Business Models and Competitiveness: Innovation Practices in Digitalising Small and Medium Enterprises in South Sulawesi, Indonesia

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The increasing dynamism of the business environment requires strategic cooperation and partnerships for both medium-sized companies, and small and medium enterprises (SMEs). The purpose of this paper is to analyse how business networks, and government policy support affect digitalisation innovation and competitive advantage in SMEs in South Sulawesi, Indonesia. Quantitative methods are used to test the effect between the variables. The data was obtained from primary sources by using a questionnaire distributed to 136 SMEs’s owners. The data were analysed by using descriptive statistics with structural equation modelling techniques. The research findings explain that business networks and government policy support can increase digitalisation innovation, so that digitalisation innovation can increase competitive advantage. However, business networks and government policy support do not significantly affect competitive advantage. The practical implications of this research include useful information for SMEs to evaluate business networks and government policy support to encourage digitalisation innovation and competitive advantage, as well as suggesting future researchers to compare competitive advantages with other provinces.

Keywords: Business networking, Government policy support, Innovation, Competitive advantage.
Introduction

The increasing dynamism of the business environment requires strategic cooperation and partnerships for both medium-sized companies, and small and medium enterprises (SMEs). The resources owned by the company aim to create value and form partnerships to develop digitalisation innovation and increase competitive advantage. For example, collaboration or collaboration in technical and non-technical aspects (Di et al., 2021). The digitalisation innovation and the competitive advantage of SMEs are priority issues in Indonesia because the central and local governments have prioritised the sector and carried out structural empowerment (Ardito et al., 2021).

The widening competitiveness gap between the South Sulawesi Province and the provinces in Java, and Sumatra, based on data from the Central Statistics Agency in 2019, noted that national growth was dominated by the islands of Java and Sumatra with a contribution of around 80 per cent (Putra & Santoso, 2020). Thus, it is a strong indication that the competitiveness of SMEs in several regions is relatively low, especially in the South Sulawesi Province, which is in fourth place, as a region with growth in the number of national micro, small, and medium-sized enterprises (MSMEs). Therefore, the competitiveness of MSMEs in South Sulawesi is relatively low compared to other regions in Java. Furthermore, assessing national statistical data, the contribution of SMEs is very low compared to the total gross domestic product (GDP). The economic growth of the South Sulawesi Province grew by 7.2 per cent (Badan Pusat Statistik, Sulawesi Selatan, 2018).

According to Talwar et al. (2020), digitalisation innovation and SME competitive advantage are essential for the success and sustainable development of SME businesses. According to Hevner and Gregor (2020), digitalisation innovation and competitive advantage are influenced by business networks. Cooperative relationships or entrepreneurial business networks have developed over time, marked by a high level of mutual trust and commitment between SME partners. This condition is becoming clearer in the SME sector, as many enterprises are micro, geographically fragmented, and interdependent, with limited resources and very high business uncertainty. This collaboration between SMEs can strengthen decision quality, overcome internal barriers, strengthen bonds between SME owners, and offer a digital platform to develop collaboration and business networks, both formally and informally, so that SMEs are characterised as business networking systems (Bouwman et al., 2019; Gupta et al., 2019; Ghezzi & Cavallo, 2018).

Digitalisation creates new opportunities and innovations for SMEs, making it possible to develop resources by adopting digitalisation innovations (Caputo et al., 2021). Another advantage of digitisation is access to new markets and resources based on e-commerce, and cloud and smartphone applications that facilitate an unlimited number of business activities (Mubarak et al., 2020). Smartphone penetration in Indonesia and in South Sulawesi continues
to increase every year, so that digitalisation innovation is a leveling up for SMEs. This positive trend is a reference for the Government in formulating the right policies. Digitalisation innovation also encourages domestic and regional economic growth and presents regulatory challenges for local governments and increases tax revenues (Ayuning et al., 2020; Minh et al., 2020).

The characteristics of the SME business require that they interact with consumers and partners by using a collaborative network to provide and offer products or services with the maximum possible value. Wang and Chung (2020) emphasised that business networks in the SME sector are very important especially digital-based business networks and providing a source of sustainable competitive advantage. The Indonesian Business Competition Supervisory Commission predicts significant growth in the use of digital technology for SMEs, as well as a projected revenue growth of 80 per cent (Etriya et al., 2019).

Various previous studies, such as Travaglioni (2020), and Siedler et al. (2019), explain that digitalisation innovation and competitive advantage in developing countries are very dependent upon government policy support. The central and local governments have prioritised policies that empower SMEs and increase their competitiveness. The Government’s special attention to SMEs is needed because in general, SMEs are only able to produce products or services, and face difficulties competing in innovation strategies (Woodard, 2020). Henderson (2020) states that in times of crisis, the Government needs to provide preference to indirect support methods for SMEs operating as a sector. Moreover, government policy support can improve the performance and innovation of SMEs.

Literature Review

Business networks, digitalisation innovation, and competitive advantages

The incorporation of business networks into digitalisation innovation and into SME products, services, and operations has significant implications for SMEs’ efforts to achieve and maintain a competitive advantage (Möller et al., 2020). Traditional business models explain that competitive advantages, such as the resource-based theory or dynamic capabilities approaches, are based on assumptions that are less relevant in the digital environment. Digitalisation has radically changed the nature of products and services, value creation processes, and the competitive environment of companies (Aspara et al., 2020).

Small and medium enterprises can achieve a sustainable competitive advantage in today’s digitisation innovations. The business network-centred view describes a company’s ability to create structures that allow for interconnected business relationships. Tajeddini et al. (2020) describe a business network as a collection of entities that intensify communication together to achieve pre-planned goals. The highly competitive digitalisation business environment has implied that business networking among SMEs is essential for business success, mainly due to the dominance of several large companies in various market segments. Business networks can
be carried out between SMEs in the same type of industry or between SMEs from different industries (Smirnova, 2020).

Business networks enable SME collaboration and synergy despite the competitive digital technology environment. Ojansivu et al. (2020) explain that SMEs can achieve competitive advantage by actively shaping a digital environment, namely implementing business networks and digitalisation innovation, and creating shared value from interconnected SMEs on digital platforms. This digital environment can help SMEs to design and strategise the best business models to achieve and maintain a competitive advantage in the digital economy (Leon et al., 2020). Based on the discussion above, the study proposes:

H1: The business network has a positive relationship with digitalisation innovation.
H2: The business network has a positive relationship with the competitive advantage.

Government policy support, digitalisation innovation, and competitive advantage

Small and medium enterprises have become an instrumental component in GDP in developing countries. A study by Westman et al. (2020) examines the relationship between government policy support and digitalisation innovation and competitive advantage. The study describes the role of government policy support in providing the right scheme to increase innovation and the competitiveness of SMEs. The activities of SMEs in developing countries are based on needs, so government policy support for SMEs varies from country to country based on variations in the cultural and social values. Veronica et al. (2019) specifically argue that support for government policies and bureaucratic procedures can hamper but simultaneously facilitate SME activities, such as empowering SMEs through digitalisation innovation (Aliu et al., 2019).

Government policy support can occur in the form of policies that can encourage and support the growth of digitalisation. The implementation of policies for the empowerment of SMEs in fact faces common problems, such as the development and implementation of government policies at the local government level. Digitalisation innovation and competitive advantage require long-term commitment from the Government (Groot et al., 2018). However, in reality, policy making is often temporary and political. Government policy support in developing countries aims to achieve a strategic business model that is capable of creating sustainable growth for SMEs. The policymakers in government are trying to find a balance between stimulating foreign investment, while at the same time, trying to create the right business environment and proportionally maintaining and developing SMEs in the digital market (Veronica et al., 2019). From the discussion above, the study suggests:

H3: Government policy support has a positive relationship with digitalisation innovation.
H4: Government policy support has a positive relationship with competitive advantage.
**Digitalisation innovation and SME competitive advantage**

Digitalisation, on the one hand, becomes an output, and on the other hand, is a source of innovation. Small and medium enterprises are not only drivers of digitalisation innovation (Nambisan et al., 2019), but are also entities affected by digital transformation. The digitalisation innovation system is considered a meta-system for entrepreneurial activities, as well as a driver for the use of digital opportunities. Digitalisation innovation is a process and outcome associated with the formation of new businesses or transforming existing businesses with new ways of creating value, which increases competitive advantage. Digitalisation innovation is essential for innovative and sustainable development. Considering digitisation innovation is essential to understanding its potential impact upon competitive advantage (Kollmann et al., 2019).

Digital technology not only generates business opportunities, but it can be disruptive because in reframing the SME business model, digital technology has had an impact on various levels of innovation systems that reshape industrial competition (Suseno et al., 2018). The integration of digitalisation in the SME business process does not only have an impact on internal changes but is also related to the entrepreneurial process. It is imperative to understand the totality of the mechanisms of digital entrepreneurship with respect to its role in digitalisation innovation, especially its impact on competitive advantage. It covers the changing patterns of communication and interaction engagement of innovation agents, assessment of opportunities, and consideration of resources, as part of a continuous digitalisation innovation process. The results of research by Arvidsson et al. (2018) show interesting implications for business models and competitive advantage. This study specifically analyses the relationship between innovation and competitive advantage, revealing that digital transformation contributes in the long term to the value creation process.

**H5: Digitalisation innovation has a positive relationship with the competitive advantage.**

**Methodology**

This research uses quantitative methods by using statistical tests. In this study, data was collected through an explanatory survey approach. The research data comes from primary and secondary data. Primary data is obtained through a set of questionnaires, as a measuring tool, while secondary data is taken from literature and documents or reports related to the object of research. The population, as the sample in this study, were all SME entrepreneurs in the Gowa, Takalar, and Jeneponto Regencies. Referring to the Regional Statistical Report for the Regencies of Gowa, Takalar, and Jeneponto (2018), the data on the number of SMEs is presented as follows:
The questionnaires were distributed to targeted respondents. The total number of respondents was 136 respondents. This questionnaire consists of two parts. The first part contains the identification of the respondents’ profile, while the second part identifies the responses to all the research variables. Several of the research variables are business networks and government policy support, as independent variables, then digitalisation innovation serves as an intervening variable, and competitive advantage as the dependent variable. The measurement uses a five-point Likert scale ranging from ‘1’ or ‘strongly disagree’, ‘2’ or ‘disagree’, ‘3’ or ‘neutral’, ‘4’ or ‘agree’, and ‘5’ or ‘strongly agree’. Subsequently, a reliability test was carried out using confirmatory factor analysis (CFA) to assess the construct validity of the proposed measurement theory. The method of analysis uses structural equation modelling (SEM) to test the proposed hypothesis.

Results

The combination of the SEM and CFA were used to evaluate the manifest variables in relation to the respective latent variables. In addition, a path analysis was carried out to measure the significance of the proposed hypothesis. Based on the CFA test (see Table 2), the manifestation variable significantly affects the proposed latent variable.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Number of SMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Food and beverage categories</td>
<td>47</td>
</tr>
<tr>
<td>2</td>
<td>Apparel textile category</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Wood and articles of wood categories</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>Paper and paper goods categories</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Chemicals and articles of chemistry categories</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Mineral goods category</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Basic metal category</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Machined metal goods categories</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>Others</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>136</strong></td>
</tr>
</tbody>
</table>
Table 2: Measurement of manifest variable and latent variable

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>Manifest variable</th>
<th>SLF</th>
<th>t-value</th>
<th>Reliability test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Network</strong></td>
<td>Relational network among SMEs</td>
<td>0.535</td>
<td>**</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>Relational network between SMEs and suppliers</td>
<td>0.509</td>
<td>4.515</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relational network between SMEs and distributors</td>
<td>0.634</td>
<td>4.904</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relational network between SMEs and customers</td>
<td>0.580</td>
<td>4.799</td>
<td></td>
</tr>
<tr>
<td><strong>Government Policy Support</strong></td>
<td><strong>Empowerment</strong></td>
<td>0.566</td>
<td>**</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>Accompaniment</td>
<td>0.769</td>
<td>6.293</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subsidy</td>
<td>0.741</td>
<td>6.354</td>
<td></td>
</tr>
<tr>
<td><strong>Digitalisation innovation</strong></td>
<td>Product development</td>
<td>0.832</td>
<td>**</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>Counterfeit Products</td>
<td>0.846</td>
<td>13.668</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New product</td>
<td>0.763</td>
<td>11.912</td>
<td></td>
</tr>
<tr>
<td><strong>Competitive advantage</strong></td>
<td>Differentiation</td>
<td>0.799</td>
<td>**</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Durability</td>
<td>0.818</td>
<td>12.715</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Imitability</td>
<td>0.786</td>
<td>12.077</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cost advantage</td>
<td>0.758</td>
<td>11.520</td>
<td></td>
</tr>
</tbody>
</table>

Note: ** The correlation of the manifest variable is significant at the 0.05 level.

Table 2 shows all the business network dimensions latent variables are significantly related and can represent the concept of a business network. The reliability test of all these indicators resulted in a loading factor of > 0.50, and a t-value of > 1.960. In other words, business networks are dominated by relational networks between SMEs, relational networks between SMEs and suppliers, relationship networks between SMEs and distributors, and relational networks between SMEs and customers. To provide a reliable evaluation, a reliability test was conducted to measure the consistency of each latent variable. The reliability test on the business network variable resulted in the reliability test value of 0.94> 0.70. Thus, business network variables have a good consistency. Furthermore, all dimensions passed the validity test of the variable of government policy support because they meet the loading factor requirements (> 0.50) and t-value (> 1.96). Therefore, the results of the identification of government policy support consists of empowerment, assistance, and subsidies. The results of the reliability test of the variable of government policy support resulted in a value of > 0.70.

The validity test on the dimensions passed the digitisation innovation variable because it meets the loading factor requirements (> 0.50) and t-value (> 1.96). Thus, the identification results of digitisation innovation consist of development products, imitation products, and new products. The reliability test results of the digitisation innovation variable produced a value of > 0.70. The last test on the latent variable of competitive advantage shows all dimensions for the validity test by meeting the loading factor requirements (0.50) and t-value (> 1.96). Its dimensions include differentiation, durability, imitability, and cost advantage. Subsequently, the reliability test of the competitive advantage variable resulted in a value of > 0.70.
Table 3: Correlation between independent and dependent variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Variables</th>
<th>Estimate</th>
<th>S.E</th>
<th>C.R</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Network</td>
<td>Digitalisation innovation</td>
<td>0.355</td>
<td>0.175</td>
<td>2.030</td>
<td>0.042</td>
</tr>
<tr>
<td>Government Policy Support</td>
<td>Digitalisation innovation</td>
<td>0.279</td>
<td>0.121</td>
<td>2.304</td>
<td>0.021</td>
</tr>
<tr>
<td>Business Network</td>
<td>Competitive advantage</td>
<td>0.099</td>
<td>0.117</td>
<td>0.848</td>
<td>0.397</td>
</tr>
<tr>
<td>Government Policy Support</td>
<td>Competitive advantage</td>
<td>0.344</td>
<td>0.117</td>
<td>1.944</td>
<td>0.052</td>
</tr>
<tr>
<td>Digitalisation innovation</td>
<td>Competitive advantage</td>
<td>0.348</td>
<td>0.103</td>
<td>3.382</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: *** The correlation is significant at the 0.05 level.

The next step is to try to measure the influence between the independent variables (business networks and government policy support) and the dependent variables (digitalisation innovation and competitive advantage) by conducting SEM. The results in Table 3 show that business networks are proven to influence digitisation innovation, indicating that hypothesis one is accepted. The business network was shown not to affect competitive advantage, indicating that hypothesis two was rejected. Government policy support is proven to influence digitisation innovation, indicating that hypothesis three is accepted. Meanwhile, government policy support was proven not to affect competitive advantage, indicating that hypothesis four is rejected. Furthermore, digitalisation innovation support is proven to affect competitive advantage, indicating that hypothesis five is accepted.

Discussion

The statistical results provide a scientific explanation of the causes of business network variables and government policy support that do not have a significant effect on competitive advantage because of the role of digitalisation innovation as an intervening variable, which is especially important in the conceptual framework. The influence of business networks and government policy support upon competitive advantage do not have a significant effect because the dimensions of the business network variables and government policy support have not contributed significantly to competitive advantage.

Business networks prioritise aspects of communication between SMEs, which can involve a complete complementary network system. Business networks can occur formally based on regulations, as well as informal business networks based upon consensus among SMEs. Numerous studies have established that SMEs can innovate digitally and achieve competitive advantage over businesses through the creation and maintenance of sustainable business networks. Business networks have an important role for SMEs regarding the various classic problems they face because they still depend on the resources of large companies.
Business networks have a positive relationship to digitalisation innovation, and empirically support the potential that can be developed by SMEs. Business networks have a strategic role in the development of digital-based innovative ideas. Business networks can create competitive advantages through digitalisation innovation, if supported by government policy support to develop the resources and skills needed by SMEs. Government policy support aims to accompany and support the competitiveness of SMEs with well-targeted policies.

Government policy in increasing the capacity and competitive advantage of SMEs considers factors such as the level of cooperation and competition between SMEs, conditions of market demand, supporting institutions, and relevant external factors. The Government intervenes with policies or regulations that are effective and is able to minimise obstacles to the competitive advantage of SMEs. Government policy support for regional economic development will have implications for the achievement of local economic performance that is competitive with other regions. Therefore, government policy support can occur by facilitating the development of SMEs based on the development of market segments.

Conclusions

In short, this paper is focussed on investigating the business networks and government policy support that can drive competitive advantage through mediating digitalisation innovation. The findings of this paper explain that business networks and government policy support do not significantly affect competitive advantage. However, business networks and government policy support can increase digitalisation innovation, and in the end, digitalisation innovation can increase competitive advantage. These findings also imply that the role of digitalisation innovation, as an intervening variable, is especially important to mediate the indirect relationship between business networks and government policy support for competitive advantage. In other words, digitalisation innovation is part of the business dynamics that can help SMEs, especially in developing countries, to achieve optimal growth and competitiveness.

Limitations and Future Research Directions

This paper contains several limitations. Firstly, the character of this study is based on the results of a survey by collecting questionnaire data, and only applies to the research area, therefore it cannot be generalised. As a result, academics must adopt a mix method approach to observe changes in competitive advantage from various perspectives. The second limitation is that this paper only investigates the competitive advantage of one province. Therefore, future studies should develop research by comparing competitive advantage with other provinces.

Acknowledgement: this research was funded by Hasanuddin University, Makassar and on the basic research scheme of Unhas.
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