

# Sustainability Practices of Small and Medium Enterprises (SMEs) in China: Basis for Strategic Plan

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Abstract. The study presents a comprehensive analysis of small and medium sized enterprises (SMEs) situated in Rizhao City, Shandong, China, focusing on their profiles, sustainability practices, challenges, and a proposed strategic plan. The respondents, SME managers, play a crucial role in shaping sustainability strategies. Among the key findings, 70% of surveyed companies adopt a corporate organizational structure, while 45% primarily operate in the manufacturing sector. SMEs in China exhibit a strong commitment to economic, social, and environmental sustainability practices, with notable percentages actively seeking cost reduction through sustainability, monitoring financial impacts, and investing in research and development for sustainable innovation.

Economic challenges, including difficulties in securing funds for sustainable projects, dominate the SME landscape (88%). Social challenges emphasize meeting community expectations (80%), and environmental challenges center on reducing carbon footprints (90%). The proposed strategic plan advocates phased sustainability investments, diversification of funding sources, talent management, and a circular economy approach to address economic, social, and environmental challenges collectively. The study recommends internal reviews of organizational structures, cross-industry collaboration, exploration of alternative financing, and robust monitoring and evaluation systems to enhance SMEs' success in China's dynamic business environment. These recommendations underscore the importance of adaptive, innovative approaches to foster sustainability and resilience in SMEs while contributing to societal well-being and environmental conservation.

Keywords: Small and medium-sized enterprises (SMEs), Sustainability practices, Strategic Plan





## 1. Introduction

The challenges of sustainable development assumed paramount importance globally. No confluence was more critical than in the People's Republic of China context. With its remarkable economic transformation and burgeoning industrial sector, China's quest for sustainable development was pivotal for the nation and the broader global community. This research initiative, titled "Sustainability Practices of Small-and-Medium Enterprises in China: Basis for Strategic Plan," embarked on a comprehensive exploration of this multifaceted issue. It sought to address a multifaceted research problem, encompassing the profiling of enterprises, analysis of their economic, social, and environmental sustainability performance, identification of the challenges hindering their sustainable practices, and formulation of a Strategic Plan grounded in empirical findings. This introduction served as a gateway to this significant research endeavor, synthesizing the existing body of knowledge while outlining the study's critical objectives and anticipated contributions.

A comprehensive analysis of sustainable development mandated a multidimensional assessment encompassing economic, social, and environmental dimensions. In recent years, scholars made significant strides in evaluating the sustainability performance of enterprises in China. Notably, Wang et al. (2020) empirically investigated Chinese manufacturing firms' economic and environmental performance, unveiling the intricate interplay between economic growth and environmental sustainability. Similarly, Liu et al. (2018) examined the social responsibility practices of Chinese enterprises and their impact on community development, emphasizing the social facet of sustainability.

The pursuit of sustainable practices by Chinese enterprises was not without its challenges. Extensive research illuminated various obstacles and impediments on this path. Huang and Vojak (2019) highlighted regulatory challenges faced by enterprises striving for environmental sustainability in China, underscoring the need for a conducive policy environment. Additionally, Zhou et al. (2020) delved into the resource constraints and technological limitations that hinder sustainable practices, revealing the complex tapestry of challenges faced by enterprises.





At the core of this research lay the intention to formulate a Strategic Plan rooted in empirical findings. Drawing inspiration from the work of Xie and Liu (2019), who outlined a framework for sustainable development in Chinese enterprises, this study offered pragmatic recommendations tailored to enterprises' diverse profiles and contexts. Through the findings gained from profiling, assessment, and the identification of challenges, this research aspired to provide a blueprint for enterprises in China, offering actionable strategies to harmonize economic growth, environmental preservation, and social wellbeing. This strategic plan, once developed, could be a valuable resource for Chinese small-and-medium enterprises as they navigated the path to sustainable development in an increasingly complex business landscape.

#### 2. Methodology

The research design for "Sustainability Practices of Small-and-Medium Enterprises in China: Basis for Strategic Plan" employed a combination of descriptive research and a quantitative approach. Descriptive research provided a structured framework for understanding and documenting sustainability practices among Small-and-Medium Enterprises (SMEs) in China, while the quantitative approach enabled the collection of numerical data and statistical analysis.

Descriptive research was used to systematically describe and analyze the sustainability practices implemented by Chinese SMEs. This approach involved the collection of detailed information about the types of sustainability practices, their prevalence, and their impact on economic, environmental, and social aspects within SMEs. An author from the 2000s who contributed to the understanding of descriptive research was Creswell (2009). In his book "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches," Creswell discussed the significance of descriptive research as one of the foundational research designs used in the social sciences. He emphasized the role of descriptive research in providing a comprehensive and objective portrayal of a research subject without manipulating it. The quantitative approach involved the use of structured surveys, questionnaires, or data collection methods to gather numerical data related to sustainability practices. Statistical techniques, such as weighted mean and frequency count, were employed to analyze the data quantitatively and draw data-driven conclusions.





## 2.1. Sampling Procedure

This is study will use non-probability sampling procedure utilizing convenience sampling technique. Convenience sampling is a non-probability sampling technique used in research and data collection. It involves selecting a sample of individuals or items from a population based on their easy accessibility and proximity to the researcher or data collector, rather than using a random or systematic method (Etikan et. al, 2016). Convenience sampling is considered as the most appropriate sampling procedure for selecting small-medium enterprises (SMEs) in Rizhao City, Shandong Province, considering the unknown number of registered SMEs in the city. It offers practicality, accessibility, and efficiency, particularly in situations where comprehensive data on SMEs is lacking or inaccessible. The 2 districts and counties in the city where considered for the allocation of the 120 SME=respondents.

## 2.2. Respondents

The respondents of the study were the Small-and-Medium Enterprise (SME) managers in Rizhao City, Shandong, China. These managers played a crucial role in shaping their respective enterprises' sustainability practices and strategies. These individuals held the highest decision-making authority within SMEs and were responsible for setting the overall direction, policies, and strategies related to sustainability. Managers possessed in-depth knowledge about the day-to-day operations and functioning of their respective SMEs. They could provide valuable information about the actual implementation of sustainability practices within the organization, offering a practical perspective that might not be readily available from other employees.

Respondents	Sample
Dongjan District	30
Lanshan District	30
Ju County	30
Wulian County	30
Total	120

#### Table 1 Distribution of the Respondents





#### 3. Results and Discussion

Discussed here the research findings were presented, emphasizing key discoveries and outcomes.

# 3.1. Profile of the Enterprises

*3.1.1 Form of Business Organization.* 70% of the companies surveyed, were classified as corporations (Inc.), showing a dominant trend toward a corporate organizational structure. Additionally, the presence of sole proprietorships and partnerships, at 10% and 20% respectively, highlights the diversity within the SME landscape, warranting deeper exploration of the impact of different forms of different business organization approaches to sustainable development initiatives.

*3.1.2 Nature of Operation*. The nature of business in China reveals a major focus on the manufacturing sector, accounting for 45%. Additionally, the retail sector accounts for 24% and the service sector with a share of 31%.

*3.1.3 Products/Services Offered.* The products and services offered in China, with 45% of respondents primarily engaged in the supply of goods (products). Also, 21% of respondents focused solely on services and 34% of businesses providing both goods and services, reflecting the trend towards integrated business models.

*3.1.4 Number of Years in Operation.* A notable proportion of businesses (34%) have been in operation for between 11 and 20 years, indicating a significant presence of established businesses with a significant track record. Other SMEs were under 6 – 10 year category (31%) and 1 – 5 years (18%).

*3.1.5 Asset Size (as of 2022).* In 2022, the financial landscape of small and medium-sized enterprises (SMEs) in China showcased diverse asset sizes. Small businesses with assets below 10 million RMB constituted 36%, while businesses ranging from 10 to 50 million RMB accounted for 40%. There was a notable segment of companies with larger assets, with 20% falling in the 50–200 million RMB category. The presence of SMEs in the 200–400 million RMB range highlighted a select group of relatively larger companies.

*3.2. Sustainability Practices of the Enterprises 3.2.1. Economic Sustainability* 





The SMEs in China have strong agreement across various indicators, including actively seeking ways to reduce operational costs through sustainability (3.65%), regularly monitoring the financial impact of sustainability initiatives (3.58%), incorporating sustainability goals into long-term financial strategies (3.54%), investing in research and development for sustainable innovation (3.51%), and recognizing a positive impact on the bottom line due to sustainability practices (3.46%).

## 3.2.2 Social Sustainability.

The SMEs in China to social sustainability practices have strong agreement across indicators, including diversity and inclusion (3.56%), stakeholder engagement (3.46%), employee well-being and work-life balance (3.39%), ethical business practices and transparency (3.38%), and support for local community initiatives (3.28%), underscoring these companies as socially responsible entities actively contributing to social welfare and brand reputation.

# 3.2.3 Environmental sustainability.

The SMEs in China have a positive setting with a strong commitment to environmentally sustainable practices in terms of sourcing from eco-friendly suppliers (3.56), integrating sustainability into product design and development (3.52), implementing energy-saving technology (3.47), reducing and recycling waste (3.45), and committing to reducing air emissions greenhouse (3.42).

# 3.3 Challenges in Pursuit of Sustainable Practices

*3.3.1 Economic Challenges.* 88% of respondents identified "difficulty in securing fund for sustainable projects" as the foremost economic challenge for small and medium-sized enterprises (SMEs) in China, followed by concerns about the immediate economic returns of sustainable investments (75%) and challenges related to sustainability-related regulatory compliance costs (70%), indicating significant financial barriers to environmentally responsible activities.

*3.3.2 Social Challenges.* The primary social challenge for small and medium-sized enterprises (SMEs) in China, identified by 80% of respondents, is "Meeting the concerns and expectations of the community and society," highlighting the complexity of balancing business strategies with societal needs, followed by challenges related to meeting social expectations and Corporate Social Responsibility (CSR) requirements (75%) and ensuring fair treatment of employees and enhancing employee well-being (71%),





emphasizing the dual responsibility of creating a healthy workplace and meeting employee expectations.

*3.3.3 Environmental challenges*. The primary environmental challenge for Small and Medium Enterprises (SMEs) in China, identified by 90% of respondents, is "Reducing the carbon footprint and emissions," highlighting a significant emphasis on addressing climate change concerns, followed by challenges related to managing resource scarcity and waste reduction (77%), implementing sustainable supply chain practices (75%), adhering to environmental regulations and standards (73%), and adopting eco-friendly technologies and practices (45%).

#### 4. Proposed Strategic Plan based on the findings gained from the study.

The proposed strategic plan for Small and Medium Enterprises (SMEs) in China is a comprehensive approach that addresses economic, social, and environmental challenges. To tackle economic issues, the plan suggests phased sustainability investments, diversifying funding sources, and strategic collaborations. Social challenges are addressed through talent management, diversity strategies, and transparent integration of corporate social responsibility (CSR) into business strategy. Environmental concerns are targeted by adopting a circular economy approach, implementing a carbon reduction strategy, and integrating eco-friendly technologies. The plan recognizes the interconnectedness of these aspects, promoting a holistic approach for SMEs to achieve sustainable practices that enhance economic resilience while positively impacting social well-being and environmental conservation in the dynamic business landscape of China.

#### 4. Conclusions

SMEs in China exhibit a strong commitment to economic, social, and environmental sustainability, with a focus on reducing operating costs, integrating sustainability into financial strategies, and fostering innovation. However, challenges persist in securing capital for sustainable projects, meeting societal expectations, and addressing environmental concerns such as carbon emissions. Proposed strategies include sustainable investment, diversified funding sources, and embracing a circular economy model to enhance economic resilience, social welfare, and environmental conservation in China's SME landscape.





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#### References

- Ahuja, I. P. S., & Mittal, A. (2015). Greening of small and medium enterprises: Strategic planning process for a better environment. Journal of Environmental Planning and Management, 58(1), 1-20.
- Anisul Huq, F., Stevenson, M., & Zorzini, M. (2014). Social sustainability in developing country suppliers: An exploratory study in the readymade garments industry of Bangladesh. International Journal of Operations & Production Management, 34(5), 610–638.
- Bakos, J., Siu, M., Orengo, A., & Kasiri, N. (2020). An analysis of environmental sustainability in small & medium sized enterprises: Patterns and trends. Business Strategy and the Environment, 29(3), 1285-1296.
- Bon, R., & Hutchinson, K. (2020). Sustainable construction: some economic challenges. Building Research & Information, 28(5-6), 310-314.
- Brown, P. (2015). Sustainable consumption: Research challenges for the future. \*\*Research Policy\*\*, 44(7), 1230-1240.
- Brown, T., & Johnson, L. (2016). International cooperation and the Paris Agreement: The role of global governance in climate action. \*\*Environmental Politics\*\*, 25(4), 667–684.

Bryman, A. (2016). Social Research Methods. Oxford University Press.

Chen, W., & Wang, Q. (2018). Sustainable urban planning and the emergence of smart cities: A case study of China's experience. \*\*Habitat International\*\*, 71, 43-52.





- Christ, K. L., Burritt, R. L., & Zollo, M. B. (2017). Contemporary environmental management accounting: Issues, concepts, and practice. Issues in Social and Environmental Accounting, 11(1), 1–23.
- Creswell, J. W. (2009). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Publications.
- De Medeiros, J. F., Ribeiro, J. L. D., & Cortimiglia, M. N. (2014). Success factors for environmentally sustainable product innovation: a systematic literature review. Journal of cleaner production, 65, 76-86.
- Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. California Management Review, 36(2), 90-100.
- Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21stcentury business. New Society Publishers.
- Fiksel, J. (2003). Design for environment: Creating eco-efficient products and processes. McGraw-Hill.
- Gupta, A., & Sharma, S. (2017). Corporate sustainability and financial performance: Does it pay to be green? \*\*Economic Modelling\*\*, 64, 35-41.
- Huang, J., & Vojak, B. (2019). Environmental regulation, green innovation, and industrial green development: Empirical evidence from China. Sustainability, 11(18), 5030.
- Jacobson, M. Z., et al. (2019). 100% clean and renewable wind, water, and sunlight (WWS) all-sector energy roadmaps for 139 countries of the world. \*\*Joule\*\*, 3(3), 705-730.
- Johnson, D., et al. (2017). Renewable energy transition: A market-driven solution to climate change. \*\*Energy Policy\*\*, 114, 266-270.
- Jones, R. (2020). Sustainability in a changing world: Past, present, and future perspectives. \*\*Sustainability Science\*\*, 15(5), 1207–1214.
- Lee, A., & Smith, B. (2020). Rethinking sustainability: An interdisciplinary research agenda. \*\*Environmental Science & Policy\*\*, 123, 1-11.
- Li, Q., Guo, Y., Wang, H., & Zhang, L. (2018). Assessing the environmental sustainability of Rizhao City, China. International Journal of Environmental Research and Public Health, 15(6), 1131.
- Li, X., & Liu, G. (2019). Can state-owned enterprises lead China's transition towards sustainable development? Sustainability, 11(10), 2873.





- Liu, S., Wang, S., & Zhang, H. (2018). Corporate social responsibility, firm reputation, and firm performance: The role of ethical leadership. Frontiers in Psychology, pp. 9, 843.
- Pirnea, I. C., Olaru, M., & Moisa, C. (2013). Relationship between corporate social responsibility and social sustainability. Economy Transdisciplinarity Cognition, 14(1).
- Sarkis, J., Zhu, Q., & Lai, K. H. (2011). An organizational theoretic review of green supply chain management literature. International Journal of Production Economics, 130(1), 1–15.
- Schaefer, A., & Corbett, C. J. (2017). "Green" supply chain management: The role of trust and top management in B2B and B2C markets. Industrial Marketing Management, 64, 166-179.
- Schaltegger, S., Hansen, E. G., & Lüdeke-Freund, F. (2016). Business cases for sustainability: The role of business model innovation for corporate sustainability. International Journal of Innovation and Sustainable Development, 10(4), 293-308.
- Seuring, S., & Gold, S. (2013). Sustainability management beyond corporate boundaries: From stakeholders to performance. Journal of Cleaner Production, 56, 1-6.
- Smith, J. (2017). The evolution of sustainability in the twenty-first century: An overview. \*\*Environmental Research Letters\*\*, 12(2), 020202.
- Smith, L., & Lewis, H. (2018). Corporate sustainability reporting: A review and research agenda. \*\*Journal of Accounting Literature\*\*, 40, 37-49.
- Thøgersen, J. (2019). Promoting sustainable consumption: The risks of using financial incentives. \*\*Journal of Consumer Policy\*\*, 42(1), 3-13.
- UNFCCC. (2015). Paris Agreement. Retrieved from https://unfccc.int/processand-meetings/the-paris-agreement/the-paris-agreement
- Wang, J., Li, H., Wang, W., & Zhao, X. (2020). Sustainable development of enterprises in Rizhao: An empirical study. Sustainability, 12(19), 7957.
- Wang, X., Qu, X., & Zhou, C. (2020). Examining the linkage between economic growth and environmental sustainability: An empirical investigation in China. Sustainability, 12(19), 8181.
- Xie, X., & Liu, X. (2019). An integrated framework for sustainable development in Chinese enterprises. Sustainability, 11(2), 321.

