

Identifying Key Competitive Factors in Industrial Enterprises Producing and Supplying Chemical Products in the Northwest Region of the Country Using Thematic Analysis

Amin. Sonboli¹, Alireza. Bafande Zendeh^{2*}

¹ PhD Student, Department of Industrial Management, Tabriz Branch, Islamic Azad University, Tabriz, Iran

² Associate Professor, Department of Industrial Management, Tabriz Branch, Islamic Azad University, Tabriz, Iran

* Corresponding author email address: a.bzendeh@gmail.com

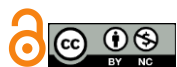
Article Info

Article type:

Original Research

How to cite this article:

Sonboli, A., & Bafande Zendeh, A. (2025). Identifying Key Competitive Factors in Industrial Enterprises Producing and Supplying Chemical Products in the Northwest Region of the Country Using Thematic Analysis. *International Journal of Innovation Management and Organizational Behavior*, 5(4), 1-7.
<https://doi.org/10.61838/kman.ijimob.5.4.1>



© 2025 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

ABSTRACT

Objective: This article aims to identify the key competitive factors in industrial enterprises involved in the production and supply of chemical products in the northwest region of the country using the thematic analysis method.

Methodology: The research method is qualitative and exploratory. Data were collected using thematic analysis and through purposeful and in-depth interviews with 20 experts and specialists in the fields of market management and competition. Initial coding and the definition of sub-themes and main themes facilitated the identification of factors affecting the competitiveness of active industrial enterprises.

Findings: Data extracted from in-depth interviews were analyzed using thematic analysis in three stages: open coding, axial coding, and selective coding. In the initial coding stage, 82 keywords were identified. During the second stage, 56 concepts were extracted, and in the third stage, the analysis resulted in the extraction of 30 basic codes, 10 sub-themes, and 4 main themes.

Conclusion: The results of the study indicate that the key competitive factors in industrial enterprises engaged in the production and supply of chemical products in the northwest region include: environmental factors (micro and national levels), internal organizational factors (market-oriented perspective, knowledge-oriented perspective, and resource-based perspective), factors creating perceived value (perceived value of competitors and the market towards the enterprise, perceived value of customers towards the enterprise), and competitiveness components (internal performance of the enterprise, enterprise performance regarding customers, enterprise performance in the market).

Keywords: Active industrial enterprises, thematic analysis method, key competitive factors, chemical products.

1 Introduction

Competition and competitiveness in the complex contemporary business environment are considered an economic driving force for various societies (Asikin et al., 2024; Meier et al., 2025). Consequently, competitiveness has been a focal point for policymakers at different levels, including national, industrial, and corporate levels across the world (Wongsansukcharoen & Thaweepaiboonwong, 2023; Zaverbnyj & Pushak, 2023). In fact, industrial competitiveness is regarded as a means to achieve desirable economic growth and sustainable development (Olazo, 2023; Pooramini & Ebrahimpour, 2023). Industrial competitiveness promotes economic advancement through enhanced global trade and the development of diversification strategies (Li, 2023).

Given that one of the main characteristics of successful industries is their competitive strength, and conversely, a prominent feature of unsuccessful enterprises is the lack of such strength, identifying the roots and factors influencing the competitiveness of companies and determining their interrelations can provide effective solutions for enhancing competitiveness (Vlados & Chatzinikolaou, 2019).

Scott defines competitiveness as the ability to increase revenues at a rate comparable to competitors while generating the necessary capital to face future challenges (Scott, 2017).

According to Martz, competitiveness equates to the economic strength of a unit compared to its rivals in a market where goods, services, skills, and ideas are easily exchanged beyond geographical borders. At the firm level, competitiveness can be defined as the ability of an enterprise to design, produce, and market products and sell them more effectively than its competitors (Murths, 2016).

De Kruz and Rugman define firm-level competitiveness as the ability of a company to design, produce, or offer products that have a lower price or higher quality compared to competitors' products, considering equivalent costs (D'Cruz & Rugman, 2017).

Buckley believes that competitiveness includes efficiency (achieving goals at minimal cost) and capability (having the right objectives), emphasizing the importance of choosing appropriate goals. Competitiveness encompasses both the objectives and the means to achieve them (Buckley & Prescott, 2014).

Feurer and Chaharbaghi, taking a holistic perspective, consider competitiveness a relative rather than an absolute issue. They define it as being dependent on customer and

shareholder values, financial strength determining the capacity to act and react in competitive environments, and the potential of individuals and technology to implement necessary strategic changes. Competitiveness becomes sustainable when there is an appropriate balance among these factors (Feurer & Chaharbaghi, 2013).

Booth and Philip categorize factors influencing firm-level competitiveness into two groups within the framework of technology-based and competency-based approaches. Information technology enhances efficiency and creates strategic advantages, rooted in the emergence of powerful, affordable computers and communication networks. The competency-based approach, derived from marketing disciplines, is dynamic and multidimensional. It emphasizes identifying and consolidating unique internal and external company skills and competencies. While the technology-based approach considers technology as the foundation of competitiveness, the competency-based approach focuses on the learning organization and emphasizes sustainability through benchmarking, as well as effective prediction and responsiveness to changes (Booth & Philip, 2013).

Smith, from a global perspective, views organizational competitiveness as differing in performance and work methods. He identifies shared characteristics of world-class companies that enhance their competitiveness. According to Smith, the key to success for world-class companies is their ability to integrate activities to impact three areas: market, operations, and culture. Sustainable competitiveness is achieved through holistic management of these three areas (Smith, 2015).

Dimitr asserts that having a production strategy enhances firm-level competitiveness (e.g., sales returns and inventory turnover). While a production strategy positively impacts sales returns, it shows no relation to inventory turnover. Regarding whether a connection exists between production competency and business competitiveness, most respondents affirm this. In a study by Schroeder et al., 80% of production managers responded positively to this question (Demeter, 2016).

Although Iran possesses abundant resources and raw materials in the form of rock salt across various regions, the country has shown less interest in this industry compared to its neighboring countries. Despite the existence of large industrial units and numerous small and medium-sized enterprises in the field of chlorine-derived products, Iran has not achieved a significant competitive position in the region. The northwest of Iran is one of the most important and resource-rich areas for salt mines in the Middle East. Today,

several large factories and over a hundred small and medium-sized industrial units operate in this region, producing and supplying products derived from rock salt. Considering the proximity of northwest provinces to countries like Turkey, Iraq, Armenia, and the Republic of Azerbaijan, this region holds significant export potential in its industries.

The literature review highlights diverse studies addressing competitiveness across various contexts. Vashqani Farahani (2019) analyzed Porter's Diamond Model to understand how nations optimize exports to enhance global competitiveness, emphasizing the model's comprehensive approach to strategic management (Vashghani Farahani, 2018). Shahiki Tash et al. (2015) examined competitiveness indices in 168 countries, emphasizing Iran's potential with a notable market size ranking of 19 (Shahiki Tash et al., 2014). Salarzehi and Dezhkam (2012) prioritized factors influencing competitiveness in Sistan and Baluchestan's fisheries cluster using the GEM model and ANP methodology (Salarzehi & Dezhkam, 2012). Kwilinski (2019) focused on evaluating industrial competitiveness in information-sensitive environments, highlighting creativity and innovation as central metrics (Kwilinski, 2019). Vladoš and Chatzinikolaou (2019) explored policy challenges in fostering sustainable competitiveness through science and technology (Vladoš & Chatzinikolaou, 2019). Von and Mutahashi (2017) conducted a comparative study of Japan and the U.S., demonstrating the critical role of effective R&D management in American organizations (Von & Mutahashi, 2017). Andrades and Limanche (2017) examined Russia's tourism sector, identifying infrastructure, training, quality management, and stability as key competitiveness factors (Andrades & Dimanche, 2017). Gonzalez (2017) emphasized the impact of trade changes on SME competitiveness nationally and internationally (Gonzalez, 2017). Finally, Luh et al. (2016) analyzed macroeconomic competitiveness in member countries, illustrating how China's trade policies influence industrial growth, underscoring the importance of innovation-driven strategies for sustainable competitiveness (Luh et al., 2016).

Understanding the competitive characteristics of the industry and identifying key competitive factors are the primary objectives of this research. One of the main reasons for conducting this study is the lack of appropriate scientific research on this topic for the studied community until now. Recognizing the importance of competitiveness, the researcher aims to address the main research question: What

are the key factors influencing the competitiveness of industrial enterprises involved in producing and supplying chemical products in the northwest region of the country, using the thematic analysis method? Thus, the primary objective of this research is to identify key competitive factors in industrial enterprises involved in producing and supplying chemical products in northwest Iran, using the thematic analysis method.

2 Methods and Materials

The research methodology at the qualitative stage was exploratory and utilized thematic analysis. In this study, the thematic framework method was employed. Literature and theoretical foundations were collected using library-based methods. Additionally, data collection to address the research question was conducted through fieldwork, utilizing interviews as the primary data collection tool.

The temporal scope of this study spanned from October 2020 to March 2022. For interviews, 20 specialists in the fields of market management and competition were selected using the snowball sampling method. All participants held at least a master's degree.

The distribution of interviewees by city was as follows: Ardabil (three participants), Zanzan (four participants), Tabriz (nine participants), and Urmia (four participants). From the 14th interview onward, repeated information was observed, and extracted concepts reached thematic saturation. However, to ensure reliability, interviews continued until the 20th participant. To enhance credibility and reliability, interviewees were asked to review the data, and their feedback and suggestions were incorporated. For confirmability, the derived themes were sent back to seven interview participants for review and approval, and their corrective feedback was implemented. Additionally, four full interviews and their corresponding initial coding were shared with five colleagues in the chemical production field and three academic faculty members for external validation, with their approval and corrective suggestions incorporated.

For thematic analysis, the six-step approach proposed by Braun and Clarke (2006) was followed: familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and preparing the final report.

Ethical considerations were observed throughout the study. Before initiating the research, the researcher met with each participant, introduced themselves, explained the research objectives and interview questions, and obtained

consent for participation. Initially, participants were asked to discuss factors influencing competitiveness. In a subsequent session, they were asked to identify the most critical categories. Each interview lasted 30 to 45 minutes and was conducted over two sessions. Sampling was terminated after the 17th interview, as no new codes were identified in the final three interviews. All interviews were conducted at the participants' workplaces with prior coordination.

3 Findings and Results

For data analysis, qualitative thematic analysis and coding were employed. Data were gathered through interviews conducted with experts selected via snowball sampling. The interview data were analyzed using thematic analysis and coding, following three stages: open coding, axial coding, and selective coding.

At the first stage of qualitative analysis, interview texts were read at least six times to ensure familiarity with the data, and noteworthy points were recorded with their context, date, and source. In the second stage, an initial analysis of the texts yielded 195 significant and repetitive points, which were grouped into meaningful clusters,

forming 50 initial codes. In the third stage, themes were identified by combining and interpreting the initial codes. The grouped codes constituted a set of main and sub-themes. From the 50 initial codes, 12 sub-themes were derived. In the fourth stage, themes were reviewed and refined based on internal coherence and external divergence. Initial analysis revealed similarities among some sub-themes. In the fifth stage, the sub-themes and main themes were named. In the sixth stage, the themes were connected to the research topic, and the final report was prepared.

The interview results were summarized into 433 data points in the form of short sentences and phrases. During the initial coding stage, 82 keywords were extracted. In the second coding stage, 56 concepts were identified. In the third coding stage, 30 basic codes, 10 sub-themes, and 4 main themes were finalized. Credibility and reliability were ensured through review by participants, with their corrective feedback incorporated. For confirmability, themes were returned to seven interview participants for final review, and their feedback was applied.

Based on the findings of thematic analysis and exploratory factor analysis, the final research results are presented in the following.

Table 1

Coding and Themes Related to Competitiveness

Main Theme	Sub-Themes	Selected Codes	Identifier
Environmental Factors	Micro Level	Competitive environment security and minimal threats	A1
		Marketing and competitive environment	A2
		Predictability of trends and consumer preferences	A3
		Industry newcomers' impact on business outcomes	A4
	National Level	Active information's effect on performance, flexibility, and adaptability	B1
		Economic variables (e.g., income, consumption, savings)	B2
		Political factors	B3
	Resource-Based Perspective	Resources allocated to improve services compared to competitors	C1
		Resource allocation for service monitoring	C2
Internal Organizational Factors	Market-Oriented Perspective	Alignment of marketing strategies with customer characteristics	D1
		Regular comparisons of marketing activities with competitors	D2
		Assessment of marketing-related quality	D3
		Interactions among responsible organizational personnel	D4
	Knowledge-Based Perspective	Systematic and ongoing research	E1
		Development of novel systems	E2
		Participation in decision-making and planning	F1
	Competitor and Market Perceived Value	Level of involvement of authorized individuals	F2
		Stakeholder perceptions about the organization	F3
		Cost of obtaining information	F4
Factors Creating Perceived Value	Customer Perceived Value	Value provided to customers	G1
		Influence of customers on processes	G2
		Organizational management's attention to customers	G3
		Value of organizational resources	G4

Competitiveness Components	Customer Performance	Speed of organizational response to changing needs	H1
		Analysis of current and future customer needs	H2
	Market Performance	Market information on emerging fields	I1
		Analysis of competitors' strategies	I2
		Organizational decisions made with commitment	I3
	Internal Performance	Satisfaction with financial performance	J1
		Employee satisfaction with company performance	J2

4 Discussion and Conclusion

The research findings indicated that the key competitive factors in industrial enterprises engaged in the production and supply of chemical products in northwest Iran include environmental factors (micro and national levels), internal organizational factors (market-oriented perspective, knowledge-oriented perspective, and resource-based perspective), factors creating perceived value (perceived value of competitors and the market towards the enterprise, perceived value of customers towards the enterprise), and competitiveness components (internal performance of the enterprise, enterprise performance regarding customers, and enterprise performance in the market).

The results of this study do not align with the prior findings (Ahmedova, 2015; Andrades & Dimanche, 2017; Asikin et al., 2024; D'Cruz & Rugman, 2017; Demeter, 2016; Gonzalez, 2017; Kwilinski, 2019; Luh et al., 2016; Meier et al., 2025; Murths, 2016; Phittayanon & Rungreunganun, 2019; Scott, 2017; Shahiki Tash et al., 2014; Smith, 2015; Vashghani Farahani, 2018; Vladoš & Chatzinikolaou, 2019; Von & Mutahashi, 2017; Zaverbnyj & Pushak, 2023).

It is recommended that industrial enterprises involved in chemical product manufacturing establish systematic and regular research processes and set up research and development (R&D) units within the company to assist in identifying key competitive factors and enhancing their position in competitive markets.

It is further suggested that companies utilize Customer Relationship Management (CRM) software for customer feedback and Enterprise Resource Planning (ERP) systems to optimize the use of high-quality raw materials and resources to increase customer satisfaction and boost sales.

Companies are encouraged to adopt modern production systems, such as flexible manufacturing systems and CNC machinery, in chemical production. Additionally, efforts to increase sales and customer satisfaction should include market analysis, understanding customer needs, and improving product quality.

For greater customer satisfaction and sales growth, companies should focus on enhancing product quality, setting optimal prices, and ensuring timely delivery to customers.

Future research could explore key competitive factors in the production and supply of chemical products using advanced methodologies, such as neural networks and dynamic systems, to enhance analytical precision. Researchers might also design comprehensive competitiveness models for Iran's chemical industries, examine the role of government policies in shaping competitiveness, and identify critical factors influencing industrial cluster competitiveness using techniques like network analysis and DEMATEL. Additionally, multi-criteria decision-making methods could be employed to rank the competitiveness of economic enterprises in this sector. Emphasis on SME competitiveness, financing, and cluster-based development approaches can provide valuable insights into sustainable growth strategies.

This research faced several limitations, including challenges associated with interviews as the primary data collection method, which can introduce issues such as biased responses and inaccuracies. Some participants were uncooperative or unwilling to provide comprehensive answers to interview questions. Furthermore, limited awareness among interviewees about the research topic posed constraints on the quality and depth of the responses, potentially impacting the robustness of the findings.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

References

- Ahmedova, S. (2015). Factors for Increasing the Competitiveness of Small and Medium-Sized Enterprises (SMEs) in Bulgaria. *Procedia - Social and Behavioral Sciences*, 195, 1104-1112. <https://doi.org/10.1016/j.sbspro.2015.06.155>
- Andrades, L., & Dimanche, F. (2017). Destination competitiveness and tourism development in Russia: Issues and challenges. *Tourism Management*, 62, 360-376. <https://doi.org/10.1016/j.tourman.2017.05.008>
- Asikin, M. Z., Fadilah, M. O., Saputro, W. E., Aditia, O., & Ridzki, M. M. (2024). The Influence Of Digital Marketing On Competitive Advantage And Performance of Micro, Small And Medium Enterprises. *International Journal of Social Service and Research*, 4(03), 963-970. <https://doi.org/10.46799/ijssr.v4i03.749>
- Booth, E. M., & Philip, G. (2013). Technology, competencies and competitiveness: The case for reconfigurable and flexible strategies. *Journal of Business Research*, 41, 29-40. [https://doi.org/10.1016/S0148-2963\(97\)00009-X](https://doi.org/10.1016/S0148-2963(97)00009-X)
- Buckley, P. J., & Prescott, K. (2014). Measures of international competitiveness: A critical survey. *Journal of Marketing*, 4, 175-200. <https://doi.org/10.1080/0267257X.1988.9964068>
- D'Cruz, J., & Rugman, A. (2017). New concepts for Canadian competitiveness. *Journal of Marketing Research*, 1, 127-154. <https://www.scirp.org/reference/referencespapers?referenceid=1191621>
- Demeter, K. (2016). Analysis of management strategy and competitiveness. *International Journal of Production Economics*, 81, 205-213. [https://doi.org/10.1016/S0925-5273\(02\)00353-5](https://doi.org/10.1016/S0925-5273(02)00353-5)
- Feurer, R., & Chaharbaghi, K. (2013). Defining competitiveness: A holistic approach. *Management Decision*, 32(2), 49-58. <https://doi.org/10.1108/00251749410054819>
- Gonzalez, A. (2017). Leveraging Trade Facilitation Reforms for Increased SME Competitiveness. *Small and Medium-Sized Enterprises in International Economic Law*, 38. <https://doi.org/10.1093/acprof:oso/9780198795650.003.0003>
- Kwilinski, A. (2019). Mechanism for assessing the competitiveness of an industrial enterprise in the information economy. *Research Papers in Economics and Finance*, 3(1), 7-16. <https://doi.org/10.18559/ref.2018.1.1>
- Li, F. (2023). Research on the Formation Mechanism and Competitive Advantage Effect of Enterprise Informatization Leader. <https://doi.org/10.4108/eai.19-5-2023.2334312>
- Luh, Y. H., Jiang, W. J., & Huang, S. C. (2016). Trade-related spillovers and industrial competitiveness: Exploring the linkages for OECD countries. *Economic Modelling*, 54, 309-325. <https://doi.org/10.1016/j.econmod.2016.01.002>
- Meier, A., Eller, R., & Peters, M. (2025). Creating competitiveness in incumbent small-and medium-sized enterprises: A revised perspective on digital transformation. *Journal of Business Research*, 186, 115028. <https://doi.org/10.1016/j.jbusres.2024.115028>
- Murths, T. P. (2016). Country capabilities and the strategic state: How national political institutions affect MNC strategies. *Strategic management journal*, 15, 113-129. <https://doi.org/10.1002/smj.4250151008>
- Olazo, D. B. (2023). Marketing competency, marketing innovation and sustainable competitive advantage of small and medium enterprises (SMEs): a mixed-method analysis. *Asia Pacific Journal of Marketing and Logistics*, 35(4), 890-907. <https://doi.org/10.1108/APJML-01-2022-0050>
- Phittayanon, C., & Rungreunganun, V. (2019). Analyzing Factors Influencing Industrial Competitiveness of Thai Silver Jewelry Industry Using Analytic Hierarchy Process. *International Journal of Mechanical Engineering and Technology*, 10(3). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3453022
- Pooramini, Z., & Ebrahimpour, H. (2023). A Conceptual Model of Employability Skill for Technology and Knowledge-Based Enterprise. *Journal of Entrepreneurship Development*, 16(3), 47-65. <https://www.magiran.com/paper/2660548>
- Salarzahi, H., & Dezhkam, J. (2012). Identifying and Prioritizing Factors Affecting the Competitiveness of Industrial Cluster Businesses in the Fisheries Sector of Sistan and Baluchestan Province Using the Analytic Network Process. *Industrial Management Studies Quarterly*, 9(24), 13-115.
- Scott, B. (2017). Competitiveness: Self-help for a worsening problem. *Harvard business review*, 6, 115-121. <https://www.sid.ir/paper/601614/fa>
- Shahiki Tash, M. N., Mahmoudpour, K., & Mohseni, H. (2014). Investigating the influencing factors on the competitiveness index of countries with an emphasis on Iran's economy. *Financial and Economic Policies*, 3(11), 155-188. http://qjfe.ir/browse.php?a_code=A-10-226-1&slc_lang=fa&sid=1
- Smith, S. (2015). Word-class competitiveness. *Managing Service Quality*, 5(4), 36-42. <https://doi.org/10.1108/09604529510100387>
- Vashghani Farahani, S. (2018). Dissection of Porter's diamond and its role in determining competitiveness. Second International Conference on Management, Industrial Engineering, Economics and Accounting, Tbilisi-Georgia.
- Vlados, C., & Chatzinikolaou, D. (2019). Challenges of industrial policy to enhance competitiveness. *Journal of Economics Library*, 6(2), 83-96. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3422953
- Von, H. K., & Mutahashi, T. P. (2017). Country capabilities and the strategic state: How national political institutions affect

MNC strategies. *Strategic management journal*, 15, 113-129.
<https://doi.org/10.1002/smj.4250151008>

Wongsansukcharoen, J., & Thaweepaiboonwong, J. (2023). Effect of innovations in human resource practices, innovation capabilities, and competitive advantage on small and medium enterprises' performance in Thailand. *European Research on Management and Business Economics*, 29(1), 100210.
<https://doi.org/10.1016/j.iedeen.2022.100210>

Zaverbnyj, A., & Pushak, Y. (2023). Theoretical and Applied Principles of Strategic Management of Competitive Advantages of Enterprises in the Context of Digitalization. *Economic Herald of the Donbas*(4 (74)), 26-31.
[https://doi.org/10.12958/1817-3772-2023-4\(74\)-26-31](https://doi.org/10.12958/1817-3772-2023-4(74)-26-31)