

FACTORS AFFECTING QUALITY TOWARD SUSTAINABLE COMPETITIVE ADVANTAGE

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ABSTRACT

This study aims to empirically prove whether there is an effect of Governance, intellectual capital, and environmental Uncertainty on improving the quality of private B-accredited universities, which impact sustainable competitive advantage. The sample in this study consisted of 136 B accredited private universities. Sampling was done through a random sampling technique. Furthermore, the quality of higher education has a significant effect on sustainable competitive advantage. This study empirically proves that good Governance, intellectual capital, and the ability to anticipate environmental Uncertainty improve the quality of private universities and sustainable competitive advantage. The findings of this study prove empirically that improvement in the quality of higher education, especially B-accredited private universities, is influenced by intellectual capital as an important factor, the Governance, and the ability to anticipate Environmental Uncertainty. This research is expected to add the limitations of the research literature on Governance, intellectual capital, and environmental Uncertainty in private universities to improve the higher education quality and sustainable competitive advantage.

Keywords: Governance, Intellectual Capital, Environmental Uncertainty, University Quality, Sustainable Competitive Advantage.

INTRODUCTION

The Indonesian government agenda of sustainable development goals targeted to be achieved by 2030 in Indonesia's SDGs program. The SDGs program has 17 goals, in which the fourth goal of the agenda states that Indonesia ensures decent quality education for the community by providing lifelong learning opportunities (No one left behind). Target by 2030, ensure equal access for all women and men to affordable and quality technical, vocational and higher education, including university. In this regard, the Indonesian government has allocated a budget for education in the 2020 State Budget of 505.8 trillion. Education expenditure allocation plays an important role in improving the quality of higher education to produce quality human resources. OECD states that higher education governance is very important to achieve university quality; in the era of globalization, higher education is faced with very fast changes such as the increasing number of students, the increasing number of new universities offering distance education services, e-learning lecture models, differences in student background both socio-economic, ethnic and previous educational background, the growing internationalization of

higher education, increasing research and innovation that creates new knowledge through scientific and technological research activities.

The assessment of the quality of higher education in Indonesia through accreditation and clustering as an indicator of the quality of higher education is still low. Only 39 private universities are accredited A, and only 14 occupy cluster 2 of 552 private universities from educational statistics data. In addition, the QS WUR 2020 data is only eight public universities and one private university that is included in the ranking. Explains that quality education is highly dependent on quality lecturers, good learning processes, and supported by a conducive environment. The low quality of universities in Indonesia is caused by the lack of several doctors, reflecting the lack of competence of lecturers and quality research. In 2019 the Indonesian government set a policy and targeted the number of doctors in Indonesia to be at least 30.62% by 2025 by offering doctoral scholarships both at home and abroad. (Olayiwola et al., 2016) explains that intellectual capital through HR proxies affects the quality of higher education, supporting strong funding aspects and the availability of infrastructure in teaching technology is developmentally appropriate.

In addition, environmental changes also affect the quality of higher education. Due to globalization, environmental changes impact changes in information and technology, demography, distance lectures, competition between universities, and the quality of education services that continue to cause environmental Uncertainty to become increasingly complex with increasing competition in the education service market (Beketova, 2016). Changes in the technological environment and innovation, and economic globalization require higher education to be of high Quality (Altbach & Hazelkorn, 2018). According to Stewart & Capital (1997), the existence of an established university cannot be separated from the threat of volatility, Uncertainty, complexity, and ambiguity. The main threats faced by universities related to VUCA are technology, economics, and political change. Likewise, Nir & Kafle (2013), the political stability of a country greatly affects the quality of education and is proven to measure the level of business sustainability of the education sector. Based on the theory and phenomenon above, whether university quality is influenced by Governance, intellectual capital, and environmental Uncertainty impacts sustainable competitive advantage.

LITERATURE REVIEW

Gimenez-Espin et al. (2013) stated that Total Quality Management is an integrated effort of an organization to achieve and maintain high product and service quality by carrying out maintenance, system improvement, and continuous error prevention processes at all levels and functions within the organization to meet needs. That exceeds customer expectations. Hackman & Wageman (1995) suggest that quality management is built on fundamental quality assumptions in human resource quality, organizational quality, and management. The implementation of TQM in universities is reflected in quality management such as modern learning processes, the technology used, the completeness of facilities and infrastructure, and others. Higher education governance has faced very dramatic changes for more than a decade, including due to expansion of the education system, diversification of education service provision, institutional policy autonomy system, more flexible learning delivery methods, different student backgrounds. The complexity of Governance in organizations requires the integration of leadership and resources to create competitiveness. Intellectual capital is all the

knowledge, information, intellectual property, experience possessed by the organization (Stewart & Capital, 1997) and represents an important element in the management and assessment of the organization's internal and external processes. Intellectual Capital is the company's ability to create knowledge by innovating, implementing new initiatives, and establishing positive relationships with stakeholders.

Environmental Uncertainty is the inability of an organization to accurately predict the impact of various aspects of the company's external environment. Inability to understand trends, potential interrelated events. This inability is due to management not having sufficient information about the organizational environment to predict the future. Uncertainty The environment in the context of economic Uncertainty is Uncertainty due to market flexibility. This environmental Uncertainty encourages the current education system to develop into a pseudo-education that puts forward the market need for special labor so that education becomes a commodity object that is traded according to market demand. Environmental Uncertainty in this study is measured using three dimensions: Political Uncertainty, Technological Uncertainty, and Competition and Market Uncertainty. Murias et al. (2008) define quality in higher education as consisting of three views. In terms of functionality, quality is defined as the alignment between the results and the general goals of higher education. In contrast, in terms of effectiveness, quality is defined as the alignment between the results and certain objectives of an activity. In contrast, from efficiency, quality is the alignment between the results and the inputs and processes. The quality is how a product offered to customers has an advantage compared to its competitors or provides good service to its customers. Harvey & Williams (2010) study the systematic quality of a university, including the development of management plans, continuous quality improvement, handing over responsibility for quality improvement to faculty, and improving documentation of procedures and results. Higher education quality is measured using six dimensions: Lecture Process, Student Learning Outcomes, Meeting student needs, Foreign Students, Research, and Supporting Services.

Competitive advantage is a condition of an organization occupying a special position where competitors cannot imitate its successful strategy, and the organization can obtain sustainable benefits (Chang, 2011). Barney (1991) defines a company's competitive advantage as a condition in which competitors cannot replicate the company's competitive strategy. Competitive advantage as a quality possessed by a company in a particular product or market, and this quality can bring the company to a better position in its market competition. Competitive advantage is the company's innovative ideas and creative product development processes. Dao (2015) conducted a study on the challenges of governance reform and the quality of higher education in Vietnam and concluded that Governance is directly proportional to higher education quality. The characteristic of Good Governance at the university is the existence of a faculty senate. Governance in the form of reliable and valid Transparency of information presented to all stakeholders affects the quality of the university Mariani et al. (2017). Good university governance has a positive and significant influence on the quality of universities from the standpoint of properly presented financial statements.

H₁ University Governance is positively affected on University Quality

The effect of leadership ability on the quality of education in higher education institutions in Zimbabwe. The results show that institutional leaders who become intellectual role models

and create a learning culture influence the quality of universities to achieve high-quality standards. Gan & Saleh (2008) concluded a positive relationship between intellectual capital and organizational quality. Furthermore, Mondal & Ghosh (2012) found inconclusive results between the two variables. Barbosa et al. (2016) concluded that there is an influence of intellectual capital on the performance of universities where human capital is very important as a source of knowledge. Cricelli et al. (2018) found the results of different aspects of IC related to performance, further stating that the mobility of students and graduates of international programs is important in improving university performance.

H₂ Intellectual Capital is positively affected on University Quality

Nir & Kafle (2013) concluded that political stability affects education, in 47 countries where 26 politically stable countries and 21 politically unstable countries in the period 1998-2008, the results show that political stability has a significant effect on the Quality of education, education policy in dealing with Uncertainty is carried out by making strategic decisions accompanied by analysis and evaluation of the organization's environment and sources that cause environmental changes by using relevant information to anticipate Uncertainty. Beketova (2016) concluded that higher education is an important value in the country's development, for it is necessary to create a quality learning process with a good education system that can assess the impact of the internal and external environment. To deal with global changes, universities must build new models in the learning process, create new quality education management systems, and form new university models that have open information. Maley & Kramer (2014), in their research, conclude that global Uncertainty affects organizational performance, where management performance that has value and cannot be imitated contributes to globalization.

H₃ Environmental Uncertainty is negatively affected on the University Quality

Mok (2010) found that Singapore was able to increase the competitiveness of its higher education institutions by carrying out governance reforms. The governance reforms include structuring the organization's strategic structure, knowledge management, and creativity centers. Bratianu & Pinzaru (2015) university governance can increase its competitive ability in budgeting flexibility and autonomy in decision making. Yonezawa & Shimmi (2016) concluded that improving Governance at Japanese universities through the role of the government has proven to increase their competitive level.

H₄ University Governance is positively affected on Sustainable Competitive Advantage

Research on the influence of intellectual capital on sustainable competitive advantage dominantly concludes that the two variables positively correlate. Córcoles et al. (2011) concludes that knowledge is the main output and input of educational institutions. The university produces knowledge, either through research or teaching, from the university's most valuable resources, namely lecturers, researchers, and administrative staff, which greatly influences the university's sustainability in the future. Chahal & Bakshi (2015) found that intellectual capital directly impacts competitive advantage, and innovation can mediate the relationship between intellectual capital and competitive advantage.

H₅ Intellectual Capital is positively affected on Sustainable Competitive Advantage

Research on the influence of environmental uncertainty variables with sustainable competitive advantage dominantly concludes that these two variables negatively affect. Daryae et al. (2011) argue that in order to maintain and increase competitiveness, companies must exploit opportunities and neutralize various uncertainties and threats in their competitive environment. (Torres & Schugurensky, 2002) concluded that changes in the political system caused universities to be forced to be more independent and increase their advantages, especially in terms of efficiency, management, and giving more influence to society. The main threats identified to the higher education sector include the uncertain mix of technology, economics, and political trends.

H₆ Environmental Uncertainty is negatively affected on Sustainable Competitive Advantage

The quality of higher education as a proxy for the relationship between lecturers and students, reputation, university ranking, and maintaining good relations with outsiders affects sustainable competitive advantage. The quality of universities (lecturers and staff who have knowledge and competence) that provide satisfaction to students and users affects the competitiveness of universities as measured by the realization of their graduates being accepted in the job market. Reed et al. (2000), using the theory of market-based competitive advantage, resources, and systems, proves that a quality organization can generate cost-based and differentiation advantages. (El Shenawy et al., 2007), concluded that management quality affects competitive advantage to support building TQM and its components such as top management commitment, work teams, culture, training and education, and process efficiency.

H₇ University Quality is positively affected on Sustainable Competitive Advantage

METHODOLOGY

This research applied a quantitative method through a survey to 136 (out of 227) B-accredited private universities in Indonesia. This research utilized questionnaires as the survey instrument. This study applied the Simple Random Sampling Technique for the data collection method. All of the data were collected online and virtually at different universities. This study developed an interval scale between 1 (poor) to 5 (excellent) for every question. This study's descriptive statistics provided the details of average value, standard deviation, and demographic data. This study also applied verificative analysis deriving the correlation between research variables to attest to the hypotheses. Verificative analysis, also known as inferential analysis, utilized the modeling method, namely, Structural Equation Modeling (SEM). This study developed the data analysis with a statistical software of Lisrel 8.8.

RESULT AND DISCUSSION

Testing the measurement model in this study uses confirmatory factor analysis (CFA). The aim is to test the validity and reliability of the instrument for each variable. The Table 1 below shows that all variables and dimensions meet the criteria of good reliability and validity. The results of the goodness of fit statistics test from Table 1 conclude that the value of NFI,

NNFI, CFI, IFI, RFI, GFI, AGFI 0.90 and p-value=1.0000 0.05, RMSEA value=0.0000 0.08, the value of SRMR = 0.000 0.05 means that the fit of the model is declared very good (good fit). Thus, it can be concluded that the model in this study as a whole has a very good level of model fit.

In this study, because the hypothesis test used is a one-way hypothesis test, for a significance level of 95% and an error rate of 5%, the critical value or t-table is 1.64. The result showing the results of testing the direct influence hypothesis of the seven research hypotheses, it is proven that six hypotheses are accepted (the t-Value is greater than the t-table value 1.64), and 1 hypothesis is rejected (the t-value is 1.59 smaller than the t-value). t-table value 1.64). All exogenous variables influence the quality of the university, where the IC variable shows a very large influence, namely 78%, Governance has an effect on 41%, and Uncertainty has an effect on 28%. But simultaneously, the value of R Square shows a value of 84%. While the effect of exogenous variables on sustainable competitive advantage shows that Governance has an effect of 60%, IC has an effect of 50%, and environmental Uncertainty does not affect it because it is very small, only 13% or it is said to have no significant effect. Simultaneously the value of R Square shows a value of 83%. Furthermore, the quality of universities has a very large influence of 73% on sustainable competitive advantage (Table 2).

| No | Criteria | Nilai Cut-of Value | Model Estimation Results | Description |
|----|------------|---------------------|--------------------------|-------------|
| 1 | Chi-square | p-value \geq 0.05 | 1.0000 | Very Good |
| 2 | RMSEA | RMSEA \leq 0.08 | 0.0000 | Very Good |
| 3 | NFI | NFI \geq 0.90 | 1.00 | Very Good |
| 4 | NNFI | NNFI \geq 0.90 | 1.00 | Very Good |
| 5 | CFI | CFI \geq 0.90 | 1.00 | Very Good |
| 6 | IFI | IFI \geq 0.90 | 1.00 | Very Good |
| 7 | RFI | RFI \geq 0.90 | 1.00 | Very Good |
| 8 | SRMR | SRMR \leq 0.05 | 0.013 | Very Good |
| 9 | GFI | GFI \geq 0.90 | 0.99 | Good |
| 10 | AGFI | AGFI \geq 0.90 | 0.98 | Good |

Source: Data Processed 2021

| Hypotheses | T-count | T-table (critical value) | Path Coefficient | | |
|--------------|---------|-----------------------------|------------------|----------|-------------|
| | | | Path Coefficient | R Square | Description |
| Hypotheses 1 | 2.67 | 1.64 | 0.41 | 0.84 | Accepted |
| Hypotheses 2 | 5.53 | 1.64 | 0.78 | | Accepted |
| Hypotheses 3 | 3.29 | 1.64 | 0.28 | | Accepted |
| Hypotheses 4 | 3.41 | 1.64 | 0.60 | 0.83 | Accepted |
| Hypotheses 5 | 2.02 | 1.64 | 0.50 | | Accepted |
| Hypotheses 6 | 1.59 | 1.64 | 0.13 | | Rejected |
| Hypotheses 7 | 5.18 | 1.64 | 0.73 | | Accepted |

Source: Data Processed 2021

The Effect of Governance on University Quality

The hypothesis test results indicate that higher education governance significantly affects the quality of higher education. University governance also refers to Permendikbud No. 3 of 2020 concerning National Higher Education Standards. The survey results show that most respondents think that the university has complied with regulations and implemented government to carry out academic and non-academic activities. The existing management structure has been running effectively, the function of SPMI has been effective. Accountability and Transparency of periodic reporting to the government (Dikti) applications provided by Dikti. However, student participation in national/international competitions, participation in lecturer research has not been widely carried out, presumably due to limited funding factors.

Meanwhile, participation from external parties (government, industry, other universities) has not been well documented, and the cooperation has not been implemented effectively. Using the Total Quality Management theory developed can be explained that good Governance improves organizational quality by building quality human resources, organizational quality, and management quality. The findings in this study support (Nadler et al., 2019; Dao, 2015) that good university governance will improve the quality of higher education. However, this study is not in line with concluded that there was no significant impact of Governance on the quality of organizational performance; this is presumably because Governance did not work well and effectively.

The Effect of Intellectual Capital on University Quality

The hypothesis test results indicate that intellectual capital has a significant influence on the Quality of Higher Education. The intellectual capital used by the university consists of human capital, structural capital, and relational capital. Law of the Republic of Indonesia No. 14 of 2005 states that Lecturers have a strategic role in facing the challenges and demands of changing life both locally, nationally, and globally, and to ensure the improvement of the quality of education, it is necessary to empower lecturers through lecturer development programs such as further doctoral studies and improvement of lecturer JFA, facilitating lecturers be a resource person, guest lecturer, and others. The university has strategies, policies, standards and procedures, data, organizational culture, information technology systems (ICT), innovations, and others, which support the activities of lecturers, students, education staff, and other interested parties. This study is in line with the results of the study of (Barbosa et al., 2016; Gan & Saleh 2008), which explain that there is an influence of intellectual capital on the performance of universities, where human capital is a very important factor in improving the quality of education.

The Effect of Environmental Uncertainty on University Quality

The hypothesis test results indicate that environmental Uncertainty has a significant effect on the Quality of Higher Education. The significant influence of environmental Uncertainty on Quality means that the higher the environmental Uncertainty and the university is difficult to follow changes that occur in the internal and external environment, the quality will decrease. The reality obtained from respondents' answers states that, on average, private

university B can follow changes related to changes in regulations and policies because they have been given by the government to be implemented. Uncertainty due to changes in technology requires private universities to follow this change because it is universal with limited capabilities both in terms of infrastructure and funding, which is difficult for private universities located in remote areas. In addition, environmental uncertainty due to competition between universities has not been able to face a competition between large universities that offer digital innovation-based services, new study programs that are according to market demand and are digital-based and produce competitive graduates. This study is in line with Nir & Kafle (2013), who concluded that environmental Uncertainty is related to political stability on the quality of higher education.

Effect of Governance on Sustainable Competitive Advantage

The results of hypothesis testing indicate that higher education management has a significant influence on sustainable competitive advantage. Implemented university governance based on laws, regulations, good management structure, organizational culture, strategy, and collaboration with stakeholders will create university competitiveness. The realization from respondents' answers that university B's Governance is carried out following SN Dikti. However, to achieve competitive advantages such as holding foreign language lectures, digital-based study programs have not been achieved because the ability of University B is limited, especially from its funding. The findings of this study are in line with the results of studies (Yonezawa & Shimmi, 2016), which explain that to increase the competitiveness of universities, it is necessary to reform Governance. Structuring strategic organizational structures, knowledge management, and creativity centers.

The Effect of Intellectual Capital on Sustainable Competitive Advantage

The results of hypothesis testing indicate that intellectual capital has a significant effect on sustainable competitive advantage. The increasing competition between universities demands that the intellectual capital owned by the university must be of high quality and superior. Human capital is manifested by doctors, professors, researchers who produce Scopus journal publications and patents. The university's structural capital in policies, strategies, procedures, data, technology, organizational culture, innovation provides satisfaction to stakeholders. Likewise, relational capital is manifested in university cooperation with external parties such as the government, industry, or other universities. The realization from respondents' answers stated that private university B still lacks the number of doctors and professors, foreign language classes are the university's competitive advantage. This research can be explained by TQM theory that in order to be competitive, universities need to improve the quality of human resources continuously according to market needs and produce competitive graduates. The research results of Secundo et al. (2017) concluded that Quality human resources would improve the university's competitive ability with its competitors both regionally and globally. The results of this study can also confirm the research findings of (Córcoles et al., 2011; Chahal & Bakshi 2015) that intellectual capital has a direct and positive impact on competitive advantage and the sustainability of universities in the future.

Effect of Environmental Uncertainty on Sustainable Competitive Advantage

The results of hypothesis testing indicate that environmental Uncertainty does not affect sustainable competitive advantage. Environmental Uncertainty increases or decreases because changes in politics, technology, and competition do not have an impact on competitive advantage, political Uncertainty which is characterized by changes in government regulations and policies, is given and forced to be obeyed, while technological change is universal throughout the world and must be adapted, a further competition that faced by university B with its competitors is not easy to do so that these things do not have an impact on the university's competitive advantage. From the respondents' answers, it is concluded that university B is more concerned with the number of students who register to maintain funding sustainability. While still focusing on the mma because of limited ability and not forcing universities to make changes by making new policies in good condition. This research can be explained by TQM theory that the way to maximize competitiveness and competitiveness is to pay attention to environmental Uncertainty that occurs and focus on graduates who are competitive in the job market. This study supports (Daryae et al., 2011), to maintain and improve its competitiveness, companies must exploit opportunities and neutralize various uncertainties and threats in their competitive environment.

The Effect of University Quality on Sustainable Competitive Advantage

The hypothesis test results indicate that the quality of higher education has a significant effect on sustainable competitive advantage. Assessment of university quality through the achievement of superior accreditation, carried out by fulfilling all indicators, will improve quality and impact its competitive advantage. However, in reality, there are still many private universities B that have not achieved maximum quality. From the results of respondents' answers, there are still shortcomings to get to excellence, namely international accreditation, the number of international students, the number of professors, reputable journals and their citations, patents, and cooperation with foreign parties are still low, even though these factors are very important. This research can be explained by TQM theory that in the management of higher education (Universities), there are four main focuses, namely labor market research, process design, operational processes, and a focus on competitive and quality graduates. The findings of this study are in line with the results of the study (De Silva & Chitraranjan, 2018), the quality of universities as proxied by reputation, university rankings, and maintaining good relations with external parties greatly affect sustainable competitive advantage the quality of universities provide satisfaction to its users. And increase competitiveness with its competitors.

CONCLUSION

Based on the results of the research and discussion above, it can be concluded that Governance, intellectual capital affect the quality and sustainable competitive advantage, while the environmental uncertainty variable affects the quality but does not affect the sustainable competitive advantage. Of all the exogenous variables that influence, intellectual capital is the most dominant influencing quality, especially the competence of lecturers. Meanwhile, Governance greatly affects competitive advantage. Although private universities have

implemented good Governance, they still need to improve student achievement and cooperation with outside parties, which are quality assessment indicators. We conducted this research during the pandemic. It has been very challenging for most of the respondents. It favorably affected their psychological condition to provide answers to our questions. Although we anticipated with well-structured questions, there was still inevitable bias. Also, there were still limitations to apply the methods. The idea of cross-sectional surveys still has limitations in the time frame of the data collection.

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