“Integrating circular economy, digital economy, and social protection policies to drive green business innovation: Insights from Indonesia’s culinary SMEs”

AUTHORS	Suci Megawati Herdis Herdiansyah Amir Machmud Ernoiz Antriyandarti Sud Sudirman

ARTICLE INFO	Suci Megawati, Herdis Herdiansyah, Amir Machmud, Ernoiz Antriyandarti and Sud Sudirman (2024). Integrating circular economy, digital economy, and social protection policies to drive green business innovation: Insights from Indonesia’s culinary SMEs. *Problems and Perspectives in Management*, *22*(4), 368-381. doi:10.21511/ppm.22(4).2024.28
DOI	http://dx.doi.org/10.21511/ppm.22(4).2024.28
RELEASED ON	Tuesday, 26 November 2024
RECEIVED ON	Wednesday, 11 September 2024
ACCEPTED ON	Friday, 15 November 2024

JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
65	2	7

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

Suci Megawati (Indonesia), **Herdis Herdiansyah** (Indonesia),
Amir Machmud (Indonesia), **Ernoiz Antriyandarti** (Indonesia),
Sud Sudirman (United Kingdom)

INTEGRATING CIRCULAR ECONOMY, DIGITAL ECONOMY, AND SOCIAL PROTECTION POLICIES TO DRIVE GREEN BUSINESS INNOVATION: INSIGHTS FROM INDONESIA'S CULINARY SMES

Abstract

Global concern over environmental pollution has sparked the adoption of green business practices, which are essential for the sustainability of SMEs through green economy initiatives and renewable resources. This study aims to analyze the integration of circular and digital economy policies along with social protection policies in supporting green business innovation among culinary SMEs. By emphasizing the significance of government roles and innovation capabilities, the paper proposes that policies promoting environmentally friendly practices and social security can enhance sustainable performance in alignment with SDG principles. The study employs a quantitative approach, surveying 200 culinary SMEs in Surabaya City in Indonesia, a city known for its vibrant SME sector and commitment to sustainable practices. The data analysis, conducted using PLS-SEM through SmartPLS 4, reveals that circular economy policies (t-test = 6.503; p-value = 0.000) and social security (t-test = 3.848; p-value = 0.000) significantly enhance green business innovation, while digital economy policies are not significant (t-test = 0.725; p-value = 0.468). Furthermore, green business innovation positively impacts sustainable performance (t-test = 24.418; p-value = 0.000). However, internal innovation capabilities do not moderate the relationship between integrative policies and green business innovation. The findings indicate that government policies significantly influence green business innovation in MSMEs, particularly through circular economy regulations. Regulatory support and incentives are crucial for driving environmental sustainability and enhancing competitiveness. Strengthening digital economy policies through improved technology access and digital literacy will further support green innovation, while investments in internal innovation and human resources are vital for sustainable growth.

Keywords circularity, digitalization, innovation, policy, SMEs, social security, sustainability, competitiveness

JEL Classification Q56, O31, L26

Received on: 11th of September, 2024
Accepted on: 15th of November, 2024
Published on: 26th of November, 2024

Suci Megawati, Dr., Assistant Professor, Department of Public Administration, Faculty of Social Sciences and Political Sciences, Universitas Negeri Surabaya [State University of Surabaya], Indonesia. (Corresponding author)

Herdis Herdiansyah, Dr., Associate Professor, School of Environmental Science, Universitas Indonesia [University of Indonesia], Indonesia.

Amir Machmud, Dr., Full Professor, Economics Education Department, Faculty of Economics and Business Education, Universitas Pendidikan Indonesia [Indonesian Education University], Indonesia.

Ernoiz Antriyandarti, Associate Professor, Department of Agribusiness, Faculty of Agriculture, Universitas Sebelas Maret [Sebelas Maret University], Indonesia.

Sud Sudirman, Assistant Professor, School of Computer Science and Mathematics, Liverpool John Moores University, United Kingdom.

Conflict of interest statement:
Author(s) reported no conflict of interest

INTRODUCTION

Global concern over environmental pollution has intensified the shift toward sustainable economies, where green business practices are increasingly recognized as vital for sustainability – particularly within the micro, small, and medium enterprises (MSME) sector. In this context, green business serves as a key driver for economic growth, emphasizing the importance of renewable resources and social responsibility.

While various sectors have embraced green initiatives, MSMEs face unique challenges and opportunities in implementing these practices. Government support plays a crucial role in facilitating this transition

http://dx.doi.org/10.21511/ppm.22(4).2024.28

through regulations, incentives, and educational programs. However, despite the growing recognition of the importance of circular economy and digital economy policies, empirical research on their combined impact on innovation and sustainability within MSMEs remains limited.

Moreover, social protection policies are critical for enhancing the resilience and sustainability of these enterprises. In many developing countries, including Indonesia, MSMEs often lack adequate social security coverage, which hampers their ability to thrive. While initiatives to expand social insurance for MSMEs have been introduced, there is a pressing need for research to evaluate their effectiveness and alignment with the Sustainable Development Goals (SDGs), particularly Goal 1 (No Poverty) and Goal 8 (Decent Work and Economic Growth). This study addresses this critical gap by examining how such policies can collectively enhance MSMEs' contributions to sustainable development and competitiveness.

1. LITERATURE REVIEW AND HYPOTHESES

The development of green business innovation has gained significant attention due to its potential to encourage sustainable performance within businesses. Green business practices encompass all stages of the business process, from product design and raw material selection to waste management, aiming to sustain economic growth while reducing environmental impact (Mubeen et al., 2024) Since the end of the 20th century, awareness of climate change impacts has grown substantially, affecting both business and societal behaviors. This heightened awareness drives businesses to adopt green practices like waste reduction, renewable energy utilization, and sustainable product design (Ma et al., 2020). These eco-friendly strategies often help companies reduce costs and increase efficiency, strengthening their competitive advantage.

This study is grounded in institutional theory, which examines how pressures from external institutions, such as government regulations, social norms, and industry standards, shape business strategies. Institutional theory posits that organizations adapt their strategies to align with external demands, thus enhancing legitimacy, stability, and long-term sustainability (Williams & Shahid, 2016). Companies are influenced by environmental pressures from stakeholders, including governmental, societal, and industry-related expectations (Basl & Benesova, 2020; Benešová et al., 2021; Sarkar et al., 2020). To achieve legitimacy, they respond to external isomorphic forces – such as obligation, normalization, and imitation – which drive them to adopt green innovation practices (Purwandani & Michaud, 2021).

In adopting green innovation, various factors compel organizations to integrate sustainable practices. Growing environmental awareness and shifting market demands emphasize the need for businesses to focus on eco-friendly strategies. This external pressure, alongside environmental policies and green certification requirements, motivates organizations to adopt sustainable practices (Rustiarini et al., 2022). Thus, green innovation arises not only from internal strategy but also as an adaptive response to external pressures guiding businesses toward practices that align with institutional expectations for sustainability.

Government policies play a crucial role in fostering the growth and development of MSME businesses. These policies are designed to enhance the business ecosystem, strengthen regional economic stability, and promote national economic growth (Mole et al., 2017). The government creates a conducive environment for MSMEs to thrive and contribute to economic advancement by establishing supportive regulations. Trends show that circular and digital economies are the main pillars of sustainable business development (Liang et al., 2023). The government encourages the adoption of these two pillars through policies that support resource efficiency and digital innovation.

The principles of the circular economy include reducing waste and pollution, keeping products and materials used for as long as possible, and regenerating natural systems (Schwanholz & Leipold, 2020). In the context of public policy, the circular economy focuses on creating an economic system that prioritizes resource efficiency, waste reduction, and improved sustainability (Upadhyay et al., 2022). These policies include regulations that

encourage the reuse of materials, environmentally friendly product design, and effective waste management. Within this framework, the government can incentivize companies to implement circular practices, such as tax breaks for using recycled materials or subsidies for green technologies (Milios, 2021). Studies highlight that government support in China has encouraged MSMEs to adopt technologies and models focused on recyclability and cleaner production processes (Zheng et al., 2023). In Indonesia, the circular economy's significance is further underscored by its integration into the 2020–2024 National Medium-Term Development Plan (RPJMN), which emphasizes economic and environmental resilience (Fatimah et al., 2020). By promoting clean technology and regenerative business models, the circular economy also fosters economic resilience, enabling societies to adapt to financial fluctuations.

Integrating the digital economy with green business innovation has also become essential as it transforms traditional practices while emphasizing sustainability (Sun et al., 2024). The digital economy, supported by policies promoting digital infrastructure and fiscal incentives, enables the transition to greener models through tools like IoT, big data, and AI, improving energy efficiency and reducing environmental impact (Tian et al., 2022; Zhang & Li, 2024). The government also plays a critical role by regulating sustainable e-commerce practices, such as eco-friendly packaging and low-emission logistics (Chen, 2019). Furthermore, support through funding and training programs strengthens green startup innovation (Guo et al., 2024).

Social security is a critical factor in promoting sustainable, equitable economic growth. Social security provides income stability, access to health services, and educational and skill development support (Lund, 2012). In times of crisis, a strong social security system supports regional economic resilience and poverty reduction (Li et al., 2024). This responsibility is shared between the government and private sector, with employers contributing to social security and supporting workers under particular conditions (Almosova et al., 2020). Social security also plays a role in strengthening workers' rights and adjusting regulations to protect vulnerable groups (Mojtaba et al., 2015). However, many MSMEs, particularly in the informal sector, lack adequate social protection due to limited resources and low awareness (Simonov et al., 2016; Torm, 2020). In response, Indonesia's BPJS Kesehatan and BPJS Ketenagakerjaan provide dual mandatory insurance policies aimed at enhancing health and employment security for MSMEs (Chibba, 2014).

A body of research highlights innovative capabilities as essential for green business. The ability to innovate, especially in green solutions, bridges resources and knowledge with business performance (Ardyan et al., 2017; Li, 2022). Innovation capabilities also mediate the benefits of government policies on business innovation, as seen in studies on frugal business innovation (AlMulhim, 2021).

In conclusion, the literature indicates a substantial influence of external institutional pressures and governmental support on green business innovation, primarily through circular and digital economic policies, social security frameworks, and innovative capabilities. These factors collectively drive MSMEs toward more sustainable and efficient business practices.

This study aims to analyze the integration of circular and digital economy policies along with social protection policies in supporting green business innovation among culinary SMEs. Figure 1 illustrates the research framework created using institutional theory and existing literature. Consequently, the following hypotheses are proposed:

H1: The circular economy policy has a significant positive effect on green business innovation in the MSME sector.

H2: The digital economy policy has a significant positive effect on green business innovation in the MSME sector.

H3: Social security policy has a significant positive effect on green business innovation in the MSME sector.

H4: Innovation capabilities moderate the relationship between circular economy policy and green business innovation.

http://dx.doi.org/10.21511/ppm.22(4).2024.28

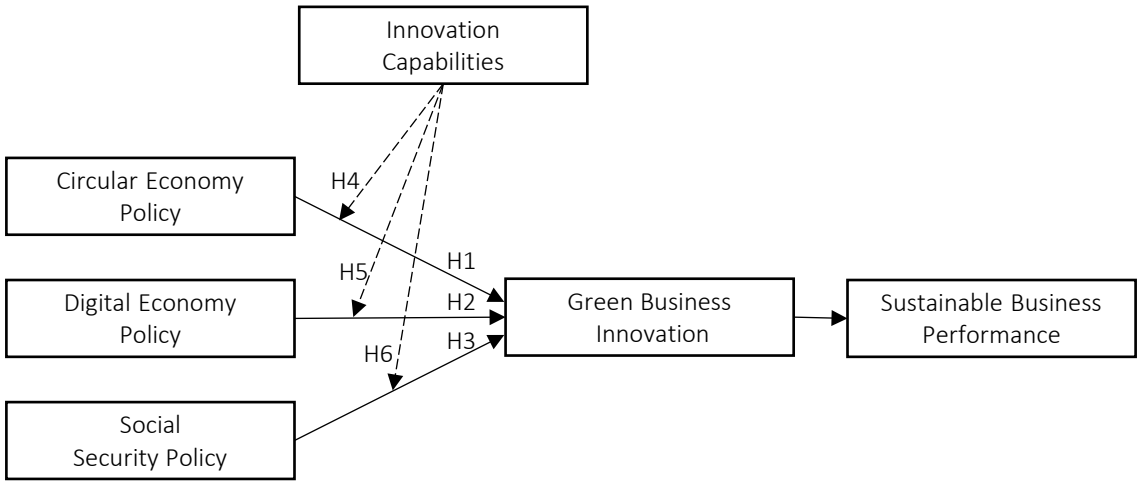

Figure 1. Proposed research model

H5: Innovation capabilities moderate the relationship between digital economy policy and green business innovation.

H6: Innovation capabilities moderate the relationship between social security policy and green business innovation.

H7: Green business innovation has a significant positive effect on the sustainable business performance of the MSME sector.

2. METHOD

This study chooses a quantitative approach with the involvement of a comprehensive survey targeting MSMEs in Surabaya City, Indonesia. The choice of Surabaya City as the object of study is due to its role as the center of economy and innovation in Indonesia. The city has implemented various sustainability initiatives, such as community-based waste management and MSME digitalization (Sutono et al., 2023). Surabaya also has social programs that support vulnerable communities (Babbitt et al., 2015). The city of Surabaya is famous for its high environmental regulations and cross-sector community compliance. This city was selected as one of the world's three best cities in the global green city category, along with the City of Mannheim (Germany) and Zhejiang Province (China) (Aminah, 2022).

The operationalization of each variable uses the previous literature with research indicators (Table A1, Appendix A). The study measured all indicators on a Likert scale of 1 = strongly disagree to 5 = strongly agree. The research framework includes circular economy policy (with seven items; Auwalin et al., 2022; Camilleri, 2020; Milios, 2021; Ogutu et al., 2023), digital economy policy (with six items; Choi & Porananond, 2023; Ge et al., 2024; Lin & Zhou, 2024; Zhao et al., 2024), and social security policy (with five items; Behrendt et al., 2019; Kwon & Keo, 2019; Lindner et al., 2017; Mojtaba et al., 2015) as independent variables. The intervening variable is green business innovation (with twelve items; Lindgren et al., 2021; Mubeen et al., 2024; Tohanean & Weiss, 2019; Xie et al., 2019). Meanwhile, sustainable business performance (with eight items; Alonso-Martinez et al., 2021; Elshaer et al., 2023; Mubeen et al., 2024) is the dependent variable, and innovation capabilities (with five items; Borah et al., 2022; Ferreira & Coelho, 2020) serve as the moderating variable.

This study uses a purposive sampling technique with criteria for selecting culinary MSME owners in Indonesia who have been running a business for at least one year. The minimum sample number is determined by calculating five times the number of indicators (Hair Jr. et al., 2017), so a minimum of 195 samples are needed. The study must also establish a minimum sample based on a power analysis. With G*Power 3.1 software, researchers can measure the desired effect size, significance level (alpha), and statistical power (power) (Faul et al., 2009). By conservatively estimating a mean effect size (*f2*) of 0.05, a power

of 0.95, an alpha level of 0.05, and a maximum of two predictors, the study determined that a minimum sample size of 104 was required.

The data collection procedure is done by distributing questionnaires to culinary MSME owners with field visits. The database and addresses of respondents were obtained from the Cooperatives and SMEs Office of East Java Province and the City of Surabaya. Respondent answers were collected through Google Forms. Data were collected for three months, from June to August 2024. 200 respondents have completed a complete questionnaire and are declared ready for analysis with profile details in Table 1. Most respondents were female (69%), and 31% were male. Most respondents were aged 21-30 years (58%), followed by 18-20 years old (20%), > 40 years old (16%), and 31-40 years old (6%). Most respondents have a high school education or equivalent (62%), followed by Diploma/Bachelor graduates (32%). The majority of respondents are unmarried (76%), have a business age of 1-3 years (71%), and have less than five employees (77%). Only a tiny percentage have more than 14 employees (2%).

Table 1. Respondent characteristics

Characteristics	Total	Percentage
Gender		
Male	62	31%
Female	138	69%
Age		
18-20 years	40	20%
21-30 years	116	58%
31-40 years	13	6%
>40 years	31	16%
Education		
Elementary School/Equivalent	5	3%
Junior High School/Equivalent	6	3%
High School/Equivalent	123	62%
Diploma/Bachelor	64	32%
Postgraduate (Master/Ph.D.)	2	1%
Marital Status		
Unmarried	152	76%
Married	43	21%
Divorced	5	3%
Business Lifespan		
1-3 years	142	71%
4-6 years	27	13%
7-9 years	13	7%
>10 years	18	9%
Number of Employees		
< 5 employees	154	77%
5-14 employees	42	21%
>14 employees	3	2%

This study uses the partial least square-structural equation modeling (PLS-SEM) technique with SmartPLS 4. This approach is practical for complex models, especially when the data or sample size are abnormal. SEM combines factor analysis and multiple regression, allowing simultaneous testing of relationships between variables (Hair et al., 2021). The advantages of SEM include the ability to model latent constructs by considering measurement errors and managing complex relationships between variables (Hair et al., 2019).

3. RESULTS

In the early stages of partial least squares structural equation modeling (PLS-SEM), it is crucial to establish a solid foundation for the analysis. This involves examining the measurement outer model, which focuses on the relationship between latent variables and their indicators. The measurement outer model assesses the reliability and validity of these indicators to ensure accurate and meaningful results (Hair et al., 2020). The reflective model considers indicators to reflect latent variables, while the formative model considers indicators to affect latent variables. Reliability and validity were assessed through Cronbach's Alpha (> 0.7), Composite Reliability (CR) (> 0.7), Average Variance Extracted (AVE) (≥ 0.5), and Outer Loadings indicators (> 0.7) (Hair et al., 2019). The results of the validity and reliability test in Table 2 show that all variables have a Composite Reliability (CR) above 0.7 and Cronbach's Alpha (CA) above 0.8, which indicates good reliability. The Average Variance Extracted (AVE) for all variables also met the minimum criteria of 0.5, indicating adequate convergent validity. Most indicators have a loading factor above 0.7, except for a few in the innovation capabilities and green business innovation items, which are slightly closer to the critical number.

Multicollinearity testing in PLS-SEM uses the Variance Inflation Factor (VIF) to identify collinearity between indicators (Kock, 2017). VIF is calculated based on the determination coefficient (R^2) of the indicator›s regression against other indicators. The results of the VIF test in Table 2 show that all indicators have a VIF value of < 5 (O'brien, 2007). This shows that the indicators do not have significant collinearity.

http://dx.doi.org/10.21511/ppm.22(4).2024.28

Table 2. Validity, reliability, and multicollinearity testing

Variable	Indicator	Factor Loading	AVE	CA	CR	VIF
Circular Economy Policy	CEP1	0.900	0.790	0.955	0.963	4.684
	CEP2	0.908				4.725
	CEP3	0.885				4.453
	CEP4	0.909				4.559
	CEP5	0.836				2.684
	CEP6	0.860				3.096
	CEP7	0.920				4.975
Digital Economy Policy	DEP1	0.884	0.825	0.957	0.966	3.630
	DEP2	0.931				5.485
	DEP3	0.904				4.214
	DEP4	0.894				4.187
	DEP5	0.915				4.913
	DEP6	0.920				4.331
Social Security Policy	SSP1	0.911	0.837	0.951	0.962	3.992
	SSP2	0.920				4.078
	SSP3	0.931				4.667
	SSP4	0.905				3.832
	SSP5	0.905				3.845
Innovation Capabilities	IC1	0.814	0.596	0.863	0.898	2.233
	IC2	0.805				2.550
	IC3	0.830				2.369
	IC4	0.706				1.618
	IC5	0.798				1.554
Green Business Innovation	GBI1	0.768	0.512	0.913	0.926	1.859
	GBI2	0.796				3.078
	GBI3	0.755				2.764
	GBI4	0.746				2.745
	GBI5	0.725				2.667
	GBI6	0.748				2.066
	GBI7	0.793				2.939
	GBI8	0.729				2.033
	GBI9	0.736				1.632
	GBI10	0.716				1.873
	GBI11	0.709				3.603
	GBI12	0.749				4.261
Sustainable Business Performance	SBP1	0.775	0.588	0.896	0.918	2.329
	SBP2	0.815				2.710
	SBP3	0.827				2.647
	SBP4	0.705				1.920
	SBP5	0.798				2.545
	SBP6	0.801				2.346
	SBP7	0.868				3.192
	SBP8	0.772				1.213

Discrimination validity testing is commonly performed in the PLS-SEM analysis technique involving two main methods: Fornell-Larcker discrimination validity and heterotrait-monotrait ratio (HTMT) (Henseler et al., 2015). Both approaches aim to ensure that the latent constructs measured by the indicators measure what is expected.

Fornell-Larcker has criteria for each latent construct: the AVE value must be greater than the *R*-squared (R^2) value of the regression of other latent constructs against the same indicator (Fornell & Larcker, 1981). As for HTMT, the value criterion is less than 0.85 for each latent construct pair (Roemer et al., 2021). The results of the Fornell-Larcker test in Table 3 show that all AVE roots (diagonal values) are more significant than the correlation between other constructs. Each variable can better explain the variance from its indicator than the variance explained by the other construct.

Furthermore, the HTMT test in Table 4 shows that the HTMT value between the construct pairs is below the threshold of 0.85. The highest HTMT value is between the sustainable business performance and green business innovation constructs of 0.794 but remains below the threshold of 0.85. This indicates that the validity discrimination between the constructs in the model has been met, meaning that each construct can be validly distinguished. Thus, this model demonstrates sufficient discriminatory validity according to the Fornell-Larcker and HTMT criteria.

Table 3. Fornell-Larcker test results

Variable	CEP	DEP	GBI	IC	SSP	SBP
CEP	0.989	–	–	–	–	–
DEP	0.919	0.908	–	–	–	–
GBI	0.429	0.417	0.816	–	–	–
IC	0.364	0.407	0.607	0.772	–	–
SSP	0.888	0.892	0.388	0.350	0.915	–
SBP	0.434	0.418	0.740	0.538	0.401	0.767

Note: CEP means circular economy policy; DEP means digital economy policy; GBI means green business innovation; IC means innovation capabilities; SSP means social security policy; SBP means sustainable business performance.

Table 4. HTMT test results

Variable	CEP	DEP	GBI	IC	SSP	SBP
CEP	–	–	–	–	–	–
DEP	0.559	–	–	–	–	–
GBI	0.444	0.431	–	–	–	–
IC	0.393	0.436	0.663	–	–	–
SSP	0.531	0.633	0.401	0.380	–	–
SBP	0.470	0.457	0.794	0.617	0.440	–

Note: CEP means circular economy policy; DEP means digital economy policy; GBI means green business innovation; IC means innovation capabilities; SSP means social security policy; SBP means sustainable business performance.

After successfully testing the measurement model, the inner stage of the structural model is tested to describe the causal relationship between latent variables, and the theory is built on it. The evaluation of the inner model includes aspects of *R* Square and path coefficients. This process is carried out through a bootstrapping procedure with 5,000 resamples applied to produce accurate statistical estimates of *t* and *p*-values, supporting statistical inference's reliability (Streukens & Leroi-Werelds, 2016). Figure 2 is the bootstrapping output, while Table 5 presents the inner structural

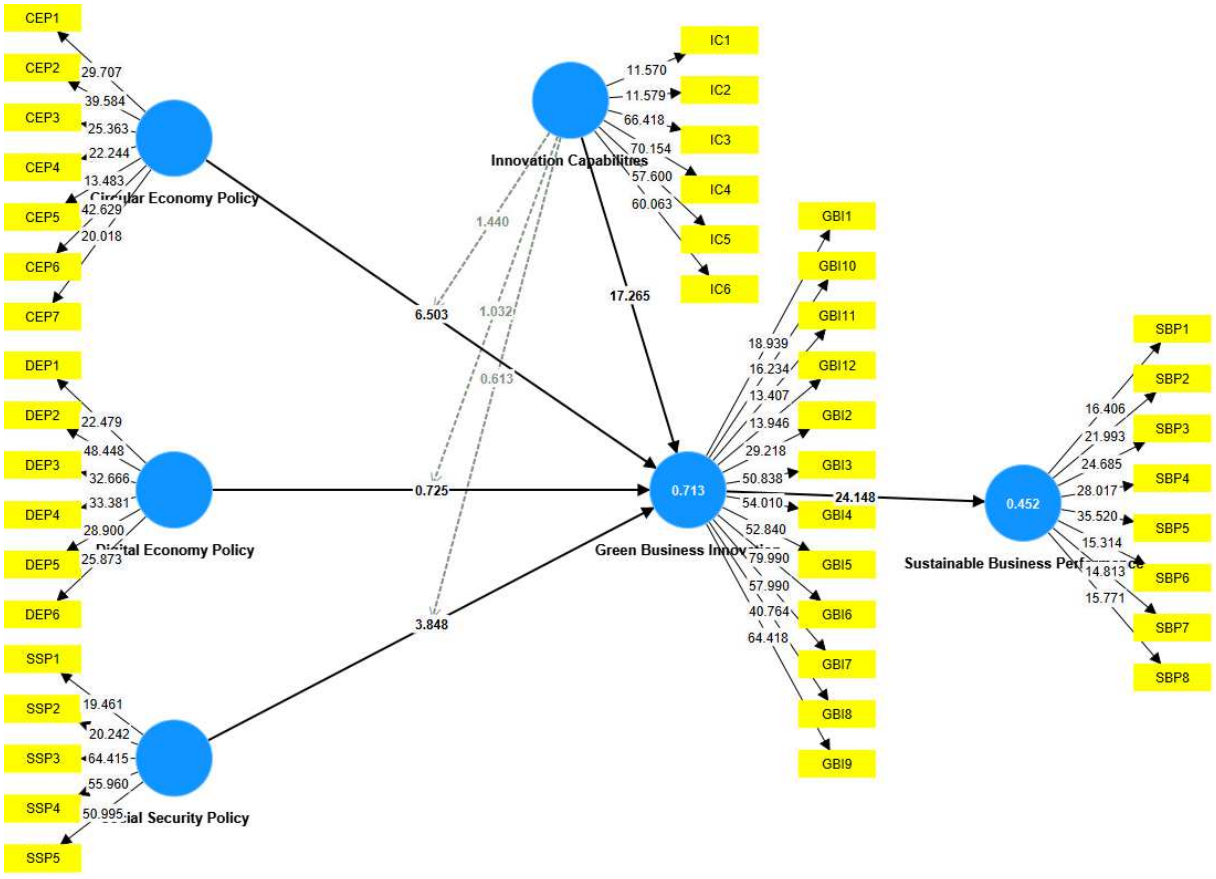

Figure 2. Bootstrapping output

http://dx.doi.org/10.21511/ppm.22(4).2024.28

Table 5. Direct effects and *R*-square result

Hypothesis	Path Coefficient	t-test	p-value	Decision	R-Square
H1: Circular Economy Policy → Green Business Innovation	0.235	6.503	0.000	Accepted	0.714
H2: Digital Economy Policy → Green Business Innovation	0.034	0.725	0.468	Declined	
H3: Social Security Policy → Green Business Innovation	0.150	3.848	0.000	Accepted	
H7: Green Business Innovation → Sustainable Business Performance	0.672	24.418	0.000	Accepted	0.415

Table 6. Results of checking the moderating hypotheses

Hypothesis	Path Coefficient	t-test	p-value	Decision
H4: Innovation Capabilities x Circular Economy Policy → Green Business Innovation	0.056	1.440	0.150	Declined
H5: Innovation Capabilities x Digital Economy Policy → Green Business Innovation	0.062	1.032	0.302	Declined
H6: Innovation Capabilities x Social Security Policy → Green Business Innovation	0.032	0.613	0.540	Declined

model test results. A proposed hypothesis is acceptable if the path coefficient value is positively charged, the *t*-test value is >1.96, and the *p*-value is < 0.05 (Hair et al., 2019).

Table 5 shows that the circular economy policy and social security policy significantly affect green business innovation, so the first hypothesis is accepted. On the other hand, the digital economy policy does not considerably affect green business innovation, so the second hypothesis is rejected. In addition, green business innovation significantly affects sustainable business performance in the MSME sector, so the third hypothesis is accepted. This study also tests the moderation hypotheses to determine the role of innovation capabilities in strengthening the relationship between economic policy-social protection and green business innovation. Surprisingly, the results in Table 6 show that innovation capabilities fail to moderate the relationship between all public policy variables and green business innovation.

The determination coefficient or *R*-Square test was carried out to measure the determination coefficient for endogenous constructs with values of 0.67 (strong), 0.33 (moderate), and 0.19 (weak) (Hair et al., 2020). Table 5 shows that the circular economy, digital economy, and social security policies explain 71.4% of the variance of green business innovation. Meanwhile, green business innovation explained 41.5% of the variance in sustainable business performance. Thus, this model has moderate predictive power for the cumulative relationship of policies supporting the integration of innovative green businesses in MSMEs.

4. DISCUSSION

The study is built on global awareness of the importance of sustainability and environmental protection, which drives the development of green businesses, especially in the MSME sector. MSMEs can develop green business innovations to improve sustainable performance by implementing circular economy, digital economy, and social security policies. This study uses a quantitative approach involving MSMEs in Surabaya, which is known for its sustainability initiatives and environmental regulations. Through the survey method, this study explores the role of innovation policies and capabilities in supporting green business practices and their impact on the sustainable performance of MSMEs, which aligns with the sustainable development goals (SDGs).

The results of the PLS-SEM test support the first hypothesis, meaning that circular economy policies significantly affect green business innovation. These results support the literature that states that circular economy policies can encourage companies to adopt clean technologies and regenerative business models, increase innovation in green solutions such as renewable energy and sustainable waste management, and reduce environmental impact through regulatory support and incentives (Dindarian, 2021; Aranda-Usón et al., 2018; Milios, 2021; Upadhyay et al., 2022; Zheng et al., 2023). This means government policies promoting the circular economy can encourage MSMEs to adopt more environmentally friendly and sustainable practices. For example, MSMEs may be more motivated to reduce waste, reuse raw materials, or

develop products with a lower carbon footprint. This innovation helps MSMEs meet the demands of a market that is increasingly concerned about the environment and can also improve their operational efficiency and competitiveness. In addition, circular economy policies often provide incentives or financial support to encourage MSMEs to invest in new technologies and processes supporting green businesses. Thus, implementing circular economy policies is essential in encouraging green innovation in the MSME sector.

The digital economy policy does not have a significant positive effect on green business innovation. These results reject the second hypothesis and contradict the literature that emphasizes the importance of digitizing the real economy to support the green transformation of companies (Sun et al., 2024; Tian et al., 2022; Zhang & Li, 2024; Jiang & Deng, 2022; Chen, 2019; Guo et al., 2024). The insignificant influence of digital economy policies on green business innovation in the MSME sector can be caused by several factors. First, policy implementation may not be optimal or not per the specific needs of MSMEs. Many MSMEs are still experiencing difficulties accessing technology and digital resources, which is vital to encouraging green innovation. Second, the level of digital literacy and understanding of green business among MSME actors may still be low. Third, the cost of adopting digital technology and green practices is often considered high by MSMEs, so they are reluctant to invest without sufficient incentives. In addition, lack of government support in the form of training or subsidies can be an inhibiting factor. To overcome this, synergy is needed between government policies, increasing digital literacy, and incentives that encourage MSMEs to innovate in green business sustainably.

Next, social security was found to have a significant positive effect on MSME green business innovation. Previous literature also supports the acceptance of this hypothesis by stating that adequate social security can improve employee well-being, which in turn increases their productivity and involvement in innovation (Li et al., 2024; Lindner et al., 2017; Almosova et al., 2020; Bures, 2017; Mojtaba et al., 2015). Social security policies can provide a sense of security and stability for MSME actors, allowing them to focus more on business innovation without worrying too much about financial risks that may arise, such as illness or work accidents. In addition, government support in the form of social security can encourage MSME actors to take innovative steps in their business, including the adoption of environmentally friendly practices. Thus, an excellent social security policy can be essential in encouraging MSMEs to innovate more, especially in implementing sustainable and environmentally friendly business practices.

The findings of the last direct hypothesis reveal the positive significance of the green business relationship to the sustainable business performance of the MSME sector. MSMEs that integrate green business principles, such as using renewable energy, effective waste management, and reducing carbon footprint, tend to achieve sustainable business performance. This reduces environmental impact and improves reputation, competitiveness, and operational efficiency. Customers are increasingly paying attention to sustainability, and this preference can translate into higher loyalty and increased revenue for MSMEs that implement green businesses. In addition, government regulations that support sustainability also encourage MSMEs to adapt to green business practices. Green business is not only a strategy for environmental sustainability but also a key driver for sustainable business performance in the long term.

This study tested the moderating effect of MSME internal innovation capabilities on the relationship between circular-digital integrative policies and social protection with green business innovation. However, the results show that innovative capabilities fail to moderate the relationship. Several explanations must be underlined. First, the internal innovation capability of MSMEs may still be low or not mature enough. MSMEs in many developing countries often have limited resources, both in terms of finance, technology, and human resources, which limits their ability to create innovations relevant to circular and digital principles and green business innovation. Second, there is still a mis-synchronization between the innovation capabilities owned by MSMEs and the specific needs needed to facilitate green business innovation. For example, while MSMEs may be innovative in certain products or processes, they may not

http://dx.doi.org/10.21511/ppm.22(4).2024.28

be sufficiently focused on sustainability efforts or in line with the implementation of circular digital and social protection policies. Next, the circular-digital integrative policy and social protection are still in the early stages as a sustainable trend emerged in the 2010s, so it has not maximally created a supportive ecosystem for MSMEs to develop green innovations.

CONCLUSION

This study aims to analyze the integration of circular and digital economy policies along with social protection policies in supporting green business innovation among culinary SMEs. The findings indicate that circular economy policies are highly influential in encouraging MSMEs to adopt clean technologies and sustainable practices, while social protection policies provide stability, allowing businesses to focus on innovation. However, digital economy policies do not show a significant impact, potentially due to implementation challenges, low digital literacy, and high technology adoption costs. Additionally, MSMEs' internal innovation capabilities did not moderate the relationship between circular-digital integrative policies and green business innovation, indicating the need for further development in this area.

The results underscore the importance of strengthening digital support and innovation capabilities within MSMEs to foster sustainable business practices. Governments should focus on enhancing access to technology, providing digital literacy programs, and offering incentives to overcome barriers to digital adoption. Additionally, MSMEs need to invest in their internal innovation capabilities and leverage government policies proactively to drive sustainable growth.

This study has several limitations that must be considered, including its limited focus on MSMEs in Surabaya, so the results may not be fully generalizable to other regions with different economic and regulatory characteristics. The quantitative approach may also not capture the deeper contextual nuances of how innovation policies and capabilities affect green business practices. Future studies could expand this research geographically to capture regional differences and incorporate qualitative approaches to better understand the challenges and opportunities MSMEs face in green innovation adoption.

AUTHOR CONTRIBUTION

Conceptualization: Suci Megawati, Herdis Herdiansyah.
Data curation: Suci Megawati, Herdis Herdiansyah, Amir Machmud.
Formal analysis: Suci Megawati, Amir Machmud.
Funding acquisition: Suci Megawati.
Investigation: Suci Megawati, Ernoiz Antriyandarti.
Methodology: Suci Megawati, Herdis Herdiansyah.
Project administration: Suci Megawati, Sud Sudirman.
Resources: Amir Machmud, Ernoiz Antriyandarti.
Software: Suci Megawati, Herdis Herdiansyah.
Supervision: Suci Megawati, Herdis Herdiansyah, Sud Sudirman.
Validation: Sud Sudirman.
Visualization: Amir Machmud, Ernoiz Antriyandarti.
Writing – original draft: Suci Megawati, Herdis Herdiansyah, Amir Machmud, Ernoiz Antriyandarti, Sud Sudirman.
Writing – review & editing: Suci Megawati, Amir Machmud, Ernoiz Antriyandarti.

ACKNOWLEDGMENT

This study is funded by the Riset Kolaborasi Indonesia (Grant No. B/43869/UN38.III.1/LK.04.00/2024) by LPPM Universitas Negeri Surabaya.

REFERENCES

1. Almosova, A., Burda, M. C., & Voigts, S. (2020). Social security contributions and the business cycle. *Journal of Macroeconomics, 65,* Article 103209. https://doi.org/10.1016/j.jmacro.2020.103209
2. AlMulhim, A. F. (2021). The role of internal and external sources of knowledge on frugal innovation: Moderating role of innovation capabilities. *International Journal of Innovation Science, 13*(3), 341-363. https://doi.org/10.1108/IJIS-09-2020-0130
3. Alonso-Martinez, D., De Marchi, V., & Di Maria, E. (2021). The sustainability performances of sustainable business models. *Journal of Cleaner Production, 323,* Article 129145. https://doi.org/10.1016/j.jclepro.2021.129145
4. Aminah, S. (2022). Implementation of green city Surabaya: Overcoming challenges of local-global and green capitalism development. *Global Strategis, 16*(2), 329-356. https://doi.org/10.20473/jgs.16.2.2022.329-356
5. Aranda-Usón, A., Moneva, J. M., Portillo-Tarragona, P., & Llena-Macarulla, F. (2018). Measurement of the circular economy in businesses: Impact and implications for regional policies. *Economics and Policy of Energy and the Environment, 2018*(2), 187-205. https://doi.org/10.3280/EFE2018-002010
6. Ardyan, E., Nurtantiono, A., Istiyanto, B., & Rahmawan, G. (2017). Green innovation capability as driver of sustainable competitive advantages and SMES marketing performance. *International Journal of Civil Engineering and Technology, 8*(8), 1114-1122. Retrieved from https://iaeme.com/MasterAdmin/Journal_uploads/IJCIET/VOLUME_8_ISSUE_8/IJCIET_08_08_119.pdf
7. Auwalin, I., Rumayya, Rahma Sari, F., & Maulida, S. R. (2022). Applying the pro-circular change model to restaurant and retail businesses' preferences for circular economy: Evidence from Indonesia. *Sustainability: Science, Practice and Policy, 18*(1), 97-113. https://doi.org/10.1080/15487733.2022.2027121
8. Babbitt, L. G., Brown, D., & Mazaheri, N. (2015). Gender, entrepreneurship, and the formal-informal dilemma: Evidence from Indonesia. *World Development, 72,* 163-174. https://doi.org/10.1016/j.worlddev.2015.02.019
9. Basl, J., & Benesova, A. (2020). Green industry 4.0 – Analysis of green aspects penetration in business readiness models for industry 4.0. *Proceedings of the 28th Interdisciplinary Information Management Talks: Digitalized Economy, Society and Information Management, IDIMT* (pp. 125-132). Linz: Trauner Verlag Universität. Retrieved from http://hdl.handle.net/11025/42471
10. Behrendt, C., Nguyen, Q. A., & Rani, U. (2019). Social protection systems and the future of work: Ensuring social security for digital platform workers. *International Social Security Review, 72*(3), 17-41. https://doi.org/10.1111/issr.12212
11. Benešová, A., Basl, J., Tupa, J., & Steiner, F. (2021). Design of a business readiness model to realise a green industry 4.0 company. *International Journal of Computer Integrated Manufacturing, 34*(9), 920-932. https://doi.org/10.1080/0951192X.2021.1946858
12. Borah, P. S., Iqbal, S., & Akhtar, S. (2022). Linking social media usage and SME's sustainable performance: The role of digital leadership and innovation capabilities. *Technology in Society, 68.* https://doi.org/10.1016/j.techsoc.2022.101900
13. Bures, O. (2017). Contributions of private businesses to the provision of security in the EU: beyond public-private partnerships. *Crime, Law and Social Change, 67*(3), 289-312. https://doi.org/10.1007/s10611-016-9650-6
14. Camilleri, M. A. (2020). European environment policy for the circular economy: Implications for business and industry stakeholders. *Sustainable Development, 28*(6), 1804-1812. https://doi.org/10.1002/sd.2113
15. Chen, L.-F. (2019). Green certification, e-commerce, and low-carbon economy for international tourist hotels. *Environmental Science and Pollution Research, 26*(18), 17965-17973. https://doi.org/10.1007/s11356-018-2161-5
16. Chibba, M. (2014). Understanding human trafficking: Perspectives from social science, security matters, business and human rights. *Contemporary Social Science, 9*(3), 311-321. https://doi.org/10.1080/21582041.2012.727301
17. Choi, Y. S., & Porananond, P. (2023). Competition law and policy of the ASEAN member states for the digital economy: A proposal for greater harmonization. *Asia Pacific Law Review, 31*(2), 358-379. https://doi.org/10.1080/10192557.2023.2216055
18. Dindarian, A. (2021). Overview: The smart sustainable city initiatives and the circular economy. In *Circular Economy and Sustainability. Volume 1: Management and Policy* (pp. 369-384). Elsevier. https://doi.org/10.1016/B978-0-12-819817-9.00004-1
19. Elshaer, I. A., Azazz, A. M. S., & Fayyad, S. (2023). Green management and sustainable performance of small- and medium-sized hospitality businesses: Moderating the role of an employee's pro-environmental behaviour. *International Journal of Environmental Research and Public Health, 20*(3), Article 2244. https://doi.org/10.3390/ijerph20032244

http://dx.doi.org/10.21511/ppm.22(4).2024.28

20. Fatimah, Y. A., Govindan, K., Murniningsih, R., & Setiawan, A. (2020). Industry 4.0 based sustainable circular economy approach for smart waste management system to achieve sustainable development goals: A case study of Indonesia. *Journal of Cleaner Production, 269,* Article 122263. https://doi.org/10.1016/j.jclepro.2020.122263

21. Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149-1160. https://doi.org/10.3758/BRM.41.4.1149

22. Ferreira, J., & Coelho, A. (2020). Dynamic capabilities, innovation and branding capabilities and their impact on competitive advantage and SME's performance in Portugal: The moderating effects of entrepreneurial orientation. *International Journal of Innovation Science, 12*(3), 255-286. https://doi.org/10.1108/IJIS-10-2018-0108

23. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50. https://doi.org/10.1177/002224378101800104

24. Ge, Y., Xia, Y., & Wang, T. (2024). Digital economy, data resources and enterprise green technology innovation: Evidence from A-listed Chinese Firms. *Resources Policy, 92,* Article 105035. https://doi.org/10.1016/j.resourpol.2024.105035

25. Guo, J., Jia, F., Yan, F., & Chen, L. (2024). E-commerce supply chain finance for SMEs: The role of green innovation. *International Journal of Logistics Research and Applications, 27*(9), 1596-1615. https://doi.org/10.1080/13675567.2023.2167959

26. Hair, J. F., Astrachan, C. B., Moisescu, O. I., Radomir, L., Sarstedt, M., Vaithilingam, S., & Ringle, C. M. (2021). Executing and interpreting applications of PLS-SEM: Updates for family business researchers. *Journal of Family Business Strategy, 12*(3), Article 100392. https://doi.org/10.1016/j.jfbs.2020.100392

27. Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research, 109,* 101-110. https://doi.org/10.1016/j.jbusres.2019.11.069

28. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203

29. Hair Jr., J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis, 1*(2), 107-123. https://doi.org/10.1504/ijmda.2017.10008574

30. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115-135. https://doi.org/10.1007/s11747-014-0403-8

31. Jiang, Y., & Deng, F. (2022). Multidimensional threshold effects of the digital economy on green economic growth? – New evidence from China. *Sustainability*, *14*(19), Article 12888. https://doi.org/10.3390/su141912888

32. Kock, N. (2017). Common method bias: A full collinearity assessment method for PLS-SEM. In H. Latan & R. Noonan (Eds.), *Partial Least Squares Path Modeling* (pp. 245-257). Springer International Publishing. https://doi.org/10.1007/978-3-319-64069-3_11

33. Kwon, S., & Keo, L. (2019). Social health protection in Cambodia: Challenges of policy design and implementation. *International Social Security Review, 72*(2), 97-111. https://doi.org/10.1111/issr.12203

34. Li, H. (2022). Green innovation, green dynamic capability, and enterprise performance: Evidence from heavy polluting manufacturing enterprises in China. *Complexity*. https://doi.org/10.1155/2022/7755964

35. Li, J., Zhao, Z., Cong, L. M., & Xu, Y. (2024). Impact of social insurance law on total factor productivity: Evidence from Chinese micro and small businesses. *Applied Economics, 56*(57), 7937-7959. https://doi.org/10.1080/00036846.2023.2289914

36. Liang, Y., Zhao, C., & Lee, M.-J. (2023). Institutional pressures on sustainability and green performance: The mediating role of digital business model innovation. *Sustainability*, *15*(19). https://doi.org/10.3390/su151914258

37. Lin, Q., & Zhou, P. (2024). Synergy of digital economy and green economy in sustainable development policy. *Journal of Autonomous Intelligence, 7*(3). https://doi.org/10.32629/jai.v7i3.1299

38. Lindgren, P., Knoth, N. S. H., Sureshkumar, S., Friedrich, M. F., & Adomaityte, R. (2021). "Green multi business models" How to measure green business models and green business model innovation? *Wireless Personal Communications, 121*(2), 1303-1323. https://doi.org/10.1007/s11277-021-09189-2

39. Lindner, S., Burdick, C., & Meseguer, J. (2017). Characteristics and employment of applicants for social security disability insurance over the business cycle. *B.E. Journal of Economic Analysis & Policy, 17*(1). https://doi.org/10.1515/bejeap-2016-0095

40. Lund, F. (2012). Work-related social protection for informal workers. *International Social Security Review*, *65*(4), 9-30. https://doi.org/10.1111/j.1468-246X.2012.01445.x

41. Ma, Y., Thornton, T. F., Mangalagiu, D., Lan, J., Hestad, D., Cappello, E. A., & Van der Leeuw, S. (2020). Co-creation, co-evolution and co-governance: Understanding green businesses and urban transformations. *Climatic Change, 160*(4), 621-636. https://doi.org/10.1007/s10584-019-02541-3

42. Milios, L. (2021). Overarching policy framework for product life extension in a circular economy – A bottom-up business perspective. *Environmental Policy and Governance, 31*(4), 330-346. https://doi.org/10.1002/eet.1927

43. Mojtaba, R.-B., Hamidreza, S., & Rohollah, Z. (2015). The challenges of implementing business process reengineering in social security organization: The impact of structural

features and human resource management. *Biomedical and Pharmacology Journal, 12,* 85-93. Retrieved from https://pdfs.semanticscholar.org/4951/635fce68419e941dfb6d150afa0dee337ce3.pdf

44. Mole, K., North, D., & Baldock, R. (2017). Which SMEs seek external support? Business characteristics, management behaviour and external influences in a contingency approach. *Environment and Planning C: Government and Policy, 35*(3), 476-499. https://doi.org/10.1177/0263774X16665362

45. Mubeen, A., Nisar, Q. A., Patwary, A. K., Rehman, S., & Ahmad, W. (2024). Greening your business: Nexus of green dynamic capabilities, green innovation and sustainable performance. *Environment, Development and Sustainability, 26,* 22747-22773. https://doi.org/10.1007/s10668-023-03574-6

46. O'brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity, 41*(5), 673-690. https://doi.org/10.1007/s11135-006-9018-6

47. Ogutu, M. O., Akor, J., Mulindwa, M. S., Heshima, O., & Nsengimana, C. (2023). Implementing circular economy and sustainability policies in Rwanda: Experiences of Rwandan manufacturers with the plastic ban policy. *Frontiers in Sustainability, 4*. https://doi.org/10.3389/frsus.2023.1092107

48. Purwandani, J. A., & Michaud, G. (2021). What are the drivers and barriers for green business practice adoption for SMEs? *Environment Systems and Decisions, 41*(4), 577-593. https://doi.org/10.1007/s10669-021-09821-3

49. Roemer, E., Schuberth, F., & Henseler, J. (2021). HTMT2 – An improved criterion for assessing discriminant validity in structural equation modeling. *Industrial Management & Data Systems, 121*(12), 2637-2650. https://doi.org/10.1108/IMDS-02-2021-0082

50. Rustiarini, N. W., Bhegawati, D. A. S., & Mendra, N. P. Y. (2022). Does green innovation improve SME performance? *Economies, 10*(12), Article 316. https://doi.org/10.3390/economies10120316

51. Sarkar, A., Qian, L., & Peau, A. K. (2020). Overview of green business practices within the Bangladeshi RMG industry: Competitiveness and sustainable development perspective. *Environmental Science and Pollution Research, 27*(18), 22888-22901. https://doi.org/10.1007/s11356-020-08816-y

52. Schwanholz, J., & Leipold, S. (2020). Sharing for a circular economy? An analysis of digital sharing platforms' principles and business models. *Journal of Cleaner Production*, *269*. https://doi.org/10.1016/j.jclepro.2020.122327

53. Simonov, S. G., Khamatkhanova, M. A., Lysenko, I. V., & Yamova, O. V. (2016). Social orientation of security of small and medium-sized enterprises in the countries of the customs union (Russia-Kazakhstan-Belarus). *International Journal of Applied Business and Economic Research, 14*(9), 5921-5934. Retrieved from https://serialsjournals.com/abstract/61069_ch-17.pdf

54. Streukens, S., & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: A step-by-step guide to get more out of your bootstrap results. *European Management Journal, 34*(6), 618-632. https://doi.org/10.1016/j.emj.2016.06.003

55. Sun, G., Fang, J., Li, J., & Wang, X. (2024). Research on the impact of the integration of digital economy and real economy on enterprise green innovation. *Technological Forecasting and Social Change, 200*. https://doi.org/10.1016/j.techfore.2023.123097

56. Sutono, S., Harsono, I., Nasruddin, N., & Judijanto, L. (2023). The influence of regulatory policy, technology infrastructure, and human resource quality on economic growth in Surabaya city. *West Science Journal Economic and Entrepreneurship, 1*(11), 547-556. https://doi.org/10.58812/wsjee.v1i11.352

57. Tian, X., Zhang, Y., & Qu, G. (2022). The impact of digital economy on the efficiency of green financial investment in China's provinces. *International Journal of Environmental Research and Public Health*, *19*(14), Article 8884. https://doi.org/10.3390/ijerph19148884

58. Tohanean, D., & Weiss, P. (2019). Digital entrepreneurship and green business model innovation: Lean startup approaches. *Quality – Access to Success, 20*(S2), 630-634. Retrieved from https://www.proquest.com/openview/94e359f1625eb1f62f4abb3b6d00783c/1

59. Torm, N. (2020). To what extent is social security spending associated with enhanced firm-level performance? A case study of SMEs in Indonesia. *International Labour Review, 159*(3), 339-366. https://doi.org/10.1111/ilr.12155

60. Upadhyay, A., Kumar, A., & Akter, S. (2022). An analysis of UK retailers' initiatives towards circular economy transition and policy-driven directions. *Clean Technologies and Environmental Policy, 24*(4), 1209-1217. https://doi.org/10.1007/s10098-020-02004-9

61. Williams, C. C., & Shahid, M. S. (2016). Informal entrepreneurship and institutional theory: Explaining the varying degrees of (in) formalization of entrepreneurs in Pakistan. *Entrepreneurship and Regional Development, 28*(1-2), 1-25. https://doi.org/10.1080/08985626.2014.963889

62. Xie, X., Huo, J., & Zou, H. (2019). Green process innovation, green product innovation, and corporate financial performance: A content analysis method. *Journal of Business Research*, *101*, 697-706. https://doi.org/10.1016/j.jbusres.2019.01.010

63. Zhang, Z., & Li, W. (2024). Driving effects of digital economy on green efficiency of resource-based cities in the Yellow River Basin. *Resources Science, 46*(3), 475-487. https://doi.org/10.18402/resci.2024.03.04

64. Zhao, X., Xu, S., Jiang, T., & Liu, B. (2024). Digital economy's impact on green innovation efficiency: Bottom-up or top-down? *Clean Technologies and Environmental Policy*. https://doi.org/10.1007/s10098-024-02753-x

65. Zheng, L. J., Wang, Y. A., Lin, H.-Y., & Liu, W. (2023). Understanding circular economy adoption by SMEs: A case study on organizational legitimacy and Industry 4.0. *Industrial Management & Data Systems, 123*(4), 1157-1177. https://doi.org/10.1108/IMDS-04-2022-0266

http://dx.doi.org/10.21511/ppm.22(4).2024.28

APPENDIX A

Table A1. Variable-indicator description

Variable	Indicator
Circular Economy Policy	The government provides incentives for ready-to-eat culinary MSMEs to use environmentally friendly raw materials
	Government policy encourages ready-to-eat culinary MSMEs to reduce plastic waste by providing environmentally friendly packaging alternatives
	The government provides training and financial assistance for ready-to-eat culinary MSMEs to implement sustainable business practices
	Government policy encourages cooperation between ready-to-eat culinary MSMEs to recycle waste and optimize resources together
	The government imposes strict regulations on the use of hazardous chemicals in the production of ready-to-eat culinary MSMEs
	Government policy provides tax incentives to ready-to-eat culinary MSMEs that implement sustainable business practices
	The government provides support in promoting ready-to-eat culinary MSMEs that are committed to sustainable business practices
Digital Economy Policy	The government supports a digital platform ecosystem that makes it easier for ready-to-eat culinary MSMEs to sell online
	The government provides training and technical support to improve the digital skills of ready-to-eat culinary MSME owners
	Government policy encourages the integration of digital payments in ready-to-eat culinary MSME transactions
	The government provides tax incentives or financial assistance for ready-to-eat culinary MSMEs that adopt digital technology in their operations
	Government policy encourages cooperation between ready-to-eat culinary MSMEs and technology companies for innovation in marketing and business management
	The government provides legal protection and data security for ready-to-eat culinary MSMEs that operate digitally
Social Security Policy	The government provides financial assistance to improve the welfare of ready-to-eat culinary MSME workers
	The government provides health insurance protection for ready-to-eat culinary MSME owners and their families
	Training and skill development programs organized by the government help improve job security in ready-to-eat culinary MSMEs
	The social protection system provided by the government provides adequate pension guarantees for ready-to-eat culinary MSME owners
	The availability of emergency financial assistance from the government helps ready-to-eat culinary MSME owners overcome unexpected economic crises
Innovation Capabilities	Our business is always a new generation of products, services or ideas
	Our business is constantly looking for new ways to do things and reach customers
	Our business is creative in its operation, processes, and implementation methods
	Our business is usually a culinary pioneer in the market
	Our business can introduce new products or services due to our constant focus on innovative ideas and capabilities
Green Business Innovation	Our business seeks to reduce resource consumption and improve resource and energy efficiency
	Our business uses recycled materials, recycling techniques, and environmental technology
	Our business implements environmental campaigns
	Our business seeks population control during the product manufacturing process
	As a business owner, I understand the importance of business protecting the environment
	Our business has an integrated self-contained landfill
	Our business has a processing site for organic waste that is converted into fertilizer
	Our business has a plastic waste processing plant that is converted into recycled products
	Our business has an eco-friendly packaging design
	Our business modifies product designs aimed at improving energy efficiency during use
	Our business uses materials that have minimal environmental risk
	Every culinary product we create has no potential to damage the environment
Sustainable Business Performance	My business has successfully used resources (raw materials, water, and energy) efficiently
	Our business has protected biodiversity and natural ecosystem areas
	Our business has minimized its emissions into the air (greenhouse gases and other substances)
	Our business has been using water efficiently
	Our business has succeeded in minimizing waste materials
	Our business has minimized the environmental impact of our products
	Our business continues to achieve reasonably good profits
	The cash flow of our business is in a good shape