspectives: finance, costumer business, internal and a learning and development prespective. The resulting prespective can be seen as a target and as a sustanability measurement aligned with the vision and strategy of Private higher education to be implemented (Soegoto, 2011). It is hoped this program can be embedded in all activities carried out as a general managment process starting from establishing the goals and target and concluding with evaluation.

The results of this research showed that an effective and strategy program has been conducted in private higher education to attain accountability using path analysis approach as reflected by a model of 'Higher Educatin Sustainability Equation Model' see Figure 1 below.

Figure 1: Higher Education Sustainability Equation Model



Source: Kaplan, 1996; Soegoto, 2011; author, 2018

The Concept of Business Process Education towards Superior and Private Universities Based on E-Governance

The model of the sustainability equation of private colleges referred to is formulated as

$$\text{LnMSt} = \beta_0 + \beta_1 \text{Ln PPPJt} + \beta_2 \text{LnPKEUt} + \beta_3 \text{LnPLGNt} + \beta_4 \text{LnPIt}$$

The equation model is given the following attributes:

LnMSt = sustainability perspective year t;

β_0 = constants;

$\beta_1 \text{Ln PPPJt}$ = perspective of growth & learning year;

$\beta_2 \text{LnPKEUt}$ = fiscal year financial perspective;

$\beta_3 \text{LnPLGNt}$ = customer perspective year t;

$\beta_4 \text{LnPIt}$ = internal /internal business perspective of the year.

The results of the study show that there are 2 (two) equations in the development of the sustainability model of private universities

Model (1) :

$$\text{KEU} = a + b_1 \text{IP} + b_2 \text{PIB} + b_3 \text{PE} + e;$$

$$\text{KEU} = -1,591 + 0,636 \text{IP} + 0,277 \text{PIB} + 0,422 \text{PE} + e$$

Model (2):

$$PS = a + b_1 IP * KEU + b_2 PIB * KEU + b_3 PE * KEU + e;$$

$$PS = 1,886 + 0,126 IP * 0,311 KEU + 0,358 IB * 0,311 KEU + 0,338 PE * 0,311 KEU + e$$

Prediction Model of the Independent Variable against the Dependent Variable

In order to answer the problem or hypothesis shown in the technique to answer the research objectives in achieving higher education sustainability, the coefficient and value of data management (quantitative) can be interpreted from the strategic techniques of responses through a concept of logging research. This investigates the variables of perspective growth and learning, financial perspective, customer perspective, and internal /internal business perspective either directly or indirectly measured by impact on the sustainability variable. The result of the Path Analysis approach is a development technique of multiple regressions used to test the contribution shown by path coefficients on each.

Based on the model development, the results of partial hypothesis testing (t-test) are as follows in Table 1:

Table 1: Coefficients^a Calculation Result

Variable	Sig	Alpha	Condition	t _{count}	t _{table}	Condition	Information
Innovation And Learning	0,000	0,05	Sig < Alpha	8,550	1,960	t _{count} > t _{table}	H0 rejected
Business Internal Customer	0,000	0,05	Sig < Alpha	3,917	1,960	t _{count} > t _{table}	H0 rejected
External Customer	0,015	0,05	Sig < Alpha	2,482	1,960	t _{count} > t _{table}	H0 rejected
Financial	0,340	0,05	Sig > Alpha	0,958	1,960	t _{count} < t _{table}	H0 rejected

Source: Data processed, 2017

Inovation learning, internal business customer and customer external affect on the sustainability of management higher education was made without any intervention from financial institution. Otherwise Financial Sustainability does not affect Sustainability Perspectives because it already has been fixed handled by the foundations. When conducting operational activities, almost all private and public universities maximized the surplus and minimized the cost. In terms of innovation performance of a college, both private and public universities have almost the same behavior, but the difference between low and high innovation performance behavior is obvious. The huge gaps which exist in the PTS indicatesshat resources are limited but that for private universities there are abundant

resources. For public universities, resources are relatively large, especially financial resources. The discussion of the findings of the research is below:

The Influence of Innovation and Learning on Sustainability Perspective

Based on the table above, calculations on Innovation and Learning obtained t_{count} value of 8.550 while the value of t_{table} with df ($df = 100 - 2 = 98$) is 1.960. So $t_{\text{count}} (8,550) > t_{\text{table}} (1,960)$ and sig value $(0.000) < \alpha (0,05)$ thus H_0 is rejected and H_a is accepted so that it can be concluded Innovation and Learning has partially significant effect on Perspective Sustainability. Significant influence on Sustainability Innovation and Learning Perspective showed a trend of increasing knowledge and skills in the management of private colleges following a series of Innovation and Learning through education and training. According to Tsiakirros (2002) and Sanusi (2015), the sustainability of process can be effectively used in educational institutions. Sustainability of process can be effectively used in educational institutions because it will affect quality, especially in terms of planning and implementation, evaluation, research, and management of education which results in the implementation of education is less relevant to the needs of society, child development, and the changing needs of the times

The Effect of Business Internal Customers to Sustainability Perspective

Based on the above table, calculations on Internal Business customers obtained t count of 3.917 while the value of t table with df ($df = 100 - 2 = 98$) is 1.960. So t count $(3.917) > t$ table $(1,960)$ and sig $(0.000) < \alpha (0.05)$ thus H_0 is rejected and H_a accepted so it can be concluded that Internal Business Customer has partially significant effect on Sustainability Perspective. The Effect of Business Internal Customers on Sustainability Perspective is supported by the results of this study. In an effort to conduct Business Internal Customers private universities required capabilities are effective at managing the universities, due to the changing role of universities powering the necessary human resources acting as a catalyst and willing to assume the responsibility of managing the university are vital (Locke, 2007).

The Effect of External Customers on Sustainability Perspective

Based on the table above, calculations on External Customers obtained t_{count} of 3.506 while the value of t_{table} with df ($df = 100 - 2 = 98$) is 1.960. So $t_{\text{count}} (3,506) > t_{\text{table}} (1,960)$ and sig value $(0.001) < \alpha (0.05)$ thus H_0 is rejected and H_a accepted so it can be concluded that External Customers have partially significant effect on Sustainability Perspective. In an effort to improve the quality of the Organizational Vision Implementation Process, according to Shoham (2009), the value benefit process and the plan of action process are the first focus to improve the level of stakeholder satisfaction, the level of customer and retention and the level

of market share. This means that the university also needs to pay attention to the conditions of competitors, suppliers, new players, and stakeholders and of course the key trends related to technological conditions used, the culture and customs of the local community, the prevailing regulations and social and economic conditions also need to be taken into account.

The Financial Effect on Sustainability Perspective

Based on the table above, calculations on Financial obtained value of t_{count} of 0.958 while the value of t_{table} with df ($df = 100 - 2 = 98$) is 1.960. So $t_{count} (0,958) < t_{tabel} (1,960)$ and $sig (0,340) > \alpha (0,05)$ thus H_0 is accepted and H_a is rejected so it can be concluded that Financial partially has no significant effect to Sustainability Perspective. In an effort to improve the quality of the Organizational Vision Implementation Process, the value benefit process and the plan of action process must first seek to improve the level of stakeholder satisfaction, the level of customer retention and the level of market share. According to Labuschagne (2005), this is related to the ability and continuity of the implementation of a quality learning process.

Conclusions

1. A Prediction model of the Free variable Against the bound variable was investigated in order to interpret the coefficient and value of the data management (quantitative) conducted in this research to answer the problem or hypothesis shown in the technique to answer the research objectives in the achievement of sustainability (sustainability) of higher education.
2. Innovation learning, internal business customer, and customer external affect the sustainability of management higher education without any intervention from financial institution.
3. Otherwise Financial Sustainability does not Affect Sustainability Perspectives because it has already been fixed handled by the foundations.



REFERENCES

- Ahmed, S. F., Eatough, E. M., & Ford, M. T. (2018). Relationships between illegitimate tasks and change in work-family outcomes via interactional justice and negative emotions. *Journal of Vocational Behavior*, 104, 14-30.
- Baciu, L. (2012). An analysis of the Romanian compulsory education from the perspective of institutional efficiency. *Procedia-Social and Behavioral Sciences*, 46, 2056-2067.
- Bakar, K. A., Tarmizi, R. A., Mahyuddin, R., Elias, H., Luan, W. S., & Ayub, A. F. M. (2010). Relationships between university students' achievement motivation, attitude and academic performance in Malaysia. *Procedia-Social and Behavioral Sciences*, 2(2), 4906-4910.
- Ceulemans, K., Lozano, R., & Alonso-Almeida, M. (2015). Sustainability reporting in higher education: Interconnecting the reporting process and organisational change management for sustainability. *Sustainability*, 7(7), 8881-8903.
- Gordon, H. J., Demerouti, E., Le Blanc, P. M., Bakker, A. B., Bipp, T., & Verhagen, M. A. (2018). Individual job redesign: Job crafting interventions in healthcare. *Journal of Vocational Behavior*, 104, 98-114.
- ISO 9001 - Reference Numbers ISO 9001: 2008 Fourth edition 2008-11-15 p: 1.
- Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Score Card*, Washington, USA. Mi, Misa, en Alexandra Halalau. 2016. "A pilot study exploring the relationship between lifelong learning and factors associated with evidence-based medicine. *International Journal of Medical Education*, 7 (Julie). *IJME*, 214-19.
- Labuschagne, C., Brent, A. C., & Van Erck, R. P. (2005). Assessing the sustainability performances of industries. *Journal of cleaner production*, 13(4), 373-385.
- Locke, W. (2007). Higher education mergers: Integrating organisational cultures and developing appropriate management styles. *Higher Education Quarterly*, 61(1), 83-102.
- Michael, R. J., Salend, S. J., Bennett, R. S., & Harris, A. J. (1988). The roles and functions of coordinators of handicapped services in higher education. *Journal of learning disabilities*, 21(3), 191-192.



- Ministry of Education Government of Malaysia Colombo Plan Staff For Technician Manila Philipina Collaboration with ISO 9001: 2000 Certification for TET Program April 16, 2003, Shah Alam Selangor Malaysia.
- Moleong, L. J. (2000). *Qualitative Research Methodology*. Bandung: PT Remaja Rosdakarya.
- Kharusi, S. A., & Murthy, S. R. (2019). The financial sustainability of publicly-traded state-owned enterprises in an emerging market. *Edición Especial*, 35(23).
- Pasharibu, Y., Sunarto, H., Sugiarto, A., & Silintowe, Y. B. R. (2015). Eksplorasi dan Perancangan Prototipe Aplikasi Kantor Maya Untuk Meningkatkan Sustainable Competitive Advantage di Perguruan Tinggi. *Jurnal Ekonomi Dan Bisnis*, 18(1), 41-60.
- Sanusi, A. (2015). Strategic alignment model between information system and technology strategy, empowerment and good governance on managerial performance (Study of Private Universities KOPERTIS Region II in South Sumatera). *Universal Journal of Industrial and Business Management*, 3(4), 83-86.
- Soegoto, E. S. (2011). Penerapan Manajemen Kinerja Dengan Pendekatan Balanced Scorecard Dalam Meningkatkan Akuntabilitas Pengelolaan Perguruan Tinggi. *Jurnal Majalah Ilmiah Unikom*, 6(2), 131-142.
- Shoham, S., & Perry, M. (2009). Knowledge management as a mechanism for technological and organizational change management in Israeli universities. *Higher education*, 57(2), 227-246.
- Akkuzova, A., Mankeyev, Z., Akkuzov, A., Kaiyrbekova, U., & Baiymbetova, R. (2018). Some features of the meaning “literary text” in the pragmalinguistic aspect. *Opción*, 34(85-2), 20-34.
- Tsiakkiros, A., & Pashiardis, P. (2002). Strategic planning and education: The case of Cyprus. *International Journal of Educational Management*, 16(1), 6-17.
- Zaitseva, N. A., Semenova, L. V., Larionova, A. A., Yumatov, K. V., & Hamnaeva, N. I. (2016). The role of human resource capacity to ensure the competitiveness of the cross-border cooperation projects in the tourism and hospitality industry. *International Electronic Journal of Mathematics Education*, 11(7), 1961-1970.