

Digital Transformation as a Moderator in the Relationship between Green Entrepreneurial Orientation and Financial Bootstrapping on Financial Performance

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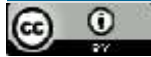
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ABSTRACT

This study examines how digital transformation can moderate the relationship between Green Entrepreneurial Orientation (GEO) and Financial Bootstrapping on the financial performance of culinary Micro, Small, and Medium Enterprises (MSMEs) in Malang City. Data was collected from 390 MSMEs in the food and beverage industry using questionnaires and analyzed using multiple linear regression and moderated regression analysis. This regression model highlights the significance of Green Entrepreneurial Orientation and Financial Bootstrapping as primary methods influencing the financial success of MSMEs. Digital Transformation as moderated is significant. To get best outcomes, MSMEs must integrate sustainability methods with financial efficiency concurrently, rather than concentrating on a singular aspect.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) of Culinary play a crucial role in Indonesia's economy, particularly in the rapidly growing culinary sector. In Malang City, the culinary sector serves as one of the backbones of the regional economy, with culinary MSMEs spread across five districts: Klojen, Lowokwaru, Sukun, Kedungkandang, and Blimbing. These culinary MSMEs face various challenges (Wardhana et al., 2023), ranging from limited capital and intense competition (Santoso et al., 2023) to shifting consumer preferences that increasingly prioritize environmentally friendly products such as organic ingredients and services such as conserve natural resources (Wondirad et al., 2021). Additionally, the development of digital technology and the industry's shift towards digitalization create both opportunities and pressures for adaptation (Novikova, 2020).

The orientation toward Green Entrepreneurial Orientation (GEO) becomes increasingly relevant (Huang et al., 2024; Lia & Fitri, 2023). GEO emphasizes the importance of sustainable innovation, efficient utilization of natural resources, and a commitment to environmental preservation. Culinary MSMEs in Malang City are expected to apply the principles of green entrepreneurship as part of their strategy to enhance competitiveness and business sustainability (Alshebami, 2023). However, the implementation of GEO strategies is often hampered by the financial constraints faced by many MSMEs (Mittal & Raman, 2021).

To overcome these financial limitations, many culinary MSMEs rely on Financial Bootstrapping strategies (Rahayu & Rahmawati, 2022). Financial Bootstrapping is an approach to managing business finances by avoiding external loans and maximizing the use of internal resources. This strategy is well-suited for MSMEs, which often lack adequate access to formal financing. Although Financial Bootstrapping can help MSMEs survive, its effectiveness in improving long-term financial performance still requires supporting strategies, such as digitalization (Wang et al., 2020).

In the current digital era, Digital Transformation can be a key factor for culinary MSMEs to improve their financial performance (Rahawarin et al., 2023). The adoption of digital technologies, such as app-based sales management systems, e-commerce, and digital marketing, enables MSMEs especially Culinary MSMEs to expand their market reach such as market share, increase operational efficiency such as labour hours, and adapt to consumer trends that increasingly prioritize convenience and sustainability. Digitalization also facilitates MSMEs in adopting green entrepreneurial strategies and leveraging Financial Bootstrapping more effectively.

However, there has been limited research on the role of digital transformation as a moderating variable in the relationship between Green Entrepreneurial Orientation and Financial Bootstrapping on the financial performance of culinary MSMEs especially in Malang City. Therefore, this study aims to examine how digital transformation can moderate the relationship between Green Entrepreneurial Orientation and Financial Bootstrapping on the financial performance of culinary MSMEs in the five

districts of Malang City. This research is expected to provide new insights into how culinary MSMEs can improve their financial performance through a combination of green entrepreneurial strategies, financial bootstrapping, and digitalization.

LITERATURE REVIEW

Green Entrepreneurial Orientation

Green Entrepreneurial Orientation (GEO) MSMEs Culinary is a concept that combines entrepreneurship with sustainability in business strategy. GEO is a proactive approach that companies or individuals have to develop their business by paying attention to environmental aspects. It involves initiatives to take advantage of opportunities that support green innovation, energy efficiency, and environmental protection. Green Entrepreneurial Orientation significantly enhances financial performance across different sectors and contexts. This positive impact is often mediated or moderated by factors such as knowledge transfer (Jiang et al., 2018), green innovation, and strategic orientations (Joshi et al., 2021). Firms adopting GEO can achieve better financial outcomes by leveraging these mediating and moderating factors, thereby gaining a competitive edge in the market.

Recent studies highlight the importance of green entrepreneurial orientation (GEO) for micro, small and medium-sized enterprises (MSMEs) especially culinary in enhancing both financial and environmental performance. GEO positively impacts MSMEs performance directly and indirectly through green innovation (Aftab et al., 2024; Asad et al., 2023). Meanwhile, corporate social responsibility and differentiation strategies moderate this relationship, strengthening the positive effects (Aftab et al., 2024). Green technology dynamism and knowledge transfer also play significant moderating roles in the GEO-performance relationship (Asad et al., 2023). Additionally, green transformational leadership contributes to improved SME performance, with green product innovation serving as a mediator (Majali et al., 2022). The adoption or adaptation of green practices is crucial for MSMEs to meet growing consumer awareness of environmental concerns and maintain competitiveness (Asad et al., 2023; Bassem, 2023). These findings underscore the importance of integrating green practices and innovation in MSMEs strategies to enhance both financial and environmental outcomes.

H1: Green Entrepreneurial Orientation of MSMEs Culinary has effect on a Financial Performance

Financial Bootstrapping

Financial bootstrapping refers to a method used by MSMEs Culinary to start and grow a business with minimal external funding or resources. Instead of relying on large investments from venture capitalists, loans, or other traditional forms of financing, entrepreneurs use personal or private savings, revenue generated from the business, and creative cost-cutting techniques to fund operations. The idea is to stretch every money and make the most of available resources to build the business in a lean and resourceful way.

Small business managers use various financial bootstrapping methods to meet resource needs, ranging from internal to social to quasi-market approaches (Winborg & Landström, 2001). MSMEs that use efficiency-promoting technology, preventive maintenance, control costs also turnover during growth are more inclined to use less external financing, preserving financial autonomy (Fadil & St-Pierre, 2021). Batik entrepreneurs in Central Java, Indonesia, use six types of bootstrapping strategies to reduce their dependence on external capital, enabling their businesses to function properly (Rita, 2019).

Financial bootstrapping, an alternative funding strategy for SMEs facing limited access to traditional financing, has shown mixed effects on business performance across different contexts. While some studies found a negative impact of financial bootstrapping on MSMEs performance (Dika et al., 2021; Parmitasari et al., 2023), others reported positive effects, particularly when related to customer and supplier relationships (Li & Alvarado, 2021). Financial literacy plays a crucial role in moderating the relationship between bootstrapping and performance, with higher literacy levels leading to improved outcomes (Dika et al., 2021; Parmitasari et al., 2023). Digital transformation has also been identified as a significant factor positively influencing MSMEs financial performance (Rita, 2019). Additionally, government support and policies facilitating access to alternative funding sources, such as P2P lending, may contribute to enhanced SME performance (Parmitasari et al., 2023). These findings highlight the complex interplay of factors affecting SME financial performance in relation to bootstrapping techniques.

H2: Financial Bootstrapping has effect on a Financial Performance of MSMEs Culinary

Financial Performance

Financial performance refers to a MSMEs Culinary ability to generate profits, grow revenues, and maintain financial health over a specific period of time. It is a measure of how well a company utilizes its resources to achieve its financial objectives. Financial performance is typically assessed through financial statements and key performance indicators (KPIs) of MSMEs Culinary, which provide insights into the MSMEs profitability, liquidity, efficiency, and solvency.

Recent studies have explored the impact of entrepreneurial orientation (EO) and financial resources on micor, small and medium-sized enterprises' (MSMEs) performance. Green entrepreneurial orientation has been found to significantly enhance both environmental and financial performance of MSMEs (Asad et al., 2023). Access to financial resources plays a crucial role in mediating the effect of EO on MSMEs performance (Oly Ndubisi & Agarwal, 2014; Zarrouk et al., 2020). While EO positively influences both financial and non-financial performance, access to finance significantly moderates the relationship between entrepreneurial orientation and financial performance but not non-financial performance (Al-Mamary et al., 2020; Khan et al., 2021). Competitive advantage has been shown to mediate the relationship between entrepreneurial orientation and MSMEs performance, measured by both firm growth and

personal wealth (Kiyabo & Isaga, 2020; Yaskun et al., 2023). These findings highlight the importance of financial autonomy, innovation strategies, and access to affordable financial services in supporting MSMEs growth and performance.

Digital Transformation

Digital transformation refers to the integration of digital technology into all areas of a business, fundamentally changing how the organization operates and delivers value to customers by MSMEs Culinary. For micro, small and medium-sized enterprises (MSMEs), digital transformation is crucial for staying competitive, improving operational efficiency, enhancing customer experiences, and accessing new markets.

Recent studies highlight the significant impact of digital transformation on financial performance and sustainability in entrepreneurial ventures. Digital transformation capabilities enhance environmental and social performance, leading to improved economic sustainability (Kumar et al., 2024). In renewable energy companies, digital transformation drives financial performance, with green technology innovation acting as a mediator (Ren & Li, 2022). The relationship between digital transformation and financial performance is further moderated by entrepreneurs' social capital, particularly technological and business social capital (Ji et al., 2024). Additionally, green entrepreneurial orientation positively influences both environmental and financial performance in MSMEs Culinary, with green technology dynamism and knowledge transfer acting as significant moderators (Asad et al., 2023). These findings underscore the importance of digital transformation and green practices in enhancing business performance and sustainability across various sectors, from renewable energy to manufacturing and MSMEs Culinary.

H3: Digital Transformation moderates the relationship between Green Entrepreneurial Orientation and Financial Bootstrapping on a MSMEs Culinary Financial Performance, strengthening their effects

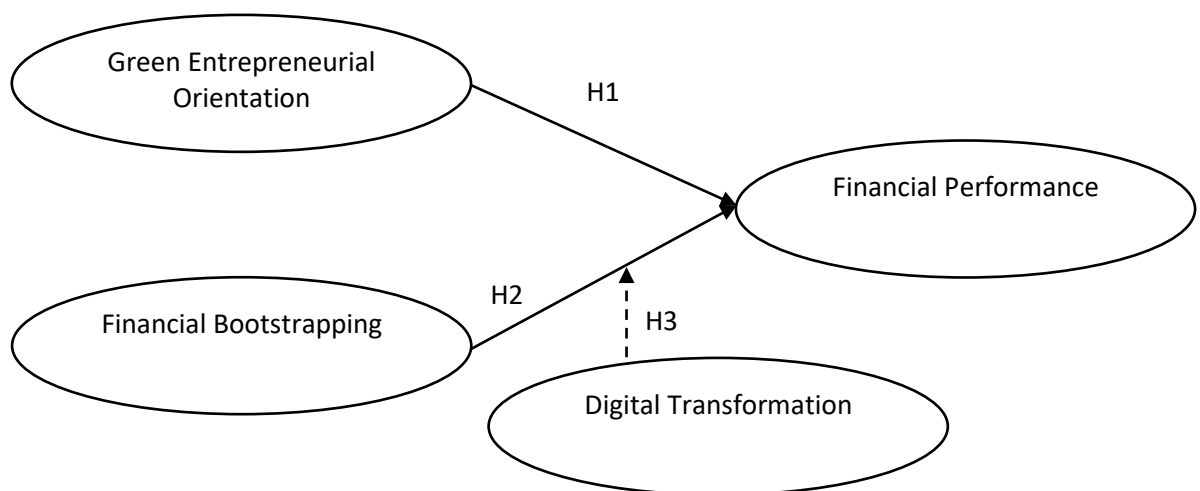


Figure 1. Conceptual Framework

METHODOLOGY

This study employs a quantitative technique with a cross-sectional design to investigate the moderating influence of digital transformation in the relationship between Green Entrepreneurial Orientation and financial bootstrapping on the financial performance of Culinary MSMEs. The sample comprises Micro, Small, and Medium Enterprises (MSMEs) in the food and beverage industry in Malang City that adopt green practices. According to data from the Malang City Cooperatives, Industry, and Trade Office, there are 16,417 MSMEs in Malang City, distributed among five sub-districts: Kedungkandang (2,352), Sukun (3,098), Klojen (2,193), Blimbing (3,235), and Lowokwaru (5,539). The study's population was subsequently determined using Slovin's formula, resulting in a total sample size of 390. To ensure proportionality, each sub-district was sampled 78 times, constituting 20% of the total 390 samples.

Data was gathered via a questionnaire administered offline to MSME proprietors or managers who satisfied the research criteria, specifically MSMEs operating in the Food and Beverage industry for a minimum of one year, employing a 5-point Likert scale to assess the researched variables. Green Entrepreneurial Orientation is assessed via three statements: (1) In the face of uncertainty, we adopt an assertive stance towards environmentally sustainable projects; (2) We typically initiate eco-friendly ventures ahead of our competitors; (3) Our organization embodies a competitive mindset, as derived from Baquero's research (Baquero, 2024), Financial bootstrapping is assessed via four statements: (1) I prioritize personal assets for business operations over acquiring new ones; (2) I utilize profits to augment business capital; (3) I favor personal or family funds when seeking additional financing; (4) I optimize existing funds for operational requirements, as adapted from the research of Rita & Nastiti (Rita & Nastiti, 2024).

Digital transformation is assessed by four statements: (1) I have utilized digital technology for a longer duration than comparable enterprises; (2) I have employed digital technology to enhance customer service; (3) I have extensively utilized digital technology, as adapted from Rita & Nastiti (2024). Financial performance is assessed using four indicators: (1) a current increase in sales; (2) a current increase in earnings; (3) a current increase in cash; (4) a current growth in assets, as adapted from Rita & Nastiti (2024). To evaluate the research instrument, the researcher employed validity and reliability tests, as well as the Harman's single-factor test to assess common method bias. The researcher employed multiple linear regression analysis to examine the data, while moderated regression analysis was utilized to assess the researcher's moderation effect. The researcher utilized SPSS 29.0 software to perform tests and analyses in this study.

RESEARCH RESULT

Common Method Bias

The utilization of a singular instrument to evaluate all variables with varying scales introduced the possibility of common method bias (CMB). Harman's single-factor test was performed to address this concern. Factor analysis was conducted using SPSS, with all items loaded at a threshold

designed to extract a single factor. The findings revealed that one factor represented 38.25% of the entire variance, well below the 50% benchmark. This established that CMB was not a substantial concern in this investigation.

Spearman's Rank Correlation (Spearman's Rho)

The Green Entrepreneurial Orientation (GEO) comprises three components, specifically GEO1 at 0.917, GEO2 at 0.642, and GEO3 at 0.917, with a significance level of 0.01 (2-tailed). Financial Bootstrapping (FB) comprises four components: FB1 0.976, FB2 0.976, FB3 0.970, and FB4 0.981, with a significance level of 0.01 (two-tailed). Financial Performance (FP) comprises four components: FP1 at 0.980, FP2 at 0.966, FP3 at 0.977, and FP4 at 0.980, with a significance threshold of 0.01 (2-tailed). Digital Transformation (DT) comprises four components: DT1 0.932, DT2 0.911, DT3 0.913, and DT4 0.908, with a significance threshold of 0.01 (2-tailed). Consequently, it may be asserted that all variables are legitimate research instruments. The reliability test for Green Entrepreneurial Orientation (GEO) yielded a Cronbach's Alpha of 0.844, Financial Bootstrapping (FB) and Financial Performance (FP) produced a Cronbach's Alpha of 0.857, Digital Transformation (DT) achieved a Cronbach's Alpha of 0.846. All variables exhibit a Cronbach's Alpha value exceeding 0.7, indicating the reliability of this study instrument.

Multiple Linear Regression

$$Y = -0,164 + 0,046GEO + 0,975FB + e \dots\dots\dots(1)$$

The constant's value is -0.164, indicating that if all variables, namely Green Entrepreneur Orientation and Financial Bootstrapping, are zero, the expected Financial Performance will be -0.164. This represents the fundamental value of Financial Performance independent of the effects of Green Entrepreneurial Orientation and Financial Bootstrapping. The Green Entrepreneur Orientation coefficient of 0.046 indicates that a 1 unit increase in Green Entrepreneur Orientation will result in a 0.046 unit improvement in Financial Performance, providing all other parameters are held constant. In other terms, Green Entrepreneurial Orientation positively impacts Financial Performance. If the Bootstrapping Financial Coefficient is 0.975, then each 1 unit rise in Bootstrapping Finance will result in a 0.975 increase in Financial Performance. Financial Bootstrapping significantly enhances Financial Performance. The p-value for Green Enterprise Orientation is 0.019 (< 0.05), indicating that it considerably influences Financial Performance. Additionally, the p-value for Financial Bootstrapping is 0.001 (< 0.05), demonstrating that it strongly affects Financial Performance as well.

The coefficient of determination (R^2) is 0.985, indicating that 98% of the variance in Financial Performance can be attributed to a combination of Green Entrepreneurial Orientation of MSMEs Culinary and Financial Bootstrapping. The residual 2% is attributed to items excluded from the model. The F test (Overall Model Significance) assesses the significance of the overall regression model in elucidating Financial Performance. The p-value for Test F is 0.001,

indicating that the whole regression model is significant. This indicates that at least one independent variable significantly influences employee performance.

Moderated Regression Analysis

$$Y = -0,164 + 0,046GEO + 0,975FB - 0,003FB \times DT + e \dots\dots\dots(2)$$

The coefficient of -0.003 for the interaction between Financial Bootstrapping and Digital Transformation indicates that Digital Transformation moderates the association between Financial Bootstrapping and Financial Performance. A negative interaction coefficient indicates that Digital Transformation diminishes or adversely impacts Financial Bootstrapping's effect on Financial Performance. In summary, while Financial Bootstrapping enhances Financial Performance, its adverse effect diminishes with increased Digital Transformation. The p-value for the interaction between Financial Bootstrapping and Digital Transformation is 0.034 (< 0.05), indicating that moderation is significant; thus, it can be stated that Digital Transformation significantly moderates the association between Financial Bootstrapping and Financial Performance.

DISCUSSION

Comprehensive summary The participants of this study comprise Culinary MSMEs in Malang City, categorized into two groups: those with monthly assets below Rp. 5,000,000 and those exceeding Rp. 5,000,000, each totaling 195. Additionally, there are 195 Culinary MSME operators aged over 30 years and 195 aged below 30 years. The regression equation indicates that Green Entrepreneurial Orientation (GEO) and Financial Bootstrapping (FB) positively impact Financial Performance. The individual components of the coefficients and the resultant p-value offer significant information for subsequent study. Initially, when assessed via the lens of the constant value, it indicates that if both GEO and FB values are zero, the anticipated financial performance is negative, specifically -0.164. While this number may be mathematically challenging to achieve in practical scenarios (since it is nearly inconceivable for there to be no effort in entrepreneurial orientation or financing), this constant functions as the baseline value or intercept of the regression model. This suggests that in the absence of GEO and FB, financial performance will fall below average standards. It is important to acknowledge that inflation is presently occurring. This also negatively impacts the financial performance of Culinary MSMEs, as food goods are perishable. Consequently, if they remain unsold for a specific duration, they must be discarded and replaced with fresh inventory.

Moreover, the Green Entrepreneurial Orientation (GEO) coefficient of 0.046 indicates that an entrepreneurial orientation centered on sustainable practices positively impacts the financial performance of MSMEs. Every increment of one unit in GEO will enhance financial performance by 0.046 units, provided that other factors stay unchanged. Despite the coefficient's relatively modest value, it indicates that initiatives aimed at green company practices significantly enhance financial performance, albeit not as robustly as Financial Bootstrapping. This suggests that the execution of green policies and tactics may

yield beneficial outcomes, albeit perhaps requiring a longer duration to realize substantial advantages in comparison to more immediate financial methods (den Heijer & Coppens, 2023; Van Niekerk, 2024).

The Financial Bootstrapping (FB) variable exhibits a greater coefficient of 0.975. An increment of one unit in financial bootstrapping activity will enhance financial performance by 0.975 units. The substantial coefficient value indicates that bootstrapping is a significant determinant in enhancing the financial performance of MSMEs. Financial bootstrapping, characterized by the utilization of internal resources or inventive methods to finance business operations without substantial external reliance, demonstrates a significant impact on the profitability and financial growth of MSMEs. Bootstrapping minimizes capital expenditures and enhances resource management efficiency (Rambe et al., 2024).

Financial Bootstrapping is a financial management method employed by micro, little, and medium enterprises (MSMEs) in the culinary industry. Research indicates that this strategy significantly contributes to business continuity and growth. Prioritizing Personal Assets for Business Operations (as opposed to Acquiring New Ones) received Strongly Agree votes from 142 respondents, indicating that business owners utilize their existing personal assets to bolster business operations prior to opting for new purchases. For instance, employing a private truck for distribution or utilizing household appliances for manufacture. This method can reduce startup and operational expenses while enhancing capital efficiency. This can offer flexibility and alleviate the financial strain during the initial phase of the business, promoting greater stability in the early stages, particularly amid inflationary economic conditions. Subsequently, 137 respondents highly concurred that business proprietors who reinvest income to augment capital demonstrate a commitment to long-term growth. This technique facilitates organic corporate growth, enhances financial stability, and diminishes dependence on external financing. Through profit reinvestment, enterprises can augment operating capacity, enhance assets, or penetrate new markets without incurring further debt (Hafez, 2024).

The preference for utilizing personal or family money for supplemental financing, as indicated by 129 respondents who largely concur, suggests that business owners favor drawing from personal savings or familial assistance prior to seeking external funding sources, such as bank loans or investors. This technique demonstrates the presence of enhanced measurable control and risk. Utilizing personal or familial resources enables business proprietors to circumvent onerous interest and debt obligations. Furthermore, it can diminish reliance on external parties and expedite the decision-making process. Ultimately, the optimization of existing finances for operational requirements received strong agreement from 144 respondents, indicating that business owners prioritize the optimal utilization of current financial resources for their operations. Rather than seeking further finance or investment, they endeavor to optimize current capital by minimizing waste and distributing resources efficiently. This technique contributes to sustaining the financial stability of the enterprise, enhancing profitability, and guaranteeing operational continuity

without the need for incessantly seeking fresh capital sources. It also displays proficient oversight in administering internal expenditures and investments.

This comprehensive strategy exemplifies a prudent and continuity-focused methodology. This method signifies a substantial contribution to growth, capital efficiency, and business risk management, particularly for small enterprises that frequently face restricted access to external financing. Furthermore, the p-value analysis indicated that both variables significantly impacted financial performance. The P-value for GEO is 0.019 (< 0.05), indicating that Green Entrepreneurial Orientation significantly influences financial performance. Entrepreneurs who prioritize environmentally sustainable business methods positively influence the profitability of MSMEs. Consequently, MSMEs may contemplate integrating green initiatives into their business strategy to enhance financial performance.

Conversely, the p-value for Financial Bootstrapping is 0.001 (< 0.05), indicating a substantial effect. The low score indicates that Financial Bootstrapping is the primary determinant of financial success, and an effective internal financial management plan should be the central emphasis for MSMEs aiming to enhance their financial outcomes. These data substantiate the hypothesis that Green Entrepreneurial Orientation and Financial Bootstrapping positively and significantly impact Financial Performance, with Financial Bootstrapping emerging as the more influential element. MSMEs seeking to enhance their financial performance should contemplate the integration of efficient and sustainable financial solutions. This technique offers immediate financial advantages while also enhancing long-term sustainability and competitiveness.

Furthermore, the findings of this analysis yield numerous managerial implications applicable to business proprietors, particularly micro, small, and medium enterprises (MSMEs) within the culinary sector, which frequently encounter constrained external capital and must depend on ingenuity and efficiency in financial management. Financial bootstrapping, which has the highest coefficients in our regression model, might be a highly important and advantageous method for small enterprises. By optimizing internal resources and decreasing dependence on costly external funding, MSMEs can enhance their earnings while mitigating financial risks. Bootstrapping tactics, like the use of retained earnings, bartering, or leveraging private networks, evidently enhance financial performance.

Moreover, the Green Entrepreneurial Orientation (GEO), which emphasizes sustainability and environmental responsibility, is becoming increasingly pertinent in light of the growing expectations for firms to perform more ethically. The coefficient for GEO in this model is less than that of Financial Bootstrapping, which is statistically significant and positively influences financial success. This indicates that MSMEs derive additional benefits from adopting sustainable business strategies. This method not only facilitates financial benefits in the long term but also enhances the reputation of MSMEs with consumers, partners, and regulators who increasingly favor environmentally conscious firms.

Practically, it conveys to business leaders that investing in green initiatives—such as energy efficiency, waste reduction, the utilization of eco-friendly raw materials, and sustainable product innovation—can positively influence financial performance, albeit with more apparent incremental effects compared to direct financial strategies like bootstrapping. This aligns with the increasing global trend in the business sector, where sustainability is a critical aspect for long-term success.

Conversely, bootstrapping tactics emphasizing operational efficiency and resource conservation indicate that MSMEs capable of optimizing their finances and assets possess a higher likelihood of survival and growth, particularly in a dynamic and competitive business landscape. Entrepreneurs can discern from these findings that bootstrapping is pertinent not only for nascent MSMEs with limited resources but also serves as an effective strategy in business management aimed at enhancing efficiency and financial performance.

Financial bootstrapping is a strategy employed by MSMEs to diminish reliance on external financing. Diverse bootstrapping methodologies, including cost reduction, enhancement of operational efficiency, and leveraging internal resources, can positively influence financial performance (Y). In this regression model, the coefficient for financial bootstrapping is 0.975, signifying that an enhancement in financial bootstrapping approach correlates directly with an improvement in financial performance.

In summary, the bootstrapping method enables MSMEs to circumvent the interest obligations of external financing while retaining complete autonomy over their operations, hence enhancing long-term performance. In the realm of startups or small MSMEs, financial bootstrapping frequently serves as the primary strategy to maintain operations amid constrained resources.

Digital Transformation as Moderation

In an increasingly digital company landscape, the efficacy of financial bootstrapping tactics appears inextricably linked to the impact of digital transformation. Digital transformation encompasses the integration of digital technologies into business operations, including automation, data analytics, and the utilization of online platforms. Numerous studies indicate that digital transformation can enhance operational efficiency, broaden markets, and elevate the competitiveness of MSMEs. Nonetheless, the results of this model indicate that digital transformation may diminish the impact of financial bootstrapping on financial performance. The interaction coefficient of -0.003 between financial bootstrapping and digital transformation suggests that as the degree of digitalization increases, the beneficial impact of financial bootstrapping on financial performance diminishes. In summary, while financial bootstrapping may enhance financial performance, the execution of digital transformation can diminish this beneficial effect.

The negative interaction coefficient indicates that as MSMEs increasingly adopt digital technologies, the efficacy of bootstrapping tactics may diminish. One rationale for this is that digital transformation frequently necessitates substantial early investments in technology, training, and infrastructure, which

contradicts the fundamental principle of financial bootstrapping that emphasizes resource conservation. Moreover, digitalization may present additional difficulties in financial and operational management, ultimately diminishing the efficacy of conventional bootstrapping methods.

Although financial bootstrapping can assist MSMEs in enduring initial developmental phases, digitalization frequently necessitates further investment and a more systematic financial strategy. This elucidates why, within the realm of more digitized MSMEs, the influence of financial bootstrapping on financial performance has diminished in significance. The p-value for the interaction between financial bootstrapping and digital transformation is 0.034, which is below the significance threshold of 0.05. The moderation effect of digital transformation on the relationship between financial bootstrapping and financial performance is statistically significant. Consequently, we may ascertain that digital transformation significantly impacts the efficacy of financial bootstrapping (Ren & Li, 2022; Wang et al., 2020).

In a progressively digital business landscape, MSMEs must evaluate the impact of digital transformation on their financial management strategies (Agustina et al., 2023; Kumar et al., 2024). Although financial bootstrapping (Rita & Nastiti, 2024) might enhance the financial performance of MSMEs (Rahawarin et al., 2023), the implementation of digital transformation may diminish this beneficial effect. Consequently, MSMEs must meticulously assess their bootstrapping tactics about digitalization and may need to strike a balance between cost reduction and technological investment to get optimal performance.

CONCLUSIONS AND RECOMMENDATIONS

Green Entrepreneurial Orientation has effect on a Financial Performance of MSMEs Culinary. Financial Bootstrapping has effect on a Financial Performance of MSMEs Culinary. Digital Transformation moderates the relationship between Green Entrepreneurial Orientation and Financial Bootstrapping on a MSMEs Financial Performance, strengthening their effects. This regression model highlights the significance of Green Entrepreneurial Orientation and Financial Bootstrapping as primary methods influencing the financial success of MSMEs. To get best outcomes, MSMEs must integrate sustainability methods with financial efficiency concurrently, rather than concentrating on a singular aspect. Combining a sustainable entrepreneurial strategy with bootstrapping methods will enable enterprises to excel financially while simultaneously fostering a beneficial influence on the environment and society, hence enhancing their competitive advantage in the marketplace.

ADVANCED RESEARCH

All studies possess limitations, and this research is no different. This study is constrained by its cross-sectional research approach. Subsequent research would benefit from employing an experimental methodology to enhance the observable impact of digital transformation in Culinary MSMEs. Moreover, additional research may incorporate control factors including meal variety, business operating hours, and parking availability.

REFERENCES

- Aftab, J., Veneziani, M., Sarwar, H., & Abid, N. (2024). Do green practices drive business excellence in SMEs? Investigating how green entrepreneurial orientation improves firm's performance. *Total Quality Management & Business Excellence*, 35(5-6), 529-558. <https://doi.org/10.1080/14783363.2024.2315442>
- Agustina, Y., Wijijayanti, T., Winarno, A., & Rahayu, W. P. (2023). The economarketing model: Development of productive and sustainable tourism area. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, 8(2), 5.
- Al-Mamary, Y. H., Alwaheeb, M. A., Alshammari, N. G. M., Abdulrab, M., Balhareth, H., & Soltane, H. B. (2020). The effect of entrepreneurial orientation on financial and non-financial performance in Saudi SMES: A review. *Journal of Critical Reviews*, 7(14), 270-278.
- Alshebami, A. S. (2023). Green innovation, self-efficacy, entrepreneurial orientation and economic performance: Interactions among Saudi small enterprises. *Sustainability*, 15(3), 1961.
- Asad, M., Majali, T., Aledeinat, M., Abdelkarim Almajali, D., & Akhorshaideh, A. H. O. (2023). Green entrepreneurial orientation for enhancing SMEs financial and environmental performance: Synergetic moderation of green technology dynamism and knowledge transfer and integration. *Cogent Business & Management*, 10(3), 2278842. <https://doi.org/10.1080/23311975.2023.2278842>
- Bassem, D. (2023). Green Entrepreneurial Orientation, and Environmental Performance in Family SMES Examining the Moderating Role of Perceived CSR and GI. *JOURNAL OF ECONOMICS, FINANCE AND MANAGEMENT STUDIES*, 06(05). <https://doi.org/10.47191/jefms/v6-i5-25>
- den Heijer, C., & Coppens, T. (2023). Paying for green: A scoping review of alternative financing models for nature-based solutions. *Journal of Environmental Management*, 337, 117754.
- Dika, C. W., Rita, M. R., & Sakti, I. M. (2021). FINANCIAL BOOTSTRAPPING DAN KINERJA UMKM: PERAN MODERASI LITERASI KEUANGAN. *Jurnal Kewirausahaan Dan Bisnis*, 26(1), 37. <https://doi.org/10.20961/jkb.v26i1.44726>
- Fadil, N., & St-Pierre, J. (2021). Growing SMEs and internal financing: The role of business practices. *Journal of Small Business and Enterprise Development*, 28(7), 973-994.
- Hafez, M. (2024). The Financial Compass: Navigating Market Expansion through Theory and Practice. Available at SSRN 4802279. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4802279
- Huang, Y., Shih, L., & Cheng, Z. (2024). A multi-level analysis of individual green entrepreneurial orientation: Evidence from Taiwan's environmental protection sectors. *Business Strategy and the Environment*, 33(4), 3440-3462. <https://doi.org/10.1002/bse.3658>

- Ji, H., Miao, Z., Wan, J., & Lin, L. (2024). Digital transformation and financial performance: The moderating role of entrepreneurs' social capital. *Technology Analysis & Strategic Management*, 36(8), 1978–1995. <https://doi.org/10.1080/09537325.2022.2118110>
- Jiang, W., Chai, H., Shao, J., & Feng, T. (2018). Green entrepreneurial orientation for enhancing firm performance: A dynamic capability perspective. *Journal of Cleaner Production*, 198, 1311–1323. <https://doi.org/10.1016/j.jclepro.2018.07.104>
- Joshi, Y., Uniyal, D. P., & Sangroya, D. (2021). Investigating consumers' green purchase intention: Examining the role of economic value, emotional value and perceived marketplace influence. *Journal of Cleaner Production*, 328, 129638. <https://doi.org/10.1016/j.jclepro.2021.129638>
- Khan, R. U., Salamzadeh, Y., Kawamorita, H., & Rethi, G. (2021). Entrepreneurial Orientation and Small and Medium-sized Enterprises' Performance; Does 'Access to Finance' Moderate the Relation in Emerging Economies? *Vision: The Journal of Business Perspective*, 25(1), 88–102. <https://doi.org/10.1177/0972262920954604>
- Kiyabo, K., & Isaga, N. (2020). Entrepreneurial orientation, competitive advantage, and SMEs' performance: Application of firm growth and personal wealth measures. *Journal of Innovation and Entrepreneurship*, 9(1), 12. <https://doi.org/10.1186/s13731-020-00123-7>
- Kumar, V., Kumar, S., Chatterjee, S., & Mariani, M. (2024). Optimizing the Digital Transformation Capability for Enhancing Economic Sustainability of Entrepreneurial Venture: The Moderating Role of Entrepreneurial Orientation. *IEEE Transactions on Engineering Management*, 71, 8517–8530. <https://doi.org/10.1109/TEM.2024.3387540>
- Li, Y., & Alvarado, M. (2021). The impact of financial bootstrapping techniques on perceived performance: An empirical analysis of Costa Rican SMEs. *International Journal of Business Environment*, 12(2), 130. <https://doi.org/10.1504/IJBE.2021.115086>
- Lia, D. A. Z., & Fitri, R. (2023). Green Entrepreneurial Orientation and Green Innovation in SMEs: An Evidence from Systematic Literature Review and Opportunities for Future Research Agenda. *Journal of Economics, Finance And Management Studies*, 6(11), 11–25. <https://doi.org/10.47191/jefms/v6-i11-25>
- Majali, T., Alkaraki, M., Asad, M., Aladwan, N., & Aledeinat, M. (2022). Green Transformational Leadership, Green Entrepreneurial Orientation and Performance of SMEs: The Mediating Role of Green Product Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(4), 191. <https://doi.org/10.3390/joitmc8040191>
- Mittal, V., & Raman, T. V. (2021). Examining the determinants and consequences of financial constraints faced by Micro, Small and Medium Enterprises' owners. *World Journal of Entrepreneurship, Management and Sustainable Development*, 17(3), 560–581.

- Novikova, I. V. (2020). Digitisation: A New Form of Precarity or New Opportunities? In V. Bobkov & P. Herrmann (Eds.), *Digitisation and Precarisation* (pp. 89–104). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-26384-3_5
- Oly Ndubisi, N., & Agarwal, J. (2014). Quality performance of SMEs in a developing economy: Direct and indirect effects of service innovation and entrepreneurial orientation. *Journal of Business & Industrial Marketing*, 29(6), 454–468.
- Parmitasari, R. D. A., Indriyani, E., Rusnawati, R., Farild, M., Efendi, W., & Adawiah, A. (2023). Financial Bootstrapping and Financial Literacy: The Moderating Role of Government Support on SME Performance. *Jurnal Minds: Manajemen Ide Dan Inspirasi*, 10(2), 341–356. <https://doi.org/10.24252/minds.v10i2.41131>
- Rahawarin, F. R., Soetjipto, B. E., & Wardoyo, C. (2023). Digital Transformation and MSME Financial Performance: Systematic Literature Review and Bibliometric Analysis. *Economics and Business Journal (ECBIS)*, 1(4), 313–322.
- Rahayu, C. W. E., & Rahmawati, C. H. T. (2022). Financial Management Of Msme In Culinary Industry According To Demographics And Financial Literacy. *Journal of Management and Business Environment (JMBE)*, 4(1), 82–99.
- Rambe, P., Mgudlwa, N., & Khoza, N. G. (2024). Stakeholder Management and Entrepreneurial Resourcing of Small African Firms: Financial Bootstrapping as a Cost Escalation Strategy. In *Stakeholder Management and Entrepreneurship in Africa* (pp. 76–87). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781003256014-8/stakeholder-management-entrepreneurial-resourcing-small-african-firms-patient-rambe-nosiphiwe-mgudlwa-nomfundo-gladys-khoza>
- Ren, Y., & Li, B. (2022). Digital Transformation, Green Technology Innovation and Enterprise Financial Performance: Empirical Evidence from the Textual Analysis of the Annual Reports of Listed Renewable Energy Enterprises in China. *Sustainability*, 15(1), 712. <https://doi.org/10.3390/su15010712>
- Rita, M. R. (2019). Financial bootstrapping: External financing dependency alternatives for SMEs: Bahasa Inggris. *Jurnal Ekonomi Dan Bisnis*, 22(1), 83–100.
- Rita, M. R., & Nastiti, P. K. Y. (2024). The influence of financial bootstrapping and digital transformation on financial performance: Evidence from MSMEs in the culinary sector in Indonesia. *Cogent Business & Management*, 11(1), 2363415. <https://doi.org/10.1080/23311975.2024.2363415>
- Santoso, F., Sudarmiatin, S., & Wardana, L. W. (2023). Creativity in Marketing: MSMEs Innovative Steps in Attracting Consumers. *West Science Journal Economic and Entrepreneurship*, 1(11), 576–584.

- Van Niekerk, A. J. (2024). Economic Inclusion: Green Finance and the SDGs. *Sustainability*, 16(3), 1128.
- Wang, H., Feng, J., Zhang, H., & Li, X. (2020). The effect of digital transformation strategy on performance: The moderating role of cognitive conflict. *International Journal of Conflict Management*, 31(3), 441-462.
- Wardhana, R. R., Anjarwani, S. E., & Agitha, N. (2023). Android-based Marketplace Development to Develop Culinary MSMEs in Mataram City. *Journal of Computer Science and Informatics Engineering (J-Cosine)*, 7(1), 31-41.
- Winborg, J., & Landström, H. (2001). Financial bootstrapping in small businesses: Examining small business managers' resource acquisition behaviors. *Journal of Business Venturing*, 16(3), 235-254.
- Wondirad, A., Kebete, Y., & Li, Y. (2021). Culinary tourism as a driver of regional economic development and socio-cultural revitalization: Evidence from Amhara National Regional State, Ethiopia. *Journal of Destination Marketing & Management*, 19, 100482.
- Yaskun, M., Sudarmiatin, S., Hermawan, A., & Rahayu, W. P. (2023). The effect of market orientation, entrepreneurial orientation, innovation and competitive advantage on business performance of Indonesian MSMEs. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, 8(4), 39.
- Zarrouk, H., Sherif, M., Galloway, L., & El Ghak, T. (2020). Entrepreneurial orientation, access to financial resources and SMEs' business performance: The case of the United Arab Emirates. *Journal of Asian Finance, Economics and Business*, 7(12), 465-474.