

Adaptation Strategies of Shenyang Research Institute of Foundry Co. Ltd: Basis for Strategic Plan

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Abstract. This research focuses on the adaptation strategies employed by Shenyang Research Institute of Foundry Co. Ltd., a State-Owned Enterprise (SOE), in response to the economic resurgence following the COVID-19 pandemic. The study aims to provide a comprehensive understanding of how SOEs, like the Shenyang Research Institute, navigate challenges and leverage opportunities to sustain and enhance their competitive position within the foundry industry post-pandemic. A quantitative method approach was utilized to explore the adaptation strategies, factors affecting these strategies, and the challenges encountered during the adaptation process. The findings revealed that the adaptation strategies were highly effective, with government intervention being the most influential factor, followed by management and leadership, and customer expectations. Policy initiatives had the least impact. Challenges in sustainable growth were found to be the most significant area of concern for the company. Furthermore, the research identified four key weaknesses: differences in interests with the government, conflicts in benchmarking and company structure, vicarious learning and collaboration, and special purpose financial planning. These areas should be the focus of the strategic plan. This study contributes valuable insights for improving the adaptation strategies of Shenyang Research Institute of Foundry Co. Ltd., a State-Owned Enterprise (SOE). The outcomes are intended to contribute not only to the academic understanding of organizational adaptation but also to provide practical guidance for industry professionals and leaders seeking to navigate change effectively.

Keywords: Adaptation strategies, Competitive Positioning, Organizational Resilience, Shenyang Research Institute of Foundry Co. Ltd, Strategic Planning, Technological Innovation.

1. Introduction

The COVID-19 pandemic caused a significant global economic slowdown, impacting China, a major player in the world economy. The early stages of the pandemic led to a contraction in economic activities in China, with many businesses facing disruptions due to lockdowns, supply chain issues, and reduced global demand. China, known as the world's factory, experienced halted manufacturing activities due to these disruptions (Tian, 2020).

The pandemic exposed vulnerabilities in global supply chains, making it difficult for many Chinese enterprises, particularly those involved in international trade, to source raw materials and components, as well as deliver finished goods. Small and Medium Enterprises (SMEs), a significant part of China's business landscape, were especially vulnerable. Many SMEs struggled to cope with the economic downturn, faced liquidity issues, and some even had to shut down (Liu et al., 2020).

2. Methodology

The researcher utilized a descriptive survey design. This method involves collecting information about the current conditions, perceptions, and general behaviors of a large sample of respondents. The descriptive survey design allows for gathering data from a diverse audience. This approach helps in analyzing frequencies and identifying patterns within the survey responses (as per VOXCO, 2021). This particular method was chosen because the primary objectives of the research were to identify adaptation strategies, the factors influencing their implementation, and the challenges faced during the implementation process by the State-owned enterprise in the post-pandemic landscape. These objectives served as the foundation for developing the proposed strategic plan.

2.1. Sampling Procedure

The researcher used purposive sampling for the employees and convenience sampling for the customers. "Purposive sampling is a non-probability method for obtaining a sample based on subjects that have particular characteristics that the researchers need to evaluate their research question (Frost, n. d.)." Since the researcher himself is an employee of the company, he used purposive sampling to identify the prospective employees that could contribute to this study. "Convenience sampling is a non-probability sampling method where units are

selected for inclusion in the sample because they are the easiest for the researcher to access. This can be due to geographical proximity, availability at a given time, or willingness to participate in the research (Nikolopoulou, 2023).”

2.2. Respondents

The participants in the study were the employees and customers of Shenyang Research Institute of Foundry Co., Ltd. They were selected as participants because of their direct involvement in the implementation of adaptation strategies by the company in a post-pandemic context. Additionally, they were employees and customers who had provided or availed services from a state-owned enterprise.

The study involved 10 company managers, 10 rank-and-file employees, and 130 customers who had transacted with the company from mid-year 2022 to the present. The intended number of participants was 150. In terms of participant selection, the researcher employed incidental sampling, which means they were chosen based on their willingness to participate in the study and their direct involvement, as employees and customers, in the adaptation strategies of the state-owned enterprise. As per the definition of terms, under "post-pandemic context," customers were chosen based on their transactions with Shenyang Research Institute of Foundry Co., Ltd. The operational definition for the post-pandemic context was set for May 5, 2023, so customers who participated were those who had transacted with the company prior to this date.

2.2.1 Research Site

The study was conducted in a state-owned enterprise located in Liaoning, China. The state-owned enterprise, Shenyang Research Institute of Foundry Co. Ltd., was formerly known as Shenyang Foundry Research Institute. Liaoning is a province in the north-eastern region of China. Its borders are shared with Jilin Province to the northeast, Inner Mongolia Autonomous Region to the northwest, Hebei Province to the southwest, and the Democratic People's Republic of Korea (North Korea) across the Yalu River. (Ministry of Commerce, 2021)

Liaoning has a land area of 148,000 square kilometers, a population of 43.52 million, and a Gross Regional Product of RMB 2,491 billion as of 2019, with a GRP per capita of RMB 57,191 during the same period (Eye on Asia, 2023). The province's economy primarily thrives in mineral resources, ferrous and non-

ferrous metals, oil, gas, boron, magnesite, diamonds, and jade (Eye on Asia, 2023).

3. Results and Discussion

3.1. Profile of Shenyang Research Institute of Foundry Co., Ltd.

Shenyang Research Institute of Foundry Co. Ltd, a state-owned company, operates under the supervision of China National Machinery General Hospital Group, which falls under the National Executive Committee's control. The board consists of a chairman appointed by the group and a vice-chairman elected by staff and external experts. Specializing in advanced melting technology, special casting, precision technology, casting environmental protection, 3DP molding, and casting equipment, the company employs around 500 people from a national labor force of 780 million. As of 2022, its business size is 840 million, and its asset size is 1.34 billion.

3.1.1. Adaptation Strategies

The company's impact on the government budget for internal resource allocation (3.81) and establishing a crisis management team (3.25) show high effectiveness. Overall, the government's influence on internal resource allocation is highly effective (3.58). In resilience, government assistance for supply chain resilience (3.58) and consulting for crisis management plans (3.43) demonstrate high effectiveness. The overall weighted mean for government influence on resilience is highly effective (3.48). For innovation, tax breaks for market access (3.77) and government investment in R&D for product development (3.42) are highly effective. The overall weighted mean for government influence on innovation is highly effective (3.54). Lastly, scaling up innovations for sustainable growth (3.59) and aligning operations with the government's sustainable development goals (3.27) show high effectiveness. The overall weighted mean for government influence on sustainable growth is highly effective (3.43).

3.1.2. Factors Affecting Adaptation Strategies

Policy Initiatives: The highest impact (3.53) is on investment decisions, while the lowest (3.27) is on financial performance. All indicators show strong agreement on their influence on adaptation strategies. Overall weighted mean: 3.39.

Government Interventions: Highest impact (3.55) on customer satisfaction, lowest on competitiveness and sustainability. All indicators demonstrate strong agreement. Overall weighted mean: 3.45.

Management and Leadership: Highest impact (3.49) on innovation culture, lowest on cost reduction (3.32). All indicators show strong agreement. Overall weighted mean: 3.42.

Customer Expectations: Highest impact (3.51) on transparency, accountability, and risk management. Lowest impact (3.27) on market expansion and partnerships. All indicators show strong agreement. Overall weighted mean: 3.27.

3.1.3 Challenge Encountered in Implementation

The majority faced minimal challenges in tracking performance and decision-making during/after the pandemic, public service delivery, and cash flow management due to lack of financial planning. Most respondents did not encounter issues in internal market design, digitalization, and maintaining a level playing field for competition. However, some faced difficulties in government accountability, political interference, IT-related issues, and cyber risks, as well as value creation and unfair competition.

3.1.4 Propose Strategic Plan for the Enhancement of the Adaptation Strategies

The strategic plan begins by addressing areas of concern. The researcher identifies these concerns by examining the company's recurrent strengths and weaknesses from the study results. The findings reveal four key strengths: (1) government support, (2) anti-corruption mechanism, (3) digitalization (digital transformation), and (4) healthy competition with private companies. Additionally, the study highlights four main weaknesses: (1) conflicting interests with the government, (2) inconsistencies in benchmarking and company structure, (3) vicarious learning and collaboration, and (4) special purpose financial planning.

4. Conclusions

1. The Shenyang Research Institute of Foundry Co. Ltd, a state-owned enterprise, specializes in advanced casting technologies and equipment. Established in 1957, it serves China's aerospace and power station sectors with 500 employees from a vast national workforce.

2. Study confirms high effectiveness of adaptation strategies, with learning from other firms and reducing environmental impact as moderately effective.
3. Respondents highlight government intervention, management & leadership, policy initiatives, and customer expectations as key factors influencing adaptation strategies, with government intervention having the highest impact.
4. Sustainable growth emerges as the primary area of challenges for the company.
5. To address weaknesses, the strategic plan should focus on government interest alignment, benchmarking conflicts, improved collaboration, and special purpose financial planning.

Acknowledgements

This academic journey would not have been possible without the assistance of several people. The author would like to express his thanks to Dr. Ma. Germina E. Santos, his adviser, Dr. Romelen Ramos, his statistician, and Dr. Darwin Andres, his English editor and critic, who all provided research analysis support. Their support significantly improved his ability for analytical thinking and scholarly writing. The knowledge and commitment to excellence they provided, along with their invaluable input and encouragement, were essential components to the success of his work, from the conception of the study subject to final editing. He would also like to thank all the faculty and staff of the University for their full support, as well as his family and close friends for their support and encouragement throughout this endeavor.

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