The Effect Of Information And Communication Technology (ICT) And Business Strategy On Business Performance In Small And Medium Businesses

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ABSTRACT
This study aims to analyze the influence of information and communication technology (ICT) and business strategies on business performance in small and medium enterprises. This research is quantitative, descriptive survey that uses SEM methodology. Data collection is carried out in small and medium enterprises that have a workforce of 5-19 people for small businesses and 20-99 people for medium-sized businesses. Second, small and medium enterprises have assets of 50 million-500 million rupiah for small businesses and more than 500 million to 5 billion rupiah for medium-sized businesses. The number of samples is 250. The results of the study were processed using LISREL 8.80, in the model and hypothesis testing. The results of this study prove that small and medium enterprises are more open in responding to the rapid development in the field of information and communication technology to build competitive advantages against competitors.

Keywords: Information and communication technology (ICT); strategy business and business performance.
INTRODUCTION

Research Background
Globalization in a rapidly changing business environment has an impact on many companies in maintaining their competitiveness. Management strategy reveals that technology, information and communication and innovation are sources for productivity and give birth to competitive advantages for the sustainability of company growth (Ramli, 2010; Chen, et al., 2015). Communication and information technology is a challenge for companies to effectively create business processes to excel in the front of competitor (Ramli, 2012a). Information and communication technology is the key to the company’s success (Tarute, et al., 2014; Ramli, 2012b; Ramli, 2013).
Small and medium enterprises need to increase sustainable business to survive in a changing and uncertain environment (Rostek, 2012). Small and medium enterprises are playing a role in creating jobs, tax contributions and human resource developers (Parnel, et al., 2015).
Phenomena and problems are small and medium enterprises affected by the rapid development of communication and information technology, both from internet networks, associated with the reduction of communication costs and customer relations (Benitez, et al., 2010; Ramli & Sjahruddin, 2015), so that small and medium enterprises must the adoption of communication and information technology for the use of computers, the internet in buying and selling and in innovative products in order to maintain their business. Small and medium enterprises adopt communication and information technology as a business strategy to excel in front of competitors. Small and medium enterprises in Indonesia face obstacles such as working capital, low human resource capabilities and lack of technological knowledge (Sudaryanto, 2011), the next obstacle is internal (individuals and organizations) and from external : market, technology, industry, government regulation (Ramli, 2016a; Ramli, 2016b).
This study emphasizes the need for information and communication technology (ICT) and business strategies towards the performance of small and medium enterprises in creating competitive advantages and fulfilling market desires, innovative products, can increase
sales growth, on-time orders, e-commerce (Sudaryanto, 2011; Khan, S. et al., 2014; Chen, et al., 2015). This study will fill the gaps of previous studies.

**Formulation of Research Problems**

The formulation in the study can be detailed as follows:

1. Is there an influence of information and communication technology (ICT) on business performance in small and medium enterprises.
2. Is there an influence of business strategy on business performance in small and medium enterprises.
3. Is there an influence of information and communication technology (ICT) and business strategies on business performance in small and medium enterprises.

**Purpose and Use of Research**

**Research purposes**

Based on the formulation of the problem above, the objectives of this study are:

1. Effect of information and communication technology (ICT) on business performance in small and medium enterprises.
2. The influence of business strategies on business performance in small and medium enterprises.
3. Effect of information and communication technology (ICT) and business strategies on business performance in small and medium enterprises.

**Benefits of research**

1. Contributions to leaders of small and medium enterprises (directors, managers and decision makers). The results of this study are expected to provide input, motivation in an effort to perfect the implementation of the production process, have a competitive business and integrate with the free market through information and communication technology (ICT) and business strategies.
2. This research is useful for academics in developing knowledge management strategies and information and communication technology (ICT).
LITERATURE REVIEW

Literature Review and Development of Hypotheses

Effect of information and communication technology (ICT) on business performance in small and medium enterprises.

Petrified Information and Communication Technology (ICT) facilitates the daily activities of small and medium enterprises (Yunis, et al., 2017; Sciacia, et al., 2006)), encourages the use of computers, improves learning and provides better teaching methods and innovative. This includes providing convenience in communication and information dissemination (Cross, 2004), helping to improve the effectiveness and efficiency of work procedures and reduce human error (ICT) to help small and medium businesses in quality products and facilitate communication with customers to provide customer loyalty (Zhou, 2010), so as to improve business performance.

H1: There is an influence of information and communication technology (ICT) on the performance of small and medium enterprises.

The influence of business strategies on business performance in small and medium enterprises.

The influence of business strategies on performance in small and medium enterprises is competitive in terms of price, quality, marketing in meeting market needs and being able to excel in front of competitors (Perrot, 2015; Chan et al., 1997). Companies implementing business strategies produce business performance (Gallego et al., 2011).

H2: There is a business strategy influence on business performance in small and medium enterprises.

Effect of information and communication technology (ICT) and business strategies on business performance in small and medium enterprises

Customer loyalty and encourage products that customers want and capture business opportunities to improve the performance of small and medium business enterprises (Zhou et al., 2010). ICT to reach existing businesses and to create new business in information and communication technology to improve business performance (Jones et al., 2003). ICT activities in the market are electronic uses, namely the internet as buying and
selling information, products and services through computer networks (Kalakota and Whinston, 1996), improving performance. The business strategy in small and medium enterprises is to achieve competitive success in meeting market needs in improving performance (Valencia et al., 2010).

**H3:** There is an influence of information and communication technology (ICT) and business strategies on the performance of small and medium business enterprises.

**Conceptual Framework**

**Picture 1:** Conceptual Framework

**RESEARCH METHODS**

This study refers to descriptive survey research, namely research explaining the concepts and problems studied to determine characteristics and relationships between variables through collecting primary data in the field to explain the problems observed in descriptive studies. Survey data describes descriptions based on perceptions of response responses. Next is hypothesis testing, which is to test the effect of information and communication technology (ICT) and business strategies on business performance in small and medium enterprises.
Variable Measurement

The measurement scale used in this study is the interval measurement method in Likert. The scale of the Lertert is a method that approves attitude by agreeing or disagreeing with certain subjects, objects or events.

1) Strongly Disagree,
2) Disagree,
3) Neutral,
4) Agree,
5) Strongly Agree.

Sample population and data collection methods

The criteria of the study population are first, small and medium enterprises have a workforce of 5-19 people for small businesses and 20-99 people for medium-sized businesses. Second, small and medium enterprises have assets of 50 million-500 million rupiah for small businesses and more than 500 million to 5 billion rupiah for medium-sized businesses.

The sample size plays a role in estimating and interpreting the results of the study. The size of the appropriate sample size is in the range of 30 to 500 respondents (Sekaran, 2011). Anticipating a non-returnable questionnaire, a total sample of 250 is set. Of the 250 data collected all can be analyzed.

Respondents from the study were directors, managers and decision makers. The data used in this study are primary data in the form of perceptions from the president director, managers and decision makers obtained through filling out questionnaires or questionnaires.

Testing of Research Instruments

The research instrument testing was carried out by testing the validity and reliability to determine the validity and reliability of the instruments used. Tests of validity were carried out to determine the accuracy of a test instrument to perform its size function. A measuring instrument that has high validity will get a small error variant so that the collected data can
be trusted (Sugiyono, 2013). High instrument validity indicates the extent to which the data collected does not deviate from the description of the intended variable.

The results of the testing of ICT validity and business strategy on business performance show that all indicators are declared valid because $r > 0.3$ indicators have a greater correlation value. This means that all question items are valid.

Reliability test is used to witness the level of consistency of measurement results if repeated measurements of the same symptoms and measuring instruments are made. Reliability is to show that an instrument is reliable enough to be used as a data collection tool because the instrument is good. Reliability shows a level that is reliable, reliable (Arikunto et al., 2002). Reliability testing is used to assess the consistency of variables, where certain statements are summarized into total values for a construct (Hair et al., 2010). Reliability testing for each construct is done using the Internal Consistency Reliability Method technique. The reliability test results from each construct see the value of Cronbach’s Coefficient Alpha. Test reliability with Cronbach's Alpha, then each variable (latent) obtains cronbach's alpha value $> 0.7$ (Arikunto, 2002; 2006) means that the instrument can be said to be reliable. The results of reliability testing for each variable of this study can be seen:

**Table 1: The Result of Reliability**

<table>
<thead>
<tr>
<th>Validity and Reliability Construct &amp; Indicator</th>
<th>Standardized factor loadings</th>
<th>Cronbach’s Alpha</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT</td>
<td></td>
<td>0.938</td>
<td>Reliable</td>
</tr>
<tr>
<td>ICT 1</td>
<td>0.79</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>ICT 2</td>
<td>0.78</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>ICT 3</td>
<td>0.85</td>
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<td>Valid</td>
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<tr>
<td>ICT 4</td>
<td>0.86</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>ICT 5</td>
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<td></td>
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<td>ICT 6</td>
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<td>ICT 7</td>
<td>0.77</td>
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</tr>
<tr>
<td>ICT 8</td>
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<tr>
<td>ICT 9</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ICT 10</td>
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</tr>
<tr>
<td>ICT 11</td>
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<td></td>
<td>Valid</td>
</tr>
<tr>
<td>ICT 12</td>
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<td>Valid</td>
<td></td>
</tr>
<tr>
<td>ICT 13</td>
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<td></td>
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<tr>
<td>ICT 14</td>
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<tr>
<td>ICT 16</td>
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<td>ICT 17</td>
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<tr>
<td>ICT 18</td>
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<tr>
<td>ICT 19</td>
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<td>ICT 21</td>
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<table>
<thead>
<tr>
<th>Business strategy</th>
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<th>Reliable</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB 1</td>
<td>0.86</td>
<td>Valid</td>
</tr>
<tr>
<td>SB 2</td>
<td>0.86</td>
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</tr>
<tr>
<td>SB 3</td>
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</tr>
<tr>
<td>SB 4</td>
<td>0.72</td>
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</tr>
<tr>
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</tr>
<tr>
<td>SB 6</td>
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<td>Valid</td>
</tr>
<tr>
<td>SB 7</td>
<td>0.78</td>
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</tr>
<tr>
<td>SB 8</td>
<td>0.78</td>
<td>Valid</td>
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</table>

<table>
<thead>
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<tbody>
<tr>
<td>KB 1</td>
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</tr>
<tr>
<td>KB 2</td>
<td>0.72</td>
<td>Valid</td>
</tr>
<tr>
<td>KB 3</td>
<td>0.90</td>
<td>Valid</td>
</tr>
<tr>
<td>KB 4</td>
<td>0.86</td>
<td>Valid</td>
</tr>
<tr>
<td>KB 5</td>
<td>0.83</td>
<td>Valid</td>
</tr>
<tr>
<td>KB 6</td>
<td>0.82</td>
<td>Valid</td>
</tr>
<tr>
<td>KB 7</td>
<td>0.62</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Source: *the results of the questionnaire were processed with SPSS 22*

**Information:**

1. ICT is information and communication technology
2. SB is a business strategy
3. KB is business performance

**Data Analysis Method**

To analyze the data using SEM (Structural Equation Model) from a package called linear structural relationship or LISREL 8.80 in the model and hypothesis testing. Tests and measurements are carried out at the indicator level. The hypothesis tested is the model hypothesis. The measurement criteria to test the feasibility of the model is the goodness of fit statistics. Goodness of fit is measuring the suitability of the observation input
(covariance matrix or correlation) with predictions from the proposed model (Haryono & Wardoyo, 2012).

RESULTS AND DISCUSSION

Descriptive statistics

Descriptive statistical testing explains descriptively and in detail to describe the characteristics of the data, which are seen from the average value and standard deviation (SD) to explain the variation of the respondent's answers.

The variable information and communication technology (ICT) is 3.86 for standard deviation (SD). This shows that in general respondents or small and medium business actors perceive information and communication technology (ICT) to be high.

The business strategy variable is 3.67 for standard deviation (SD). This shows that in general respondents or small and medium business actors perceive business strategies as important.

The business performance variable is 3.66 for standard deviation (SD). This shows that in general respondents or small and medium business actors perceive business performance to be quite increasing.

RESULTS OF HYPOTHESIS TEST

<table>
<thead>
<tr>
<th>Hipothesized path</th>
<th>Standardized Path coefficient</th>
<th>t-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Information and communication technology (ICT) → Business Performance</td>
<td>0.67</td>
<td>6.09</td>
<td>H1 Accepted</td>
</tr>
<tr>
<td>H2: Business Strategy → Business Performance</td>
<td>0.27</td>
<td>4.26</td>
<td>H2 Accepted</td>
</tr>
<tr>
<td>H3: (ICT), Business Strategy → Business Performance</td>
<td>0.68</td>
<td>7.70</td>
<td>H3 Accepted</td>
</tr>
</tbody>
</table>
CONCLUSION

This research is intended to find out a general description of the influence of information and communication technology (ICT) and business strategies on the performance of small and medium business enterprises. Based on the results of hypothesis testing it can be concluded as follows:

Information and communication technology (ICT) has an effect on business performance in small and medium enterprises that is positive and significant. The most dominant variable is (ICT) which suppresses the use of new technologies and new ideas. Small and medium enterprises are more open in responding to the rapid development in the field of information and communication technology to build competitive advantages against competitors. The creative process that explores new technologies to create added value for customers will encourage small and medium enterprises to compete and excel in front of competitors.

It is evident that there is a positive and significant influence of business strategy on business performance in small and medium enterprises. Business strategies have a competitive advantage to win competition, market profits and opportunities and sustainable business.

It is evident that there are positive and significant effects of information and communication technology (ICT) and business strategies on business performance in small and medium enterprises. Information and communication technology (ICT) and business strategies have the ability to deal with threats, can adapt to markets, apply new ideas and create innovative new products so that customers become loyal and improve business performance in small and medium enterprises.

Theoretical Implications

This research found that there were significant positive impacts together with information and communication technology (ICT) and business strategies on business performance in small and medium enterprises. The implication is that if it will improve business performance in small and medium-sized businesses, it is necessary to improve the information and communication technology (ICT) and business strategies that provide a
major influence in communication, information and internal administration on business performance.

**Managerial Implications**
This study found that information and communication technology (ICT) and business strategies have a positive and significant effect on business performance in small and medium enterprises. Given that information and communication technology is not ready to use, it is important for small and medium businesses to recognize the workings offered by internet applications so that they can be explored according to the desired business strategies and processes. Business strategies in small and medium enterprises in reaching a wider market and can reduce costs compared to traditional sales and purchasing techniques.

**Limitations Of Research**
The research is quantitative with survey methods and the data retrieval process takes place in a short time so that it refers to the information and communication technology (ICT) process and business strategy in its use in small and medium enterprises widely, routinely, and organized.
This research only on small and medium enterprises does not include large businesses so that it has not been able to provide a more comprehensive picture of information and communication technology (ICT) and business strategies in Indonesia.

**Advice And Research**
Based on empirical findings obtained, then at the end of this study so that small and medium enterprises must have the ability to recognize work methods, requirements in information and communication technology (ICT) and business strategies in accordance with the desired business process strategy. Small and medium businesses must learn in developing innovative products and making sales and purchases online to maintain their business. Small and medium businesses must strive as a pioneer or the first in introducing new products or services, anticipating competitors in terms of the use of new technologies, trying not to lag behind as demanded by customers.
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