

Knowledge-Based Variables in the Sustainability of Private Universities in East Java

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ABSTRACT

Organisational sustainability is closely linked to the organisation's brand image in the eyes of stakeholders and the wider community. Each organisation can build a positive image through effective communication or innovative marketing models, one of which is social media. Social media is the most appropriate means of communication and marketing for universities to recruit prospective students. This study analysed the role of knowledge-based variables in building higher education sustainability, as universities are knowledge institutions and always maintain or develop knowledge through research activities. Knowledge-based variables include Intellectual Capital, University Management Intelligence, and Social Media. Based on this, this research aimed to find out the significance of knowledge-based variables in the sustainability of private universities in East Java. This research focused on human behaviour by using a survey with a quantitative approach and data collected through a questionnaire. This study concludes that Social Media Marketing does not reduce the impact of intellectual capital on private universities' sustainability in East Java. Social Media Marketing does not reduce the impact of the University Managerial Intelligence on the sustainability of private universities in East Java.

Keywords: *Knowledge-Based Variables; Sustainability; Private Universities; East Java.*

I. INTRODUCTION

Managing the organisation's internal activities is one of the tasks of modern executives. The aim of this management is to accelerate the achievement of organisational objectives and to create an organisational life cycle for a more extended period. An analytical approach called Recourse Based Theory (RBT) emphasises strategic resources' role in achieving a level of competitive advantage (Acar & Polin, 2015). Company resources are heterogeneous, not homogenous. Productive services that come from company resources will give each company a unique character (Kor & Mahoney, 2004). Organizational culture has a positive effect on performance (Indrasari, 2017);(Indrasari et al., 2018);(Indrasari et al., 2019). The academic climate also affects the competence of lecturers (Indrasari et al., 2015). Resource-Based Theory (RBT) explains that companies can gain a competitive advantage by owning, controlling and using strategic assets, including tangible assets and

intangible assets (Wernerfelt, 1984). Acedo, Barroso, & Galan (2006) recognises that RBT and its derivatives have become the dominant paradigm or, at least, have become corporate theory from a strategic point of view.

Based on the RBT concept, if the company can manage resources effectively, it will create a better competitive advantage than its competitors. It, therefore, calls for a series of strategic decisions and actions aimed at developing sustainable competitiveness. David & David (2016) explained that all management activities aimed at achieving and maintaining competitiveness are categorised as strategic decisions. There are two strategies for maintaining these strategic decisions: 1) continuously adapting to external changes and increasing internal competencies; 2) effectively formulating, implementing, and evaluating predetermined strategies. Organisations that are capable of formulating and evaluating strategic

decisions have a chance to outperform the industry over their competitors.

Katrinli, Gunay, Celikdemir, & Alpbaz (2017) explained that companies are more willing to develop sustainability strategies in profit-driven companies than in non-profit companies such as universities. Lozano (2011) dan Ceulemans, Lozano, & Alonso-Almeida (2015) reports that information on sustainability strategies in higher education is still very low in the world and can even be said to be in the early stages of learning. Although they understand the importance of sustainability, most universities do not have a specific strategy for building sustainability for their organisations. Several factors are hindering the development of a sustainability concept for higher education, including the lack of a process for involving external stakeholders, the lack of materials or criteria that can be included in the formulation, and the lack of an institution that has the authority to formulate or evaluate the concept of sustainability. Most universities are concerned only with the importance of sustainability through a statement of the organisation's vision in different versions, such as an educational institution capable of producing a professional graduate in creating a healthy society and understanding the concept of sustainability (Katrinli et al., 2017).

The weaknesses of higher education in formulating the concept of sustainability are not only related to the institution that is empowered to define sustainability criteria, evaluate and report on sustainability but also to the depth of the concept and the content of what is formulated or reported (Fonseca et al., 2011; Lopatta & Jaeschke, 2014). This is partly due to the lack of research that discusses sustainability in higher education (Ceulemans et al., 2015), and the lack of a generally accepted theory for developing the concept of sustainability in higher education. Some researchers like Sanusi & Khelghat-Doost (2008) argue that higher education sustainability can be achieved by reducing poverty (Dmochowski, Garofalo,

Fisher, Greene, & Gambogi (2016) states that higher education sustainability can be done through curriculum development. that the sustainability of higher education can be done through curriculum development. In addition, learning motivation is one that affects learning achievement (Indrasari & Syamsudin, 2017). Meanwhile, Jose & Chacko (2017) believes that higher education's sustainability can be measured by applying the Triple Bottom Line (TBL) concept, namely by aligning the achievement of organisational objectives with economic, social and environmental interests.

It is very reasonable to measure the sustainability of higher education by applying the TBL concept. The TBL concept proposed by Elkington in 1997 as a means of sustainable development has been recognised and well-known. Not only in business circles, but this concept is also applied in other fields, such as consulting agencies, professional accounting institutions and NGOs (Rambaud & Richard, 2015). The TBL philosophy concludes logically the role of three types of capital in determining organisational performance, namely economic capital, natural capital, and social capital. Efforts to build sustainability will help organisations equalise the importance of the three types of capital and integrate them into every aspect of organisational life. To formulate its sustainability concept, higher education can learn from business organisations that have implemented the TBL concept in their sustainability reporting (Lozano, 2011).

The use of the TBL concept to measure higher education sustainability cannot be separated from the existence of higher education as a non-profit organisation in competition for higher education services. Every university needs to have a level of competitive advantage because theoretical and practical studies show that organisations will win an intense competition with a sustainable level of competitive advantage, not a temporary competitive advantage (O'Shannassy, 2008).

Sigalas (2015) argues that the most effective achievement of competitive advantage is the use of superior skills or organisational capabilities. In addition, superior competence also provides an opportunity for an organisation to generate and act based on a knowledge of competitors' actions and reactions that will help build a competitive strategy.

The following is a table of developments in the number of private universities in East Java published in the Annual Report of the Ministry of Research, Technology and Higher Education (Kemenristek Dikti) for 2011 to 2017.

Table 1. Development of the Number of Universities in East Java for the Academic Years 2011/2012 to 2018/2019

Academic year	College Status	
	State	Private
2011/2012	11	330
2012/2013	13	326
2013/2014	15	363
2014/2015	17	326
2015/2016	17	329
2016/2017	17	328
2017/2018	17	328
2018/2019	17	324

Source: Kemenristek Dikti Annual Report

Table 1 shows that the number of private universities in East Java has been declining every year. In the 2011/2012 academic year, Kemenristek Dikti reported the number of private universities run by Higher Education Service Institutions (LLDIKTI) Region 7 East Java was as many as 330 units, but there was a continuous reduction to 324 units in the 2018/2019 academic year. This is not the case with State Universities, whose numbers are always constant or increasing. The fluctuation in the number of private universities from year to year shows that the level of sustainability of private universities in the performance of their functions as higher education institutions is still questionable. Intellectual fraud practices are

often the cause of private universities failing to achieve organisational sustainability, for example:

1. Having a total lecturer: student ratio that exceeds the provisions of the Permenristek Dikti, as 31 private universities in East Java have done for the period 2014 to 2018 (<https://www.malangtimes.com>).

Excessive numbers of students result in the inability of lecturers to provide knowledge to students in such a way that the quality of students or graduates is not good enough and public trust is declining. Problematic private universities include Nusantara University PGRI Kediri, Ronggolawe University Tuban, IKIP PGRI Jember and IKIP Budi Utomo Malang.

2. Problem of mismanagement at the private universities Organising Body, as implemented by Tri Tunggal University in 2000 (<https://penarakyatnews.id>). The Tri Tunggal University problem began with the emergence of two Tri Tunggal University Trustees Foundation administrators who were both looking for students and lecturers at two different Tri Tunggal University campuses, namely the Jl campus. Simpang Dukuh 11, Jl. Kalijudan 34 of Surabaya. Each campus has its management, different rectors, and diplomas. As a result, the two diplomas were declared fake by the state, and the Higher Education Campus closed in early May 2016 (<http://www.beritajatim.com>).

All the challenges faced by private universities impact the inability of private universities to manage strategic resources for the achievement of organisational objectives. Some of the sanctions imposed by ministries that must be borne by problematic universities include sanctions for guidance, not receiving operational funding assistance, not receiving ministries in any field until the problem has been resolved, not being able to accept new students, and the highest sanction is revoking higher education operating

permits. When linked to the RBT theory, the sanctions that problematic private universities have to affect the organisation's sustainability because RBT emphasises the importance of management's ability to identify and use strategic assets consisting of tangible assets and intangible assets to build sustainable business growth.

To identify strategic assets of higher education, this study assumes that all knowledge-based assets are intangible strategic assets (intangible assets) that will provide added value to the organisation to improve performance. The role of higher education as a knowledge-based organisation in which different kinds of knowledge are developed (Sizer, 2001) as well as a producer of reliable human resources in the field of science (Adams, 2013) this is the reason for the provision of "knowledge-based assets" as a strategic asset for higher education. Bontis, Dragonetti, Jacobsen, & Ross (1999) reviews four models for measuring knowledge as intangible assets, namely 1) human resource accounting; 2) economic value added; 3) a balanced scorecard, and 4) intellectual capital. This study chooses a single measurement model, namely Intellectual Capital (IC), because IC includes a value creation factor that cannot be shown on traditional balance sheets, but is very important for long-term performance (Andreou & Bontis, 2007). The model for measuring knowledge through intellectual capital is very appropriate to be used in this study because universities, as a research site, do not publish balance sheets or financial reports as a measure of organisational performance.

The application of Intellectual Capital to sustainable practices is a management effort aimed at gathering empirical evidence to deepen the potential role of intellectual capital in the process of value creation (Dumay & Guthrie, 2012). The close relationship between intellectual capital and sustainability can be analysed continuously through its role in achieving organisational performance (Coleman, 2007), Fatoki

(2011), Todericiu & Şerban (2015), Nawaz & Haniffa (2017). Researchers have argued that intellectual capital impacts organisational performance in both the present and the future. The importance of intellectual capital in building sustainability has been shown by Pedrini (2007). The practice of organisational responsibility, which is geared towards increasing intangible resources, has proven to be capable of producing better organisational performance in the long term. Similar findings have also been reported by Dutot, Galvez, & Versailles (2016) the relationship between Intellectual Capital and sustainability actions is demonstrated by enhancing reputation and corporate image and fostering technological innovation. Flexibility, speed, innovation, and integration call for human resources full of creativity, while creativity itself can emerge from human resources that have advantages in science (Marr et al., 2003).

Many experts argue that intellectual capital's contribution to achieving the organisation's strategic objectives can only be achieved if organisational managers can prioritise the scarce resources they have (Bornemann & Wiedenhofer, 2014). In practice, managers do not practice intellectual capital as much as academics preach (Dumay, 2009). Ultimately, this condition raises the need to understand what an organisation can do to maximise the relationship between intellectual capital and sustainability (Massaro et al., 2018). Leaders with managerial intelligence are needed to solve organisational problems that are innovatively science-based and apply knowledge to build and maintain competitive advantage through management activities called Knowledge Management (Sternberg, 1997; Tung, 2018; Wiig, 1997).

Leaders who have managerial intelligence are needed to solve organisational problems that are innovatively science-based and apply knowledge to build and maintain competitive advantage through management activities called Knowledge Management

(Zhou & Fink, 2003). Knowledge management leads to harmonising the relationship between units and creates an organisational climate that is conducive to the achievement of organisational objectives to have an impact on organisational sustainability (Tung, 2018). Empirical studies show that the organisation in which knowledge is created, recognised, stored, used and transferred to support strategic development will continue to grow and develop (Earl, 2001; Teodorescu, 2006). The success of leadership in identifying, distributing and applying knowledge in all aspects of organisational life is a measure of Knowledge Management's success (Wiig, 1997).

According to Cheong & Tsui (2011), Knowledge Management is an effort to combine the different experiences, intuitions, ideas, skills, motivations and interpretations of individuals involved in organisations, so the key to success lies in the Management of Personal Knowledge. There are two main aspects to Personal Knowledge Management, namely: making knowledge a solution to organisational problems; and, secondly, establishing a direct relationship between intellectual assets and organisational performance (Barclay & Murray, 2000). Some Personal Knowledge Management performance according to (Zhou & Fink, 2003) among others: (1) Monitor and facilitate knowledge-related activities; (2) build and update knowledge assets; and (3) use knowledge assets effectively.

At present, the higher education sector has seen a paradigm shift in the higher education system from the classic model to the modern technology-based model (Lyapina et al., 2019). Higher education leaders should understand these needs and apply information technology to all aspects of their leadership. In this context, information technology is used to perform two management functions: the performance function and the supervisory function (Indrajit, 2011). The performance function relates to the leadership strategy for

achieving effective and efficient performance targets, while the supervisory function concerns procedures for the rapid and accurate assessment of organisational performance. Therefore, it is necessary to develop a technology application to make it easier for lecturers and students to use and distribute global knowledge.

Organisational sustainability is closely linked to the organisation's brand image in the eyes of stakeholders and the wider community (App & Büttgen, 2016). The organisational image represents all stakeholders' perceptions of organisational quality and often triggers word of mouth (WOM) communication (Stojanovic et al., 2018). Each organisation can build a positive image through effective communication or innovative marketing models according to the wishes of the stakeholders (Akonkwa, 2009). Given that students are the main stakeholders in higher education, while students are part of the millennial generation, the most appropriate communication model is communication that can meet students' needs as part of the millennial generation (Assimakopoulos et al., 2017).

The millennial generation is a generation that is always connected to the Internet, has a deep involvement in digital technology, and uses this interactive technology to gather information or entertain and decide things online (Moore, 2012). Millennials prefer information transmitted via social media such as YouTube, Instagram or Facebook to information transmitted conventionally in the form of printed media (Bondarouk et al., 2013).

Southeast Asia's social media users have been fast shifting on social media platforms (Daniel Susilo & Putranto, 2018); (D Susilo et al., 2019). Social media is the most suitable communication and marketing tool for universities to recruit prospective students (Khan, 2013). Younger generations are extremely reliant on social media and split into fictitious communities (Yunus et al., 2019). This theory explains

that consumer sympathy for the organisation will continue to grow if they can inform the public about the organisation's services. Higher education leaders need to understand how social media can be used effectively in organisations (Merrill, 2011) and use social media presence to communicate university policies to students (Hamid et al., 2017). Social media is a valuable tool for recruiting prospective students and analysing student potential through communication (Vrontis et al., 2018). Branding created through social media is very honest so that it can accelerate the achievement of organisational objectives. That is why this study makes Social Media Marketing a variable that can moderate Intellectual Capital and University Managerial Intelligence's impact on organisational sustainability.

As an institution that produces quality labour, higher education is expected to be at the forefront of meeting the needs of quality human resources. Higher education requires strategic planning for organisational sustainability because higher education's sustainability is closely linked to the concept of sustainable development (Adams, 2013). Under the concept of sustainability, tertiary institutions can attract many national and international students to generate large incomes for themselves and play a key role in sustainable development (Jose & Chacko, 2017).

This study analyses the role of knowledge-based variables in building higher education sustainability because higher education institutions are knowledge institutions and always maintain or develop knowledge through research activities. Knowledge-based variables include Intellectual Capital, University Managerial Intelligence, and Social Media. Based on this, this study's problem is how knowledge-based variables in the sustainability of private universities in East Java?

II. METHODOLOGY

This research focused on human behaviour through the research method of

the survey. The approach used was a quantitative approach (positivism) where the data obtained is a number (score or value) which is then analysed using the statistical techniques.

The type of data is the primary data collected through a questionnaire to explain the research object based on the respondent's perception, namely the Chancellor or university leadership at the Chancellor level in all private universities in East Java.

The distribution of questionnaires to the respondents was carried out in person, by post, by google form or by e-mail in accordance with the agreement between the researcher and the respondent. In completing the questionnaire, the Chancellor can present the task to other officials who are considered capable of understanding the concept of sustainability of the higher education that he leads. Responses to the questionnaire were tabulated using the Likert scale, which interacted in the range 1 to 5 and explained:

1. If the respondent's perception is Strongly Disagree / Very Rare / Strongly Not Considered.
2. If the respondent's perception is Disagree / Rare / Not Considered.
3. If the respondent's perception is Doubtful.
4. If the respondent's perception is Agree / Often / Considered.
5. If the respondent's perception is Strongly Agree / Very Often / Very Considered.

Population and Sample

The population is the whole object of research that consists of a group of people or events with specific characteristics (Sekaran, 2003). The research population was a private university in East Java that can use knowledge as a strategic asset. The private universities were the ones which have been well managed and have received recognition from the government through the National Accreditation Board for Higher Education (BAN-PT) by giving the Higher Education Accreditation (APT) rating of at

least 'C.' On the <http://www.ban-pt-universitas.co.id> page, we found that the number of private universities in East Java with an APT rating of 80 private universities up to 2019, so the population in this study were 80 private universities.

The parties acting as respondents (data sources) are the private universities' leaders in East Java, namely the 'Chancellor' for universities and academies, and the 'Chairman' for higher education. Primary data in this study were collected through the distribution of questionnaires with two characteristics: closed and open. A closed questionnaire was used to measure the perceptions of the respondents. In the meantime, an open questionnaire was used to dig more profound information on the questions in a closed questionnaire. The data obtained by means of a closed questionnaire is the sum of the scores of each respondent for all variables studied based on the Likert scale of 1 to 5:

1. Score one (1) of the first choice
2. Score two (2) of the second choice
3. Score three (3) of the third choice
4. Score 4 (4) for the fourth choice
5. Score 5 (5) for the fifth choice

III. RESULTS AND DISCUSSION

Validity test

Table 2. The validity of the items of the Intellectual Capital statement

Item No	r-indic	sign	r-var	sign	Information
Human Capital 1	0.776	0.000	0.599	0.000	Valid
Human Capital 2	0.855	0.000	0.741	0.000	Valid
Human Capital 3	0.756	0.000	0.780	0.000	Valid
Human Capital 4	0.469	0.009	0.478	0.008	Valid
Human Capital 5	0.725	0.000	0.771	0.000	Valid
Human Capital 6	0.728	0.000	0.739	0.000	Valid
Human Capital 7	0.629	0.000	0.627	0.000	Valid
Human Capital 8	0.812	0.000	0.816	0.000	Valid
Human Capital 9	0.743	0.000	0.688	0.000	Valid
Organizational Cap 10	0.752	0.000	0.727	0.000	Valid
Organizational Cap 11	0.740	0.000	0.604	0.000	Valid
Organizational Cap 12	0.736	0.000	0.631	0.000	Valid
Organizational Cap 13	0.788	0.000	0.654	0.000	Valid
Organizational Cap 14	0.827	0.000	0.722	0.000	Valid
Organizational Cap 15	0.527	0.003	0.452	0.012	Valid

This validation test is obtained by correlating each indicator score with the total variable indicator score, and the correlation results are then compared to the critical value at a significant level of 0.05. If the analysis results show a value of significance > 0.05, the items in the questionnaire do not show a value of validity so that they cannot be continued as a research tool. The validation test is carried out using the calculation of the product-moment of correlation, using the following formula:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{[n \sum X^2 - (\sum X)^2][n \sum Y^2 - (\sum Y)^2]}}$$

r_{xy} = The correlation coefficient for the independent variable and the dependent variable

n = The number of samples

X = Score each item

Y = Variable total score

The recapitulation of the validity test results of all tested variables is presented in the following tables.

Relational Capital 16	0.801	0.000	0.747	0.000	Valid
Relational Capital 17	0.852	0.000	0.802	0.000	Valid
Relational Capital 18	0.529	0.003	0.395	0.031	Valid
Relational Capital 19	0.769	0.000	0.765	0.000	Valid
Relational Capital 20	0.785	0.000	0.734	0.000	Valid

Source: Validity Test Results

It is explained in Table 2 that the correlation coefficient between the score of each item/statement with the score indicator on the Intellectual Capital variable has a

significant level of ≤ 0.05 . Thus, it can be concluded that all items are declared valid in measuring variables.

Table 3. The validity of University Managerial Intelligence statement items

Item No	r-indic	sign	r-var	sign	Information
Personal KM 1	0.720	0.000	0.697	0.000	Valid
Personal KM 2	0.755	0.000	0.775	0.000	Valid
Personal KM 3	0.806	0.000	0.814	0.000	Valid
Personal KM 4	0.853	0.000	0.831	0.000	Valid
Personal KM 5	0.819	0.000	0.764	0.000	Valid
Personal KM 6	0.782	0.000	0.751	0.000	Valid
Personal KM 7	0.772	0.000	0.680	0.000	Valid
Personal KM 8	0.622	0.000	0.539	0.002	Valid
Personal KM 9	0.705	0.000	0.692	0.000	Valid
Personal KM 10	0.675	0.000	0.681	0.000	Valid
Univ. Governance 11	0.727	0.000	0.578	0.001	Valid
Univ. Governance 12	0.790	0.000	0.686	0.000	Valid
Univ. Governance 13	0.751	0.000	0.655	0.000	Valid
Univ. Governance 14	0.854	0.000	0.692	0.000	Valid
Univ. Governance 15	0.660	0.000	0.752	0.000	Valid
IT Capabilities 16	0.892	0.000	0.802	0.000	Valid
IT Capabilities 17	0.868	0.000	0.746	0.000	Valid
IT Capabilities 18	0.880	0.000	0.787	0.000	Valid
IT Capabilities 19	0.640	0.000	0.574	0.001	Valid
IT Capabilities 20	0.811	0.000	0.799	0.000	Valid

Source: Validity Test Results

Table 3 shows that the correlation coefficient between each item/statement's score and the score indicator on the University Managerial Intelligence variable has a significant level of ≤ 0.05 . Thus, it can be concluded that all items are declared valid for the measurement variables.

The validity of the statement items measuring the Social Media Marketing variable is explained in Table 4. The coefficient of correlation between the score of each item/statement and the Social Media Marketing variable score has a value of ≤ 0.05 . Thus, it can be concluded that all items are declared valid for the measurement variables.

Table 4. The validity of items of Social Media Marketing

Item No	r-indic	sign	r-var	sign	Information
Content Creation 1	0.936	0.000	0.907	0.000	Valid

Item No	r-indic	sign	r-var	sign	Information
Content Creation 2	0.796	0.000	0.782	0.000	Valid
Content Creation 3	0.932	0.000	0.862	0.000	Valid
Content Creation 4	0.744	0.000	0.747	0.000	Valid
Content Creation 5	0.831	0.000	0.726	0.000	Valid
Content Sharing 6	0.717	0.000	0.725	0.000	Valid
Content Sharing 7	0.878	0.000	0.798	0.000	Valid
Content Sharing 8	0.802	0.000	0.772	0.000	Valid
Content Sharing 9	0.730	0.000	0.568	0.001	Valid
Content Sharing 10	0.652	0.000	0.527	0.003	Valid
Connecting 11	0.599	0.000	0.545	0.002	Valid
Connecting 12	0.578	0.001	0.595	0.001	Valid
Connecting 13	0.856	0.000	0.735	0.000	Valid
Connecting 14	0.815	0.000	0.745	0.000	Valid
Connecting 15	0.878	0.000	0.725	0.000	Valid
Community Building 16	0.855	0.000	0.731	0.000	Valid
Community Building 17	0.727	0.000	0.633	0.000	Valid
Community Building 18	0.809	0.000	0.816	0.000	Valid
Community Building 19	0.862	0.000	0.723	0.000	Valid
Community Building 20	0.834	0.000	0.799	0.000	Valid

Source: Validity Test Results

Reliability Test

The purpose of the Reliability Test is to determine the consistency of the measuring instruments in use, or, in other words, the measuring instrument will have consistent results if used often at different times. The reliability test is performed using the Cronbach Alpha technique, where the device can be said to be reliable (reliable) if it has a reliability coefficient or an alpha of 0.700 or more. Formulas:

$$r_{11} = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum \sigma b^2}{\sigma^2} \right)$$

Where:

$$\sigma = \frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n}$$

- r₁₁ = instrument reliability
- k = the number of questions
- σb² = the number of grain variances
- σ² = the total variance
- n = the number of samples

The recapitulation of the reliability test results for all variables is presented in the following tables.

Table 5. Reliability of Intellectual Capital items

Indicator	Number of Items	Cronbach's Alpha	Information
Human Capital	4	0.885	Reliable
Organizational Capital	4	0.824	Reliable
Relational Capital	4	0.790	Reliable

Source: Reliability Test Results

The Cronbach Alpha test results in Table 5 show that the value of the reliability coefficient on the Human Capital, Organizational Capital and Relational Capital indicators is more than 0,700.

Thus, it can be concluded that all statements in these indicators can be trusted or can be reliably used as a measure of the variable Intellectual Capital.

Table 6. Reliability of University Managerial Intelligence items

Indicator	Number of Items	Cronbach's Alpha	Information
Personal Knowledge Management	4	0.910	Reliable
University Governance Management	4	0.803	Reliable
Information Technology Capabilities	4	0.900	Reliable

Source: Reliability Test Results

It is known from the Cronbach Alpha test results presented in Table 6 that the value of the reliability coefficient on the University's Personal Knowledge Management Governance Index as well as on the Information Technology Capabilities

is more than 0,700. Thus, it can be concluded that all statements in these indicators can be trusted or can be reliably used as a measure of the University Managerial Intelligence variable.

Table 7. Reliability items of Social Media Marketing items

Indicator	Number of Items	Cronbach's Alpha	Information
Content Creation	5	0.902	Reliable
Content Sharing	5	0.802	Reliable
Connecting	5	0.810	Reliable
Community Building	5	0.872	Reliable

Source: Reliability Test Results

The Cronbach Alpha test results presented in Table 7 indicate that the value of the reliability coefficient for the Content Creation, Content Sharing, Connecting, and Community Building indicators is more than 0,700. Thus, it can be concluded that all statements contained in these indicators can be trusted or reliably used to measure the variables of Social Media Marketing.

Discussion

This study shows that Social Media Marketing (SMM) is unable to reduce the impact of Intellectual Capital (IC) on Organizational Sustainability (OS). Similar conclusions are also drawn on the role of SMM as moderating the effect of the University Managerial Intelligence (UMI)

on OS. The moderating test results on IC's effect on the OS even showed a negative and insignificant coefficient of direction. As a result, the accuracy of the SMM information appears to be questioned by the stakeholders. The public tends not merely to trust the universities' information (private universities in East Java). Similarly, the role of SMM in moderating the influence of UMI on OS. Although the directional coefficient shows a positive value, this value is not sufficiently significant to conclude that SMM can moderate the effect of UMI on OS.

The determination of SMM as a moderating variable is based on the researchers' awareness of research time in the industrial era 4.0 and the hectic pace of

SMM as a promotion medium for private universities to attract new students. Higher education (in this case, private universities) needs to inform all its strategic resources that become competitive through appropriate marketing methods that prospective students like or understand. As part of the millennial generation that is always connected to the Internet, it is appropriate for higher education leaders to understand this. Therefore, higher education management and the public/prospective students need to understand the role of social media as a communication platform that can significantly impact the acquisition of new students and the motivation of students to learn.

To measure the use of SMM in higher education management, this study provides several questionnaire statements, such as content creation, content sharing, connectivity, and communication building indicators. For instance:

- a. Adjusting the appearance of content to students and prospective students' preferences as part of the millennial generation.
- b. Choose the type of social media that has a more extensive network.
- c. Provide open space for content comments, etc.

This study shows that everything presented cannot strengthen the influence of IC or UMI on OS.

Several possibilities cause SMM not to moderate IC and UMI's impact on the organisation's sustainability as Ng has stated. There is still literature on differences in attitudes towards accepting or rejecting information between generations, and some experts argue that these differences are not meaningful. Generation X, Y, or even Z have almost the same way to digest information. Thus, the information presented through the SMM should not have differences in perception between generations, especially if it relates to the millennial generation's decision to choose campus as a place to gain knowledge.

Prospective students are still very dependent on their parents' attitude to digesting information. The study results show that the information provided by private universities in social media is likely to be viewed differently by students and their parents as the primary decision-makers in the selection of campuses.

On the other hand, the strategic steps that organisations must take to get the most out of their internet marketing activities. If an organisation does not feel that it has a positive impact on its posts, likely, the organisation does not have a specific internet marketing strategy. This opinion is consistent with states that organisations that can develop social media marketing strategies well will impact income growth, while those that do not have a good marketing strategy will not experience an increase in income.

If the opinions of these experts are related to the results of this study, it can be explained why SMM does not reduce the impact of IC and UMI on sustainability, namely:

- a. It is possible that the information presented 'only' represents students' needs or prospective students as a millennial generation without paying attention to the perceptions of parents who (maybe) do not understand the marketing of social media.
- b. Private Universities do not have a specific strategy for formulating marketing concepts for social media. What is being done by private universities can only follow the current (current) but does not have a clear idea of building sustainability.

IV. CONCLUSION

Based on the research problem in this study regarding how knowledge-based variables in the sustainability of private universities in East Java, the results show that Social Media Marketing does not moderate the influence of intellectual capital on the sustainability of private universities

in East Java. Social Media Marketing does not moderate the influence of University Managerial Intelligence on the Sustainability of Private Universities in East Java.

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