

# Competitive Advantage, Organizational Culture and Sustainable Leadership on the Success of Management Accounting Information System Implementation

Siti Choiriah<sup>1\*</sup>, Yvonne Augustine Sudiby<sup>2</sup>

<sup>1</sup>Accounting Doctoral Student, Trisakti University, Universitas Trisakti, Jl. Kyai Tapa No.1, RT.6/RW.16, Grogol, Kec. Grogol petamburan, Kota Jakarta Barat, Daerah Khusus Ibukota Jakarta 11440, Indonesia

<sup>2</sup>Senior Lecturer, Trisakti University, Universitas Trisakti, Jl. Kyai Tapa No.1, RT.6/RW.16, Grogol, Kec. Grogol petamburan, Kota Jakarta Barat, Daerah Khusus Ibukota Jakarta 11440, Indonesia

DOI: [10.36348/sjef.2020.v04i09.009](https://doi.org/10.36348/sjef.2020.v04i09.009)

| Received: 14.09.2020 | Accepted: 22.09.2020 | Published: 26.09.2020

\*Corresponding author: Siti Choiriah

## Abstract

The purpose of this study was to empirically examine the relationship between Competitive Advantage, Organizational Culture, and Sustainable Leadership on the successful application of the management accounting information system (MAIS). Using primary data obtained from distributing questionnaires to several manufacturing companies in Bekasi, West Java. The research instrument, namely Competitive advantage, was adapted from the Porter's Diamond Model Questionnaire which consists of five indicators, Organizational culture consists of four indicators, and Sustainable Leadership consists of three indicators. Data processing uses SEM Partial Least Square. In this study Competitive advantage, organizational culture, and sustainable leadership have a positive and significant relationship to the successful implementation of MAIS.

**Keywords:** competitive advantage, organizational culture, sustainable leadership, successful application of management accounting information systems.

**Copyright © 2020:** This is an open-access article distributed under the terms of the Creative Commons Attribution license which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use (NonCommercial, or CC-BY-NC) provided the original author and source are credited.

## INTRODUCTION

The business competition that is so competitive requires an information system that provides ease of use, mastery of work, and increased competitiveness. According to Gelinias *et al.*, [1] and McLeod and Schell [2]. A good information system not only provides a competitive advantage, but a quality information system provides reliable and trustworthy information and makes the user more effective and efficient in carrying out work. Information is relevant if users of information can be affected in the evaluation of events and predictions both past, present, and future. Besides that, it can be useful for making decisions about resource allocation, reducing the use of raw materials, producing products quickly to reduce unnecessary expenses [3]. According to Hall [4], an information system is a collection of data collection processes that will be processed and used for the company's operational interests. Until now, the dependence on information systems is increasingly widespread.

Competitive companies need a system that designs financial and non-financial outflows so that

they are more efficient. Management accounting information systems are used for this to support company operations such as providing supplies of goods and services for long-term quality improvement. Large companies spend a lot of investment costs to increase the use of new information systems to support company activities.

Information systems can run well if they have long-term innovating leaders. Sustainable leadership requires taking a long-term perspective in decision-making by encouraging systematic innovation aimed at increasing customer value, developing a skilled, loyal, and highly engaged workforce, and products that offer quality, service, and solutions [5]. And also said that sustainable leadership offers an approach to a sustainable organization.

Sustainable leadership must be embedded throughout the organization. Fostering individuals, their development, and their mindset must influence the organization. This includes a process of building short-term and long-term goals with a focus on improving the

future of the organization. This is inherent in the organizational culture carried over to the workplace. Organizational culture can usually be observed from behavior patterns because it is a manifestation of the principles and values that are embedded in each individual that is carried over to the organization. A good organizational culture will spur the organization to go further in the future. Research on culture is important because the culture is deeply rooted in society. Cultural differences that are owned are well maintained, companies that value culture will have good ethics in managing their business and this will improve the company's reputation.

In today's competitive era, companies must compete not only with national companies but also with international companies. So for that, the company must be able to compete with its competitors. Competence with prices, innovative products, always paying attention to customer wants and complaints, effective and efficient resources are forms of corporate strategy that will improve company performance. As a result of the global financial crisis, companies seek stable, safer growth through a more progressive and long-term approach to leadership and development [6]. The concept of Sustainable Leadership suggests that organizations should shift their emphasis from a traditional focus to the view that organizations are contributors to the existing environmental and social influences [7, 8, 5]. According to [6], "Sustainable leadership takes a long-term perspective in making decisions, encourages systematic innovation aimed at increasing customer value, developing a skilled, loyal and very active workforce, products that offer quality, services and solutions".

In addition to leaders who are sustainable leadership to survive in a business competition, competitive advantage is also needed. According to Porter [9], competitive advantage is the center of a firm's performance in a competitive market. It is a must-have for all companies to survive. There are many ways that companies do in this competitive environment. Everything is done to improve company performance to increase the level of success in implementing a good management accounting information system in the company.

Research by [10] conceptualized a Brand Management System (BMS) as a dynamic ability that has the potential to gain a sustainable competitive advantage. Likewise, Dobbs [11] in his research applies the description of Porter's [12] five strengths framework, namely competitive competition, strong buyers, strong suppliers, prospective newcomers, and substitute products. Meanwhile [13], explores the relationship between top management teams and the acquisition of sustainability knowledge using a management accounting information system. Our

findings suggest that there is an effect of sustainable leadership in the interactive application or use of MAIS.

## LITERATURE REVIEW

Indicators of success in implementing information systems are in line with the information system success model conducted by [14] known as D&M is a success. According to [14], successful application of information systems can be represented by six dimensions of success factors which include: System Quality, Information Quality, Use, User Satisfaction, Impact Individual (individual impact), and organizational impact (organization impact) will affect the information system on organizational performance.

Measuring the success of information systems adopts [14] research which refers to customer satisfaction which consists of information quality, system quality, and its use, which is a process that describes activities ranging from collect, measure, record, analysis, report and manage information. Changes in information technology that are so fast must be followed by management and employees who are reliable in their operation from the start of identifying data to processing and presenting reports for decision making by company stakeholders. Making the right decision is the expectation of external and internal stakeholders which is obtained from efficiency in data input, processing, integration, and the results of data that will be used in the long term.

[15] synthesize these various fields of research into seven principles that drive sustainable leadership, namely, simply, time, accountability, resources, tracking, melioration, emotion In solving problems, managers have the possibility of alternative actions to be taken. And a decision is a choice is taken and various alternatives. Information Quality according to [2] is Relevance, that is, all individuals in an organization need a device that can help in their work, Accuracy, namely information must reflect the actual situation. Timeliness is the information available when the information is needed completeness, namely information must be provided in full to support decision making.

Competitive advantage is the company's ability to gain more than the profit that competitors can achieve in markets in similar industries [16]. A company that has a superior competitive edge always has an understanding of market changes and can use effective marketing strategies. So that companies that have a competitive advantage are companies that have the characteristics and company resources to achieve high performance compared to similar companies. There are five strength analyzes of [17] which are a framework for industry analysis and corporate strategy development including the threat of substitute products, competitors, new entrants, bargaining power of suppliers, and bargaining power of consumers. The

company will have competitiveness if the company is competitive. Competitiveness between companies makes the company more innovative and always improves its capabilities. With great global pressure changing the environment in which companies operate, traditional industrial strategies have become less effective. To survive, companies must build "core competencies" by implementing quality, cost-effective, competitive pricing, innovation-based marketing, product innovation, and predicting buyer behavior for high customer satisfaction [18-20].

According to [21], technological innovation has a positive impact on increasing competitiveness. One of the improvements in technological innovation is the improvement of the right information system in the company, namely the management accounting information system to increase the competitiveness and competitive advantage of the company. Based on several opinions from the research above, this study takes a hypothesis

*H1: Competitive Advantage has a positive effect on the successful application of management accounting information systems*

Organizational culture is the norm and value that guides all employees and leaders of an organization. And to be accepted by the surrounding environment, all members of the company will behave following the company culture. Malthis and Jackson [22] define organizational culture as the values and beliefs of an organization. Sashkin [23] states that all organizations have a culture based on the values and beliefs shared by some, most, or all members of the organization. However, when a culture is based on values that do not support the functions of managing change, organizational achievement, customer orientation, and coordinated teamwork, then this culture may hinder organizational survival and growth.

The success of a management accounting information system implementation is influenced by the organizational culture as stated by [24] who also stated that organizational culture affects business practices and accounting systems. Sisaye [25] states that organizational culture shapes the accounting system and the extent to which administrative changes can be applied. The influence of organizational culture affects the application of management accounting information systems with the successful implementation of information systems not only minimizing costs, time, and information resources but success is also seen from the right information technology, effective business processes, organizational structure, organizational culture and an increase in the number of customers and company value high [26]. Based on several opinions from the research above, this study takes a hypothesis

*H2: Organizational culture has a positive effect on the successful application of management accounting information systems*

The management accounting system (MAS) is defined as a systematic control process that is used to influence members in the organization to achieve company goals. Management research extensively on the influence of knowledge management in MAS development [27], enables it to produce more reliable and strategic information [28]. This means MAS understands more dynamic perspectives, oriented towards best practices [29], organizational culture, and a better understanding of the corporate environment [30]. Along with the development of increasingly complex information technology tools were also developed [28], not only at the management level but also at the operative level. The concept of sustainable leadership eliminates that organizations are shifting control from traditional systems to more modern and innovative systems. Organizations are contributors to broader environmental and social influences [8]. Meanwhile [5], state that "Sustainable leadership requires a long-term perspective in making decisions, encouraging systematic innovation that aims to increase customer value, develop a skilled workforce, innovative products and services, and solutions.

Information systems support competitive advantage in the company, this will happen if supported by future-oriented leaders [31]. A strong leadership style encourages increased use of information technology in the environment which will provide convenience, efficiency, and accurate results. This is in line with the research of [32] which states that information systems provide convenience and will produce data and information that supports correct decision making.

*H3: Sustainable Leadership has a positive effect on the Application of Information Systems Management*

## RESEARCH METHODOLOGY

The causality research method is a research method of examining the variables used in the study and also testing the variables that influence this study. Competitive Advantage, organizational culture, Sustainable Leadership as independent variables in the success of implementing management accounting information systems as the dependent variable that will be tested for its relationship in this study.

Variable Competitive Advantage according to [9] The uniqueness of the company will make the company have an advantage over other companies. This variable is measured by six dimensions with a total of 33 indicators. This variable is measured by indicators and variables used by [9]. Organizational culture variables are measured by dimensions and indicators used by [23, 33, 22, 34], where there are 4 dimensions, namely managing change with 3 indicators, achieving dimensions goals with 3 indicators, coordinated teamwork with 3 indicators and dimensions of customer orientation with 4 indicators.

The Sustainable Leadership variable is measured by the dimensions and indicators used by [35]. Where there are 3 (three) dimensions consisting of foundation practice, Higher level practice, key performance drivers. And a total of 23 indicators. Variables of Success in Implementation of management accounting information systems are measured by dimensions and indicators used by [14, 36, 3, 2], where there are 3 dimensions, namely the system dimension. Quality with 5 indicators, information quality dimension with 4 indicators and usefulness dimension with 3 indicators.

**Population and Research Sample**

The researcher sent a questionnaire to an industrial area in the Bekasi area in which there were many manufacturing companies as a population by distributing 90 questionnaires and returning 60 questionnaires. The samples in this study were respondents who worked with manufacturing companies in Bekasi. This study uses the sample criteria method, namely middle-level officials in the company as respondents, among others, managers / assistant managers or supervisors in the fields of

accounting, finance, marketing, information systems and human resource (HRD), have a minimum work experience of 5 years, minimum education is an undergraduate. They were chosen because they are directly involved in competitive advantage, sustainability leadership, organizational culture and the successful application of accounting information systems. This means that the respondent must comply with the criteria in order to answer all the questionnaire questions distributed by the researcher.

**Data Collection Techniques**

Data collection uses primary data obtained by sending questionnaires to manufacturing companies in the city of Bekasi, West Java. The questionnaire is addressed to company officials at the level of assistant managers and managers who are involved in increasing competitive advantage, sustainability leadership, organizational culture and successful application of management accounting information systems. The questionnaire target is 70 questionnaires. The research questionnaire is formed from the variable indicators studied.

**RESULT AND DISCUSSION**

**Table-1: Test of Discriminant Validity and Composite Reliability**

Measurement Model	Results		Critical Value	Evaluation Model
	Measurement Model			
Discriminant Validity	Variabel	AVE	>0,5	Valid
	CA	0,509		
	OC	0,504		
	SL	0,518		
	MAIS	0,507		Valid
Composite Reliability	Variable	Composite Reliability	>0,7	Valid
	CA	0,976		
	OC	0,928		
	SL	0,960		
	MAIS	0,902		Valid

*Note: CA = Competitive Advantage, OC = Organizational culture, SL = Sustainable Leadership, MAIS = Management Accounting Information System*

In research using primary data, it must have passed the validity and reliability test. The validity test is to test whether a questionnaire is valid or not with a loading factor indicator value greater than or equal to 0.5. While the reliability test is used to measure the

reliability of a questionnaire and the composite reliability value should be greater than 0.7. the validity test of the variable value is above 0.5 and the reliability test is above 0.9, this indicates that it has passed the validity and reliability test.

**Table-2: Adjusted R-square**

	Adjusted R-square
Management Accounting Information System ( MAIS )	0,678

In quantitative research there is a correlation test and the coefficient of determination which is one of the hypothesis tests. The coefficient of determination in the regression analysis states the suitability of the

regression line and the ability of the regression model. In this study (see Table-2), the Adjusted R Square value is 0.678, this indicates that the R2 value is stronger and more accurate in predicting the dependent variable.

**Table-3: Result**

Variable	Original Sample (O)	Sample Mean (M)	(STDEV)	T Statistics ( O/STDEV )	P Values	Result
CA -> MAIS	0,222	0,242	0,086	2,569	0,010	positive and significant effect
OC -> MAIS	0,424	0,399	0,147	2,889	0,004	positive and significant effect
SL -> MAIS	0,359	0,377	0,137	2,616	0,009	positive and significant effect

Note: CA = Competitive Advantage, OC = Organizational culture, SL = Sustainable Leadership, MAIS = Management Accounting Information System

## DISCUSSION

From the test results above (Table-3) it is stated that Competitive Advantage has a positive and significant relationship to the Success of MAIS implementation, indicated by the original sample value of 0.222 and a P value of 0.010 0.05. This is in line with the research of [18-20] which stated that companies that use information technology make a lot of product innovations will greatly maintain their competitive advantage so that they will increase company value. The current intense competition makes companies have to provide better service to customers, competitive prices and different from others.

Hypothesis 2 states that Organizational Culture has a significant positive relationship to the Success of MAIS Implementation seen with the original sample value of 0.424, P value of 0.04 is smaller than 0.05. This is in line with the research of [24, 25] which state that in a good company organizational culture greatly influences, provides support, togetherness and communication between employees who are increasingly open which will affect one's attitude towards the application of accounting information systems in a company which in turn gives an increase in companies [26].

Hypothesis 3 states that sustainability leadership is closely related to the success of MAIS implementation, this can be seen from the original sample value of 0.359 and the value of P value 0.009 <0.05. This is in line with the research of [37] that Sustainable Leadership will form a leadership system that will strengthen itself and will improve business performance and prospects for survival. Business performance is not only financial but also non-financial. One of them is the effective and efficient use of resources, use of information systems and improving employee performance.

## CONCLUSION AND LIMITATIONS OF RESEARCH

Based on the research results, it can be concluded that Competitive Advantage, Organizational Culture and Sustainable Leadership have a moderate effect on the Success of the Implementation of Management Accounting Information Systems (MAIS). It is proven that Competitive Advantage, Organizational Culture and Sustainable Leadership have a positive

effect on the Success of MAIS Implementation with a significant level of 5%.

This study has many shortcomings, one of which is the sample that is only small so that it provides limited results in this study. For further research using several different variables such as demographic problems, or other economic factors and the research sample can be replaced with other companies such as banking or retail companies which will provide different results and will add to the richness of similar research results.

## REFERENCE

- Gelinas Jr, Ulric, J., & Dull, R. B. (2008). Accounting Information System. 7th edition. Thomson South Western. USA.
- McLeod, R., & Schell, G. (2007). Management Information Systems. 9<sup>th</sup> Edition. Prentice- Hall. Inc. New Jersey.
- Laudon, K. C., & Laudon, J. P. (2008). Management Information System. 10th Edition. Prentice-Hall. Inc, New Jersey.
- Hall, J. A. (2011). Accounting Information Systems. Seventh Edition. Cengage Learning 5191 Natorp Boulevard Mason, OH 45040 USA.
- Avery, G. C., & Bergsteiner, H. (2011). Sustainable Leadership Practices for Enhancing Business Resilience and Performance, *Strategy & Leadership*. 39(3), 5-15.
- Avery, G. C., & Bergsteiner, H (2011). Sustainable Leadership: Honeybee and Locus Approaches, Oxon, Routledge.
- Caserly, T., & Critchley, B. (2010). A New Paradim of Leadership Development. *Industrial and Commercial Training*. 42, 287-295.
- Crews, D. E. (2010). Strategies for Implementing Sustainability: Five Leadership Challenges, *SAM Advance Management Journal*, 75(2), 15-21.
- Porter, M. (1990). The Competitive Advantage of Nations, Simon and Schuster.
- Santos-Vijande, M. L., del Río-Lanza, A. B., Suárez-Álvarez, L., & Díaz-Martín, A. M. (2013). The brand management system and service firm competitiveness. *Journal of Business Research*, 66(2), 148-157.
- Michael, E. D. (2014). Guidelines for applying Porter's five forces framework: a set of industry analysis templates. Emerald Group Publishing Limited.

12. Dess, G. G., & Davis, P. S. (1984). Porter's (1980) generic strategies as determinants of strategic group membership and organizational performance. *Academy of Management journal*, 27(3), 467-488.
13. Ugalde Vásquez, A. F., & Naranjo-Gil, D. (2020). Management Accounting Systems, Top Management Teams, and Sustainable Knowledge Acquisition: Effects on Performance. *Sustainability*, 12(5), 2132.
14. DeLone, W., & McLean, E. (1992). Information Systems Success: The Quest for the Dependent Variable. *Information Systems Research*. 3(1), 60-95.
15. Dave, U., & Norm, S. (2013). Leadership Sustainability, The Magazine of Leadership Development, *Managerial Effectiveness and Organizational Productivity*, 30(1).
16. Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard business review*, 86(1), 25-40.
17. Porter, M. (2008). The Five Competitive Forces that Shape Strategy, Harvard Business Review.
18. Lynch, J., & Ariely, D. (2000). 'Wine Online: Search Costs Affect Competition on Price, Quality, and Distribution', *Marketing Science*. 19(1), 83-103.
19. Chobanyan, A., & Leigh, L. (2006). The competitive advantages of nations: Applying the Diamond model to Armenia. *International Journal of Emerging Markets*, 1(2), 147-164.
20. Gupta, H., & Nanda, T. (2015). A quantitative analysis of the relationship between drivers of innovativeness and performance of MSMEs. *Int J Technol Policy Manag*. 15(2), 128-157.
21. Foster, R. (1986). *Innovation, the Attacker's Advantage*. Simon & Schuster: New York.
22. Mathis, R L., & Jackson, J. H. (2008). *Human Resources Management* 12th edition. Thomson South Western.
23. Sashkin, M. (2001). *Organizational culture assessment questionnaire - user manual*. Washington, Ducochon Press.
24. Schroeder, R. D., Clark, M. W., & Cathey, J. M. (2011). *Financial Accounting Theory and Analysis*. John Willey & Son.
25. Sisaye, S. (2001). *Organization Change and Development in Management Control System: Process Innovation for Internal Auditing and Management Accounting*. Elsevier Science Ltd.
26. O'Brien, J. A., & Marakas, G. M. (2010). *Management Information Systems*. Fifteenth Edition. New York: McGraw-Hill/Irwin.
27. Azevedo, P. S., Romão, M., & Rebelo, E. (2014). Success factors for using ERP (Enterprise Resource Planning) systems to improve competitiveness in the hospitality industry. *Tour Manag Stud*. 10, 165-168.
28. Ferreira, A. A., & Kuniyoshi, M. S. (2015). Critical factors in the implementation process of integrated management systems. *J Inf Syst Technol Manag*. 12:145-164.
29. Deokar, V. A., El-Gayar, F. O., Samikar, S., & Wills, J. M. (2010). Communications of the association for information systems. *Commun AIS*, 20, 565-598.
30. Frigotto, M. L., Coller, G., & Collini, P. (2013). The strategy and management accounting systems relationship as emerging dynamic process. *J Manag Gov*. 17:631-656.
31. Cho, J., Park, I., & Michel, J. W. (2011). How Does Leadership Affect Information Systems Success? The Role of Transformational Leadership. *Information & Management*, 48(7):270-260
32. Nicolaou, A. I. (2000). A Contingency Model of Perceived Effectiveness in Accounting Information Systems: Organizational Coordination and Control Effects. *International Journal of Accounting Information System*, 1:91-105.
33. Robbins, S. P., & Judge, A. T. (2008). *Perilaku organisasi (Organizational Behavior)* 12th edition Salemba empat.
34. Luthan, F. (2006). *Organizational Behavior*, 10th edition, McGraw-Hill International Ed, Singapore.
35. Avery, G. C., & Bergsteiner, H. (2011). Sustainable leadership practices for enhancing business resilience and performance. *Strategy & Leadership*.
36. Seddon, P. B., & Kiew, M. Y. (1996). A Partial Test and Development of DeLone and McLeans's model of IS Success. *Australian Journal of Information System*.
37. Avery, G. C., & Bergsteiner, H. (2013). Rhineland business model/Rhineland leadership. In *Encyclopedia of corporate social responsibility* (pp. 2074-2082). Springer, Springer Nature.