



# Presentation and Validation of a Model for Factors Affecting Marketing and Competitiveness in the Automotive Industry of Iran

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## Abstract

Competitiveness has been one of the critical topics emphasized in recent years in the literature on management and marketing. This study aims to identify, categorize, and model the factors influencing marketing and competitiveness in Iran's automotive industry using a qualitative thematic analysis approach. In this regard, interviews were conducted with 14 experts and senior specialists in the automotive marketing domain, each possessing at least 10 years of work experience and a minimum of a master's degree. Eleven key components were identified: the contexts included domestic and foreign investment attraction, proper policymaking, sanctions, government control, and monopolization. The processes identified were marketing and competitiveness in the automotive industry, knowledge and technology development, improvement of design and production processes, and enhancement of services. The outcomes of the proposed model included customer satisfaction and increased market share. In the quantitative phase, the model derived from the qualitative section was tested using structural equation modeling based on data collected from 373 questionnaires. The results indicated that domestic and foreign investment attraction, proper policymaking, monopolization, and sanctions significantly impact marketing and competitiveness in the automotive industry, knowledge and technology development, improvement of design and production processes, and enhancement of services. Additionally, government control significantly influences marketing and competitiveness in the automotive industry, knowledge and technology development, and improvement of design and production processes. Furthermore, marketing and competitiveness in the automotive industry, knowledge and technology development, improvement of design and production processes, and enhancement of services significantly impact customer satisfaction and increased market share. However, the influence of government control on service enhancement was not confirmed.

**Keywords:** Marketing, Competitiveness, Automotive Industry.

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## 1. Introduction

Competitiveness is a key criterion for evaluating the degree of success of industries and firms in competitive commercial arenas. It implies that any industry or firm with high competitiveness in competitive markets can be considered to possess a high level of competitiveness [1]. Competitiveness, as conceptualized in the evolutionary trajectory of advantage theories and the transformation of competition concepts, emphasizes continuous productivity

growth and income generation in the process of international competition [2].

Competitive advantage comprises a set of factors or capabilities that consistently enable a company to outperform its competitors. In other words, competitive advantage is a factor or a combination of factors that makes an organization significantly more successful than others in a competitive environment and difficult for competitors to replicate. Therefore, to achieve a competitive advantage, an



organization must focus both on its external position and its internal capabilities [3].

In today's competitive world, marketing and creating competitive advantage are pivotal elements in developing industries and companies domestically and internationally [4-8]. The automotive industry is one of the most significant industries in any country and is considered a key indicator of industrial progress. Given the extensive growth of the automotive industry worldwide and the increasing competition among car manufacturers, marketing for this highly popular product has garnered substantial attention.

Marketing helps companies identify their customers' needs and expectations and improve their products and services based on this information. This deep understanding of customers leads to the development of products and services that align more closely with market demands. Effective marketing involves leveraging various communication channels to reach customers. These interactions can build trust and customer loyalty. Moreover, digital marketing and social networks provide powerful tools for direct and interactive communication with customers [7].

Marketing enables companies to recognize customer needs and expectations and deliver products and services that meet those needs. Competitiveness is also a critical factor for success in the automotive industry. It motivates companies to invest in research and development and introduce new innovations. These innovations can create new competitive advantages for companies, strengthening their market positions. Competitiveness drives companies to enhance the quality of their products and services to remain viable in competitive markets. Improving quality can increase customer satisfaction and reduce product failure and return rates. Competitiveness encourages companies to innovate, improve quality, reduce costs, and expand their markets [2, 4, 8, 9].

Given the intense competition in this industry, companies must consistently focus on marketing and increasing their competitiveness to succeed in domestic and international markets [9]. One of the challenges facing Iran's automotive industry is international sanctions. These sanctions have imposed restrictions on access to advanced technologies, automotive parts, and foreign markets. Such limitations can reduce the competitiveness of Iranian automakers compared to their competitors.

The literature on the automotive industry highlights various factors influencing innovation, competitiveness, and customer satisfaction. Habibi et al. (2023) developed a marketing intelligence model for new product development

in the Iranian automotive industry, emphasizing the interplay of customer relationship management, market research processes, and technology adoption, which positively affect competitiveness and customer satisfaction [10]. Pimanfar et al. (2023) modeled the transformation of integrated marketing communication paradigms in Iran's automotive industry, identifying integrated media and communication strategies as key elements [11]. Varasteh and Ebrahimi (2023) focused on predicting customer satisfaction in after-sales services using stepwise regression, demonstrating the importance of data-driven insights for quality improvement [12]. Comparative studies, like Ahmadi and Nikoueresht (2022), highlighted structural weaknesses in the Iranian automotive industry compared to Japan, such as monopolization and a lack of innovation-driven policies [13]. Globally, Lee et al. (2024) revealed that product diversity and active social media marketing enhance competitiveness in European and Korean brands in Russia [9], while Rajan et al. (2023) emphasized organizational learning and knowledge absorption as critical for performance [14]. Additionally, research on innovation paths [15] and environmental sustainability [16] demonstrated how open innovation and circular economy principles contribute to competitive advantage. Finally, studies like Llopis-Albert et al. (2021) underscore the transformative impact of digitalization, advocating for strategic investments to enhance efficiency, profitability, and customer satisfaction [17].

Additionally, the lack of formulation and implementation of efficient and coordinated policies to support the automotive industry is another issue. Poor policymaking can result in inefficient resource allocation, reduced investment, and slower industry growth. Government ownership and monopolization in the automotive industry are further challenges. These conditions have led to reduced efficiency, innovation, and competition within the industry. The automotive industry is one of the critical and leading sectors in any country's economy. In Iran, this industry plays a vital role in GDP generation, job creation, and technological advancement. However, the industry faces numerous challenges that can impact its marketing and competitiveness [13]. Identifying and presenting a comprehensive model of factors affecting marketing and competitiveness in Iran's automotive industry is essential for systematically improving and developing this sector. Therefore, this research adopts a mixed-methods approach to present and validate a model for factors influencing marketing and competitiveness in Iran's automotive

industry. Accordingly, the main research question is: What factors affect marketing and competitiveness in Iran's automotive industry?

## 2. Methodology

This study, which aims to present and validate a model of factors affecting marketing and competitiveness in Iran's automotive industry using thematic analysis, falls under the category of qualitative and fundamental research. Following the determination of the aforementioned characteristics, it transitions to quantitative and applied research when examining relationships between variables and testing the model derived from the first phase, given its potential application in practice. The research strategy is thematic analysis for the qualitative phase and survey-based for the quantitative phase. Paradigmatically, the qualitative aspect follows constructivism (interpretive), while the quantitative aspect is rooted in positivism. Additionally, this study is exploratory in identifying influential factors and descriptive in determining relationships between variables and their practical applications. In terms of data type, it is a mixed-methods study.

The qualitative population consisted of automotive marketing experts and senior specialists with at least 10 years of professional experience and a minimum of a master's degree, considering the specialized nature of the subject. The quantitative population included specialized employees in Iran's automotive marketing sector. In qualitative studies based on interviews, a sample size of 5 to 25 participants is generally recommended (Shafiee & Tat, 2020). For the qualitative sampling, non-probability, purposive, and theoretical sampling methods were used (Mohammadpour, 2013). Interviews continued until theoretical saturation was achieved, involving 14 participants in total. In the quantitative phase, with a population size of approximately 10,000 individuals, 373 participants were selected as the sample based on Morgan's table using simple random sampling.

Data collection in the qualitative phase relied on interviews. Since semi-structured interviews are more suitable for exploratory studies aimed at model development, this method was employed to gather insights from experts. In the quantitative phase, a researcher-developed questionnaire based on qualitative findings was used to collect data for hypothesis testing. For data analysis,

grounded theory was applied using MaxQDA software for the qualitative phase, while structural equation modeling with PLS software was utilized for the quantitative phase.

## 3. Findings

The qualitative phase of this study was conducted based on the perspectives of 14 experts in the field. Regarding gender, 11 participants were male and 3 were female. In terms of age, 1 participant was under 40, 6 participants were aged 41 to 45, and 7 participants were above 45 years. Concerning education, 4 participants held a master's degree, and 10 had a doctoral degree. Finally, 3 participants had 10 to 20 years of work experience, while 11 had over 20 years of experience.

To present a model for factors affecting marketing and competitiveness in Iran's automotive industry, semi-structured interviews with experts were conducted. Before the interviews, eight open-ended questions were prepared, with the flexibility to add new questions during the process. To familiarize themselves with the depth and breadth of the data, the researchers repeatedly reviewed and actively read the data (seeking meanings and patterns). The interview results were analyzed using thematic analysis. Interview transcripts were reviewed multiple times. For thematic analysis, the naturalistic approach of DePoy and Gitlin (2005) was adopted.

Through theoretical sampling, after initial coding of the interview texts, concepts and categories were extracted. The interview texts comprised 29,561 words, with 2,148 words having at least three characters. Initial open coding identified a total of 682 codes, which were filtered down to 69 concepts grouped into 11 main categories in focused coding. In qualitative research, achieving "theoretical sufficiency" or saturation determines when to stop interviewing and analyzing. This indicates that extending the research would not alter the emerging concepts or categories. By the end of the 13th interview and throughout the 14th interview, no changes (additions or revisions) occurred in the concepts and categories, confirming "theoretical sufficiency." Open codes were grouped, axial codes were developed, and their relationships were determined.

The key concepts and main categories of the model for factors affecting marketing and competitiveness in the automotive industry, derived through thematic analysis, are presented in [Table 1](#).

**Table 1.** Indicators of the Model for Factors Affecting Marketing and Competitiveness in the Automotive Industry

Main Categories	Basic Concepts (Open Coding)
Domestic and Foreign Investment Attraction	Foreign investment, capital attraction, lack of financial resources, joint ventures, financing, liquidity provision, investment with reputable companies
Proper Policymaking	Comprehensive planning, strategic planning, appropriate support, macro planning, policymaking for auto parts manufacturing, addressing unrelated expenditures
Marketing and Competitiveness in the Automotive Industry	4Ps of marketing, competitive pricing, advertising, identifying target markets, addressing needs, needs assessment, considering competitors, creating competitive advantage, non-competitive industry
Sanctions	Technology access limitations, restrictions on collaboration with other companies, international limitations, currency fluctuations, economic instability due to sanctions, inflation caused by sanctions
Government Control	Government managers, privatization of the industry, political decisions, narrow governmental perspective
Industry Monopolization	Industry monopolization, limited competitors in the Iranian market, non-competitive industry, import restrictions
Knowledge and Technology Development	Knowledge management, technological development, creation of up-to-date knowledge, introduction of technology, new technologies, technological transformation, environmentally friendly technology
Improvement of Design and Production Processes	New car features, improving product quality, increasing efficiency, process improvements, cost reduction, research and development, creative projects
Service Enhancement	Appropriate services, after-sales services, service acceptability, widespread service delivery, cost reduction in service provision, flexible sales conditions
Customer Satisfaction	Customer satisfaction, service satisfaction, company satisfaction, organizational popularity, customer orientation, building customer trust
Market Share Growth	Capturing larger market share, greater share in competitive markets, increased sales, higher industry sales, export growth

Capturing a larger market share, achieving a greater share in competitive markets, increasing sales volume, boosting industry-wide sales, and expanding exports contribute to market share growth.

Subsequently, the codes were organized, and their relationships were determined using the Interpretive Structural Modeling (ISM) method. This matrix was completed by experts and specialists focused on process-centric analysis. The gathered information was consolidated using the ISM methodology, resulting in the final structural self-interaction matrix.

In categorizing the components, a structure was developed around the contexts, processes, and outcomes. The axial codes were aligned and their relationships were

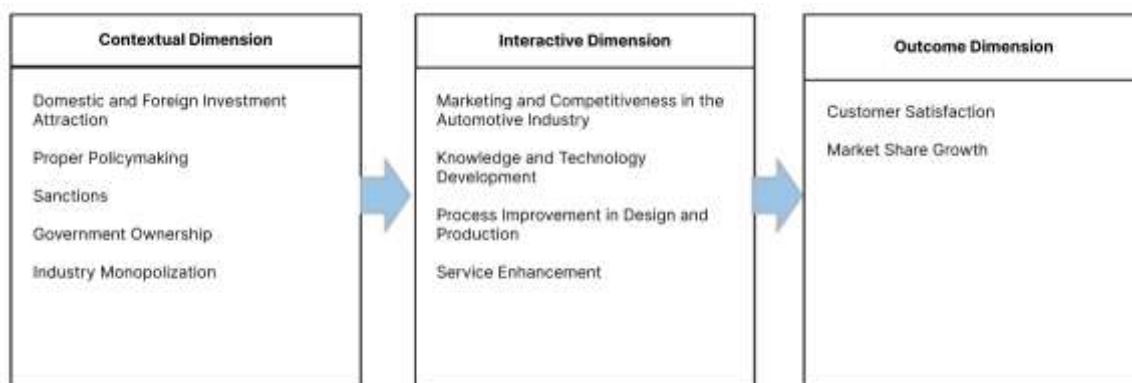
identified using the ISM method. The following were identified in this study:

**Contexts:** Domestic and foreign investment attraction, proper policymaking, sanctions, government ownership, and industry monopolization.

**Processes:** Marketing and competitiveness in the automotive industry, knowledge and technology development, process improvement in design and production, and service enhancement.

**Outcomes:** Customer satisfaction and market share growth.

Additionally, the diagram of the model for factors influencing marketing and competitiveness in the automotive industry is presented below



**Figure 1.** Model of Factors Influencing Marketing and Competitiveness in the Automotive Industry

To evaluate the reliability of the questionnaire, which was derived from expert interviews in the qualitative phase and

extracted from the concepts related to each variable (Table 1), Cronbach's alpha and composite reliability coefficients

were used. The reliability coefficient for the entire questionnaire was calculated as 0.919. Additionally, Cronbach's alpha and composite reliability for each variable were calculated individually, all of which exceeded 0.7 (Table 2), indicating the reliability of the questions for each factor.

To estimate validity, the questionnaire was distributed among 15 experts, and its content validity index (CVI) and content validity ratio (CVR) were assessed and confirmed.

In exploratory factor analysis using SPSS, the correlation of each variable with its related construct was higher than its

correlation with other constructs, indicating discriminant validity. Furthermore, the Kaiser-Meyer-Olkin (KMO) index was calculated as 0.876, confirming the adequacy of the sample size for factor analysis. Convergent and discriminant validity were also assessed using factor analysis in PLS software. All factor loadings and the average variance extracted (AVE) values for each construct, as shown in Table 2, exceeded 0.5, confirming convergent validity.

**Table 2.** Model of Factors Influencing Marketing and Competitiveness in the Automotive Industry

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	R Square
Industry Monopolization	0.846	0.869	0.896	0.683	-
Marketing and Competitiveness	0.927	0.934	0.941	0.666	0.915
Sanctions	0.913	0.944	0.935	0.744	-
Service Enhancement	0.961	0.965	0.969	0.838	0.774
Domestic and Foreign Investment	0.855	0.941	0.892	0.701	-
Process Improvement	0.960	0.962	0.967	0.808	0.817
Government Ownership	0.821	0.868	0.883	0.658	-
Knowledge and Technology Dev.	0.966	0.968	0.972	0.832	0.859
Market Share Growth	0.923	0.926	0.946	0.813	0.865
Proper Policymaking	0.893	0.948	0.918	0.630	-
Customer Satisfaction	0.923	0.946	0.944	0.774	0.893

Additionally, the square root of AVE for each construct in the standard estimation was greater than the correlations among constructs, indicating discriminant validity (Table 3).

**Table 3.** Discriminant Validity Assessment

Variable	1	2	3	4	5	6	7	8	9	10	11
Industry Monopolization	0.83										
Marketing and Competitiveness	-0.42	0.82									
Sanctions	0.08	-0.25	0.86								
Service Enhancement	-0.46	0.80	-0.35	0.92							
Domestic and Foreign Investment	-0.29	0.72	-0.24	0.82	0.78						
Process Improvement	-0.44	0.70	-0.35	0.92	0.73	0.90					
Government Ownership	0.51	-0.56	0.17	-0.58	-0.49	-0.55	0.81				
Knowledge and Technology Development	-0.45	0.73	-0.32	0.92	0.66	0.72	-0.65	0.91			
Market Share Growth	-0.44	0.79	-0.27	0.87	0.65	0.70	-0.45	0.84	0.90		
Proper Policymaking	-0.38	0.85	-0.26	0.82	0.60	0.68	-0.53	0.88	0.86	0.76	
Customer Satisfaction	-0.50	0.70	-0.29	0.92	0.65	0.79	-0.58	0.72	0.79	0.65	0.88

To examine the statistical significance of the research questions, the normality of the data distribution was first tested using the Kolmogorov-Smirnov test. With p-values above 0.05 for all variables, the data were confirmed to follow a normal distribution. Given this, one-sample t-tests were used to evaluate the status of research variables. Results indicated high levels for sanctions, government ownership, and monopolization, while variables like domestic and foreign investment, proper policymaking,

marketing and competitiveness, knowledge and technology development, process improvement, service enhancement, customer satisfaction, and market share growth were rated low and unsatisfactory in the automotive industry.

Structural equation modeling (SEM) with PLS software was used to determine the fit of the structural model and test the research hypotheses. The final structural model is presented in two states: significance of coefficients and standard estimation (GoF = 0.79):



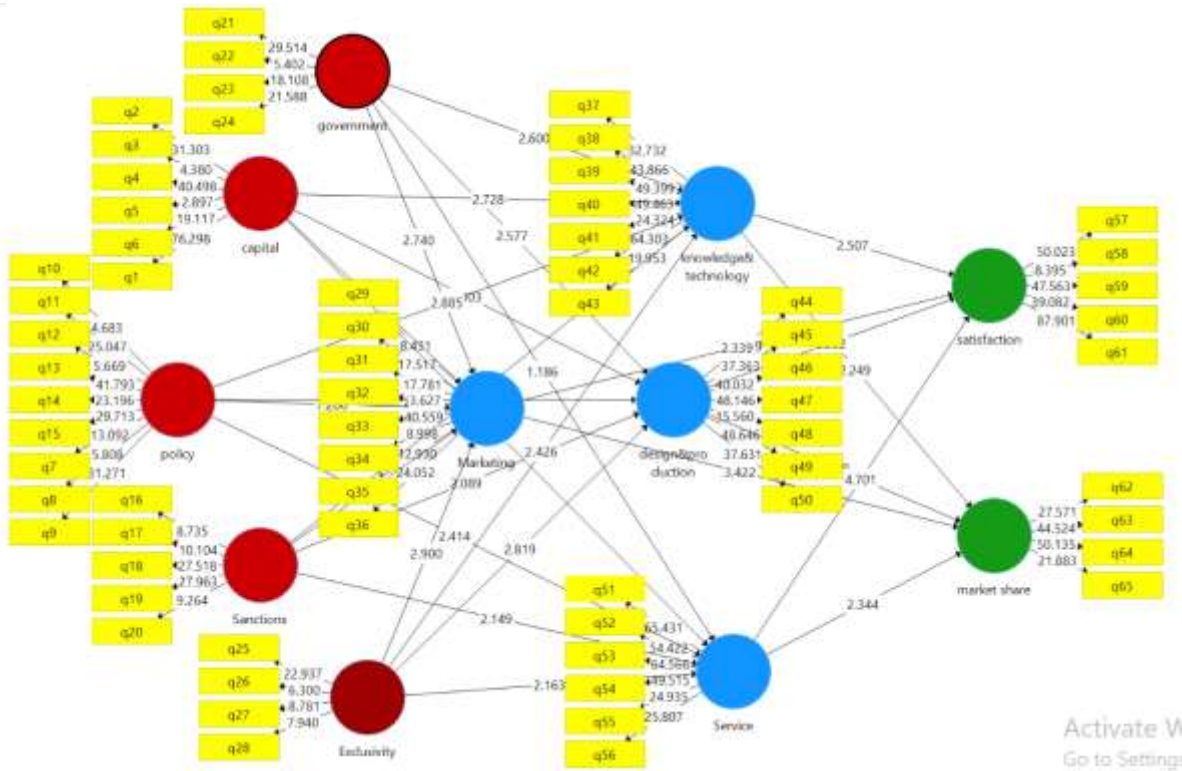


Figure 2. Model with T-Values

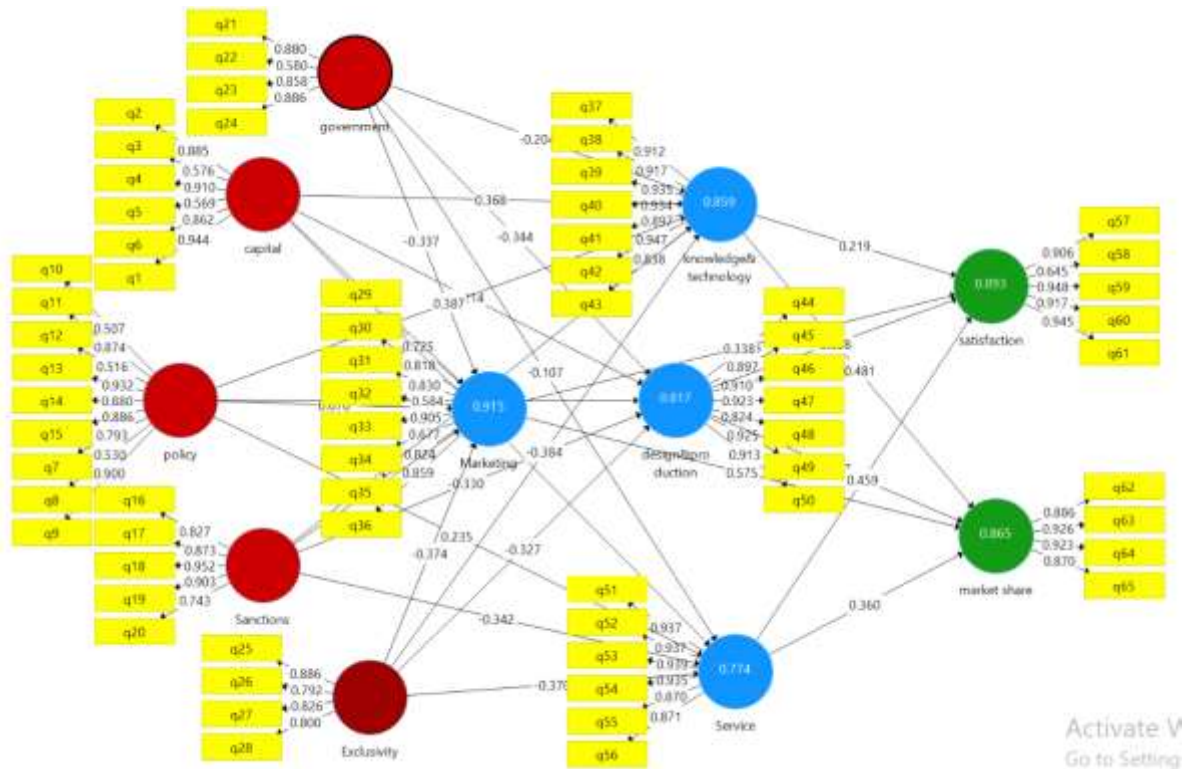


Figure 3. Model with Standard Coefficients

**Table 4.** Evaluation of Hypothesis Acceptance or Rejection

Hypothesis	Path Coefficient	Significance	Accepted/Rejected
Domestic and foreign investment significantly impacts marketing and competitiveness in the automotive industry.	0.255	2.922	Accepted
Domestic and foreign investment significantly impacts knowledge and technology development.	0.368	2.728	Accepted
Domestic and foreign investment significantly impacts process improvement in design and production.	0.214	2.303	Accepted
Domestic and foreign investment significantly impacts service enhancement.	0.476	2.712	Accepted
Proper policymaking significantly impacts marketing and competitiveness in the automotive industry.	0.670	7.206	Accepted
Proper policymaking significantly impacts knowledge and technology development.	0.387	2.885	Accepted
Proper policymaking significantly impacts process improvement in design and production.	0.584	3.627	Accepted
Proper policymaking significantly impacts service enhancement.	0.235	2.414	Accepted
Sanctions significantly impact marketing and competitiveness in the automotive industry.	-0.302	2.040	Accepted
Sanctions significantly impact knowledge and technology development.	-0.393	2.666	Accepted
Sanctions significantly impact process improvement in design and production.	-0.330	2.089	Accepted
Sanctions significantly impact service enhancement.	-0.342	2.149	Accepted
Government ownership significantly impacts marketing and competitiveness in the automotive industry.	-0.337	2.740	Accepted
Government ownership significantly impacts knowledge and technology development.	-0.204	2.600	Accepted
Government ownership significantly impacts process improvement in design and production.	-0.344	2.577	Accepted
Government ownership does not significantly impact service enhancement.	-0.107	1.186	Rejected
Industry monopolization significantly impacts marketing and competitiveness in the automotive industry.	-0.374	2.900	Accepted
Industry monopolization significantly impacts knowledge and technology development.	-0.384	2.426	Accepted
Industry monopolization significantly impacts process improvement in design and production.	-0.327	2.819	Accepted
Industry monopolization significantly impacts service enhancement.	-0.370	2.163	Accepted
Marketing and competitiveness in the automotive industry significantly impact customer satisfaction.	0.338	2.339	Accepted
Marketing and competitiveness in the automotive industry significantly impact market share growth.	0.575	3.422	Accepted
Knowledge and technology development significantly impacts customer satisfaction.	0.219	2.507	Accepted
Knowledge and technology development significantly impacts market share growth.	0.481	2.249	Accepted
Process improvement in design and production significantly impacts customer satisfaction.	0.038	2.282	Accepted
Process improvement in design and production significantly impacts market share growth.	0.497	3.149	Accepted
Service enhancement significantly impacts customer satisfaction.	0.459	4.701	Accepted
Service enhancement significantly impacts market share growth.	0.360	2.344	Accepted

#### 4. Discussion and Conclusion

The findings of this study highlight the significant impact of various factors—domestic and foreign investment, proper policymaking, sanctions, government ownership, industry monopolization, and service improvement—on marketing, competitiveness, knowledge development, process improvement, and customer satisfaction in Iran's automotive industry. Each factor contributes to shaping the dynamics of this crucial sector, providing insights into addressing its challenges and enhancing its global standing.

Domestic and foreign investment was found to significantly influence marketing and competitiveness, knowledge and technology development, process improvement, and service enhancement. This aligns with Habibi et al. (2023), who emphasized the role of investments in fostering new product development and customer-

oriented innovations [10]. These results underscore the necessity of financial inflows for technology adoption and market-oriented strategies, as suggested by Fernando et al. (2021), who noted the role of resource-based capabilities in driving sustainability and competitiveness in the Malaysian automotive industry [16]. Proper policymaking also emerged as a critical factor influencing all aspects of the sector, from marketing strategies to service quality. Similar findings by Ahmadi and Nikoueresht (2022) illustrate how Japan's strategic policymaking supports its automotive industry's resilience and growth, a stark contrast to Iran's struggles with ineffective and fragmented policies [13].

The study confirmed the negative impact of sanctions on various outcomes, including marketing, knowledge development, and service enhancement. These findings echo Hosseini et al. (2013), who highlighted the dual nature of sanctions as external pressures that can either hinder economic performance or create opportunities for internal

innovation and structural reforms [6]. The results also corroborate Ahmadi and Nikoueresht's (2022) analysis, which linked Iran's inability to access international markets and technologies to reduced competitiveness [13]. Addressing these barriers requires a deliberate shift toward mitigating external dependencies, as suggested by Grieco et al. (2024), who emphasized leveraging local capacities to counter external pressures [18].

Government ownership and monopolization were identified as significant hindrances to the sector's progress, negatively impacting all key variables except service enhancement. These findings resonate with Ahmadi and Nikoueresht's (2022) conclusion that monopolization and governmental interference in Iran's automotive sector have stifled innovation and competitiveness [13]. In comparison, studies like Candelo et al. (2021) highlight how embracing open innovation and reducing government intervention can accelerate the industry's transformation and global integration [15]. The importance of adopting market-oriented strategies was further reinforced by Lee et al. (2024), who found that the competitive positioning of Korean and European brands in the Russian market hinges on flexible policies and innovative practices [9].

Service enhancement was identified as a key driver of customer satisfaction and market share growth. This is consistent with Varasteh and Ebrahimi's (2023) findings, which linked improvements in after-sales service to higher customer satisfaction levels [12]. Moreover, Fernando et al. (2021) emphasized the importance of customer-oriented practices in achieving competitive advantages, particularly in the context of sustainable and resource-efficient product development [16]. These results underscore the critical role of customer satisfaction in driving industry performance, a notion echoed by Llopis-Albert et al. (2021), who stressed digital transformation's role in enhancing customer experiences and operational efficiency [17].

The study's findings collectively underscore the multifaceted challenges and opportunities within Iran's automotive industry. By addressing structural issues such as governmental inefficiencies and monopolization while leveraging external investments and customer-focused practices, the industry can enhance its competitiveness and global presence.

This study has several limitations that should be considered when interpreting the findings. First, the research was limited to Iran's automotive industry, and the contextual and cultural factors unique to this sector may limit the generalizability of the results to other industries or countries.

Second, while the study employed both qualitative and quantitative methods, the reliance on self-reported data from industry experts and employees could introduce bias. Third, the analysis was constrained by the availability of comprehensive and current data, particularly in the context of sanctions and economic fluctuations, which may affect the reliability of the findings. Finally, the cross-sectional nature of the study limits the ability to assess the long-term impacts of the identified factors on the industry's performance.

Future research should expand the scope of analysis to include comparative studies of the automotive industry across different countries to identify best practices and transferable strategies. Longitudinal studies would provide deeper insights into the long-term impacts of factors such as policymaking, investment, and sanctions on industry performance. Additionally, future research could explore the role of emerging technologies such as artificial intelligence, blockchain, and IoT in driving innovation and competitiveness in the automotive sector. Examining consumer perspectives on satisfaction, service quality, and brand loyalty in greater detail could also offer valuable insights for market-oriented strategies. Finally, exploring the interplay between environmental sustainability and economic competitiveness within the industry would provide a holistic understanding of future growth avenues.

To address the challenges identified, policymakers and industry leaders should prioritize creating a stable and transparent regulatory framework that encourages both domestic and foreign investments. Efforts should be made to reduce monopolization and governmental inefficiencies by promoting private sector participation and fostering competition. Industry leaders should also invest in advanced technologies and training programs to enhance knowledge and technology development. Improving after-sales services and customer engagement strategies should remain a key focus to drive customer satisfaction and loyalty. Lastly, companies should adopt data-driven approaches to identify market needs, streamline operations, and optimize resource allocation, ensuring sustained growth and competitiveness in both domestic and international markets.

#### Authors' Contributions

Authors equally contributed to this article.



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## Declaration of Interest

The authors report no conflict of interest.

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## Ethical Considerations

All procedures performed in this study were under the ethical standards.

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