# Business Agility and Competitive Advantage of SMEs in Makassar City, Indonesia

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Article

# Business Agility and Competitive Advantage of SMEs in Makassar City, Indonesia

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Abstract: Corporate agility will encourage companies and economic enterprises to respond quickly to the dynamics of internal and external changes in the company. This study aims to analyze the effects of business innovation, CSR implementation, and digital transformation in improving business agility, with competitive advantage as a mediating variable. This study uses a quantitative approach with a survey method. Data were obtained through questionnaires distributed to 100 business units and SMEs as repondents in Makassar City. The results show that competitive advantage, digital transformation, and business innovation have a significant effect on business agility with a coefficient of determination of 72.4%, while CSR implementation and digital transformation have a negative correlation with SME business agility. Digital transformation, CSR implementation, and business innovation affect competitive advantage with a value of 53.9%, while digital transformation, CSR implementation, and business innovation affect business agility through corporate image. This study recommends the use of digital transformation and business innovation for small and medium enterprises (SMEs) to respond and adapt with business agility in Makassar City, Indonesia.

Keywords: business agility; competitive advantage; digital transformation; business innovation



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#### 1. Introduction

As a developing country, Indonesia needs to improve the performance and effectiveness of SMEs, especially regarding strategic planning in business, which is hoped to not only create efficiency and comfort in work, but also make it easier for SMEs to achieve competitive advantages. The development of an increasingly complex business world requires SMEs to take advantage of information technology, capabilities, and competencies to encourage growth in order to win in business competition [1,2]. One effort that needs to be developed by SMEs in the current digitalization era is to adapt to business agility to help make decisions quickly, facilitate communication, and respond quickly to changes that occur in business [3–5]. Furthermore, there is a need to improve information technology-based business strategies and work processes for SMEs [6,7]. Thus, to ensure business competitiveness for SMEs, companies are expected to be able to sharpen their agility by utilizing computer systems [8–10], as well as increase the ability of business actors to respond quickly to the market [11]. The development of business agility is in line

with the two grand theories developed so far by management scientists, namely, marketing management theory [12] and strategic management theory [13].

The development of business agility in the international world was marked by the formation of the Agile Business Consortium based in the United Kingdom. The presence of this consortium is intended to assist companies in maintaining their existence and assisting business development in uncertain, constantly volatile, complex, and ambiguous conditions [14]. The global financial crisis that occurred in 2008 showed that several SMEs in the world were able to create business agility by increasing the interest in and role of SMEs in creating jobs and playing a role in economic growth, even though this was hampered by the lack of ability of countries in the world to respond to conditions, especially to several economic indicators, such as restrictions on cross-border loans for SMEs. Global SMEs loan volume had reached \$10 trillion, 70% of which has been in high-income countries, with the rest in developing countries [15]. The successful implementation and development of an international business agility strategy adopted by the Emerging Economy Multinational Enterprise (EMNE) in emerging market conditions has been carried out by building relationships, increasing social responsibility, and innovating according to standardization, as well as by adapting to the rapidly changing business environment [16].

Several Southeast Asian countries outperformed most other developing countries in the 10th annual Agility Emerging Markets Logistics Index, which is a benchmark of competitiveness based on logistical excellence and business fundamentals, as well as core manufacturing activities and goods supply chain values that place several Southeast Asian countries close together in the top of this index. These Southeast Asian countries are behind China and India, as well as the Arab Gulf countries, which are rich in energy resources. Furthermore, the Pittsburgh G-20 Summit resulted in a commitment to make SME development a mainstay of the reform agenda in many governments [17]. Various policies and programs target the improvement of SMEs, the business environment, and financial support for SMEs. An innovative approach to the provision of financial services to SMEs includes a successful regulatory and policy approach [15,18]. In Indonesia alone, the operational performance of SMEs is still very low. Efforts that can be made are adaptive companies to increase knowledge and skills to changes in environmental conditions [2]. However, that does not mean that they ignore the importance of strategic planning or ignore organizational efficiency, but SMEs in Indonesia are also trying to achieve a competitive advantage, especially in their adaptation to technological developments [6,8,19]. A study conducted by Price Waterhouse Coopers [20] found that the ability to innovate is the key to organizational success when dealing with future changes.

SMEs are required to benefit from the business they are in and contribute to the social environment and economic growth [8,21]. This means that SMEs are not only concerned with obtaining their own profits, but also must implement social and environmental responsibilities [21,22]. Furthermore, the benefits obtained by SMEs by carrying out CSR activities, namely, products that are increasingly favored by consumers and more attractive to investors, increased sales volume and market share, strengthened brand positioning, increased ability of SMEs to motivate and retain employees, and reduced operating costs [23]. Thus, companies and economic businesses that implement CSR strategically will increase product competitiveness [24]. All the benefits of implementing CSR will make it easier for SMEs to gain a competitive advantage. In order to fulfill social responsibility, business people are required to have sensitivity to consumer wants and needs. In business competition, SME players are also required to think creatively in building their business and dare to innovate to create products that are different and superior to competitors [25]. Integrated innovations have the ability to create competitive advantages, which are the main capital for SMEs to survive in an increasingly competitive market. That is, SMEs have the potential and opportunities to develop competitive advantages [26]. The increase in use value or benefits in an SME product will be able to increase the selling power of the product in the eyes of consumers, due to an increase in the economic value of the product being marketed. Sustainability 2023, 15, 627 3 of 23

In some cases, it was found that innovation encouraged SMEs to achieve a higher level of growth and success when compared to business actors who did not innovate [27].

Several studies have found that innovation is able to develop a competitive advantage that can form a positive image. A positive image in the eyes of customers fosters a loyal customer attitude, which is marked by the willingness of customers to return to using the SME services or products [28]. Furthermore, the brand is not just a name or symbol of a SME or industry; it becomes a product differentiator from competing products. This means that the SME business image plays an important role in selective customer satisfaction in making considerations when using a product or service. Consumer experience is an important consideration in relation to purchasing decisions [8,29]. This reason makes the corporate image have a strong role in the relationship between customers and SMEs. Furthermore, the brand serves as a signal of product quality and helps consumers to not doubt the benefits they will get, even though they have never tried the product before. Thus, the agility of SMEs is formed from a set of teams oriented to organizational values that demonstrate a learning process and rapid decision-making, utilize technology, and is based on a commitment to shared goals to create value for stakeholders. Agile is intended as an agile effort design to achieve organizational dynamics and stability. This design consists of empowering the team and its network by centering on typical people who can act and make quick decisions that are guided by technology to create shared value for all stakeholder interests. This design model can be a quick and efficient reconfiguration of all resources, structures, processes, people, strategies, and technologies. Thus, Agile can increase the speed and ability of organizations to adapt to various possibilities, and can create competitive and comparative advantages in various volatile, uncertain, complex and ambiguous (VUCA) situations [30,31]. The combination of dynamic, yet efficient systems is the essence of the implementation process towards an agile organization.

Strong collaboration between individuals and organizations opens up opportunities for the sustainable cultivation of the values of agility. The research gaps from this study are the factors that influence business agility with a competitive advantage as a mediating variable. These research gaps encourage the improvement of the company's ability to respond to internal and external changes based on the ability of corporate agility, which further improves the performance of SMEs in the future. Thus, the formulation of the problems from this research are: (1) How to improve the agility ability of SMEs; (2) How the use of digital transformation, CSR implementation, and business innovation can increase the competitive advantage of SMEs; and (3) Determining the mediating role of competitive advantage in increasing SME business agility.

#### 2. Literature Review

#### 2.1. Business Agility

Business agility can be understood as an organization's capacity to adapt quickly to changing market dynamics, customer demands, and industry standards profitably and cost-effectively without compromising on quality. Business agility empowers SMEs to continuously stay on top of other markets. Business agility is characterized by the presence of human resources that are capable of providing solutions, business development, IT utilization, and the benefit of producing products and services faster than competitors.

The company's agility can be seen from the ability to respond to market changes by creating applications that are easy to use and install by mobile users or prospective customers, so that the company can be more readily accepted, user-friendly, mobile, and agile. Innovation, differentiation, and speed of service are the driving forces to increase competitiveness and dominate market share. They also now have considerable onboarding in the marketplaces in Makassar. The marketplace has also helped and taught business actors to enter the digital realm. In addition, the government, academia, the business world, the media, and the community must jointly support the creation of new entrepreneurs and the development of SMEs to create excellent and competitive entrepreneurs.

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Competitive advantage is the ability obtained through the characteristics and resources of an SME to have a higher performance than other SMEs in the same industry or market. A competitive advantage comes from the ability of SMEs to take advantage of their internal strengths to respond to external environmental opportunities by minimizing internal weaknesses [32]. The competitive advantage comes from the many different activities carried out by SMEs in designing, producing, marketing, and distributing their products. Findings [33] reveal that the development of a competitive advantage makes it easier for SMEs to achieve business agility. SMEs that can achieve and maintain differentiation will become high-performing SMEs in their industry. Research by [34] found that higher innovation capacities were better able to leverage their digital platforms to increase agility. The development of a competitive advantage requires speed and flexibility, and does not only focus on the profitability of SMEs [35]. A competitive advantage emphasizes high speed and flexibility as the main attributes in adapting to environmental turbulence. This principle is like the concept of innovation, which always tries to answer market demands by making changes [36].

#### 2.2. Digital Transformation

The business actors have the dominance of the digital econogy benefiting from network effects. They have changed because they are triggered by the development of information and communication technology (ICT) that has encouraged the emergence of start-ups and unicorns, the majority of which are controlled by the younger generation of SMEs in Makassar. This condition has changed the concept that not only focuses on personal development (creative, proactive, aggressive), but that also requires SMEs to be able to optimize the use of information technology as the basis for building "disruptive innovation," not just "sustaining innovation".

Digital transformation refers to the process and strategy of using digital technology to drastically change the way businesses operate and serve customers. If an SME wants to transform digitally, it must have the expertise, mindset, and digital-based culture. These three things will lead to the digital technology used by SMEs. Digital technology will be used well by SMEs if the human resources of the SMEs have the expertise to utilize digital technology [37].

Digital technology is one of the triggers for the emergence of opportunities that can be utilized by SMEs. The opportunity can be something that will change one or more aspects (business model, operational model, customer experience, etc.) of the SME and become an advantage, such as value creation. Research by [38] found that digital transformation can affect improvisation capabilities and competitive advantage in a business environment. In line with those findings [39,40], information technology (IT) can facilitate the reconfiguration and improvement of business agility. Disruption due to rapid technological developments in the last few years has indeed made many SMEs embrace technology. This arises as a result of market needs that require a different culture of agility and openness.

Through approaches like Agile and Open Innovation, SMEs have various opportunities for faster development and risk reduction [39,40]. Research by [41–43] found that digital transformation that properly utilized e-commerce could develop market capitalization agility (strategic focus) and operational adjustment agility (operational focus), which then affects business agility. IT is an essential part of an organization's infrastructure [44]. Several researchers have shown that IT enables SMEs to react quickly to changing market conditions by helping SMEs make strategic changes when necessary [45–47].

#### 2.3. Corporate Social Responsibility Implementation (CSR)

Implementing corporate social responsibility (CSR) programs carried out by SMEs in Makassar City means commitment to being ethical and contributing to economic development while improving the quality of life of workers and their families, as well as that ofthe local community and surrounding communities. The following table presents CSR expenses in social programs by SMEs in Makassar City.

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According to The World Business Council for Sustainable Development, CSR is an ongoing commitment of business people to behave ethically and to contribute to economic development while improving the quality of life for workers and their families, as well as that of the local community and surrounding communities [48]. Based on the description above, in the concept of CSR, in addition to being economically responsible for SMEs in the form of profit to their shareholders, SMEs must also run their businesses according to applicable laws, and must apply ethics, morals, and charity (philanthropy) to the environment. The implementation of the CSR concept has the implication that SMEs must also have responsibilities to other parties, such as employees, suppliers, consumers, government, local community groups, and the wider community [49].

CSR is a form of responsibility of business people for the negative and positive impacts of the production process. When a corporation fulfills its social and environmental duty, it will bring benefits to its existence. The CSR of SMEs can be seen as an action taken by SMEs as a sense of responsibility towards the community and the surrounding environment. The responsibility can be in the form of improving the prosperity of the community, protecting the environment, and building public facilities. A well-implemented CSR implementation could increase public confidence in the presence of SMEs. CSR can be used as a competitive tool for SMEs, which can later help pave the way for obtaining the resources needed by those SMEs [50].

The findings of [51] from 205 SMEs in manufacturing and consumer products in Iran revealed that CSR has a positive influence on the performance of SMEs, due to the positive effect of CSR on competitive advantage, reputation, and customer satisfaction. Similar results also from [52–55] found that better CSR had a positive impact on competitive advantage. Findings from [56–59] revealed that CSR activities can create a sustainable competitive advantage in terms of increasing customer loyalty, which then facilitates SMEs in creating business agility, business innovation and corporate image.

Innovation is one of the corporate choices when facing market competition and sustainable management. Ref. [60] considers innovation as the efforts of SMEs through the use of technology and information to develop, produce, and market products that are new to the industry. It can be said that innovation is the modification or discovery of ideas for continuous improvement and development to meet customer needs. Ref. [61] revealed that SME innovation can result in research and development (R and D) in terms of production and marketing approaches, which ultimately leads to product commercialization. In other words, innovation is the process of realizing a new idea, which is different from the previous one by means of production, or by making it a reality where innovation includes evaluation, the discovery of new concepts, and implementation. The innovation capacity of SMEs has a positive relationship with the business agility of SMEs. SMEs with higher innovation capacity are better able to leverage their digital platforms to increase agility [34,62].

Continuation of the acceptance of the concept of CSR within the framework of sustainable development, in addition to the impact caused by the company on the economy, social sphere, and environment must be reported by the company in a sustainability report or citizenship report, which is currently a mirror that describes the extent of corporate social responsibility towards their stakeholders. CSR implies that the company has a moral obligation to act honestly, comply with the law, uphold integrity, and not be corrupt. CSR emphasizes that companies must develop business practices that are ethical, as well as economically, socially, and environmentally sustainable. Considering that CSR is intangible, it is difficult to measure the level of success achieved, and bench marking is difficult. Organizations need to apply directed strategies, concepts, and applications with various approaches to make them quantitative by using the Triple Bottom Line or Sustainability Reporting approach.

The philosophy (substance existence principles) of CSR is that it strengthens the company's ability to adapt to its environment, community, and stakeholders related to it, both local and national. The benefits of implementing CSR for strategic companies include

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increasing sales and market share, strengthening brand positioning, improving corporate image, lowering operating costs, and increasing the attractiveness of the company in the eyes of investors and financial analysis.

Meanwhile, the ESG (environment, social, and governance) criteria form a framework pillar that aims to identify all non-financial risks and opportunities related to corporate routines. What are the ESG in the company? This is the abbreviation for environmental, social, and governance factors. These three big factors are used to measure the sustainability and ethical impact of investments in a business or company.

The framework provides principles-based guidance that helps identify ESG topics to determine how to organize and prepare the TESG information disclosed by companies. Governments around the world have issued non-binding guidelines to help companies present relevant non-fit ncial information in a more consistent and comparable manner as follows: (a) Reporting standards provide specific and 7 etailed information requirements that help companies or others using them determine which specific marics or indicators will be required for each topic. In Europe, the standards most frequently used by companies in their ESG reporting are those issued by the Global Reporting Initiative (GRI). The GRI standards enable companies to report the impact of their social and environmental activities to stakeholders. This standard can be directly verified by interested parties. (b) The GRI standards enable any organization, large or small, private or public, to understand and report on the impact of their ESG performance on the economy, environment, and people in a comparable and credible manner, thereby increasing the transparency of their contribution to sustainable development. Apart from companies, this standard is highly relevant to many stakeholders, including investors, policy makers, capital markets, and civil society. The standards used by the GRI are designed to be easy-to-use, modular tools that provide an inclusive overview of an organization's material topics, their associated impacts, and how they are managed.

The image of SMEs is needed to influence customers through a combination of advertising, public relations, physical form, word of mouth, and various actual experiences while using goods and services. From those statements, customers consider the capabilities of SMEs to form their perceptions of what is offered and will have an impact on customer buying behavior. According to [63], the image of an SME is the impression, feeling, or image of the community or the public towards the SME, which is an impression created from a product or service offered. The image of an SME is the public's perception of the SME or their products [64]. The SME image relates to the business name, architecture, variety of products, traditions, ideology, and the impression of quality that is communicated by every employee who interacts with the organization's clients. Ref. [65] stated that the good image of SMEs can arise from aspects that show their seriousness in the social responsibility of SMEs that are more concerned with environmental sustainability. Concerning the findings of [66], the image of an SME will be more profitable when the SME is able to consistently display the quality and quantity of services that impress their audiences [67]. A good image arises from the result of public evaluation or response to various activities, empathy, achievements, and reputation of an SME during their various activities. This can be achieved by integrating information technology, which currently makes it easier for customers to get the products they want [68]. For greater clarity, the scope of the research, along with all the hypotheses, are illustrated as shown in Figure 1.

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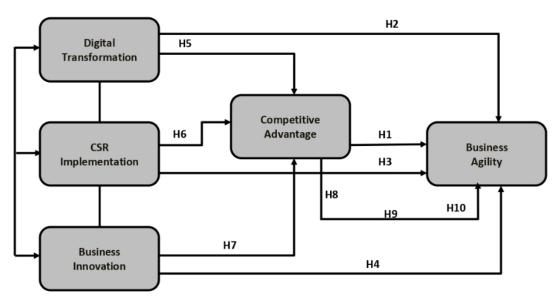


Figure 1. The research framework of factors affecting the business agility of SMEs.

In reference to the theory that is used as the basis of this study, the hypotheses built in this study are as follows:

**Hypothesis 1 (H1).** Competitive advantage affects the business agility of SMEs in Makassar City, Indonesia.

**Hypothesis 2 (H2).** Digital transformation affects the business agility of SMEs in Makassar City, Indonesia.

**Hypothesis 3 (H3).** CSR implementation affects the business agility of SMEs in Makassar City, Indonesia.

**Hypothesis 4** 314). Business innovation affects the business agility of SMEs in Makassar City, Indonesia.

**Hypothesis 5 (H5).** Digital transformation affects the competitive advantage of SMEs in Makassar City, Indonesia.

**Hypothesis 6 (H6).** *CSR implementation affects the competitive advantage of SMEs in Makassar City, Indonesia.* 

**Hypothesis 7 (H7).** Business innovation affects the competitive advantage of SMEs in Makassar City, Indonesia.

**Hypothesis 8 (H8).** Competitive advantage is able to mediate the relationship of Digital transformation to business agility.

**Hypothesis 9 (H9).** Competitive advantage is able to mediate the relationship of CSR implementation to business agility.

**Hypothesis 10 (H10).** Competitive advantage is able to mediate the relationship of Business innovation to business agility.

#### 3. Materials and Methods

#### 3.1. Research Design

This study uses a quantitative approach with a survey method. This quantitative research method aims to examine the factors that influence SME business equity, including digital transformation, CSR implementation, and business innovation, which are measured directly and indirectly with the mediating role of competitive advantage and the moderating role of corporate image. The number of variables in this study consisted of six variables, namely, three independent variables(digital transformation, CSR implementation, and business innovation); one intervening variable (competitive advantage) that is also the dependent variable; and one moderating variable (corporate image). Variable testing used 31 indicators, each consisting of 8 (eight) indicators for business agility: strategic sensitivity, immediate identification of changes, selecting strategic goals, resource fluidity, process integration, network synchronization, flourishing network due to strong partners, customer knowledge, and impetitor knowledge. There were a total of four indicators of competitive advantage: the ability to compete effectively and efficiently; the ability to compete that other companies rarely or do not have; the ability to compete that is not easily imitated; and the ability to compete that is not easily replaced.

There were a total of eight digital transformation indicators: supportive organizational culture, employee and partner engagement, aligning business, IT strategies, process standardization and data integration, employee training and skills development, agile transformation management, and internal and external leveraging. There were a total of eight indicators for CSR implementation: pollution prevention, recycling, human rights, work benefits, economic benefits, customer relations concerns, reporting quality, and health and safety. Also, there were three business innovation indicators: product innovation, process innovation, and service innovation. The quantitative approach used in this study is shown in Figure 2.

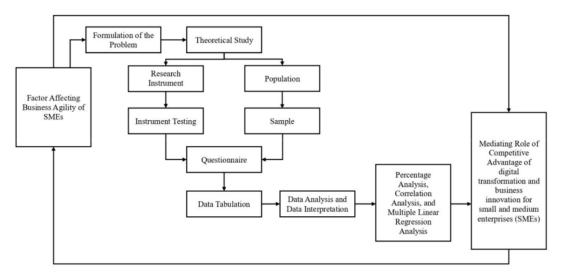


Figure 2. Research quantitative approach. Source: Author's elaboration.

42. Study Area

This research was conducted in the city of Makassar and related to improving the ability of SME equity. The research location is based on the consideration that the city of Makassar is considered a developed city and is classified as a metropolitan city, so business development is increasingly complex and varied. Makassar City has an area of 175.75 Km<sup>2</sup> with a population of 1,526,667 people spread over 15 districts. The chosen sub-district

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was the Makassar sub-district, due to it being the sub-district with the highest business complexity among the many sub-districts, so it was important to examine the ability of SMEs to deal with various changes in the current context.

As shown in Table 1, the number of SMEs was based on the business characteristics of each SME with the percentage of each type of business, such as: culinary at 25%, technology business at 17%, clothing and textile business at 20%, cosmetics at 8%, souvenir business at 11%, automotive business at 6%, accommodation business at 3%, and agribusiness at 10%.

Table 1. Total of SMEs and characteristics of business type.

No	<b>Business Unit</b>	Total of SMEs (Units)	Percentage (%)
1	Culinary	25	25
2	Technology	17	17
3	Garment	20	20
4	Cosmetics	8	8
5	Souvenir	11	11
6	Automotive	6	6
7	Accommodation	3	3
8	Agribusiness	10	10

Source: Author's elaboration.

#### 3.3. Method of Collecting Data



The data used in this study were categorized into two types of data—primary data and secondary data. Primary data were obtained directly in the field through observation and survey using a questionnaire. Secondary data was obtained from documents regarding information on SMEs in Makassar City. Furthermore, the data collection method was divided into three stages, as is explained in the following sections.

#### 3.3.1. Observation

Field observations were aimed at observing the behavior of SMEs, as well as the agility of SMEs in carrying out technological transformations to support their business, including observing the implementation of CSR by SME businesses. Furthermore, the observations made were intended to understand the situation, conditions, and characteristics of SMEs. Research observations using instruments included field notes, periodic notes, cameras, and working papers. Observations were made to trace the following data: (i) technological transformation and utilization of digital platforms, as well as business shifts from offline to online, (ii) investment development and SME business development, (iii) SME behavior in carrying out business activities, and (iv) uman resource capacity owned by SMEs. The results of this observation were then used to adjust to the theory that had developed so far and was used as a reference in this study.

#### 3.3.2. Survey

A survey was conducted to collect, test, investigate, process, analyze, and present information related to the company's ability to deal with the changes that occurred. Moreover, the survey was utilized to understand the characteristics of respondents based on conditions to improve abilities and skills in utilizing transformation technology and agility in its use. This survey was conducted through questionnaires distributed to 100 selected SMEs as respondents. The selection of respondents was carried out using various considerations, such as (i) the type of business developed by the SME, (ii) the age and experience of the SME, (iii) the number of workers involved in the business, and (iv) the area where the SME carries out its activities. The scale used in the questionnaire was a Likert scale with five types of choices described by selecting numbers (1-2-3-4-5), where the choices were explained as follows: (1) strongly disagree, (2) disagree, (3) undecided, (4) agree, and (5) strongly agree.

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#### 3.3.3. Documentation

Documentation was performed to collect and study documents and study results related to the development of SMEs in Makassar City, including (i) data on the number of SMEs and types of SMEs in Makassar City obtained from BPS Makassar City in 2021, (ii) profile data on SMEs obtained from the Makassar City Cooperatives and SMEs Office, (iii) data related to the company's ability to take advantage of digital transformation, such as reports on the use of digital platforms by SMEs, which could be obtained through the Makassar City Cooperatives and SMEs Office or other relevant media, and (iv) CSR implementation reports, etc.

# 3.4. Research Respondents

The population in this study was SMEs in the Makassar sub-district, which had a total of 256 SMEs. The sample of this study was determined using the quota sampling technique by taking 100 samples that considered the business characteristics of each SME, which included: (1) culinary business, (2) technology business, (3) clothing and textile business, (4) cosmetics, (5) souvenir business, (6) automotive business, (7) accommodation business, and (8) agribusiness.

The respondents were selected samples from SMEs in the Makassar sub-district of Makassar City. Sampling used a probability technique by providing equal opportunities to all SMEs to be selected as samples.

The purposive sample approach as a probability technique used in this study was measured based on certain criteria that represented the entire population with the following details: (i) the increasing effective demand for products produced by SMEs, (ii) the location or position of SMEs with consideration of the conformity with the concept of the marketing mix, and (iii) the ability of the products produced to compete with other SMEs. Based on the determination of respondents as described above, the determination of the sample was based on what is shown in Table 2.

Table 2. Number of SMEs as respondents in Makassar District.

Number	Criteria	Number of Respondent	Percentage
1	Increasing effectiveness of demand for products produced by SMEs	32	32
2	The location or position of SMEs with consideration of conformity with the marketing mix concept	43	43
3	The resulting product can compete with other SMEs	25	25

Source: Author's elaboration.

The determination of a sample of SMEs in the Makassar sub-district that was selected as respondents was based on the criteria. The effectiveness of increasing demand for products produced by SMEs was as much as 32%. Efficiency and effectiveness obtained from digital transformation make SMEs more agile, flexible, and focused on the intended target. Furthermore, the location or position of SMEs with consideration of the suitability with the marketing mix concept was 43%, and the ability of the products produced to compete with other SMEs was 25%.

When SMEs are able to display innovations that are of value to customers, they will have an impact on customer demand, which ultimately affects the high position of SMEs compared to competitors, their superior prices, and their ability to master e-commerce to make SMEs' products more attractive. The variables and indicators studied in this study are shown in Table 3.

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Table 3. Variables and Indicators.

Variable 3 Indicator		Reference
	Strategic sensitivity	
	Immediate identification of changes	
	Selecting strategic goals	
	Resource fluidity	
Business Agility	Process integration and Network	[69]
2 30311000 1 1821117	Synchronization	[0.1
	Flourishing network due to strong	
	partners	
	Customer knowledge	
	11 Competitors knowledge	
	The Ability to compete effectively and	
	efficiently	
	The Ability to compete that other	
Competitive Advantage	companies rarely or do not have	[70]
Competitive Advantage	The Ability to compete that is not easily	[70]
	imitated	
	The Ability to compete that is not easily	
	replaced	
	Supportive Organization Culture	
	Employee and Partner Engagement	
	Aligning Business	
	IT Strategies	
Economic Business Transformation	Process standardization and Data	[71]
Economic business transformation	Integration	[/1]
	Employee training and skills	
	development	
	Agile transformation management	
	Leveraging internal and external	
	Pollution prevention	
	Recycling	
	Human Rights	
COD I I I I I	Work benefit	[70]
CSR Implementation	Benefit to economically	[72]
	Customer relations concern	
	Reporting quality	
	Health and Safety	
	Product innovation	
Business Innovation	Process innovation	[64]
	Service innovation	
	Benefits, or Attitude	
	Common Product attributes	
Corporate Image	Value and Programs	
	Corporate Credibility	

Source: Author's elaboration.

#### 3.5. Validity Test

#### 3.5.1. Validity Test

Each research instrument used in research requires testing to ensure that the instrument is valid or invalid. The research instrument could be said to be valid if the tool performs a predetermined size function or provides measurement results that are in accordance with the stated aims and objectives. The validity test in this study was used to illustrate that the instrument was really valid in measuring the variables used in data acquisition for each SME. The validity testing was done by using Pearson's product—moment approach. This validity test was carried out by making a correlation of each statement item with a predetermined number of scores for each variable. Statistically, the correlation number obtained must be compared with the correlation table for the r value.

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The formulation that was used in this study used 12: Pearson product–moment correlation formula, which was tested with SEM PLS 3. The Pearson product–moment formulation is described as follows:

$$r_{xy} = \frac{n\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{(n\Sigma x^2 - (\Sigma x)^2)(n\Sigma y^2 - (\Sigma y^2))}}$$
(1)

Note:  $r_{xy}$  = Pearson correlation coefficient r, n = number of samples/observations, x = independent variable/first variable, and y = dependent variable/second variable Based on the calculation results, all indicators met the lidity criteria with an outer loading score > 0.7 and an AVE score > 0.5. The description can be seen in Table 4:

Table 4. Validity Test Results.

Variabel	Indikator	AVE	Outer Loading	Keterangan
	M1.1		0.790	Valid
Competitive Advantage	M1.2	0.663	0.882	Valid
compensive riavantage :	M1.3	0.005	0.865	Valid
-	M1.4		0.711	Valid
	X1.1		0.746	Valid
-	X1.2		0.723	Valid
-	X1.3		0.721	Valid
Digital Tranformation	X1.4	0.558	0.737	Valid
Digital Transcribation	X1.5	0.556	0.750	Valid
-	X1.6		0.767	Valid
-	X1.7		0.757	Valid
-	X1.8		0.774	Valid
	X2.1		0.768	Valid
-	X2.2	0.624	0.792	Valid
CSR Implementation	X2.3		0.816	Valid
-	X2.4		0.785	Valid
	X3.1		0.836	Valid
Business Innovation	X3.2	0.701	0.842	Valid
-	X3.3		0.833	Valid
	Y1.1		0.772	Valid
-	Y1.2		0.757	Valid
-	Y1.3		0.727	Valid
Provinces Avillies	Y1.4	0.574	0.731	Valid
Business Agility -	Y1.5	0.574	0.793	Valid
-	Y1.6		0.759	Valid
-	Y1.7		0.760	Valid
-	Y1.8		0.757	Valid

Source: Author's elaboration.

#### 3.5.2. Reliability Test

In addition to testing the validity, the research instrument can also be tested from the aspect of reliability, where the reliability test is intended as a form of testing to ensure the reliability of the instrument. The instrument is said to be reliable if the data used is safe and can work well at different times and conditions. The reliability test in this study used

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the PLS 3 platform, where from the results of this test obtained data that could be used in measuring reliability above the composite reliability value of 0.70 (> 0.70), both for each variable and for all variables in the model. Composite reliability is better at estimating the internal consistency of a construct.

The testing technique used in this analysis was the split-half correlation, as well as the Spearman–Brown formulation. The interval scores of the odd consecutive items are added up to obtain a total score of odd hemispheres. The intervals of even consecutive items are summed and a total score of even halves is obtained. Furthermore, the total score of odd and even hemispheres is correlated using the following correlation coefficient:

$$r_i = \frac{2r_b}{1 + r_b} \tag{2}$$

where the  $r_i$  is the internal reliability of all instruments or questions, while  $r_b$  is the product moment correlation between the first and second hemispheres. The significance test of the  $r_i$  coefficient was carried out by using the t test (significance level 5%), for which the formula used was as follows:

$$t = \frac{r_i \sqrt{(n-2)}}{\sqrt{1-r_i^2}}; db = n-2$$
 (3)

Based on the test results, all indicators were declared reliable with a Cronbach alpha score and composite reliability > 0.7.

#### 3.6. Pata Analysis Method

The data analysis used a structural equation model (SEM) approach using a smart PLS application [74]. The standard measurement of data analysis was carried out through several stages: model feasibility tests (GoF, AVE, and discriminant validity, reliability tests such as Cronbach alpha, composite reliability, VIF test); hypothesis testing, and influence testing through the bootstrapping stage to determine the value of the t-test coefficient and the value of the significance coefficient. The stages of data analysis in this study were:

#### R-Square Test

R-square for the dependent construct was used to assess the effect of certain independent latent variables on the dependent latent variable, which showed the presentation of the magnitude of the effect.

The inner model analysis or the structural model was used to predict the causal relationship between the variables tested in the model. The analysis of the inner model in testing using Smart PLS was conducted by testing the hypothesis, which can be seen from the t-statistical value and probability value. To test the hypothesis by using statistical values, for alpha 5%, the t-table value used was 1.98, while the beta score was used to determine the direction of the influence of the relationship between variables. The criteria for acceptance/rejection of the hypothesis were:

 $H_a$  = t-statistik > 1,98 (n = 100) with p-values < 0.05  $H_0$  = t-statistik < 1.98 (n = 100) with p-values > 0.05

#### 4. Results and Discussion

#### 4.1. Outer Model Analysis

The validity test was used to measure the validity of the questionnaire. In this research, validity testing was carried out using convergent validity and AVE. The instrument was declared valid if the AVE value was >0.05 and the outer loading value was >0.7. The results of the calculation of the validity test can be seen in the following Figure 3.

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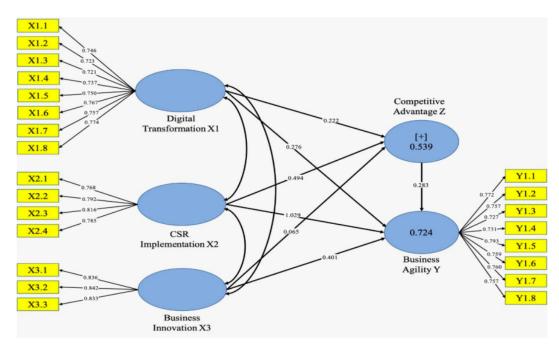


Figure 3. Outer model test results.

This study used two types of reliability tests—the Cronbach alpha test and the composite reliability test. The Cronbach alpha test was used to measure the lowest value (lower bound) reliability. The data was declared reliable if the data had a Cronbach alpha value > 0.7. Composite reliability measured the actual reliability value of a variable. The indicator was declared to meet the reliability criteria if it had a composite reliability score > 0.7. Based on the test results, all indicators were declared reliable with a Cronbach alpha score and a composite reliability > 0.7.

### 4.2. R-Square Test

The r-square coefficient determination test is used in the measurement to measure whether the dependent variable was influenced by the dependent variable. Based on the data analysis carried out with the PLS program, the r-square value was obtained, as is shown in Tables 5–7:

Table 5. Reliability test results.

	Cronbach's Alpha	Composite Reliability	Description
Business Agility Y2	0.894	0.915	Reliable
Business Innovation X3	0.788	0.875	Reliable
CSR Implementation X2	0.800	0.869	Reliable
Competitive Advantage Y1	0.823	0.876	Reliable
Digital Transformation X1	0.887	0.910	Reliable

Source: Author's elaboration.

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Table 6. Reliability test results.

	Cronbach's Alpha	Composite Reliability	Description
Business Agility Y	0.894	0.915	Reliable
Business Innovation X3	0.788	0.875	Reliable
CSR Implementation X2	0.800	0.869	Reliable
Competitive Advantage M	0.823	0.876	Reliable
Corporate Image Z	0.828	0.887	Reliable
Digital Transformation X1	0.887	0.910	Reliable

Source: Author's elaboration.

Table 7. R-Square test result.

	R-Square	R-Square Adjusted
Business Agility Y	0.724	0.700
Competitive Advantage M	0.539	0.525
Source: Analysis of author's.		

Based on the test results, it was confirmed that digital transformation, CSR implementation, and business innovation affected competitive advantage (M) by 0.539 (53.9%) with the remaining 46.1% influenced by 12 er factors that have not been described in this study. Moreover, business agility (Y) was influenced by digital transformation, CSR implementation, business innovation, and competitive advantage by 0.724 (72.4%), whereas the other 27.6% was influenced by other variables that have not been included in this study.

#### 4.3. Inner Model Analysis

In the PLS SEM analysis, the results of the calculation of the inner model produced data for determining the hypothesis. The criteria used were beta scores, which indicated the direction of the effect of the t-count and *p*-value to determine whether or not the proposed hypothesis was accepted. The results of the calculation of the inner model analysis are described in Table 8:

Table 8. Inner model analysis results.

	Hypothesis	Original Sample (O)	T Statistics	p Values	Description
		Direct E	ffect		
H1	Competitive advantage affects business agility	0.283	3.112	0.002	Accepted
H2	Digital transformation affects business agility	0.276	2.927	0.004	Accepted
НЗ	CSR implementation affects business agility	0.119	1.029	0.304	Rejected
H4	Business innovation affects business agility	0.401	4.314	0.000	Accepted

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Table 8. Cont.

	Hypothesis	Original Sample (O)	T Statistics	p Values	Description
		Direct E	ffect		
H5	Digital transformation affects competitive advantage	0.222	1.595	0.111	Rejected
H6	CSR implementation affects competitive advantage	0.494	3.130	0.002	Accepted
H7	Business innovation affects competitive advantage	0.065	0.582	0.561	Rejected
		Indirect I	Effect		
Н8	Competitive advantage is able to mediate the relationship of digital transformation to business agility	0.163	2.270	0.025	Accepted
H9	Competitive advantage is able to mediate the relationship of CSR implementation to business agility	0.140	2.151	0.032	Accepted
H10	Competitive advantage is able to mediate the relationship of business innovation to business agility	0.018	0.537	0.591	Rejected

Source: Analysis of the author.

#### H1 Competitive Advantage Affects Business Agility

The test results showed that competitive advantage had an effect on business agility. Competitive advantage is a set of unique features that an SME has that are considered by the market to be significant. This aspect is one of the key aspects behind the creation of brand loyalty or customer loyalty to a brand or product. Competitive advantage brings an SME to a superior level by earning more profits than its competitors. With a competitive advantage, SMEs can achieve business agility. This is achieved because SMEs that have a competitive advantage are able to carry out different organizational arrangements, control procedures, and intensive systems. SMEs with good competitive advantages utilize large resources and consistently conduct a cost-benefit analysis to evaluate various opportunities between existing business units and potential business units within SMEs. This result is in line with the research [31,75].

#### H2 Digital Transformation Affects Business Agility

Digital transformation has brought convenience and practicality into great demand in every activity. One form of digital transformation is e-commerce, which is developing

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rapidly in Indonesia. This certainly creates challenges and conveniences for SMEs. The existence of digital transformation has made it easier for SMEs to carry out buying and selling activities, as well as made the distribution process easier without direct contact with consumers. Digital transformation has shifted conventional jobs to be automated. Automation ensures that errors in the production process for the distribution of SME products will be minimal. Digital transformation makes SME products able to reach a wider market. The good ability of SMEs to carry out digital transformation makes it easier for SMEs to understand market demand. This understanding makes SMEs more flexible, adaptive, and have business agility [7–11,41–45,47,76].

#### H3 CSR Does Not Affect Business Agility

Based on the test results, CSR had no effect on business agility. CSR is a form of concern for SMEs to improve their quality of life. CSR is carried out by making programs that are beneficial to the community. SMEs that carry out CSR will certainly increase product prices to cover expenses from the CSR program carried out. The increase in prices makes people more considerate of SME products. CSR activities are more related to the relationship between SMEs and the community, while business agility is related to innovations made by SMEs to create superior products. The formulation of strategies for achieving business agility is mostly carried out by SME owners internally, because these individuals are considered to have good knowledge of strategies to achieve the business agility that they want to develop. CSR that is related to the welfare of the surrounding community is not able to affect the business agility of SMEs, because business agility and CSR are two different activities. These results refute the findings in [56–59,74].

#### H4 Business Innovation Affects Business Agility

Innovation is needed in a business and is considered an essential aspect of some business processes because it can provide a competitive advantage. Innovation is conducted to meet market demand so that SMEs can understand the ever-changing market needs. Customers want innovative products according to their wishes. For SMEs, their success in product innovation means they are one step ahead of their competitors. Innovations that have been successfully carried out by SMEs can make SMEs superior to their competitors. SMEs that can innovate on an ongoing basis can maintain their business for a long time, because SMEs can understand market tastes. It was concluded that better innovation by understanding market needs affects business agility. This is in line with the findings in [32].

#### H5 Digital Transformation Does Not Affect Competitive Advantage

The test results determined that digital transformation had no effect on competitive advantage. Digital transformation is part of a huge technology process with changes related to the application of digital technology in all aspects of SMEs activities. Digital transformation efforts by an SME are quite diverse. Digital transformation involves a massive change made by SMEs, in terms of production to distribution, that switches to a digital system. Even though SMEs have been able to implement digitization in production and distribution activities, there are still many products sold with unattractive packaging of mediocre quality, so digitalization has not been able to provide significant advantages. The digital transformation carried out by SMEs should be followed by product innovation, so that SMEs can achieve a competitive advantage. Although SME activities have switched to digitization if the products offered are the same as products produced using conventional strategies, SMEs will have difficulty achieving a competitive advantage. The results reject the findings in [36–38,56–58].

#### H6 CSR Implementation Affects Competitive Advantage

Corporate social responsibility (CSR) is one of the mandatory activities of SMEs in carrying out social responsibility to the community. CSR is an organization's responsibility for the impact of its decisions and activities on society and the environment, which is manifested in the form of transparent and ethical behavior that is in line with sustainable development and community welfare. One of the benefits of implementing CSR is the

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good relationship that SMEs can build with the community. SMEs that are responsible for the environment indirectly minimize the occurrence of environmental conflicts around SMEs. Concerning the competitive strategy, the existence of CSR activities as a form of concern for SMEs can put SMEs in a good position in the eyes of the community. Those implementations make the community want to give good feedback to SMEs by carrying out consumption activities. The results of this study are as found as well in [52–55].

#### H7 Business Innovation Does Not Affect Competitive Advantage

SMEs with a large capacity for innovation will be able to respond to environmental changes that can create new capabilities. Innovations are not only made by the number of products, but also by new processes, ideas, policies, systems, management, and programs. Innovation is one of the efforts of SMEs to be able to carry out an increasingly effective production process to increase profits. When SMEs can display innovations that are of value to customers, they will have an impact on customers demand, which ultimately affects the high position of SMEs compared to competitors. The results of this study reject the findings in [37,38].

#### H8 Competitive Advantage is Able to Mediate the Relationship of Digital Transformation to Business Agility

Based on the test results, competitive advantage was able to mediate the relationship of digital transformation to business agility. Market demand pressures, as well as changing consumer expectations, are very important for SMEs to understand. Home-based food businesses and online shopping tend to be more popular these days. This is one of the consequences of technological developments that make purchases through e-commerce more attractive. The ease of purchase and the large variety of products make consumers prefer to shop online rather than buy products at the market or supermarket. Therefore, acceleration in production and distribution activities is a crucial thing for SMEs to do.

The digital transformation that has been successful for SMEs will help them to run their businesses more effectively and efficiently. Computerization makes the process of producing goods faster and more affordable, because it does not require a lot of human labor. In this way, SMEs are able to reduce spending on salary financing. This effectiveness and efficiency allow SME products to be sold at lower prices. In terms of marketing activities, digital transformation is indicated by the ability of SMEs to master e-commerce. A superior price followed by the ability to master e-commerce will make SMEs products more attractive. In this way, competiti and advantage can be done independently when SMEs can carry out digital transformation. It can be concluded that competitive advantage was not able to mediate the relationship between digital transformation and business agility. This is in line with the findings of [24,34,77–79].

## H9 Competitive Advantage is Able to Mediate the Relationship between CSR Implementation and Business Agility

CSR in SMEs aims to provide value to the community, to participate in environmental awareness, and to improve the welfare and productivity of employees working in SMEs. CSR helps SMEs to not only seek profit, but also care for the natural environment, community, and employees in SMEs. Through good CSR, the life of the community as a whole is improved, and the natural environment around it will be well preserved. In essence, CSR is a form of SME's responsibility to the surrounding environment. If it is associated with business agility, which takes care of the internal matters of SMEs, CSR does not have a significant impact.

The existence of CSR, in addition to being beneficial for the community, namely, by having activities that encourage community empowerment, will also help SMEs to facilitate their operations so that they are free from interference. CSR makes people view SMEs more as a good industry, due to their concern for the surrounding community. The existence of this concern makes people more interested in SMEs so that their products are more in demand. In this condition, it is known that competitive advantage can fully mediate the

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relationship of CSR to business agility. These results are in agreement with the findings of [34,77–79].

H10 Competitive Advantage Unable to Mediate the Relationship between Business Innovation and Business Agility

Competitive advantage was not able to mediate the relationship of business innovation to business agility. Innovation is a step that must be taken by SMEs if they want to remain relevant amid the onslaught of changing times. Communication competency, self-leadership, a personal factor, is another important factor influencing organizational performance [80]. The existence of innovation provides wider market opportunities, making SMEs better able to see market opportunities. Innovation can be used as a strategy for achieving business performance [81]. Customers want innovative products according to trends and needs. To deal with this condition, SMEs need to be able to adapt by innovating well. The relationship between the adoption of administrative and technical innovations over the relationship between the adoption of administrative and technical innovations, SMEs will create innovative products and can improve business performance. Innovation makes SMEs more flexible and able to adapt so that, by innovating, SMEs can sheet to mediate the relationship between business innovation and business agility. The results of this study reject the findings in [34,77–79].

#### 5. Conclusions

Economic business development for SMEs is essential to develop activities in business agility to support increased competitiveness and digital transformation towards business innovation. An SME's economic business is determined by the ability to develop business agility and is a key aspect in customer service. Thus, digital transformation, in addition to facilitating digital transformation, also facilitates business products without going through consumers directly.

Furthermore, the business innovations developed by SMEs are not only capable of creating agility, but are also able to meet changing market needs in the sense that SME businesses will require the public. The business agility developed is more oriented toward the use of Corporate social responsibility (CSR) funds for the establishment of mutually beneficial relations between SMEs and the industrial world.

The development of SME business businesses through increasing competitiveness, in addition to encouraging increased productivity, will also mediate the role of digital functions towards increasing productivity, competitive capabilities, and the ability to respond to business changes that will take place. Thus, the competitiveness created will encourage the competitiveness of SMEs toward business stability and urban economic development.

Based on the results of the external model test, all reliable indicators with Cronbach alpha and composite reliability values were in safe values. In the r-square test, digital transformation, CSR implementation, and business innovation had a significant influence on competitive advantage, and several other factors had an effect. Meanwhile, business agility was influenced by digital transformation, CSR implementation, business innovation, and competitive advantage. In addition, the results of the calculation of the inner model produced data to determine the hypotheses where H1, H2, H3, and H4 affect business agility. H5, H6, and H7 had an effect on competitive advantage. H8, H9, and H10 could mediate the relationship betwe 4 business innovation and business agility.

Dis research contributes to the development of the capacity of SMEs in Makassar City to be able to adapt to various situations that are volatile, uncertain, complex, and ambiguous (VUCA), as well as increases the speed and ability of the organization to achieve competitive and comparative advantages over its competitors.

Since this study was conducted within a limited scope, further research is still needed in the case of relevant studies: (1) improvement of the function and role of SMEs in encouraging the increase in urban economic productivity, (2) increasing SME business productivity

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based on the use of technology and business sustainability capital, and (3) developing SME businesses that are more selective in the use of marketing theory and agility.

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