The Role of Islamic Values in Strengthening Effects of Kaizen, Employee Loyalty and Accounting Information System to Cost Reduction

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ABSTRACT

This study aims to empirically test several determinant factors that effect of achieving cost reduction strategies and how Islamic values may strengthening these factors. The companies which is developing cost reduction strategies must have a competitive advantage based on different capabilities with unique characteristics in core values. Islamic values are core values as part of the organizational culture that is internalized in the Kalla Group company (a business group in Indonesia). This study uses quantitative methods with SEM PLS analysis tools. Data collection through electronic surveys circulated at all managerial levels of Kalla Group companies. Samples were taken randomly and obtained as many as 100 respondents fulfill criteria. Based on empirical testing, the results show that all the determinants of cost reduction, Kaizen, Employee Loyalty and Effectiveness of Accounting Information Systems (AIS), have a significant positive effect, and the effect increases with the presence of Islamic Values as a moderating variable.

Keywords: cost reduction, kaizen, employee loyalty, accounting information system, islamic values

INTRODUCTION

A cost reduction program is a plan to cut spending to increase profits or cash flow. When a cost reduction program is intended for short-term goals, it is most likely to be targeted at discretionary costs, i.e., costs that have no short-term impact on company performance, such as maintenance and employee training.

costs. Cost reduction programs can be combined with strategic changes, in which old product lines and programs are trimmed back to provide funds for new business strategies going forwards. This is often termed re-engineering in support of continuous improvement.²

Pandemic conditions, continuous technological advances, increasingly fierce competition in the global market, new customer needs that must be met quickly, and companies efforts to achieve profit functions are just a few of the triggers that motivate every modern company to seriously analyse its costs.³⁴

The cost reduction strategy is part of a competitive advantage strategy carried out using various approaches, both technical and non-technical or behavioural⁵. A technical approach is an approach that can be measured clearly through programs that can be designed quantitatively or physically, such as Kaizen or methods commonly known related to the production of goods, namely, reducing labor costs, increasing productivity and production rates (throughput), increasing performance and efficiency and value addition with quality improvement⁶.

Approaches that are more physical in nature or are termed mechanical approaches⁷ are approaches that ignore the human aspect as a driver or trigger for costs to arise, which can lead to deviant behavior within the company. Therefore, a more holistic and comprehensive approach is needed.⁸

Behavioral factors play a very important role in activity-based costing (ABC). Shields and Young present behavioral models in the broader context of project cost reduction strategies.⁹ This model then needs to be empirically validated. Empirical evidence is needed to demonstrate the relative or absolute nature of behavioral and organizational factors in the context of cost reduction. Empirical insights into the mechanisms and impact of behavioral factors with

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respect to the successful implementation of cost reductions are relevant not only for research but also for management\textsuperscript{10}

The higher company performance with a strong corporate culture has been ascribed to the implementation and socialization techniques that emphasize certain core values and, when spread to employees, are considered to perform certain important functions\textsuperscript{11}

Culture refers to the intricate system of learned beliefs and customs that are shared by both leaders and followers, and by those who collaborate and contribute to the development of a collective history that shapes the future.\textsuperscript{12} The certain important functions of core values as external adaptation and internal integration. In fostering external adaptation, holding these core values is believed to be able to influence employees to behave in such a way that the organization needs to survive in its environment. In this model, values are considered to have a direct effect on individual behavior at work; thus, it is necessary to internalize core values that ultimately affect cost reduction\textsuperscript{13}

A holistic approach is needed in making efforts to reduce costs (cost reduction). Nowadays, businesses organization looked at the need for an organizational culture approach in transforming cost management. Organizational culture can be formed from values and principles that are well maintained in an organization\textsuperscript{14}. Value is the basis for determining whether something is considered good and acceptable or not\textsuperscript{15}. Corporate value is the principle that exists in determining whether individual behavior is acceptable or not in a company. The relationship between values, culture and company performance has been studied by several researchers but did not specifically empirically examine Islamic values on cost reduction.

\textsuperscript{15} L. Ceja and J. Tàpies, “Corporate values guiding the world’s largest family-owned businesses: A comparison with non-family firms,” IESE Business School (2011).
Based on previous research, the determinants of cost reduction in order to study are the implementation of Kaizen, Employee Loyalty and the Effectiveness of Accounting Information Systems in order to the problem in this study is whether Islamic values can moderate the determinants of cost reduction.

**METHODS**  
**Research Design**  
The approach in this study is a hypothetical-deductive approach. The hypothetico-deductive method provides a useful and systematic approach to generating knowledge to solve basic and managerial problems. There are 6 (six) hypotheses in this study:

- **H1a:** Kaizen implementation has a significant effect on cost reduction.
- **H1b:** Employee loyalty has a significant effect on cost reduction.
- **H1c:** The effectiveness of the accounting information system has a significant effect on cost reduction.
- **H2a:** A company’s Islamic values have a significant moderating effect on the relationship between Kaizen implementation and cost reduction.
- **H2b:** A company’s Islamic values have a significant moderating effect on the relationship between employee loyalty and cost reduction.
- **H2c:** A company’s Islamic values have a significant moderating effect on the relationship between the effectiveness of accounting information systems and cost reduction.

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Data obtained by using a questionnaire in the form of positive statements. The data collection method uses electronic survey media (Google Form), which is sent through the WhatsApp (WA) social media application. The questionnaire measurement scale uses a numerical rating scale (1-10) in which several bipolar attributes are identified on an extreme scale, and respondents are asked to indicate attitudes, in what is called semantic space, towards certain individuals, objects, or events on each attribute.\(^{20}\)

**Population and Samples**

The population selected in this study is managers from line managers (section heads) to directors (chiefs). Managers can participate directly or indirectly in cost reduction. Managers have authority as users of the budget and as a source of expenditure because every expenditure, both routine and nonroutine, is subject to proposals or approval at the manager's level. Managers from line managers to top managers are approximately 300 people. Data collection and sample of 161 people was successfully obtained, and 100 people met the criteria. Based on the number of samples, it is included in the medium category.\(^{21}\)

**Data Analysis Technique**

Processing of inferential statistical data using the Warp SEM PLS program ver. 7.0. The structural equation model (SEM) can be divided into two categories, namely, covariance-based SEM (CB-SEM) and variance-based SEM or partial least squares SEM (PLS-SEM). This study uses PLS-SEM as a data analysis tool. PLS-SEM is a nonparametric multivariate approach based on iterative OLS regression to estimate models with latent variables and their directed relationships.\(^{22}\)

**RESULT AND DISCUSSION**

The construct descriptive statistics are shown in table 1. Construct descriptive statistics are descriptions of the minimum, maximum, average (mean), and standard deviation values of a data. Based on the results of data processing shown in Table 1 (Appendix 1).

**Instrument Measurement Model Evaluation**

Instrument testing was performed using the WarpPLS 7.0 statistical software application to obtain validity and reliability. The discriminant and convergent validity of each indicator as a whole is met. The results of cross loading between constructs can be seen in Table 2 appendix 2. A way to determine convergent validity is to look at the average variance extracted (AVE) value. The criterion or rule of thumb of the test results is an AVE value > 0.5. The results of instrument testing obtained values that met the AVE criteria for all indicators, as shown in appendix-2. The results of reliability testing of the

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\(^{22}\) N. K. Avkiran and C. M. Ringle, *Partial least squares structural equation modeling: Recent advances in banking and finance*, 2018, 35
instrument can be seen from the composite reliability and Cronbach's alpha values. Composite realibility and Cronbach's alpha values for all dimensions for all variables are above 0.70, as shown in appendix-2. The summary of validity and reliability is presented in Table 1 below:

**Table 1: Validity and Reliability Test Conclusion**

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Composite Reliability (&gt;0,7)</th>
<th>Cronbach's Alpha Coef. (&gt;0,7)</th>
<th>AVE (&gt;0,5)</th>
<th>FVIF'S (&lt;=5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cost Reduction</td>
<td>0.941</td>
<td>0.925</td>
<td>0.727</td>
<td>3.042</td>
</tr>
<tr>
<td>2</td>
<td>Kaizen</td>
<td>0.934</td>
<td>0.905</td>
<td>0.781</td>
<td>3.976</td>
</tr>
<tr>
<td>3</td>
<td>Employee Loyalty</td>
<td>0.898</td>
<td>0.849</td>
<td>0.689</td>
<td>2.020</td>
</tr>
<tr>
<td>4</td>
<td>AIS Effectiveness</td>
<td>0.980</td>
<td>0.978</td>
<td>0.794</td>
<td>1.821</td>
</tr>
<tr>
<td>5</td>
<td>Islamic Values</td>
<td>0.946</td>
<td>0.928</td>
<td>0.778</td>
<td>4.987</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2022

**Determinant Factors to Cost Reduction Testing Result**

The result of testing is separated in two sessions. First session is result before using moderating variable and the second session is using Islamic Values as moderating variable. The first session testing results show that there are two exogenous or independent variables that have a significant effect <0.05: the Kaizen variable and the Information System Effectiveness (SIA/ERP) variable. The employee loyalty variable is not significant. As detailed in Table 2. Kaizen is determinant dominant factor effect to Cost Reduction which regression coefficient $\beta=0.720$ and $p\ value<0.001$. Information System Effectiveness is also significant effect to Cost Reduction which regression coefficient $\beta=0.69$ and $p\ value 0.40$. Otherwise, Employee Loyalty is not significant effect to Cost Reduction which $p\ value 0.171 (>0.05)$.

**Table 2: Path Coefficient Between Variables (Non Moderator)**

<table>
<thead>
<tr>
<th>Path Coefficients</th>
<th>KAIZEN (X1)</th>
<th>Employee Loyalty (X2)</th>
<th>IAS/ERP (X3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Reduction</td>
<td>0.720</td>
<td>0.093</td>
<td>0.169</td>
</tr>
<tr>
<td>$P$ values</td>
<td>&lt;0.001</td>
<td>0.171</td>
<td>0.040</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2022

In the concept of cost management, the term Kaizen costing is known. Kaizen costing is characterized by constant and incremental improvements to existing processes and products. Activity management is a fundamental part of kaizen costing. Activity management can reduce costs in four ways: (1) eliminating activities, (2) selecting activities, (3) reducing activities and (4) dividing activities. Measurement variable of Kaizen implementation can be

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done in two dimensions, namely, maintenance and improvement or innovation. The intended maintenance is to comply with and maintain existing standard operating procedures. The improvement in question is an activity directed at improving existing standards (quality).²⁵

The effectiveness of the accounting information system (AIS) is a function of the availability of information in financial reports, including the availability of budgets for decision making. Accounting information in the form of performance and financial position includes operational and investment budgets. Financial reports that are presented and can be accessed at any time are factors that can help measure, evaluate, and control performance targets both financial and nonfinancial. The effective use of SIA will have a significant impact on organizational performance in general and on all dimensions, including cost reduction, quality improvement and effective decision making.²⁶

An accounting information system (AIS) is a tool that, when incorporated into the information systems and technology (IT) field, is designed to assist in the management and control of topics related to the economic-financial area of organizations. However, AIS needs political will of top management to implement IT integrated for getting financial and nonfinancial target. The political will of management or corporate strategy can’t be separated from the culture that has long been holding by the company.

The most frequently used measure of the success or effectiveness of information systems is the Delone & McLean model (DM Model) published since 1992. The D&M model has been found to be a useful framework for managing the measurement of IS success.²⁷ This model has been widely used by information systems researchers to understand and measure the dimensions of IS success. Variables describing information system success is consistent with one or more of the updated six key success dimensions.

Based on the test results, the regression equation with the fit model indicator is in accordance with the criteria required as a fit model structure, as shown in Appendix-3.

**Testing Result by Using Islamic Values as Moderating Variable**

Subsequent tests were carried out by testing the moderating variable Islamic Values on the three exogenous variables. Based on the test results, the regression equation with the fit model indicator is in accordance with the criteria required as a fit model structure, as shown in Appendix-4. The test results by including moderating variables show an increase in the influence of all

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exogenous variables, marked by an increase in the adj R², which was originally 0.600 to 0.935, with the indicators still meeting the best fit model criteria according to the rule of thumb. Even the Employee Loyalty variable, which initially had no significant effect on Cost Reduction, became significant after the Islamic Values moderating variable was introduced.

The influence of Islamic values on each exogenous variable is detailed in Table 3. The results of the regression test, the coefficient values and P values of each variable are summarized and shown in Table 6.

All exogenous variables significantly affect endogenous variables (cost reduction), namely, the Kaizen variable (<0.001), Employee Loyalty variable (<0.05) and Information System Effectiveness (<0.05), and moderating Islamic values significantly affect (<0.01) the Kaizen variable and Information System Effectiveness. Islamic values significantly negatively affect the relationship between Kaizen and Cost Reduction, which means that the magnitude of Kaizen's influence decreases on one side, but the influence of Islamic values increases on the other. Likewise, what happens to the effect of Islamic Values on Kaizen and AIS to Cost Reduction, where the moderating variable Islamic Values has a significant negative effect? This shows that the Islamic value variable is a quasi moderator or can become an independent variable²⁸.

We describe the path coefficient between variables and total effect exogenous variables to endogenous variables by R² as seen in Figure 1 below:

<table>
<thead>
<tr>
<th>Path Coefficients</th>
<th>KAIZEN (X1)</th>
<th>Employee Loyalty (X2)</th>
<th>AIS (X3)</th>
<th>KAIV (X1*M1)</th>
<th>LKIV (X2*M1)</th>
<th>AISIV (X3*M1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Reduction</td>
<td>0.625</td>
<td>0.163</td>
<td>0.187</td>
<td>-0.436</td>
<td>0.047</td>
<td>-0.323</td>
</tr>
<tr>
<td>P values</td>
<td>&lt;0.001</td>
<td>0.046</td>
<td>0.026</td>
<td>&lt;0.001</td>
<td>0.316</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Figure 1 Path Coefficient Variables with Moderating Variable

The Qur'an is a guide from Allah swt. as a learned, is a guide to the truth, and if it is read and studied in depth, it can help find values that can be used as guidelines for solving various life problems and if lived and practiced will make thoughts, feelings and intentions lead to the reality of faith, which is needed for stability. and peace of personal and community life.

Islamic values then become a reference in economics and business. Yusuf Qardhawi explained that when talking about the economic and business values of Islam, it appears that there are four main values, namely, Rabbaniyah (Divine) values, morals, humanity, and middle.

Muslimin Kara explained that basically the principles of Islamic economic values are the principle of monotheism, the principle of balance, the principle of caliphate, and the principle of justice.

There are many opinions and views related to Islamic values or corporate values, but in this study, the researcher limits the company's Islamic values to worship work motivation, which is also one of Kalla's values (Kalla Values). This

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worship work motivation includes three aspects, namely, the right aqidah or monotheism, integrity and professionalism.\(^{32}\)

Based on testing of hypothesis, as seen Islamic Values variable may increases effect all determinant (exogeneous) factors to cost reduction. Eventhough, Employee Loyalty variable unsignificant in testing yet. Adjusted R\(^2\) also increase from 0.6 to 0.9 (see Appendix-4) with accordance rules of thumb fit model. These are indicating that Islamic Values may effect determinant factors of cost reduction. Employee Loyalty may effects to cost reduction if it combines with Islamic Values.

CONCLUSION

The results of this empirical study indicate that Islamic values can be a moderating variable and are even said to be quasi moderators because they have a significant negative effect. A quasi moderator means that Islamic values can be independent or exogenous variables. The moderating variable of Islamic values is proven to be able to increase the influence of the determinants of cost reduction, namely, the implementation of Kaizen, employee loyalty and the effectiveness of accounting information systems. Although Islamic values have no significant effect on the relationship between employee loyalty and cost reduction before using Islamic Values as moderating variable, but employee loyalty has a significant effect after the presence of Islamic values as a moderating variable.

Author's Contribution
Muslimin H. Kara, Wahyuddin Abdullah: Contribute to formulating research ideas, collecting data, processing data, and interpreting data.
Murtiadi Awaluddin: Contributing to writing systematics, research methods.
Azwar Anwar: Contributing to analyzing interpretation results, the language proofread.

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Declaration of Competing Interest
The author declares that there is no conflict of interest.

Ethical Approval
Ethical approval No patient-identifying parts in this paper were used or known to the authors. Therefore, no ethical approval was requested.

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