Increasing the competitiveness of creative industries based on information technology and good corporate governance in central Java

Herry Laksito* and Dwi Ratmono*

*Universitas Diponegoro, Semarang, Indonesia

ABSTRACT

The purpose of this study is to examine the enhancement of the competitiveness of creative industries based on information technology and good corporate governance in Central Java. In this research, it is expected to find the right selection of information technology and the application of good corporate governance to improve the competitiveness of the creative industries in the handicraft sub-sector in Central Java. The sampling technique is based on a purposive sampling method and get 112 respondents as samples that meet all the criteria. The analytical tool used to test the hypotheses in this study uses the Structural Equation Model. The results of this study indicate that it is necessary to utilize the development of information technology and the application of good corporate governance to increase the company’s market competitiveness which will impact on improving company performance. In addition, transparency and accountability are also needed to build stakeholder's trust.

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Keywords:
Competitiveness
Company performance
Good corporate governance
Information technology

1. Introduction

The shift from the agricultural era to the industrialization era, followed by the digital era accompanied by many new discoveries in the field of information technology and economic globalization gave rise to the creative industries era (Darsono, 2005). The development of the creative industry is inseparable from the creative economy which is believed to be able to contribute significantly to the nation's economy. The government has begun to develop every sub-sector of the creative industry which has good potential. Issues that need to receive major attention, according to the Ministry of Trade in 2008, are the quantity and quality of human resources as creative industry players, a conducive climate for starting and running a business, appreciation/participation of human beings and the resulting creative works, accelerating the growth of information and communication technology, and financing institutions that support creative industry players. The role of Information Communication Technology (ICT) can be used as a business tool to reduce costs, create strong customer relationships, create innovation and facilitate niche markets (Kutlu & Özturan, 2009; Apulu & Latham, 2011; Wu et al., 2011). ICT in business processes is used in order to overcome challenges in the business environment in SMEs (Ongori, 2009; Anggraeni, 2020). The creative industry in Indonesia has a big role in contributing to state revenue, it is proven that it contributes to gross domestic income by an average of 7.8% per year or equivalent to 140 trillion rupiahs and should not be underestimated because it can absorb a workforce of around 7.4 million people. From 2004 to 2010 the export of creative industries has increased with the highest average annual growth of 12% and recorded an export value of 131 trillion rupiahs in 2010, and it is expected that in 2025 the creative industry will contribute 11% of GDP and 12-13% for exports (http://citraиндonesia.com/kemendag-genjot-industri-kreatif).
Based on the creative industry mapping study by the Ministry of Trade of the Republic of Indonesia in 2008, information on the contribution of the creative industry to the Indonesian economy is differentiated based on 5 main indicators, namely gross domestic product, employment, number of companies, exports and the impact on other sectors. The creative industry has a significant contribution to national gross domestic income, labor absorption and export value. To increase competitiveness, the creative industry is in need of the support of appropriate information technology to support business activities and the implementation of good corporate governance. The success of the company in implementing the principles of corporate governance has led to an increase in its corporate image, gaining prestige in the eyes of foreign investors, and increasing internal and external control mechanisms (Atakan et al., 2008; Prencipe & Bar-Yosef, 2011). Personality development in entrepreneurship is closely related to business performance, thus creative industry entrepreneurs must change their paradigm to become more entrepreneurial and also change their culture in the context of performance-based arts to performance-based entrepreneurship. In addition, entrepreneurs must creatively change their culture of life that is profit-oriented and customer-oriented. Therefore, good creative industry entrepreneurs are individuals who have the ability to take challenges, are competitive, strategic, and have a strong desire for business achievement (Halim et al., 2011). The source of competitive advantage in an organization is not only determined by external and internal factors but the source of competitive advantage of a company has been considered as a factor towards success. This research is expected to find the right selection of information technology and the application of good corporate governance in an effort to increase the competitiveness of the creative industry in the craft sub-sector in Central Java.

2. Literature Review

2.1 Creative Industries

The development of information and communication technology has encouraged human development to be more creative. Industrial development has created cheap and efficient work, production, and distribution patterns, thus technological developments make humans more productive. The creative industry focuses on creating goods and services by relying on expertise, talent, and creativity as intellectual property (Smith et al., 2010).

2.2 Information Technology

Information and Communication Technology (ICT) has tremendous potential to contribute to a sustainable competitive advantage in business. Kutlu and Özturan (2009), argue that Small and Medium-sized Enterprises, the role of ICT can be used as a business tool to reduce costs, create strong relationships with customers, create innovation and facilitate market niches. Ongori (2009), Rastrick & Corner (2010) also states that SMEs are forced to adopt ICT in their business processes in order to overcome challenges in the business environment. In small business market-oriented information technology, there is a relationship between the use of the internet for communication, transactions, flexible strategic policies, but market-oriented IT does not moderate the relationship between the use of the internet for transactions and strategic flexibility (Celuch & Murphy, 2011; Mohan-Neill, 2006). IT can improve the company's agility capabilities and build an agile organization (Lu & Ramamurthy, 2011). Increasing self-effectiveness will increase creativity and the level of technological ability. Information technology is a technology that deals with processing data into information and the process of distributing that data or information within the boundaries of space and time. Several technologies that interact to create a fast response system include Electronic Data Interchange (EDI) which carries out computer-to-computer business documents via a communication network, Electronic Mail (E-Mail) which includes sending text and files via electronic communication, Just In Time (JIT) is a concept by eliminating inventory, Computer Integrated Manufacturing (CIM) which carries out the production process automatically, for example, CAM, CAD, and EFT which are payment systems which processing and communication is done electronically.

The theory of attitudes and behavior developed by Triandis (1980) states that the use of personal computers or PCs by users who have optional knowledge is influenced by their effect on PC utilization, workplace social norms that utilize PCs, habits in connection with computer use, and the expected individual consequences of PC use. According to this theory, social factors are the internalization of the subjective culture of certain groups of interpersonal agreements that individuals make in certain social situations. Subjective culture contains norms, roles, and values. Affection is related to feelings of pleasure, depression, disgust, displeasure, or hatred by individuals for certain actions. Complexity is the level at which innovation is perceived as something that is relatively difficult to define and use. Complexity has a negative relationship with technology utilization (Rogers & Shoemaker, 1971). Promotional spending via the internet has a positive impact on income growth, the use of the internet for product distribution has experienced sales growth (Rasheed, 2009). Job fit relates to an individual's ability to use a PC to improve their performance (Thompson, 1991). Conditions that facilitate are stated as objective factors that exist in the work environment that make it easy for users to take advantage of the PC. Thompson (1991) concluded that there was a positive and significant relationship between social factors, task suitability, and long-term consequences with technology use. Conversely, affection has an insignificant relationship, even the complexity, and conditions that facilitate it have a negative relationship with the use of technology.
2.3 Good Governance

Small companies are still trying to expand overseas markets as a way to reduce costs by developing economies as well as taking advantage of overseas customers. The implementation of Good Corporate Governance (GCG) is a guideline for Commissioners and Directors in making decisions and taking actions based on high morals, compliance with applicable laws and regulations, and awareness of the existence of corporate social responsibility towards interested parties consistently. The success of the company in implementing the principles of corporate governance has led to an increase in its corporate image, gaining prestige in the eyes of foreign investors, and increasing internal and external control mechanisms (Atakan et al., 2008). In agency theory, agents can be trusted to carry out their duties and responsibilities in maximizing prosperity. But in reality, because of the information asymmetry where the agent has more information than the owner, the agent will use the power they have to prioritize their interests over those of the owner (Jensen, 1986). Over time, the agency problem has become more complex, where agency problems do not only occur between managers and owners. Between shareholders and stakeholders such as suppliers, employees, and other stakeholders (Shleifer & Vishny, 1997).

2.4 Competitive Advantage

Competitive advantage describes a company that can act better than other companies even though they operate in the same industrial environment. Trust has been described as a source of competitive advantage, organizational value, and wealth creation (Caldwell & Hansen, 2010). Competitive advantage will be obtained if the activities carried out have a lower cost than its competitors and the total competitive advantage is a combination of cost advantages and the resulting differentiation (Barney 1996; Day 1994). Moderation of competitive advantage between learning orientation and performance does not differentiate between large and small companies (Martinette & Obenchain-Leeson, 2009). A resilient competitive advantage position is the key to superior long-term business performance. A strong advantage position will create a value that is perceived by customers higher than others and is able to create relatively low costs and ultimately encourage the achievement of job differentiation. The determinants of the success of a small business are structural factors in fulfilling the advantages and location and uniqueness of the business (Chawla et al., 2010). Competitive advantage will only be obtained through one of two sources, namely through the advantage of creating low costs (cost leadership), or the ability of an organization to be different (differentiation) compared to its competitors.

2.5 Performance

Assessment of the performance of a business must take into account the financial and economic consequences of management decisions that affect investment, operations, and financing (Kuncoro, 2006). Internal sources of competitive advantage cover various fields, it is important that competitive advantage in an organization is not only determined by external and internal factors but the source of competitive advantage of a company has been considered as a factor towards success. Pelham & Wilson (1996) define company performance as the success of new products and market development, where performance can be measured through sales growth and market growth. Export performance for small companies is done by developing market understanding skills, building a strong distribution network, and managing exports effectively (Brouthers et al., 2009). There is a correlation between entrepreneurial personality and business performance, however, the correlation reveals that moderating government initiatives have a lower correlation with the relationship between entrepreneurial personality and business performance (Halim et al., 2011). Performance measurement should use multiple measures (Bhargava et al, 1994), while De Clercq and Sapienza (2006) suggest that accounting and financial-based performance measures have shortcomings due to variations in accounting methods, as well as a tendency to manipulate figures management, so it is possible to use a subjective measure that is based on manager perceptions. Subjective performance measures have high reliability and validity, and the dimensions of performance measurement are growth, profitability, and efficiency (Murphy, et al, 1996). Roper (1999), Barkham et al. (1996) emphasized that sales growth is a common performance indicator and has become consensus as to the best measure of growth dimensions. Based on the description, the hypotheses proposed in this study are:

H1: The better the use of information technology, the higher the company's competitiveness.

H2: The better the implementation of good corporate governance, the higher the competitiveness of the company.

H3: The better the use of information technology, the higher the company's performance.

H4: The better the implementation of good corporate governance, the higher the company's performance.

H5: The better the competitiveness of the company, the higher the company's performance.
3. Research Methods

3.1 Population and Sample

The population is all creative industries that are focused on the craft sub-sector in Central Java. The sampling technique used a purposive sampling method, through two stages. The first stage selects 6 selected regencies/cities that have many creative industries in the craft sub-sector, namely Semarang, Kudus, Jepara, and Pekalongan Regencies. In the second stage, sampling is the creative industry in the craft sub-sector in selected districts/cities and obtaining 112 respondents as the sample. As for the consideration in selecting the sample is the creative industry in the craft sub-sector which operates for more than one year and utilizes information technology and implements good corporate governance.

3.2 Research and Measurement Variables

This study will use a questionnaire instrument to describe the variables. Then each variable and indicator will be tested for validity and reliability. The measurement scale used in this study is the Likert scale. In order to obtain accurate data for as many as 121 creative industry players, the data collection method will be carried out by sending questionnaires and conducting in-depth interviews, thus if the questionnaire is unclear, it can be immediately followed up. In addition to data collection through questionnaires, direct visits to the field are necessary to obtain the real conditions.

3.3 Data Analysis Technique

The analytical tool used to test the hypothesis is to use the Structural Equation Model with the consideration that SEM has the ability to combine measurement models with structural models simultaneously and efficiently when compared to other multivariate techniques (Hair et al 1998). The use of this equation model with the application program "Partial Least Squares (PLS)". Blocks with reflexive indicators can be written the following equation:

\[
\begin{align*}
X_1 &= \lambda_1 \xi_1 + \delta_1 \\
X_2 &= \lambda_2 \xi_2 + \delta_2 \\
X_3 &= \lambda_3 \xi_3 + \delta_3 \\
X_4 &= \lambda_4 \xi_4 + \delta_4 \\
X_5 &= \lambda_5 \xi_5 + \delta_5 \\
\end{align*}
\]

For endogenous latent variables with reflective indicators, the equation can be written as follows:

\[
\begin{align*}
Y_1 &= \lambda_1 \eta_1 + \epsilon_1 \\
Y_2 &= \lambda_2 \eta_2 + \epsilon_2 \\
Y_3 &= \lambda_3 \eta_3 + \epsilon_3 \\
Y_4 &= \lambda_4 \eta_4 + \epsilon_4 \\
Y_5 &= \lambda_5 \eta_5 + \epsilon_5 \\
\end{align*}
\]

where the notation in PLS is as follows:

- \(\xi\) = Ksi, exogenous latent variable
- \(\eta\) = Eta, endogenous latent variable
- \(\lambda_X\) = lambda (small), loading factor exogenous latent variable
- \(\lambda_Y\) = lambda (small), loading factor endogenous latent variable
- \(\delta\) = delta (small), measurement error on exogenous latent variables
- \(\epsilon\) = epsilon (small), measurement error for endogenous latent variables
4. Results

Based on the PLS test results, the t value is 1.983 and the estimated coefficient value is 0.133. The results show that the t-count value is greater than the t-table value (1.96), which means that the hypothesis which states that information technology has an effect on competitive advantage is accepted at the 5% significance level. These results indicate that in order to build market competitiveness, companies need to take advantage of developments in information technology (Table 1).

<table>
<thead>
<tr>
<th>Variables</th>
<th>original sample estimate</th>
<th>mean of subsamples</th>
<th>Standard deviation</th>
<th>T-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>TI → CA</td>
<td>0.133</td>
<td>0.164</td>
<td>0.151</td>
<td>1.983</td>
</tr>
<tr>
<td>GCG → CA</td>
<td>0.282</td>
<td>0.287</td>
<td>0.154</td>
<td>3.832</td>
</tr>
<tr>
<td>TI → Performance</td>
<td>0.803</td>
<td>0.822</td>
<td>0.106</td>
<td>7.552</td>
</tr>
<tr>
<td>GCG → Performance</td>
<td>0.171</td>
<td>0.174</td>
<td>0.207</td>
<td>2.826</td>
</tr>
<tr>
<td>CA → Performance</td>
<td>0.413</td>
<td>0.102</td>
<td>0.072</td>
<td>5.186</td>
</tr>
</tbody>
</table>

The use of information technology will provide convenience in building communication networks with consumers, suppliers, and other interested parties. Information technology continues to develop, so the creative industry is expected to keep abreast of technological changes as needed and be able to utilize information technology according to the level of information required for business development. Utilization of information technology will increase cost efficiency, production innovation, and ease of creating products that are different from competitors as well as make it easier to build cooperation networks with customers or increase business competitiveness. The findings of this study are in line with the results of research by Celuch (2011), that in small businesses the use of market-oriented information technology is related to the use of the internet for communication, transactions, flexible strategic policies. Kutlu and Özturan (2009), that Information Communication Technology (ICT) can be used as a business tool to reduce costs, create strong relationships with customers, create innovation, and facilitate market niches. In line with Ongori’s (2009) research, ICT in business processes is to overcome challenges in the business environment.

Regarding the examination of the hypothesis that the better the implementation of good corporate governance, the higher the competitiveness of the company, based on the PLS test results, the t value is 3.832 and the estimated coefficient value is 0.282. The results above indicate that the t-count value is greater than the t-table value (1.96), which means that the hypothesis states that good corporate governance has an effect on competitive advantage received at the 5% significance level. These results indicate that in order to build market competitiveness, companies need to implement good corporate governance (Shore et al., 2011). Creative industries that have sufficiently strong independence will be able to develop businesses by creating cheap and efficient work, production, and distribution patterns, thus making creative industry people more productive. Creative industry people put more emphasis on creating goods and services by relying on expertise, talent, and creativity as intellectual property which will make them more independent and responsible. For the creative industry, transparency and accountability are needed to build trust with stakeholders and are expected to increase market competitiveness. The implementation of good corporate governance will increase trust in stakeholders, and it is hoped that there will be cost efficiency, encouraging production innovation, and the ease of creating new products that are different from competitors and making it easier to build cooperation networks with customers and ultimately increase business competitiveness.

This finding is in line with the research results of Atakan et al. (2008) that the success of companies in implementing the principles of corporate governance has led to an increase in its corporate image, gaining prestige in the eyes of foreign investors, and increasing internal control mechanisms. In the relationship between information technology and the company’s performance, based on the results of the PLS test, the t value is 7.552 and the estimated coefficient value is 0.802. The results above indicate that the t-count value is greater than the t-table value (1.96), which means that the hypothesis which states that information technology affects performance is accepted at the 5% significance level. These results indicate that to improve company performance, it is necessary to take advantage of developments in information technology. For the creative industry, the use of information technology will make it easier to build communication networks with various parties. The creative industry is expected to keep abreast of technological changes that develop according to needs and be able to utilize information technology according to the level of information required.

The use of appropriate information technology will provide convenience in building communication networks with consumers, encouraging sales growth, which in turn will increase company profits or company performance. These findings are consistent with research by Rasheed (2009), which states that promotional spending through the internet has a positive impact on income growth, the use of the internet for product distribution has experienced sales growth. Regarding the effect of the implementation of good corporate governance and the company’s performance, based on the results of the PLS test, the t value is 2.826 and the estimated coefficient value is 0.171. The results above indicate that the t-value is greater than the t-table value (1.96), which means that the hypothesis which states that good corporate governance affects performance is accepted at the 5% significance level. These results indicate that to improve company performance it is necessary to take advantage of the development of good corporate governance.
The independence of creative industry players in developing businesses makes creative industry people more productive and stronger. Creating goods and services by relying on expertise, talent, and creativity as the intellectual property will make them more independent and responsible. Transparency and accountability for creative industry players are needed in building trust with stakeholders.

The implementation of good corporate governance will increase trust in stakeholders, and it is hoped that production cost efficiency will be created. Production innovations are continuously carried out to create new products that are different from competitors as well as to increase cooperation networks with customers are always carried out to improve business competitiveness. Likewise, the research results of Atakan et al. (2008) show that the company’s success in implementing the principles of corporate governance has led to an increase in its corporate image, gaining prestige in the eyes of foreign investors.

Finally, based on the PLS test results, the t value is 5.186 and the estimated coefficient value is 0.413. The above results indicate that the t-count value is greater than the t-table value (1.96), which means that the hypothesis which states that competitive advantage has an effect on performance is accepted at the 5% significance level. These results indicate that to improve company performance it is necessary to build strong market competitiveness.

The company's strategy to increase competitiveness can be carried out through cost efficiency. Creative industry players are expected to continue to innovate in production so that they are able to produce new products. Increasing the competitiveness of companies will make it easier to build communication networks with consumers, encourage sales growth, which in turn will increase company profits or company performance.

Competitive advantage describes a company that can act better than other companies even though they operate in the same industrial environment. Competitive advantage in small companies has a positive and significant effect on company performance (Swamy, 2011; Homburg et al., 2009). Likewise, the findings of Cen (2011), competitive advantage in an organization is not only determined by external and internal factors, but the competitive advantage of a company has been considered a factor towards success. This finding is also in line with the findings of Martinetee (2009), that competitive advantage is related to learning orientation with performance, likewise, Pelham and Wilson (1996) argue that company performance is a new successful product and market development.

### Table 2
**Direct and indirect effects**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Direct effect</th>
<th>Indirect effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology – competitive advantage</td>
<td>0.133</td>
<td></td>
</tr>
<tr>
<td>Competitive advantage – performance</td>
<td>0.413</td>
<td></td>
</tr>
<tr>
<td>Information technology – performance</td>
<td>0.803</td>
<td>0.055</td>
</tr>
</tbody>
</table>

From the results, it can be seen that the direct effect of information technology on performance is 0.803, while the indirect effect is 0.055 (0.133 x 0.413). This shows that the direct effect is greater than the indirect effect. Competitive advantage is not an intervening of information technology on performance.

### Table 3
**Direct and indirect effects**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Direct effect</th>
<th>Indirect effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good corporate governance – Competitive advantage</td>
<td>0.282</td>
<td></td>
</tr>
<tr>
<td>Competitive advantage – performance</td>
<td>0.413</td>
<td></td>
</tr>
<tr>
<td>Good corporate governance - performance</td>
<td>0.171</td>
<td>0.116</td>
</tr>
</tbody>
</table>

From the results, it can be seen that the direct effect of good corporate governance on performance is 0.171 while the indirect effect is 0.116 (0.282 x 0.413). This shows that the direct effect is greater than the indirect effect. Thus, competitive advantage is not an intervening of good corporate governance on performance.

### 5. Conclusions

This study contains a model that examines the effect of information technology, good corporate governance, and competitive advantage on employee performance in creative industries. The findings emphasize that to build market competitiveness, companies need to take advantage of developments in information technology. Moreover, to build market competitiveness, companies need to implement good corporate governance. The use of appropriate information technology will provide convenience and encourage sales growth so that it will increase company profits or company performance. Hence, transparency and accountability for creative industry players are needed in building trust with stakeholders and will increase trust in stakeholders. Practically, the findings noted that increasing the competitiveness of the company will provide convenience in build-
ing communication networks with consumers, encouraging sales growth, which in turn will increase company profits or company performance. Future studies are suggested to use other variables that can be used to see their effect on performance besides information technology, good corporate governance, and competitive advantage.

References


