Sustainability Innovativeness Agility as an Intervening Variable in the Managerial Competence to Business Performance Relationship of a Family-Owned Company

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This study aims to understand the phenomenon of low business continuity to the next generation, and answer the research gap from previous research on the effect of managerial competence towards the business performance in family companies. This study also proposed and examined the novelty of sustainability innovativeness agility. The respondents were selected through a purposive sampling method from a population of retail traders and distributors based on a monthly turnover criteria of reaching more than USD $38,500 (Sekaran, 2008). The questionnaires were distributed through enumerators, who directly interviewed the traders and retailers. Although 243 respondents were interviewed, only 239 resulted in feasible questionnaires. This study investigated the relationship between five variables, and the endogenous variable of business performance. The managerial competence variable was measured by five indicators; the business performance variable was measured with four indicators; the business operation satisfaction variable was measured against three indicators; and the sustainability innovativeness agility variable was assessed against three indicators. The data processing was completed through a structural equation model, assisted by the IBM AMOS software version 22.0. The results evidenced the hypothesis in the previous research gap; the relationship between managerial competence, and business performance was able to be formed with the new concept of sustainability innovativeness agility, as an intervening variable. Based on the statistic calculation, the estimation value was 0.261, the CR value was 4.072, and the p-value was 0.000. These results enforced several implications for family-owned companies. If the companies continue to grow the business
performance, and improve their competitiveness, rather than rely on managerial competence, they should consider the sustainable innovativeness agility.

**Key words:** Sustainability innovativeness agility, Managerial competence, Business performance, Family-owned company.

**JEL Classification:** M1, O3

**Introduction**

The results of previous studies into family-owned companies revealed that in Asia, the Middle East, and the European countries of Italy, and Spain, family businesses reached 95 per cent of Gross Domestic Product (GDP). Meanwhile, in other European countries, such as France, and Germany, family businesses ranged from 60–70 per cent, similar to the context of the United States (Kets de Vries, & Carlock, 2007). The results of another study conducted by Gimeno et al. (2010) showed that only 30 per cent of family businesses could survive into the second generation. Furthermore, those who survived to the third generation were decreased at ten per cent. However, if it could survive until the third generation, the business would be more stable. A different study conducted by the Family Company Institute explained it more clearly. The relay of business management to the next generation is not easy because from the whole family companies, as the respondents, 30 per cent were successfully developed by the second generation, 12 per cent survived until the third generation, and only three per cent survived until the fourth generation (Hall, 2008). Both studies illustrated that the transition of the next generation was not easy due to potential business leaders having managerial capacities in the future.

The failure in the continuity of the family company, which was developed until the next generation, was caused by many variables, including the inability of the previous generation to comprehend the managerial competencies of their successors (Boyatziz & Soler, 2012; Sharpe, 2014). Moreover, the findings of the study conducted by Soedibyo (2007) confirmed the importance of the next generation competency factor, which is chosen as the successor of leadership. Thus, the sustainability of the family company’s performance might continue to be developed. It was supported by the finding that the developed, and large companies in Indonesia remain at a lower level in preparing managerial development, which is related to a relatively small succession, at 30 per cent (Susanto et al., 2008; Suseno et al., 2019).

Besides the evidences of low managerial competence which caused the low sustainability of family companies in Indonesia, the researchers of family companies did not seem to have the same opinion on the effect of managerial competence in business performance. It was shown
in the findings proposed by Bharwaj and Punia (2015), and Motwani (2016), and which were supported by the study of Sultan et al. (2017), showing that managerial competence in non-family companies has a significant effect on the business performance above the family-owned companies that do not consider the importance of managerial competence, and still maintain the harmony in both family and business compromise.

Meanwhile, a number of other researchers have argued differently, with the evidence of their findings showing that managerial competence in family-owned companies has a positive effect on business performance (Lotto, 2013; Neff, 2015; Rambe & Makamele, 2015; Aslan & Pamukcu, 2017).

This study aims to explain the phenomenon of low business continuity to the next generation, and answer the research gap from previous research on the effect of managerial competence upon the business performance in family-owned companies, which through the literature investigations, is to be synchronised into a novelty. The potential of novelty is to improve the performance of the family companies after generation transitions, and conceptually enable enrichment, and contribution in the fields of management, human resource management, family-owned companies, and entrepreneurship governance.

Theoretical Framework

Business Sustainability

A proven business model enables the strengthening of business sustainability through the sharing of resources, which fulfils an important role in the mediating market (Upward & Jones, 2015; Siew, 2015; Gyula, 2016). Although the condition was acknowledged by Miller (2011), and Montiel and Delgado-Ceballos (2014), who collectively found difficulty in measuring business sustainability due to its long-term nature, there was evidence that business could be maintained from various competitive threats, and business environment changes. Yu and Zhao (2015), along with by Geissdoerfer et al. (2018), argue that predictive capabilities could rapidly enable the changes in new business models to continue having sustainable competitive advantages, which is very important for family companies. Furthermore, founded on the results of 50 journals, and regarding co-operation sustainability, Swarnapali (2017) identified and applied typology, extensions, adjustments, and design principles to a sustainable business model, which showed that a company could sustain the organisation's business model innovation, if it continued to adapt to the aspects of the economic, social, and ecological.
Innovativeness

Various studies on innovativeness, including by May and Shao (2016), and Li et al. (2019), have highlighted that innovation can reduce the use of resources, and operating economics can be optimised. Therefore, it is important to have innovation, so that business growth is sustainable. Based on the research fields which were determined by scholars, the topics that are relevant to innovation include: consumer responses to the innovations created; industrial revolution product development; market entry strategies; portfolio management; prescriptive product development; market retention strategies; customer input accuracy; web marketing communication; survival strategies; and the complexity of managing product lines over time (Hauser, 2006; Glemarec & de Oliveira, 2012; Jiang, et al., 2018). The other evidence showed that business innovation has an impact on the sustainability of performance development, especially sales and profits that are greater than non-innovator companies, if government policies and legal certainty are considered to be consistent (Yang, 2016; Belitski et al., 2016).

Agility Theory

Nowadays, agility theory is widely recognised by scholars of organisational development, and strategic changes. For example, Wendler (2014), and Ozaki et al. (2015) state that every business organisation will always face competition in its business environment. In order to win the competition, the organisation needs to have agility in operational management and development. Holsapple and Li (2018), and Nejatian et al. (2018) argue that agility also needs to be distributed through the authority of the organisational hierarchy, so that it is always dynamic and flexible in adjusting the design for each job.

Thus, when the process of change is about to begin, agility has a role to strengthen the team, making adjustments and anticipating the possibility of negative effects that reduce the success of the changes (Dyer & Ericksen, 2007; Teece et al., 2013; Wufka & Ralph, 2015).

Based on the three theories that have been described above, a novelty in this study is then summarised as an intervening variable, namely sustainability innovativeness agility, which intends to bridge the research gap from previous studies on the relationship between managerial competence, and business performance. Sustainability innovativeness agility is positioned as the agility of family company managers to innovate and transform organisational change on an ongoing basis, facing competitive dynamics. Moreover, sustainability innovativeness agility will potentially increase the business performance towards family companies.
Development of Hypothesis and Empirical Model

Relationship between the Managerial Competence and Business Performance of Family-Owned Companies

A discussion regarding the relationship between managerial competence, and business performance begun when exploring the research gap between both variables. The observation on the relationship, of course, will be developed by providing a review from other researchers, so that the study obtains a stronger justification. Based on the evidence presented by Ismail et al. (2014), Sidek and Muhammad (2014), and Veliu and Manxhari (2017), managerial competence with generic, technical, and conceptual skills dimensions, has a positive impact on the performance growth of small businesses. Other evidence was argued from the perspective of large companies, with the evidence of a significant relationship between managerial competence, and optimising human resources (Abbaszadeh et al., 2012; Parl, 2013; Hawi, 2015). Based on the various literature regarding the relationship between managerial competence, and business performance, the following hypothesis is proposed:

H1: The higher the managerial competence, the higher the business performance will become.

Relationship between Managerial Competence and Sustainability Innovativeness Agility

The relationship between these two variables refers to the result of a previous study, which stated there was a significant relationship between managerial competence, and innovation capability at the company level (Wickramasinghe & De Zoyza, 2011; Idris et al., 2015). Other evidence was based on the innovation capability hierarchy framework, which was well adapted in the business competition environment, leading to performance excellence, and which was strongly influenced by knowledge management capabilities, and information technology support (Wasselink et al., 2015; Teimori et al., 2017). In a slightly different context, Leal-Rodriguez et al. (2016), Saha et al. (2017), and Appelbaum et al. (2017) tried to present a different perspective, with evidence that the agility of an organisation in updating its operational methods is influenced by the competencies presented by each manager, and in teams (Sidek & Muhammad, 2014; Veliu & Manxhari, 2017).

H2: The higher the managerial competence, the stronger the sustainability innovativeness agility will become.

Relationship between Managerial Competence and Business Operation Satisfaction

Various literature studies were conducted to justify the relationship between these two variables, among others, through evidence that compliance in the team with customer-focussed
competencies has a positive effect on job satisfaction in carrying out the organisational procedures (Sanda, 2011; Othman & Jaafar, 2013; Fink, 2014). Furthermore, Wang (2013), and Lawicka and Sitko-Lutek (2016) provided evidence from the managers’ experience as practitioners, where their competencies had a strong influence on the targets’ achievement successfulness, and job satisfaction. Another argument under study found the key competence of a manager can influence the consistency of the company's operational innovations to meet customers demand (Szczepańska-Woszczyńska & Dacko-Pikiewicz, 2014; Young & Conboy, 2013).

**H3:** The higher the managerial competence, the higher the business operation satisfaction will become.

**Relationship between Business Operation Satisfaction and Sustainability Innovation Agility**

According to Ross et al. (2006), and Dieguez-Soto et al. (2016), four business operation models, namely diversification, coordination, replication, and unification, have been proven to have an effect on the innovative performance in large-scale manufacturing companies. Especially, in taking strategies relating to the variations of the attributes owned, according to the performance demands, which should be realised by the manager (Harraf et al., 2015; Tou et al., 2019). The company's operations unexpectedly face the effects of obsessive information technology, and research and development, which are proven to have an excessive effect on either productivity reduction or disruption in meeting the digital economy customers’ demands (Schmid et al., 2014; Naruge, 2018; Tou et al., 2018).

**H4:** The higher the business operation satisfaction, the higher the sustainability innovation agility will become.

**Relationship between Business Operation Satisfaction and Business Performance**

The business operation satisfaction could be matched with employee satisfaction, considering that in previous studies there were not many scholars who provided comprehension on the business operation satisfaction through in-depth research. By investigating and obtaining the evidence from various industries with high service demands, it is known that employee satisfaction has an effect on operational performance, and company profit (Williams & Naumann, 2011; Kalkan, 2018). However, the companies must understand the latent needs of stakeholders, in order to continue improving superior performance. The satisfaction of stakeholders can significantly strengthen market orientation, and business performance. The studies conducted by Jyoti and Sharma (2012), Mafini (2013), and Latif et al. (2015), and Mafini and Pooe (2013), which were also supported by Bakotić (2016), provided evidence of
a strong and significant relationship between the satisfaction level with market, and financial growth performance.

**H5:** The higher the business operation satisfaction, the higher the business performance will become.

**Relationship between Sustainability Innovation Agility and Business Performance**

Several research studies, including those by Wirtz et al. (2016), Wells (2016), and Rajapathirana and Hui (2018), verified that sustainable innovation was effectively confirmed to improve excellent company performance. Other evidence found that the management ability which consistently innovates, would quickly adapt to new business processes, and it has an effect on the continuity of competitive advantage, and improved organisational performance (Gloet & Samson, 2016; Geissdoerfer et al., 2018; Suseno et al., 2019). Besides that, the previous studies conducted by Maletic et al. (2014), Cheng (2014), and Zhang et al. (2019), showed that innovation competence, and the integration of innovation activities in every organisational function were empirically proven to improve the organisational performance.

**H6:** The higher the sustainability innovation agility, the higher the business performance will become.

Based on the development of the hypothesis as described, the empirical model offered in this study is shown in Figure 1.

**Figure 1. Empirical Model**
Methods

The respondents of this study were the owners of the family companies of retailers and distributors, which are the main business located in the largest traditional markets in eight regencies or cities in the Banten Province. They have similar characteristics among the traders and distributors in the traditional markets located in Java Island, Indonesia. The eight traditional markets were the Rau market in Serang City, Pandeglang market in the Pandeglang District, Rangkasbitung market in the Lebak District, Balaraja market in the Tangerang District, Lama market in Tangerang City, and Ciputat market in South Tangerang City. The selection of the respondents was completed using a purposive sampling method, and was taken from the population of retail traders and distributors, and based on a monthly turnover criteria of more than USD $38,500 (Sekaran, 2008). The questionnaires were distributed through enumerators, who directly interviewed traders and retailers. The interviews were conducted at a duration of two hours, and because it took 45–60 minutes for each respondent, the time was chosen when there were less buyers. We interviewed 243 respondents, and then processed 239 feasible questionnaires. In this study, the relationship between five variables and sustainability innovation agility, as a proposed novelty, will be tested. Moreover, they also acted as an intervening variable between the managerial competence, and business performance variable. The managerial competence variable was measured by five indicators; the business performance variable was measured by four indicators; the business operation satisfaction variable was assessed with three indicators; and the sustainability innovativeness agility variable was measured with three indicators. The data processing was completed using a structural equation model, which was assisted by IBM AMOS software version 22.0.

Results

Respondents’ Descriptions

An overview of the sample of 239 respondents can be deconstructed as follows. The highest frequency based on gender was men, consisting of 159 respondents (66.5 per cent), with the remaining 80 respondents being women (33.5 per cent). Based on the education level, the majority of respondents had a high school education, at a rate of 129 respondents (54 per cent), 42 (17.6 per cent) respondents had a diploma or undergraduate education, 30 (12.6 per cent) respondents had a junior high school education, 24 (10 per cent) respondents had an elementary school education, and only 14 (5.9 per cent) respondents had a post-graduate education. Based on their marriage status, 186 (77.8 per cent) respondents were married, and 53 (22.2 per cent) respondents were unmarried. Furthermore, based on their business status, the majority of respondents had just started their own business, at a rate of 199 respondents (83.3 per cent), 32 (13.4 per cent) respondents had inherited a business, and only eight (3.3 per cent) respondents had bought or taken over another business. Based on their age, the lowest age of the respondents
was 18 years, and the highest age was 71 years, with the average being 36.3 years. Meanwhile, the shortest business running period was one year, and the longest business running period was 45 years, with the average being 7.56 years.

**Model Test**

**Reliability Test**

Reliability is a measure of the internal consistency of a construct indicator, which indicates the degree to which each indicator highlights a general construct or latent factor (Ghozali, 2011, p.232). The cut-off value of the construct reliability is >0.7, while the variance extracted is >0.5. According to Ghozali, the construct reliability formula (2011, p.233) is as follows:

\[
\text{Construct – Reliability} = \frac{(\sum \text{Std. loading})^2}{(\sum \text{Std. loading})^2 + \sum \varepsilon_j}
\]

Noted:
- Standard loading is obtained directly from the standardised loading for each indicator, where the Lambda value was generated by each indicator.
- \(\varepsilon_j\) is the error measurement of each indicator.

The variance extracted formula according to Ferdinand (2011, p.234), is as follows:

\[
\text{Variance Extracted} = \frac{\sum \text{Std. Loading}^2}{\sum \text{Std. Loading}^2 + \sum \varepsilon_j}
\]

Noted:
- Standard loading is obtained directly from the standardised loading for each indicator, where the Lambda value was generated by each indicator.
- \(\varepsilon_j\) is the error measurement of each indicator.

The results of the construct reliability, and variance extracted showed that the construct reliability of managerial competence was 0.883, the construct reliability of business operation satisfaction was 0.861, the construct reliability of sustainability innovativeness agility was 0.886, and the construct reliability of business performance was 0.877. Moreover, all latent variables met the cut-off value criteria of >0.60. Furthermore, the variance extracted of managerial competence was 0.602, the variance extracted of business operation satisfaction was 0.676, the variance extracted of sustainability innovativeness agility was 0.722, and the
The variance extracted of business performance was 0.643. Moreover, all latent variables met the cut-off value of >0.50. Thus, the conclusion was that all the latent variables achieved the reliability criteria.

**Conformity Test and Empirical Model Test**

**Absolute Fit Measures**

Absolute fit measures are measures used to determine how well the model established in the study is able to produce the data observed. Based on the result, the model was fit, since it met the test index based on the required rule of thumb. Thus, the model could be empirically tested; there was compatibility with the data used in this study. The measure used was based on the type of absolute fit measures, as explained in Table 1.

<table>
<thead>
<tr>
<th>Goodness of Fit Index</th>
<th>Cut-off Value</th>
<th>Estimation</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Fit Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \chi^2 )-Chi-square</td>
<td>134.559</td>
<td>106.39</td>
<td>Not Fit</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>( \leq 2.00 )</td>
<td>1.602</td>
<td>Fit</td>
</tr>
<tr>
<td>Probability</td>
<td>( \geq 0.05 )</td>
<td>0.000</td>
<td>Not Fit</td>
</tr>
<tr>
<td>RMSEA</td>
<td>( \leq 0.08 )</td>
<td>0.050</td>
<td>Fit</td>
</tr>
<tr>
<td>GFI</td>
<td>( \geq 0.90 )</td>
<td>0.929</td>
<td>Fit</td>
</tr>
</tbody>
</table>

**Incremental Fit Measures**

Incremental fit Measures were intended to assess how well the model estimated by the researchers compared to several alternative models. The several measures used are noted in Table 2.

<table>
<thead>
<tr>
<th>Goodness of Fit</th>
<th>Cut-off Value</th>
<th>Estimation</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental Fit Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGFI</td>
<td>( \geq 0.90 )</td>
<td>0.899</td>
<td>Acceptable</td>
</tr>
<tr>
<td>TLI</td>
<td>( \geq 0.95 )</td>
<td>0.971</td>
<td>Fit</td>
</tr>
<tr>
<td>CFI</td>
<td>( \geq 0.95 )</td>
<td>0.977</td>
<td>Fit</td>
</tr>
<tr>
<td>NFI</td>
<td>( \geq 0.95 )</td>
<td>0.941</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>
Causality Test

The results of the full Structural Equation Modelling output are presented in Table 3.

### Table 3: Regression Weight of Full Model Hypothesis Testing

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Operational Satisfaction &lt;--- Managerial Competence</td>
<td>0.534</td>
<td>0.074</td>
<td>7.224</td>
<td>***</td>
<td>significant</td>
</tr>
<tr>
<td>Sustainability Innovativeness Agility &lt;--- Managerial Competence</td>
<td>0.310</td>
<td>0.123</td>
<td>2.524</td>
<td>0.012</td>
<td>significant</td>
</tr>
<tr>
<td>Sustainability Innovativeness Agility &lt;--- Business Operational Satisfaction</td>
<td>0.394</td>
<td>0.123</td>
<td>3.198</td>
<td>0.001</td>
<td>significant</td>
</tr>
<tr>
<td>Business Performance &lt;--- Sustainability Innovativeness Agility</td>
<td>0.261</td>
<td>0.064</td>
<td>4.072</td>
<td>***</td>
<td>significant</td>
</tr>
<tr>
<td>Business Performance &lt;--- Managerial Competence</td>
<td>0.348</td>
<td>0.105</td>
<td>3.332</td>
<td>***</td>
<td>significant</td>
</tr>
<tr>
<td>Business Performance &lt;--- Business Operational Satisfaction</td>
<td>0.352</td>
<td>0.106</td>
<td>3.333</td>
<td>***</td>
<td>significant</td>
</tr>
</tbody>
</table>

The empirical model testing was done by testing the model developed hypotheses. If the value of the critical ratio (CR) was > 1.96, and the p-value was <0.05, then H0 was rejected, and H0 was accepted, if the value of the critical ratio was <1.96, and the p-value was >0.05.

**Discussion**

The results of the *first hypothesis* obtained an estimated value on the effect of managerial competence on business performance of 0.348, the CR value was 3.332, and the p-value was 0.000. The result can conclude that managerial competence has a significant positive effect on business performance, and at a significance level of five per cent. The result is in line with the studies from scholars who diligently examined the relationship between managerial competence and business performance, including those by Hawi (2015), Sidek and Muhammad (2014), and Veliu and Manxhri (2017). The result of this study is not in line with the studies conducted by Parl (2013), and Hawi (2015), as both stated that managerial competence does not have a significant effect upon business performance.

The *second hypothesis* acquired that the estimated value on the effect of managerial competence on sustainability innovation agility was 0.310, the CR value was 2.2524, and the p-value was 0.012. Based on the results, managerial competence has a significant positive effect on sustainability innovativeness agility, and at a significance level of five per cent. The result of this study confirmed the study findings of Wasselink et al. (2015), and Teimori et al. (2017).
The third hypothesis found the estimated value on the effect of managerial competence on business operation satisfaction was 0.534, the CR value was 7.224, and the p-value was 0.012. Regarding the values, managerial competence has a significant positive effect on business operation satisfaction, and at a significance level of five per cent. The result of this study confirmed a similar perspective, as stated by Othman and Jaafar (2013), and Fink (2014).

The fourth hypothesis had an estimated value on the effect of business operation satisfaction on sustainability innovativeness agility of 0.394, the CR value was 3.198, and the p-value was 0.001. The result explained that business operation satisfaction has a significant positive effect on the sustainability innovativeness agility, and at a significance level of five per cent, which supported the arguments and findings of Naruge (2018), Tou et al. (2019), and Suseno (2019).

The fifth hypothesis mentioned the estimated value on the effect of business operation satisfaction on business performance was 0.394, the CR value was 3.198, and the p-value was 0.000. Based on these results, business operation satisfaction has a significant positive effect on business performance, and at a significance level of five per cent. It supports the evidence of previous studies conducted by Latif et al. (2015), Mafini and Pooe (2013), Bakotić (2016), and Suseno and Dwiatmadja (2016).

The sixth hypothesis obtained an estimated value on the effect of sustainability innovativeness agility on business performance of 0.261, the CR value was 4.072, and the p-value was 0.000. The results explained that sustainability innovativeness agility has a significant positive effect on business performance, and at a significance level of five per cent. This result is in line with the result of previous a study conducted by Geissdoerfer et al. (2018), as well as the studies of Maletic et al. (2014), Cheng (2014), and Zhang et al. (2019).

Conclusions

This study proved the hypothesis that the previous research gap on the relationship between managerial competence, and the business performance could be connected by the new concept of sustainability innovativeness agility, as an intervening variable. The estimated effect was 0.261, the CR value was 4.072, and the p-value was 0.000. These results have implications for family-owned companies. If the companies continue to grow the business performance, and to improve their competitiveness, rather than only rely on managerial competence, they should consider the agility for sustainable innovation.

Future Research Agenda

The recommended absolute goodness of fit (AGFI) value was known at ≥0.90. This study indicated an AGFI value of 0.899, which was included in the ‘less strong’ category. Thus, it is
recommended that future studies re-examine the role of the sustainability innovativeness agility variable in various family, and non-family business organisations.
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Suseno, Bambang Dwi; Yusuf, Furtasan Ali; Suharno. (2020),


