HONG KONG JOURNAL OF SOCIAL SCIENCES

香港社會科學學報

第一的第 59 期 (2022 春/夏) Vol. 59 Spring/Summer 2022

Achieving Business Resilience through Environmental Turbulence in Indonesian Culinary SMEs

Ervina Waty*, Idris Gautama So, Richardus Eko Indrajit, Sri Bramantoro Abdinagoro

Universitas Bina Nusantara, Jakarta, Indonesia

Received: June 14, 2022 ▪ Reviewed: July 11, 2022

▪ Accepted: August 8, 2022 ▪ Published: September 29, 2022

Abstract:
This study aims to determine whether the factors of environmental turbulence such as digital adoption, business ecosystem, strategic agility, business model innovation, dynamic regulation can affect business resilience in Indonesian culinary SMEs. This study uses a survey method with a quantitative approach. The data collection method used in this research is a survey method with the process of collecting data through questionnaires. This study uses a five-point Likert scale with no neutral choice because the researchers wanted to determine the tendency of the respondents' answers and avoid central tendency bias. The respondence involved in this research includes 150 culinary SME business units spread in Indonesia. The results of this study indicate that in terms of Indonesian Culinary SMEs, its business resilience can only be affected by dynamic regulation and strategic agility. This means that in order that the business resilience can only be increased by maintaining dynamic regulation and strategic agility. The novelty that can be found is that the factors that affect business resilience of Indonesian culinary SMEs are only dynamic regulation and strategic agility other than the business resilience of other types of SMEs. This research only measures environmental turbulence such as digital adoption, business ecosystem, strategic agility, business model innovation, dynamic regulation toward business resilience in Indonesian culinary SMEs. Other than that, this research excludes microenterprises in order that the samples can be limited specifically so that the specific results can be produced. Therefore, further research should be able to add other independent and dependent variables or use other research methods so that the results obtained are more coherent.

Keywords: business resilience, environmental turbulence, Indonesian culinary small and medium enterprises.

通过印尼烹饪中小企业的环境动荡实现业务弹性

Corresponding Author: Ervina Waty, Universitas Bina Nusantara, Jakarta, Indonesia; email: Ervina20_2000@yahoo.com

摘要：
本研究旨在确定数字采用，商业生态系统，战略敏捷性，商业模式创新，动态监管等环境动荡的因素是否会影响印度尼西亚和中小企业的业务恢复力。 本研究采用定量调查方法. 本研究采用的数据收集方法是一种调查方法，其过程是通过问卷收集数据。 这项研究使用五点李克特量表，没有中性选择，因为研究人员希望确定受访者答案的倾向并避免中心倾向偏差。 参与这项研究的受访者包括分布在印度尼西亚的 150 个烹饪中小企业业务部门。 这项研究的结果表明，就印尼烹饪中小企业而言，其业务弹性只能受到动态监管和战略敏捷性的影响。 这意味着，只有保持动态监管和战略敏捷性，才能提高业务弹性。 可以发现的新颖之处在于，影响印尼本土中小企业业务恢复力的因素只有其他类型中小企业业务恢复力以外的动态监管和战略敏捷性。 这项研究只测量环境动荡，如数字采用，商业生态系统，战略敏捷性，商业模式创新，对印尼烹饪中小企业业务弹性的动态监管。 除此之外，这项研究排除了微型企业，以便可以对样品进行具体限制，以便产生具体的结果。 因此，进一步的研究应该能够添加其他自变量和因变量或使用其他研究方法，以便获得的结果更加连贯。

关键词：商业韧性，环境动荡，印尼烹饪中小企业。

1. Introduction

The development of an increasingly rapid era makes business organizations occupy a major position. One that has been widely discussed is the role of SMEs as the "backbone" of the Indonesian economy. Currently, business sector is in a transition period from the industrial revolution era to the information and communication revolution triggered by technological changes. In the era of globalization, SME (Small and Medium Enterprises) actors are faced with a challenging and increasingly competitive business environment (Kumar et al., 2020). Data from the Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia in 2017 show that the contribution of SMEs to gross domestic product is 62.57% or a value of Rp7.005.950 billion. The total population of Indonesian SMEs in 2017 reached up to 60 million business units with the employment of 97% of the total national workforce. Currently, there are at least 60 million SMEs in Indonesia. The Ministry of Cooperatives and Small and Medium Enterprises states that the SME segment can absorb 96.8% of the national workforce. Meanwhile, the large business segment can only absorb the remaining data of 3.2%. These data show that SMEs play an important role in Indonesia's economic development (Pratono, 2018).

Willingness, tenacity, independence, and the ability to face problems and challenges in their business activities, and the impetus for progress/achievement affect the resilience of SME existence. The resilience of small businesses in facing various crises cannot be separated from their success in facing various business obstacles (Khurana et al., 2019). Business resilience is measured by the proportion of business difficulties in each industrial sector. One of the factors that affect the resilience of SMEs is their resilience to face turbulence. Turbulence occurs due to various challenges of change, which are marked by the emergence of various new products, mindsets, competitions, methods, and rapid technological developments. The turbulent and rapidly changing business situations and conditions require SME executants to be able to compete and survive in high competitive conditions (Senbeto & Hon, 2020).

Rapid technological changes leading to disruption, deregulation, globalization, and mass customization of both production and consumption have led to a 'hypercompetitive' business environment in which the competitive advantage achieved can be temporary (Bruijl, 2018). Additionally, emerging challenges such as climate change, extreme weather events, and global pandemics present new and distinctive challenges to the survival and success of an enterprise (Ahammad et al., 2020). At this time, the environmental conditions faced by SMEs are complex, in which there is no certainty because of the rapid changes in the economic or other environments. Therefore, companies must be able to cope with and adapt to changes, uncertain conditions, and a turbulent environment.

The turbulence occurring in the business environment is increasing the challenges and opportunities faced by national and multinational companies. Companies must also have the capability to conduct the adjustment. The increasing business competition in the midst of the global financial crisis requires the sensitivity of the company's management in managing its resources. These resources are in the form of physical resources (tangible) as well as non-physical resources (intangible). The unpreparedness of the company's management in managing both resources will result in the company's unsustainable growth (Buckley et al., 2017).

Strategic agility offers organizations the opportunity to be flexible, to adapt, respond quickly to changes, to implement actions, and to control market uncertainty and risk (Ragin-Skorecka, 2016). A strategically agile company can adapt its culture to market changes, learn about market changes quickly, take advantage of these external changes, and shape the company's products/services according to external changes (Braunscheidel & Suresh, 2018). Simultaneously, by reorganizing the organization's systems and strategies according to environmental changes responsively, external changes can be turned into opportunities for the organization (Kim et al., 2016). According to Olaleye et al. (2021) and Vidmar et al. (2020), strategic agility can affect the resilience of the existence of SMEs. Strategic

agility requires companies to keep abreast of the internal and external environment, gather and use information quickly, and respond quickly to market changes (Bădulescu, 2021).

The increasing number of internet users has triggered business people to start involving technology in their company management. The technological developments occur rapidly, which will provide convenience in accessing information and ease in managing resources effectively and efficiently. The development of technology in terms of internet use is a development that is most demanded by most people. The digitization process has been used in the production, purchasing, and payment processes of companies and is now at the heart of almost every company. According to Cheema-Fox et al. (2020), the use of technology in a company also affects business resilience. IT-enabled processes, transactions, and services require substantial infrastructure capabilities to operate effectively and efficiently. The duties of business drivers are presenting a unified face to customers or knowing the entire customer relationship with the company at any point of service (Cheema-Fox et al., 2020).

Innovation is a breakthrough that must be carried out by SME executants. Innovation is relevant to the characteristics of business resilience, which incidentally is sensitive to the changing times that are rapidly changes. In the increasingly fierce business competition, to survive, a company must be able to improve its marketing performance in terms of sales turnover, market share, and profitability. In this millennium era, the market seems increasingly important in winning the competition. Without innovation, company will not be able to last long. This is due to the changing needs, wants, and demands of customers. Customers will not always consume the same product. Customers will look for other products from other companies that are felt to satisfy their needs. In the research by Ibarra et al. (2018) conducted on 89 of the best performing companies found that strategic agility can be obtained through the development of integrated infrastructure in all clusters. In addition to influencing strategic agility, business model innovation can strengthen business resilience (Sin et al., 2017; Alberti et al., 2018). Achieving business resilience requires the involvement of all its components. The concept of a business ecosystem consists of all individuals, organizations, governments involved, and the regulations in which the business interacts, including consumers, competitors, media, etc. (Radziwon & Bogers, 2019). The importance of this business ecosystem makes us realize that a business or company must be able to develop its own business ecosystem to be able to survive in a fairly hot business competition (Ferreira & Teixeira, 2019). In the business ecosystem, companies must dare to take new steps and top management must dare to determine and make important decisions in creating change.

Corporate organizations must work quickly to create a vision for the future and focus on developing the resources they have. An integrated global world has caused many changes, such as how we choose employees, take advantage of high-speed information technology networks, create new strategies, create stronger branding, and anticipate the future. The business ecosystem always generates innovative companies, in which innovative companies will continue to boost their productivity. According to Ramezani and Camarinha-Matos (2020), Tan et al. (2020), Hsieh et al. (2017), Ibarra et al. (2018), business ecosystem can affect the business model innovation. SME executants see that opportunity is a process to win business competition that is very tight. They continue to improve the company's organizational performance, without this, they are just awaiting the door of death. Today's market moves quick but provides a very large space, the competition will certainly increase from time to time, but the true winner is a company that is ready to compete and knows how to win the battle called competition. Companies must always need innovation and never stop doing it. If it stops, the life of innovation will die.

In addition to the managerial factor of SMEs, the government's encouragement for the existence of SMEs is also something to be reckoned with. Improving SME regulations is a substance prioritized for discussion in the Job Creation Law. According to Kaal (2016), Ramezani and Camarinha-Matos (2020), the existing regulations are one of the triggering factors of business innovations. Regulation dynamics is a process of movement or change from an old regulation to a new regulation with certain stages. Explicitly, the government's support for SMEs began to appear in Law No. 9 of 1995 concerning Small Businesses. This law contains important policies, namely support for small businesses, which includes empowerment, business climate, coaching, development, financing, guarantees, and partnerships. Furthermore, in February 1998, Soeharto implemented PP No. 32 of 1998 regarding the development of small businesses, which contained policies in fostering and developing small businesses into medium enterprises. Furthermore, during the reformation period in December 2001, Megawati Soekarnoputri stipulates Presidential Decree No. 127 of 2001 concerning businesses/types of business that are reserved for small businesses and fields/types of businesses open to medium, large businesses, and with partnership conditions. Besides, in 2014, SBY issued Presidential Regulation number 98 regarding licensing for micro and small businesses. This product adds to the strength of the legality of small and medium enterprises. Micro and small business permits provide business certainty and protection at the designated location.

The level of ease of doing business has been realized by the government through improving regulations in various sectors, starting from starting a business, protecting minority shareholders, speeding up service time standards, innovating, socializing, and improving

services through the online system. According to Arbussa et al. (2017), regulatory dynamics can affect strategic agility. SMEs (Micro, Small and Medium Enterprises) play a very large role in advancing the Indonesian economy. Apart from being an alternative for new employment opportunities, SMEs also played a role in encouraging the pace of economic growth after the 1997 monetary crisis, when large companies experienced difficulties in developing their businesses. Currently, SMEs have contributed greatly to regional income and Indonesian state revenue. SMEs play an important role in the country's economy through their various contributions. Therefore, its existence needs to be maintained with various efforts. This study determines how environmental turbulence such as digital adoption, business ecosystem, strategic agility, business model innovation, dynamic regulation can affect business resilience in Indonesian culinary SMEs.

The purpose of the introduction is to arouse the reader's attention and provide a general overview of the paper. The contents to be described in the introduction are roughly as follows: (1) First, the rationale, purpose, and background of the research should be reviewed. This part includes the question, the research object, its basic characteristics, what work has been done by other researchers on this issue, what the deficiencies are, what problems are expected to be solved, what the role and significance of the solution is, and what is the background of the research work. If several questions are to be answered, only a brief explanation can be provided. Usually, one problem can be explained in one or two sentences; (2) The theoretical basis, experimental basis, and research methods are then introduced. If established theories, principles, and methods are followed, the relevant literature should be noted. If a new concept or term is to be introduced, it should be defined or clarified; (3) The expected results and their status, role, and significance should then be outlined in a natural, general, concise, and precise manner. In the introduction, diagrams, tables, and formulas are generally not allowed.

2. Literature Review

2.1. Business Resilience

Resilience is the capacity to face and cope with the stresses of life. Resilience is one of the important things when making tough and difficult decisions in times of urgency (Walsh, 2020). Resilience is the result of the interaction between entrepreneurs and their environment. This involves the knowledge, abilities, and skills to deal with uncertainty while maintaining a positive, creative, and optimistic attitude. Therefore, resilience reflects a growth strategy (Hadi, 2020). Resilient SMEs can work hard to achieve their goals, adapt to change, achieve excellence in new situations, and learn from their mistakes (Herbane, 2020; Newman et al., 2019). SME executants who are confident in their abilities can cope with stress in their activities so that they are better able to build resilience and are more resilient when faced with problems. According to Newman et al. (2019), the combination of entrepreneurial self-efficacy and resilience will make individuals stronger against turbulence. SME is one of the business potentials strongly encouraged by the government because the more people are involved in entrepreneurship, the more the economy of a region will improve because local resources, workers, and financing can be absorbed and benefited optimally. The success of SMEs depends on the ability to manage these two factors through analysis of environmental factors and the formation and implementation of business strategies. According to Tibay et al. (2018), business resilience measurement is carried out using the following indicators described in Table 1.

Table 1. Business resilience indicators

Dimension	Indicator
Proactivity	1. Leadership and management
	2. Access to External Resources
	3. Ability to Leverage Knowledge and Information
	4. Care Competence of Staff
Coping ability	5. Network Robustness
	6. Market Sensitivity
	7. Planning Preparedness
Flexibility	8. Reflective Business Model
	9. Situational Awareness
	10. Innovation and Diversification
Persistence	11. Compliance and Regulation
	12. Adaptive Ability

2.2. Digital Adoption

Digital adoption is considered an important tool for improving services within the government. Digital adoption has been the subject of extensive theoretical and empirical studies and is now widely recognized as an important determinant of sustainable superior performance. Groher et al. (2020) mentioned that the nature and character of technology development depends on one's perception of the technology. Technology can be viewed as an object, as a process, as knowledge, and as control (Tjahjana et al., 2020). According to Olaleye et al. (2021), dynamic IT capability has a positive and direct impact on strategic agility, business model innovation, and firm performance, while strategic agility impacts firm performance indirectly through business model innovation. According to Cichosz et al. (2020), the measurement of digital adoption can be done with the following indicators.

Table 2. Digital adoption indicators

Dimension	Indicator
Organizational culture	1. Supportive organizational culture
	2. Employee and partner engagement
	3. Leveraging internal and external (technological) knowledge
Technology usage	4. Process standardization and data integration
	5. Employee training and skills development
	6. Aligning business and IT strategies
	7. Agile transformation management

2.3. Business Ecosystem

A successful company has a unique characteristic when the organization occupies a position as a hub in its industrial environment. The position of the hub does not mean that a company has a large mass such as in terms of assets, profits, or capitalization, but because the company can occupy a unique, strategic position and play an important role in determining the direction of the business environment or its business ecosystem. The concept of a business ecosystem consists of all individuals, organizations, governments involved, and regulations in which the business interacts, including consumers, competitors, media, etc. (Senyo et al., 2019).

A business or company must be able to develop its own business ecosystem to be able to survive in a fairly business competition. The importance of building a business ecosystem is the key to success in a business or organization. The business ecosystem creates relationships between executants and this is in accordance with the concept of a social network, which is useful for knowing the relationships of each executant. In social networks, executants usually have relationships simultaneously, which can be individuals or togetherness such as several departments, organizations, and families. Executants who are bound within social networks usually have resources such as information, goods, services, social, and financial resources (Masucci et al., 2020).

Annanperä et al. (2016) state that business ecosystem and business model innovation relate to each other. Additionally, Peltola et al. (2016) state that the business ecosystem can provide a holistic view. According to Leminen et al. (2018), the ecosystem offers a strong analogy for understanding business networks, increasing cooperation with various parties to build a wider business network, and increasing product innovation to increase competitiveness so that SMEs can continue to grow in the midst of competition. Supporting this opinion, Olaleye et al. (2021) stated that strategic agility supported by IT is the main means of achieving business resilience. Digital Business Ecosystems (DBEs) can support company agility to preparing companies to survive in the midst of intense competition between networks. Developing and leveraging DBE for enterprise agility is an inductive derivation that sheds light on the antecedents, nature, and implications of DBE development in three distinct phases.

According to Leminen et al. (2018), companies must see themselves as interdependent parts of a multi-stakeholder community whose interests are integral to business success. In this view, the company can be seen as a system of long-term cooperative relationships among the affected parties. It includes company managers and employees, customers and clients, investors, suppliers, cities, states, and countries where the company is located or sells goods and services, and even future generations of stakeholders. Stakeholder influence generates pressure for organizations to behave in an ethically and environmentally and socially responsible manner, and in turn, this interdependence helps companies become sustainable and resilient. Graça and Camarinha-Matos (2017) state that the business ecosystem can be measured using the following indicators.

Table 3. Business ecosystem indicators

Dimension	Indicator
Finance	1. Incur lower operating costs than competitors;
	2. Conduct cost analysis;
Marketing	3. Creating different products;
	4. Conduct market research;
	5. Focus on specific market segments
Sales	6. Focus on specific customers;
	7. Focus on a specific product;
Operations	8. Make products or services cost efficient;
	9. Optimizing the use of production tools and facilities;
	10. Provide work equipment that supports optimizing outcomes;

2.4. Strategic Agility

Strategic agility encompasses a range of activities undertaken by companies that create value in a volatile and unpredictable environment. These activities involve the systematic variation of certain processes, products, and structures (Shams et al., 2021). Companies should dedicate different resources to maintain the high level of flexibility and speed required to be agile in an international context to proactively deal with unexpected external changes (Ahammad et al., 2020). In line with Ahammad et al. (2020), strategic agility is a meta-capability that involves not only allocating sufficient resources for the development and deployment of all specific capabilities but also remaining agile by dynamically balancing those capabilities over time.

Strategic agility is defined as the ability to reinvent or review organizations and organizational strategies dynamically with rapid changes in the external business environment (Xing et al., 2020b). The increasing diversity and intensity of change and dynamism sources in the contemporary business environment have led to increased agility as a means to continually adapt to external threats and opportunities (Ahmad et al., 2020). The research by Olaleye et al. (2021), involving 492 respondents, states that innovation and strategic agility predict company resilience in universities in Nigeria. Furthermore, Vidmar et al. (2020) state that resilience can be influenced by business agility. It has a significant impact on the fast-moving data-based industrial sector, such as the New Space industry. Joiner (2019) states that business resilience is obtained after the company faces threats that are not normal, worrying, and often unexpected. Gurkov et al. (2017) suggest that strategic agility requires four main routines: (a) “strategic” – providing strategy and motivating people to operate in a favorable organizational climate; (b) “perception” - continuous environmental monitoring in anticipation of major changes and quickly providing this knowledge to

executives who must interpret it and make decisions; (c) "testing" - conducting trial; (d) "implementing" - making changes, both gradual and radical, and measuring their performance. According to Asil and Farahmand (2019), strategic agility can be measured using the following indicators.

Table 4. Strategic agility indicators

Dimension	Indicator
Developing a strategic prospect	1. Strategic sensitivity 2. Immediate identification of Changes 3. Selecting strategic goals
Customer knowledge	4. Strategic sensitivity 5. Immediate identification of Changes 6. Selecting strategic goals

2.5. Business Model Innovation

The business model innovation is a unique combination of activities, complementing each other and providing value, increasing efficiency and effectiveness. Broadly speaking, the business model innovation is planning and designing new ways of doing business through changes, improvements, and improvements to existing business processes, both internally and in collaboration with externals, to create new work processes that have never been done before to increase stakeholder value added.

Putri et al. (2020) said that an innovation can be concluded to be successful if the creation and implementation of new processes, products, services and methods can produce effective and efficient quality improvement results. The process innovation often involves either a significant adaptive change in an organization's current business model or the adoption of a new business model. Here, the process shift is driven by innovation occurring within the organization, such as product and strategy innovation, or it may be driven by external innovation. Specifically, the business model innovation can make SMEs better and increase their profit.

Shakeel et al. (2020) state that business model innovation is divided into four dimensions of innovation: product innovation, process innovation, marketing innovation, and organizational innovation, on which the researchers made 10 indicators as follows.

Table 5. Business model innovation

Dimension	Indicator
Product	1. Product quality 2. Product variant
Process	3. Use of new method 4. Use of new technology
Marketing	5. Price 6. The place 7. Promotion
Organizational	8. Administrative novelty 9. Technological novelty 10. Strategy innovation

2.6. Dynamic Regulation

One of the weaknesses of SMEs is due to limited access to market information, which results in low market orientation and weak competitiveness at the global level. This lack of information makes SMEs unable to direct their business development in a clear and focused manner, thus, their development has stagnated (Nasruddin et al., 2020). The development of micro and medium enterprises depends on the support of aspects of strengthened capital, seeing developments from year to year. Since 2012, the government enacted the Credit Law for Micro, Small, and Medium Enterprises (SMEs). The authority to form these regulations rests with the central government.

The regulation is an instrument for realizing state policies to achieve state goals. As an instrument to realize every state policy, regulations must be formed in the right way so that they can produce good regulations, encourage the implementation of orderly social dynamics and the performance of state administration. Changes in SME regulations issued can support the ease of starting a business, but these regulations will not run effectively without the support of local governments in creating regulations that agree with the central government. The indicator for starting a business is surveyed by the World Bank to measure the ease of doing business (EODB). With the increase in Indonesia's EODB index, it is expected to be able to create a favorable investment climate and stimulate new businesses to grow and develop in Indonesia. Additionally, an increase in the index of ease of doing business is expected to increase gross domestic product, which will increase national competitiveness (Nieuwenhuizen, 2019).

Basically, the regulation has three main functions, described in the following.

As a means of order or a code of conduct; regulations serve as guidelines for the implementation of social dynamics. Here, both formal and informal activities.

As a development instrument, the regulation mobilizes resources to achieve a predetermined goal.

As an integration factor; regulations integrate areas and policies in the context of state administration and development into a National Regulatory System that is an aggregation of all existing regulations.

Kaal (2016) states that legal regulations contribute indirectly to business innovation. A similar result is also presented by Mansour et al. (2018), where the dynamics of regulation emphasize anti-trust, regulation, and public ownership solutions toward measures geared toward supporting the dynamic role of SMEs. Policy dynamics can ultimately support corporate innovation through knowledge transfer and technological change. In addition to impacting business innovation, Bargués-Pedreny and Mathieu (2018) state that strategic experience occurs when mistakes are found and corrected by rethinking, regulation, and policy adjustments. The research also found that strategic learning (strategic knowledge creation, strategic knowledge distribution, strategic knowledge interpretation, and strategic knowledge implementation) had a significant impact on strategic agility in the Elba

House Company in Jordan. According to Doong et al. (2018), regulatory dynamics are measured using the indicators in the following table.

Table 6. Dynamic regulation indicators

Dimension	Indicator	
Impact	1.	Burden of government regulations
	2.	Effectiveness of antitrust policy
Obstacle	3.	Burden of government regulations
	4.	Extension and effect of taxation
	5.	Intensity of local competition
	6.	Prevalence of trade barriers
	7.	Ease of starting a new business
	8.	Stringency in environmental regulations

3. Method

With the aim of explaining the characteristics of culinary SMEs in Indonesia and explaining the supporting factors for business resilience, this study uses a quantitative approach. Quantitative research method aims to test the relationship between the existing variables. The quantitative method is in the form of numbers derived from measurements using a scale on the variables in the study.

The data collection method used in this research is a survey method with the process of collecting data through questionnaires. According to Tamailang et al., (2021), the survey method is a method that takes data from one population by using a questionnaire as the main data collection tool, so that the research from the survey aims to find out the opinions of respondents in the population to be studied. This study uses a five-point Likert scale consisting of "Strongly Disagree" (1), "Disagree" (2), "Slightly Disagree" (3), "Slightly Agree" (4), and "Agree" (5). In this study, there is no neutral choice because the researchers wanted to determine the tendency of the respondents' answers and avoid central tendency bias.

Sampling or commonly referred to as a sampling technique, is used by researchers to take research samples to be studied. Sampling technique is a technique or method of taking a representative sample of the population, this sampling must be done in such a way that samples are obtained that can truly describe the actual population. Population in this study was 864,144 culinary SME business units in Indonesia. This research uses a random sampling technique, specifically stratified random sampling, where researchers provide equal opportunities for each member of the population. Additionally, according to Hair et al. (2019), the sample size should be 100 or larger. Therefore, the respondences involved in this research are 150 culinary SME business units spread throughout Indonesia.

The existing variables and their relationships are shown in the following figure.

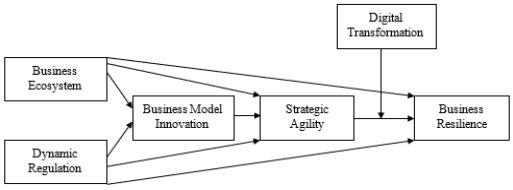

Figure 1. Research framework

The data collected are analyzed using the structural approach of the Equation Model (SEM) assisted by the smart PLS application (Civelek, 2018).

H1: There is an effect of the business ecosystem on business model innovation.

With a business ecosystem, a company or business running will impact efficiency and effectiveness in building business relationships. A business ecosystem that can be developed is able to create mutually supportive positive relationships between business executants and factors in it to have a positive influence on micro and small businesses. A business ecosystem occurs between various institutional and individual stakeholders; thus, it can encourage entrepreneurship, innovation, and the growth of SMEs. According to Antikainen and Valkokari (2016), Hsieh et al. (2017), Radziwon and Bogers (2019), Ramezani and Camarinha-Matos (2020), business ecosystem has a positive and significant effect on business model innovation.

H2: There is an effect of the business ecosystem on strategic agility.

The business ecosystem approach contains a set of actors and factors that relate to each other formally and informally, regulate, and mediate all entrepreneurial performance starting from the initial stages that produce new entrepreneurs to business development aiming to increase ability and competitiveness. A good business ecosystem can facilitate the growth of entrepreneurship by providing access to training, guidance, financing, and networks. The concept of a good business ecosystem is important in terms of its influence on economic growth. Through this concept, a network system created can be regulated independently and is useful for supporting the strategic agility of SMEs.

H3: There is an effect of dynamic regulation on business model innovation.

Culinary SMEs in Indonesia, especially, should see whether the dynamic regulation regulated in their enterprise will affect their business model innovation. This is because when the parties can manage and regulate the appropriate regulation, the innovation of culinary SMEs will enhance their innovation more. Kaal (2016) states that legal regulations contribute to business innovation indirectly.

H4: There is an effect of dynamic regulation on strategic agility.

Strategic agility involves multiple stakeholders and creates value by providing access to critical resources ahead of competition, preparing the organization for change, and permitting the organization to steer proactively toward a desired future to achieve prosperity. The concept of strategic agility addresses the problems of a constantly changing environment, the derivation of a competitive advantage, market position and firm superior performance. It enhances the identification, observation and interpretation of corporate environmental changes and potential opportunities by determining possible implications as

well as responses. One of the factors that can affect strategy agility is a dynamic regulation. Xing et al. (2020a) stated that legislation is part of the national legal system that plays a critical role in the development of SMEs.

H5: There is an effect of business model innovation on strategic agility.

Facing changes in the fluctuating business environment, companies must have the ability to adjust internal business resources and market behavior. Agility is the ability of the company's business activities broadly, which includes the organization's strategy ability to manage internal factors such as structural adjustments, usage of information systems, company logistics management, and creating employee mind-sets to be more agile in dealing with market dynamics. The main characteristic of agility is having flexible operational capabilities to be able to respond quickly to environmental changes. Çağlıyan et al. (2022) state that a company with agility will be able to adapt to market conditions through changes in the flow of operations or organizational structuring to survive. To be able to take market opportunities, companies must be agile in making every decision with actions that benefit the company.

H6: There is an effect of business ecosystem on business resilience.

A business ecosystem is a network of organizations involved in the delivery of a specific product or service through both competition and cooperation. Through the ecosystem, in which is mass collaboration using social media and advanced data analytics technology, MSMEs can generate new business ideas, leading to enhanced resilience to meet the challenges caused by COVID-19 or other unexpected or extraordinary circumstances, such as natural disasters and financial crises (Yu et al., 2021).

H7: There is an effect of business model innovation on business resilience.

Organizational responses such as business model innovation largely rest upon managerial decisions, it is surprising that research on individual cognition is still underdeveloped, particularly in business model innovation research, therefore, stress the need for research on behavioral strategy, directed at the relationship between cognition and business model innovation. A promising research path for gaining deeper insights into decision-making in turbulent environments is offered by the regulatory focus theory. The theory explains the preference of individuals to pursue and seize opportunities or to eliminate possible mistakes and errors. Hence, it offers an explanation why individuals choose offensive strategies to increase the organization´s competitiveness, or whether defensive strategies are preferred, to prevent an attack by competitors and to reduce damage.

H8: There is an effect of dynamic regulation on business resilience.

Resilience involves both mitigating the effect toward regulation and adapting to change by developing flexible and innovative solutions. The ability to quickly make changes to business operations can be the differentiating factor across those affected by a crisis. Therefore, knowing the dynamic regulation regulated will affect the business resilience experienced by SMEs. It is also stated by Zohuri and Moghaddam (2017) that regulatory dynamics can affect strategic agility.

H9: There is an effect of strategic agility on business resilience.

An organization or business resilience capacity captures its ability to take situation-specific, robust, and transformative actions when confronted with unexpected and powerful events that can jeopardize an organization’s long-term survival. Strategic agility is a complex, varied construct that can take multiple forms but captures an organization’s ability to develop and quickly apply flexible, nimble, and dynamic capabilities. These organizational attributes share common roots and are built from complementary resources, skills, and competencies. Together, strategic agility and business resilience capacity enable firms to prepare for changing conditions, restore their vitality after traumatic jolts, and become even more proficient due to the experience. The business resilience capacity helps firms navigate among different forms of strategic agility and respond effectively to changing conditions (Lengnick-Hall & Beck, 2009).

H10: There is an effect of strategic agility on business resilience moderated by digital adoption.

Digital adoption has opened up various possibilities for companies to interact with customers, which has led to new and unexpected business agility and resilience. To facilitate the wider marketing process of the SMEs’ product, it also should pay attention to the human resource readiness in the SMEs. The human resources in SMEs are expected to be able to adapt with any changes, including digitization, so that the process will run effectively, efficiently and optimally. Thus, the digitization can really facilitate the interaction experience between the company and the customer and cover a wider market.

4. Result

4.1. Outer Model Analysis

4.1.1. Validity Test

The validity test is used to measure the validity of a questionnaire (Taherdoost, 2018). In this study, validity testing is carried out using convergent validity and AVE. The instrument is declared valid if the AVE value is > 0.05 and the outer loading value (> 0.7) (Sarstedt & Cheah, 2019).

According to the normality test results in the above table, it is identified that the AVE values of the business ecosystem, dynamic regulation, business model innovation, strategic agility, digital adoption, and business resilience were 0.587, 0.599, 0.614, 0.574, 0.549, and 0.568. Other than that, the value of the outer loading for each indicator of each variable is identified

as all being more than 0.7. The results identify that all questions of instruments for each variable are considered valid.

4.1.2. Reliability Tests

Researchers used two types of reliability tests: the Cronbach's alpha test and the composite reliability test. Cronbach's alpha measures the lowest value (lowerbound) reliability. The data is declared good if the data has a Cronbach's alpha value > 0.7. Meanwhile, composite reliability measures the actual reliability value of a variable. The data is declared to have high reliability if it has a composite reliability score > 0.7.

According to the table above, the results of Cronbach's alpha identified are 0.922, 0.910, 0.915, 0.863, 0.888, and 0.894. It is identified that all data are considered as reliable. Other than that, the results of composite reliability for each variable are 0.934, 0.927, 0.929, 0.895, 0.913, and 0.915. It was identified that all the data had high reliability.

4.2. Outer Model Analysis

The R coefficient determination (R-Square) test is used in the measurement to measure how much the endogenous variable is influenced by other variables. Based on the data analysis carried out through the use of the SmartPLS program, the R-Square value is obtained as shown in the following table. Based on the test result, the r-square score for business resilience is 0.720, which means that business resilience is influenced by strategic agility and business model innovation by 72%, and other 28% is influenced by variables that have not been explained in this study. The r-square score for business model innovation is 0.614, which means that the business ecosystem and dynamic regulation affect the business model innovation by 61.4%, and other 38.6% are influenced by variables that have not been explained in this study. Strategic agility obtained an r-square score of 0.687, which means that business ecosystem, business model innovation, dynamic regulation, and business model innovation affect strategic agility by 68.7%, while other 31.3% is influenced by other variables not explained in this study.

5. Discussion

5.1. Effects of the Business Ecosystem on Business Model Innovation

The result of the hypothesis testing on the effect of the business ecosystem on business model innovation shows a positive beta score (p = 0.319) with p-values of 0.000 (p < 0.05), and t-statistic of 3704 (p > 1.96) indicates a significant and positive relationship between the business ecosystem and business model innovation. This indicates that H1 is accepted. Therefore, the better the business ecosystem will add to the company's business model innovation. With a business ecosystem, a company or business running will impact efficiency and effectiveness in building business relationships. A business ecosystem that can be developed is able to create a mutually supportive positive relationship between the executants and factors in it to have a positive influence on micro and small businesses. A business ecosystem that occurs between various institutional and individual stakeholders, it can encourage entrepreneurship, innovation, and SME growth. The results are in accordance with the research by Antikainen and Valkokari (2016), Ma et al. (2018), Radziwon and Bogers (2019).

5.2. Effects of the Business Ecosystem on the Strategic Agility

The result of the hypothesis testing on the effect of the business ecosystem on strategic agility shows a positive beta score (p = 0.255) with p-values of 0.015 (p < 0.05) and a t-statistic of 2,449 (p > 1.96) indicating a significant and positive relationship between the business ecosystem and strategic agility. This indicates that H2 is accepted. Therefore, the better the business ecosystem will increase the strategic agility of the company. These results are in accordance with the research by Radziwon and Bogers (2019). The entrepreneurial ecosystem approach contains a set of formally and informally related and coordinated executants and factors, regulates, and mediates all entrepreneurial performance starting from the initial stage that involves new entrepreneurs to business development aiming to increase capabilities and competitiveness. A good business ecosystem can facilitate the growth of entrepreneurship by providing access to training, guidance, financing, and network. The concept of a good business ecosystem is important to pay attention to regarding its influence on economic growth. Through this concept, a network system is created that can be regulated independently and is useful for supporting the existence of the company (Asil & Farahmand, 2019).

5.3. Effects of Dynamic Regulation on Business Model Innovation

The result of hypothesis testing to the effect of dynamic regulation on business model innovation obtains a positive relationship direction with a beta score (p = 0.517) with p values 0.000 (p < 0.05) and t statistic of 5.917 (p > 1.96) indicating that the dynamics of regulation affect business model innovation. This indicates that H3 is accepted. This result is in accordance with the findings of Kaal (2016) and Nieuwenhuizen (2019). The Government's commitment to improve the economic and investment climate is carried out by deregulating various strategic economic sectors, one of which is Micro, Small and Medium Enterprises (SMEs). This is reflected in Joko Widodo's directive to cut regulations in 2015. Existing deregulation will provide ease of doing business for SME executants to be able to grow and contribute to the national economy. The Indonesian nation must move from regulation to implementation consistently with the

intelligence to seize the opportunities open to us. Ease of doing business in the Job Creation Law related to the status of the company. The Job Creation Law regulates the exception of the establishment of a company for SMEs, where one person can be established based on a statement of establishment made in Indonesian. Additionally, the Job Creation Law changes the rules for the minimum authorized capital limit, which no longer has a minimum limit.

5.4. Effect of Dynamic Regulation on Strategic Agility

The result of hypothesis testing to the effect of dynamic regulation on business model innovation obtains a positive beta score ($p = 0.237$) with p values of 0.029 ($p < 0.05$) and t-statistics of 2.186 ($p > 1.96$) indicating that the dynamics of regulation have an effect on strategic agility. This indicates that H4 is accepted. This result is in accordance with the findings of Xing et al. (2020a). Legislation is part of the national legal system that plays a critical role in development. The urgency of harmonizing current laws and regulations in Indonesia is becoming more and more significant, amid increasingly complex situations and conditions, including the implementation of regional autonomy and the influence of globalization. The state is responsible for providing and facilitating the existence of SMEs. As a regulator, the government issues various regulations related to the existence of SMEs. This is created in the provision of interest subsidies for both people's business loans (KUR) and non-KUR, the placement of government funds in commercial banks for credit restructuring, and guarantees for SME loans. There is also the imposition of a final SME income tax (PPh) borne by the government.

5.5. Effects of Business Model Innovation on Strategic Agility

The result of hypothesis testing on the influence of business model innovation on strategic agility obtains a positive beta score ($p = 0.419$) with p values 0.000 ($p < 0.05$) and t statistic of 4.262 ($p > 1.96$) indicating that the business model innovation affects strategic agility. This indicates that H5 is accepted. This result is in agreement with the findings of Clauss et al. (2021) and Shams et al. (2021). To face changes in the fluctuating business environment, companies must adjust internal business resources and market behavior. Agility is the organization's ability to manage internal factors such as structural adjustments, usage of information systems, company logistics management, and creating employee mindsets to be more agile in dealing with market dynamics. The main characteristic of agility is having flexible operational capabilities to be able to respond quickly to environmental changes. Attar and Abdul-Kareem (2020) state that in a company that has agility, it will be able to adapt to market conditions through changes in the flow of operations or organizational structuring to be able to survive. To be able to take market opportunities, companies must be agile in making every decision with actions that benefit the company.

5.6. Effects of the Business Ecosystem on Business Resilience

The result of testing of the business ecosystem hypothesis on business resilience obtains a positive beta score ($p = 0.419$) with p-values of 0.207 ($p > 0.207$) and t-statistics of 1.263 ($p > 1.96$) indicating that the business ecosystem has no effect on business resilience. It indicates that H6 is rejected. The results of this research are not in accordance with those of other studies. In the business ecosystem, companies must make many changes in internal and external changes. Corporate organizations must work quickly to create a vision for the future and focus on developing the resources they have. An integrated global world has caused many changes in this world, such as how we choose employees, use high-speed information technology networks, create new strategies, create stronger branding, and anticipate the future. A business ecosystem is used to describe how economic communities work. The business ecosystem is not just a collection of business people, but also a complex social system. The government assesses that the type of Micro, Small and Medium Enterprises (SMEs) requires a hub or business ecosystem that can connect the marketing of SME products to the global market. Later, the hub will not only look for buyers from abroad but also provide assistance to SMEs to continue to improve the quality of their products to meet market tastes. SMEs that can collaborate well will be able to run a business on a scale equivalent to that done by large corporations. In addition to the ability to collaborate, the ability to change businesses in a fast time is also a factor that is often referred to as the uniqueness of SMEs.

5.7. Effects of Business Model Innovation on Business Resilience

The result of testing to the effect of business model innovation on business resilience obtains a positive beta score ($p = 0.073$) with p-values of 0.513 ($p > 0.05$) and t-statistics of 0.655 ($p > 1.96$). These results indicate that there is no effect of business model innovation on business resilience in SMEs in East Java. It indicates that H7 is rejected. The results of this research are not in accordance with those of other studies. The innovations possessed by SME executants are still limited. This has resulted in the frequent occurrence of plagiarism in SME products, thus, making SME executants reluctant to develop innovation and creativity. This situation will ultimately reduce the productivity of SMEs in the Central Java Province. Therefore, there needs to be a strategic step in encouraging creativity-based SMEs to continue to develop with their respective innovations and creativity. SMEs in Indonesia still have several weaknesses, such as inadequate number and quality of human resources, lack of loyalty, perseverance and power, concentration, trademarks unowned by most SMEs, limited capital.

5.8. Effects of Dynamic Regulation on Business Resilience

The result of hypothesis testing to the effect of dynamic regulation on business resilience obtains a positive beta score (p = 0.306) with p-values of 0.017 (p < 0.05) and a t-statistic of 2.403 (p > 1.96). These results indicate that regulatory dynamics have a significant positive effect on business resilience. This indicates that H8 is accepted. This result is in accordance with the findings of Zohuri and Moghaddam (2017) where regulatory dynamics can affect strategic agility. The definition of government policy is in principle made or on the basis of a broad policy. Based on these principles, all decisions and actions of government administrators must be based on the principle of people's sovereignty and the principle of the rule of law. The government continues to strengthen its position and role of cooperatives and SMEs by providing various conveniences for protection. One of the government's efforts related to this is by issuing Government Regulation (PP) Number 7 of 2021 concerning Ease, Protection, and Empowerment of Cooperatives and SMEs. This regulation, which is issued on February 2, 2021, is one of the implementing regulations of Law (UU) Number 11 of 2020 concerning Job Creation. Additionally, this regulation also regulates the allocation of 30 percent of the public infrastructure area for cooperatives and SMEs. The government also has a plan to increase the target of distributing People's Business Credit (KUR) to Rp 190 trillion to encourage the development of national SMEs. Various government policies that encourage SMEs continue to be carried out because they are aimed at later enabling the economic sector to make a major contribution and can provide various positive impacts on national economic stability. Other government policies in supporting SMEs have also been carried out. The Government has issued a policy to reduce the Final Income Tax (PPh) rate from 1% to 0.5% for Micro, Small, and Medium Enterprises (SMEs).

5.9. Effects of Strategic Agility on Business Resilience

The result of hypothesis testing on the effect of strategic agility on business resilience obtained a positive beta score (p = 0.426) with p-values of 0.000 (p < 0.005) and t-statistics of 4.152 (p > 1.96) indicating that strategic agility affects business resilience. This indicates that H9 is accepted. This result is in accordance with the findings of Olaleye et al. (2021), Vidmar et al. (2020). Organizational agility is the organization's ability to respond quickly, simultaneously, and on time. Organizations that are integrated with supply chain partners across sectors tend to be adaptive, flexible, responsive, and agile. Agility is an organization's unique way of increasing its competitive advantage to keep up with the continuous changes of an explosive market. Organizational agility and human resource management strategies are important components for evaluating and strengthening the overall efficiency of an organization. In this period of industrial evolution, the concept 'organizational agility' has become a key aspect to improve organizational skills, abilities, capabilities, and presentation through continuous organizational learning and human resource strategies.

5.10. Effects of Strategic Agility on Business Resilience Moderated by Digital Adoption

The result of testing the strategic agility hypothesis on business resilience moderated by digital adoption shows a positive beta score (p = 0.063) with p-values of 0.097 (p < 0/005) and t-statistics of 0.097 (p > 1.96) indicating that digital adoption is unable to moderate the effect of strategic agility on business resilience. It indicates that H10 is rejected. The results of this research are not in accordance with those of other studies. Organizational agility plays an important role in the process of developing organizational transformational leadership and organizational agility, thus, it can have a positive effect on organizational competitiveness. Agility can act as a very applicable tool in all categories and scopes of companies with the aim of achieving organizational competitiveness. Responsive capability refers to the selection of organizational actions and competencies that enable them to react to relevant changes when detected or foreseen in advance. Alternatively, good responsiveness requires smart decision-making and good value proposition skills. HR strategy and the strategic role of HR, namely strategic HR practices, encourage and stimulate businesses to achieve a sustainable competitive advantage.

6. Conclusion

The results showed that there is a significant and positive relationship between the business ecosystem and business model innovation, there is a significant and positive influence of the business ecosystem on strategic agility, dynamics of regulation affects business model innovation, dynamics of regulation affects strategic agility, business model innovation affects strategic agility, business ecosystem has no effect on business resilience, there is no effect of business model innovation on business resilience in SMEs in East Java, dynamics of regulation have a significant positive effect on business resilience, strategic agility affects business resilience, and digital adoption is unable to moderate the influence of strategic agility on business resilience. It can be concluded that in terms of Indonesian culinary SMEs, its business resilience can only be affected by dynamic regulation and strategic agility. This means that in order that the business resilience can only be increased by maintaining dynamic regulation and strategic agility.

Business resilience is influenced by strategic agility by 72%, business ecosystem and dynamic regulation affect business model innovation by 61.4%, the business ecosystem, the business model innovation,

dynamic regulation, and business model innovation affect strategic agility by 68.7%. Therefore, the novelty that can be found is that the factors that affect business resilience of Indonesian culinary SMEs are only dynamic regulation and strategic agility other than the business resilience of other types of SMES.

This research only measures environmental turbulence such as digital adoption, business ecosystem, strategic agility, business model innovation, dynamic regulation toward business resilience in Indonesian culinary SMEs. Other than that, this research excludes microenterprises in order that the samples can be limited specifically so that the specific results can be produced. Therefore, further research should be able to add other independent and dependent variables or use other research methods so that the results obtained are more coherent.

7. Limitations and Further Study

The limitations of this research are still limited to researching about Indonesian culinary. This study also took a small sample. Future work is to explore other variables that are interrelated with environmental turbulence. This is to more deeply determine the influencing factors, especially those related to workers or business people.

Acknowledgments

This research was supported in part by friends from Mulawarman University. We are grateful to our colleagues who provided expertise that was helpful to the research, although they may not agree with all interpretations given in this paper. The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

Authors' Contributions

The first and second author of this study contributed as a translator, framework advisor, and manuscript editor. The third and four authors of this study contributed as a background maker, theoretical study, data analysis, and discussion.

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