

Conference Paper

Creating A Competitive Advantage For Universities Through Knowledge-Based Strategic Assets Management

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ORCID IDSiti Istikhoroh: <https://orcid.org/0000-0003-0090-0669>**Abstract.**

This study aims to identify and analyze strategic assets for universities and explain the role of leadership in maximizing the use of these assets as a competitive advantage through knowledge management practices. As a non-profit organization, universities live in a competitive world of higher education services. Theoretical and practical studies prove that intense competition will be won by organizations that have a sustainable level of competitive advantage, not temporary competitive advantages. In order to identify strategic assets for higher education institutions, this study assumes that all knowledge-based assets are strategic assets that add value to the organization and improve organizational performance. The role of higher education as a knowledge-based organization that nurtures diverse knowledge and as a producer of reliable human resources in the scientific field establishes knowledge-based assets or intellectual capital as the strategic capital of universities. The research population are the leaders of universities in East Java, both state universities and private universities. The sample was determined based on the purposive random sampling technique, namely by selecting the leaders of universities with a rating (AIPT) of at least B or Good, totalling 113 people. The criteria are set with the assumption that the university leadership has implemented knowledge management. Data were collected by distributing questionnaires and analyzed using SEM-PLS. Research is useful both theoretically and practically. At the theoretical level, a strategy for managing intellectual capital is formulated as a strategic asset, while at the practical level it can be carried out by university leaders.

Keywords: Intellectual Capital, Knowledge Management, AIPT, Competitive Advantage

1. Introduction

Managing the internal activities of an organization is one of the responsibilities of modern leaders. This management aims to accelerate the achievement of organizational goals and create a sustainable organizational lifecycle over a longer period. An analytical approach called (Resource-Based View/RBV) was developed by Barney (1991). It discusses the strategic resources owned by the company and how the company can process and utilize its resources as a competitive advantage. The focus of this theory is

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the idea of generating unique, non-imitable and non-replaceable corporate resources, which lead to sources of competitive advantage as a means of continuous value creation. Competitive advantage is a concept that is often discussed in universities, but the concept is rarely formulated for the organization of the university itself (2).

In order to identify the strategic assets of higher education, this study assumes that all knowledge assets are strategic assets. The role of universities as knowledge-based organizations that develop various sciences (3) and produce reliable human resources in the field of science (4) is the reason for defining "knowledge-based assets" as a strategic asset. for higher education. There are four models for measuring information as an intangible asset: 1) Human Resource Accounting; 2) Economic Value Added; 3) The Balanced Scorecard; and 4) Intellectual Capital (5). Of the four kinds of measurement models, only the 4th model is suitable to be applied to universities. The characteristics of universities as non-profit organizations that do not publish financial reports are the reason why Intellectual Capital can be applied to measure strategic assets because the other three models use financial statements as an analytical tool.

The application of intellectual capital to achieve competitive advantage is a management effort aimed at gathering empirical evidence to deepen the potential role of intellectual capital in the value creation process (6). The close relationship between intellectual capital and corporate value can be analyzed in terms of the role intellectual capital plays in enabling a firm's performance to continue to gain competitive advantage (7–10). The relationship between intellectual capital and competitive advantage improves brand recognition and corporate image and supports technological innovation (11). Flexibility, speed, innovation, and integration require creative talent, but creativity comes from those with an advantage in science (12).

On the other hand, some researchers state that Intellectual Capital has no effect on firm value and therefore cannot be used as a component of competitive advantage (13). *Intellectual Capital* very difficult to apply for some reasons. First, it requires sufficient skill to overcome the gap between *Intellectual Capital* as a scientific discipline with its function in the organization. Second is because the instability of the professionalism of the workforce. Third, it is due to the high volume of the immeasurable knowledge so that it is not easy to be transferred and exploited by all members of the organization (14). This condition ultimately raises the need to understand what can actually be used by organizational managers to maximize the relationship between *Intellectual Capital* with company value(15). Leaders with managerial intelligence to apply knowledge to solve organizational problems in innovative, science-based ways and to build and maintain

competitive advantage through the management practice known as knowledge management is required (16–18).

In practice, activity *Knowledge Management* requires alignment of managerial processes because in it there is a leadership effort to encourage individuals to be able to apply their knowledge to meet the strategic needs of the organization(19). *Knowledge Management* causing harmonization of inter-unit linkages and creating a conducive organizational climate in achieving goals so that it has an impact on organizational sustainability (18). Empirical studies prove that an organization where knowledge is being created, recognized, stored, utilized, and transferred in support of strategic development will make the organization grow and develop continuously(20,21). Leadership's success in identifying, disseminating and applying knowledge in all aspects of organizational life is a measure of success. Knowledge Management as a key effort to create competitive advantage (17).

This study aims to analyze the effect of intellectual capital on competitive advantage through knowledge management. The results of the research are useful for higher education leaders to formulate the concept of competitive advantage for the organization they lead by utilizing knowledge-based strategic assets. For academics, research results are able to add insight into the material in the field of Strategic Management Science, especially on the subject of Intellectual Capital for non-profit organizations and its use in formulating the concept of competitive advantage.

2. Method

This research is a correlational study. This research examines the relationship between variables in functional relationships, using a quantitative approach and based on the philosophy of positivism. Research respondents are the highest leaders of Universities in East Java, namely the "Chancellor" for universities and institutes, "Directors" for academies, and "Chairmen" for Colleges. The data obtained is primary data on an interval scale in the form of respondents' perception scores in the questionnaire about the statement items about the measurement of all variables as presented in table 1.

The number of universities in East Java is 125, of which 113 have a Higher Institution Accreditation (AIPT) rating of at least B or Good (<https://banpt.or.id>). Universities with an AIPT rating of at least B or Good are designated as research samples and their leaders are research respondents. The hypotheses developed are:

H1: Intellectual Capital affects Competitive Advantage

H2: Intellectual Capital has an effect on Knowledge Management

TABLE 1: Research Variables.

Variable Type	Indicator
Independent : Intellectual Capital (IC): is an organizational added value sourced from knowledge-based intangible assets (intangible resources) (9,22).	<i>Human Capital:</i> It is an intangible resource that is inherent in each individual
	<i>Structural Capital:</i> It is an intangible resource that is inherent in the organization and can be validated by anyone.
	<i>Relational Capital:</i> It is an intangible resource originating from good relations between the organization and its stakeholders, government, private institutions, and society in general.
Interventions: Knowledge Management (KM): is a series of value creation processes using knowledge based assets(17).	<i>Tacit knowledge:</i> Personal knowledge that is formed through experience so that it can make decisions and influence the collective behavior of members of the organization.
	<i>Explicit knowledge:</i> is systematic knowledge that is easily communicated in formal language and shared through print or other electronic media.
Dependents: Competitive Advantage (CA): is the process of creating value through the use of strategic resources, both tangible and intangible assets by Barney (1991)	Valuable: has more value compared to competitors
	Rare: that these resources are very hard to come by in the market and only owned by a few organizations
	Imitable: that the resource is difficult for competitors to imitate
	Non-substitutable: these resources cannot be replaced

H3: Knowledge Management affects Competitive Advantage

H4: Knowledge Management mediates the influence of Intellectual Capital on Competitive Advantage

3. Result and Discussion

3.1. Results

Structural models or SEM-PLS inner models are run by analyzing the R2 values and path coefficient values or t values of the dependent variables to test for significance between variables within the structural model. Test results are shown in Table 2 and Figure 1.

TABLE 2: Structural Model Significance Value.

	Original Sample (O) / Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Information
IC -> CA	0.257	0.255	0.032	5,743	0.000	Significant
IC -> KM	0.747	0.766	0.039	11,297	0.032	Significant
KM -> CA	0.741	0.742	0.072	9,862	0.018	Significant
IC -> KM -> CA	0.515	0.528	0.056	8,440	0.005	Significant

Source: Smart-PLS Test Results

Presentation of the results of the analysis in the form of images as follows:

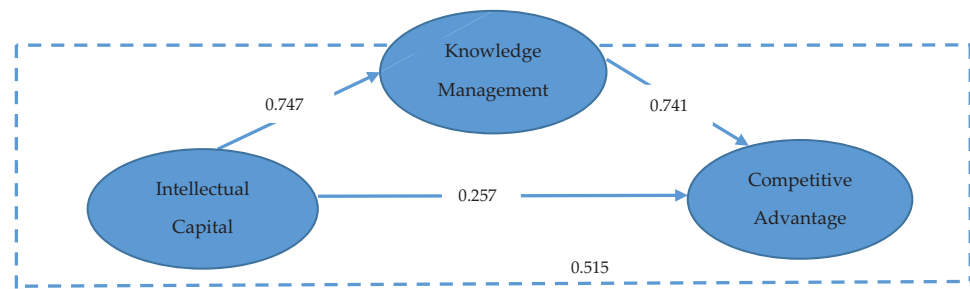


Figure 1: Result.

The explanation of the results of the analysis in table 2 and Figure 1 are:

1. The results of the direct effect analysis of this study are:
2. The direct effect of IC on CA of 0.257 is positive, significant with a p value of 0.000. This result means that if IC increases by one unit, CA will increase significantly by 25.7%. Thus, the first hypothesis which states that IC has an effect on CA is accepted as true.
3. The direct effect of IC on KM of 0.747 is positive, significant with a p value of 0.032. This result means that if IC increases by one unit, then KM will increase significantly by 74.7%. Thus, the second hypothesis which states that IC affects KM is accepted as true.
4. The direct effect of KM on CA of 0.741 is positive, significant with a p value of 0.018. This result means that if KM increases by one unit, CA will increase significantly by 74.1%. Thus, the third hypothesis which states that KM affects CA is accepted as true.

1. Indirect Effect Analysis Results

The results of the indirect effect analysis of this study of 0.515 are positive, significant with a p value of 0.005. This means that if IC increases by one unit, then CA will increase significantly by 51.5% through KM. This increase is greater than the direct effect of only 25.7%. Thus, the fourth hypothesis which states that KM mediates the effect of IC on CA is accepted as true.

3.2. Discussion

The application of intellectual capital in the process of determining competitive advantage is a management effort aimed at gathering empirical evidence to deepen the potential role of intellectual capital in the value creation process (6). This is what ultimately drives intellectual capital to influence competitive advantage. University leaders with sufficient intellectual capital can improve the quality of their graduates, manage their finances well, develop modern curricula, and provide adequate academic management services both offline and online. I can do it. With sufficient intellectual capital, universities can manage their organizations in accordance with applicable laws and regulations and operate in an environmentally friendly manner. Campuses are getting prettier and learning environments are more fun. With such general conditions in place, there is an increasing public interest in university research to improve performance compared to competitors.

The level of competitive advantage can be assessed easily through observations of the use of resources, including: 1) can be used efficiently in creating value, 2) can be used as part of a value creation strategy that is not implemented simultaneously with competitors, 3) cannot be duplicated by current or potential competitors. In order to achieve a level of competitive advantage, *Intellectual Capital* must be managed properly by the leadership of the University. For example, lecturers who are academically very competent to develop their research will not be able to provide added value to universities if the leadership does not provide sufficient space for the lecturers to conduct research. No less important is the utilization of the research results for the advancement of the organization. Research results must be patented so that they become the intellectual property of higher education institutions and can be applied optimally for the progress of the organization. What has been done by the leadership is a very important part in the effort to realize the level of competitive advantage. The results show that education and training are the best things an organization can do to maintain its level of competitive advantage (23).

4. Conclusion

Based on the results of the analysis it can be concluded that:

1. Intellectual Capital affects Competitive Advantage
2. Intellectual Capital affects Knowledge Management
3. Knowledge Management affects Competitive Advantage
4. Knowledge Management mediates the influence of Intellectual Capital on Competitive Advantage at Universities in East Java.

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