

## Original Paper

# The Process and Perspective of Industrial Management in Developing Economies: Iran's Experience

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### **Abstract**

*This article explores the processes and perspectives of industrial management in developing economies, focusing on the unique case of Iran. The research examines how historical, economic, and political contexts influence industrial management practices in Iran post-Islamic Revolution (1979-present). Through a mixed-methods approach, combining qualitative surveys, case studies, and expert interviews, the study reveals the adaptive strategies employed by Iranian industrial managers to navigate extensive challenges such as international sanctions, political instability, and economic isolation. Key themes identified include the integration of hybrid management models that blend traditional values with modern practices, the impact of government policies on local industry, and the persistent challenges associated with workforce retention and talent management. Furthermore, the findings highlight an emerging culture of innovation within Iranian industries, indicating a shift toward technological advancements despite external pressures. The research underscores the resilience of Iranian managers, illustrating their commitment to aligning with global market trends while adapting strategies to local conditions. Ultimately, this study contributes to a deeper understanding of industrial management in developing economies and provides valuable insights for policymakers and practitioners aiming to enhance industrial effectiveness in Iran and similar contexts.*

### **Keywords**

*Industrial Management, Developing Economies, Iran, Economic Sanctions, Innovation*

## 1. Introduction

Industrial management is a critical aspect of economic development, particularly in developing economies where the transition from traditional to industrial economies can significantly influence economic growth, employment, and societal advancement. The landscape of industrial management in developing economies has garnered significant attention in recent years, reflecting the pressing need for tailored management strategies that address unique regional challenges. Industrial management refers to the process of overseeing and improving the operations and performance of industrial sectors. In developing economies, this concept is often complicated by multifaceted challenges such as political instability, infrastructural deficiencies, and varying levels of workforce skills (Hoskisson et al., 2013). Such challenges necessitate adaptive management practices that are responsive to local contexts and global competitive pressures. Developing economies represent a unique environment where traditional industrial management theories may not wholly apply, calling for localized strategies that integrate cultural, economic, and technological factors (Khan & Kahn, 2018).

In the context of developing countries, the implementation of effective industrial management practices is a cornerstone for enhancing competitiveness, fostering innovation, and improving overall productivity. According to Porter (1990), the ability of an economy to create and sustain competitive advantage through industrial policy is vital for its progression towards developed status.

Iran, as one of the prominent developing economies in the Middle East, provides an intriguing case study for examining the interplay between industrial management practices and socio-economic dynamics in a transitioning economy.

Historically, Iran's industrial sector has played a substantial role in its economic landscape, contributing to a significant portion of employment and GDP (World Bank, 2020). However, despite its potential, Iranian industrial management practices have often been hindered by factors such as state involvement, bureaucratic inefficiency, and a lack of integration with global markets (Esfahani & Ramrei, 2003). Iran stands out as a significant player in the realm of developing economies, largely due to its rich natural resources and strategic geographic location. The country's industrial sector has historically been influenced by various factors, including sanctions, economic policies, and the global oil market's volatility (Kazemi, 2018). The Iranian economy is characterized by its duality; while there exists a robust energy sector, there are also underdeveloped industries that require meticulous management strategies to enhance productivity and competitiveness (Omidvar & Akbari, 2020).

These challenges highlight the urgency of examining industrial management processes and perspectives in the Iranian context, aiming to address the broader implications for sustainable development in similar economies. During the past few decades, Iran has experienced various economic reforms aimed at modernizing its industrial base and integrating with the global economy. However, these reforms have often been met with obstacles, particularly concerning the management processes that underpin industrial activities (Abedi, 2019). Understanding the experiences of Iranian industry provides valuable insights into the processes and perspectives that shape industrial management in developing economies.

One significant challenge in Iranian industrial management is the dependency on oil revenues, which has led to a neglect of the diversification of industrial activities (Hosseini et al., 2019). The reliance on a single sector hampers innovation and adaptability, limiting the exploration of varied industrial potentials that are essential in today's competitive global landscape. Consequently, the current structure of industrial management often fails to address the needs for agility and rapid responsiveness to market changes (Moshiri & Fallah, 2018). Additionally, external pressures such as international sanctions have exacerbated existing vulnerabilities in the Iranian industrial sector, leading to isolation from global markets, technology transfer limitations, and a consequent stagnation in industrial advancement (Zarif et al., 2016). This situation creates a pressing need for an integrated approach that not only enhances domestic industrial practices but also strategically positions Iranian industries for future engagement with the global economy.

Understanding the process and perspective of industrial management in developing economies such as Iran holds significant methodological and practical implications. From a methodological standpoint, this study contributes to the existing literature by providing an in-depth case study that illuminates the specific challenges and successes experienced in Iran's industrial sector. Practically, the findings may serve as a valuable resource for policymakers and industrial managers seeking to design more effective industrial policies and management strategies that can stimulate sustainable industrial growth in similar contexts. In this article, we seek to answer these questions, what are the key challenges facing industrial management in developing economies like Iran, and how can these challenges be overcome to increase industrial efficiency and competitiveness? The complexity of this problem is due to the interaction of various factors that affect industrial management, including political, economic, social and technological dimensions (Aghion et al., 2017). The purpose of this study is to dissect these factors and propose solutions derived from Iran's experience that can provide wider applications in other developing economies. In addition, with the aim of representing the unique features of Iran's industrial management processes, revealing the challenges facing Iran's industries and highlighting the implications of broader theories of industrial management in developing economies.

It is up to Debnal to find the answer to this question, how have industrial management methods evolved in Iran and what factors affect their effectiveness in the context of developing economies?

This research aims to provide a comprehensive analysis of Iran's industrial management by examining various dimensions including government policies, human resources, technology adoption and international relations. This issue is particularly salient as the country is in a turbulent economic landscape marked by international sanctions and domestic challenges.

**Table 1. Industrial Management Practices and Perspectives throughout the Qajar, Pahlavi and Islamic Republic Regimes in Iran (authors, 2024)**

<b>Government</b>	<b>Governance Style</b>	<b>Industrial Policies</b>	<b>Management Practices</b>	<b>Comparison with Developing Countries</b>	<b>Comparison with Developed Countries</b>
<b>Qajar Dynasty (1789-1925)</b>	Monarchical, weak central authority	Limited state involvement, reliance on foreign capital	Informal and traditional management practices	Similar to other developing countries with weak governance structures	Significant lag in formal management practices; reliance on imports and foreign expertise (Harris, 2010) (Sadeghi, 2018)
<b>Pahlavi Dynasty (1925-1979)</b>	Authoritarian, strong central power	State-led industrialization (e.g., 5-Year Plans), emphasis on modernization	Centralized management, adoption of Western practices	More alignment with developing countries pursuing rapid industrialization (Kazemi, 2018)	Strived for Western management systems but lacked institutional stability (Kordzadeh & Ghasemi, 2017)
<b>Islamic Republic (1979-present)</b>	Theocratic, mixed governance model	Nationalization of key industries, self-sufficiency focus	Hybrid management systems combining Islamic values with modern practices	Reflects attempts similar to developing countries balancing tradition with modern needs (Gholami & Razeghi, 2021)	Struggles with efficiency similar to developing countries due to sanctions and ideological constraints (Hamidi & Zare, 2021)
<b>Developing Countries</b>	Variable governance structures, often unstable	Focus on industrialization; policies may be influenced by external aid or investment	Management practices vary, often adapting global practices to local contexts	Exhibit challenges like vulnerability to external shocks and resource limitations (Khan & Kahn, 2018)	N/A

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<b>Developed Countries</b>	Stable, often democratic governance	Advanced industrial policies with significant state support	Sophisticated management practices, with emphasis on innovation and technology	Generally, more effective industrial policies, integration of sustainable practices	Examples of best practices in management and industrial evolution; integration of technology and human capital investment
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(Hoskisson et al., 2013)

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### *1.1 Literature Review*

The lens through which industrial management is studied in developing economies often reveals multifaceted influences of historical, economic, and political dimensions. Iran, with its rich historical context, vibrant economic landscape, and complex political framework, serves as a valuable case study for examining these dynamics in detail. This literature review synthesizes existing research on the distinct processes and perspectives shaping industrial management in Iran, providing a comprehensive understanding of how these dimensions intersect to inform management practices and strategic adaptations.

#### *1.1.1 Historical Context of Industrial Management in Iran*

The historical backdrop of industrial management in Iran dates back to the early 20th century, marked by the establishment of the first modern factories during the reign of Reza Shah Pahlavi (1925-1941). As reported by Sadeghi and Gholamalifard (2018), this period saw significant state-driven industrialization efforts aimed at reducing foreign dependency and promoting economic self-sufficiency. The post-World War II era further accelerated industrial development as Iran became a focal point for Western investment, particularly in the oil sector.

Despite initial progress, the 1979 Islamic Revolution significantly altered the industrial landscape, leading to nationalization policies that redefined the roles of state and private sectors in management practices (Kordzadeh & Ghasemi, 2017). The revolution brought about a paradigm shift where industrial decision-making became heavily influenced by ideological considerations, often at the expense of efficiency and technological advancement. Thus, historical events serve as a critical lens for understanding current industrial management challenges and processes in Iran.

##### *1.1.1.1 Economic Dimension: Industry and Development*

Economically, Iran's industry has experienced oscillations shaped by global oil prices, domestic economic policies, and international sanctions. Literature suggests that the oil sector plays a dual role in Iran's economy—it provides significant revenue while simultaneously generating dependency that limits the diversification of the industrial base (Zabihollah & Shikhani, 2020). According to Mohammadi and

Rahimikoo (2019), the fluctuations in oil prices have often dictated the pace of industrial investments and modernization efforts, leading to cycles of boom and recession that impact managerial processes. The economic sanctions imposed since the early 1980s, particularly in the wake of the nuclear program negotiations, have further complicated industrial management in Iran. Gholami and Razeghi (2021) argue that such sanctions have deepened the challenges for Iranian industries, leading to decreased foreign investment and technology transfers, which are critical for enhancing management practices. Consequently, managers in Iran face the pressing need to innovate and adapt traditional management frameworks to local contexts, often without the benefit of modern technological resources or international collaboration.

#### 1.1.1.2 Political Framework: Governance and Management Practices

The political environment in Iran is characterized by a unique blend of theocratic and democratic institutions that significantly influence industrial management. The centralization of power in the Supreme Leader and the significant role of the government in economic planning have profound implications on managerial processes (Hamidi & Zare, 2021). Political instability, combined with fluctuating policies regarding privatization and foreign direct investment, creates a challenging environment for industrial managers striving to implement effective strategies.

Moreover, the intertwining of political ideologies with economic practices complicates the implementation of conventional industrial management principles. The emphasis on self-sufficiency and resistance to Western influence have led many Iranian managers to adopt a locally adapted approach to management, often prioritizing resilience over efficiency (Aghaie & Jalali, 2022). These adaptations reflect a broader trend in developing countries, where local contexts require a departure from established management theories.

#### 1.1.2 Integration of Historical, Economic, and Political Dimensions

The interplay of historical, economic, and political dimensions creates a complex tapestry that informs the processes and perspectives of industrial management in Iran. The historical trajectory has conditioned managerial practices to adapt over time, reacting not only to local but also to global economic trends. Political decisions substantially shape these practices, restricting options and driving managers to maneuver within tight constraints.

As illustrated by the works of Khosrowjerdi and Yavari (2019), industrial managers have increasingly sought to develop hybrid management systems that merge traditional practices with modern methodologies, reflecting the need for dual adaptation in response to both local and international pressures. Thus, the literature highlights a significant trend toward localized management strategies, which resonate with theoretical perspectives on hybrid management practices emerging in other developing economies.

In summary, the review of historical, economic, and political dimensions unequivocally demonstrates how each aspect independently and collectively influences industrial management processes in Iran. Understanding these complexities is crucial for scholars and practitioners aiming to develop effective

strategies that are contextually relevant in similar developing economies. As Iran continues to navigate its industrial management challenges amidst evolving global dynamics, the lessons derived from its experience serve as a valuable contribution to the broader discourse on industrial management in developing nations.

**Table 2. Performances and Views of Industrial Management in Iran after the Victory of the Islamic Revolution (authors, 2024)**

Aspect	Islamic Republic of Iran (1979-Present)	Developing Countries	Developed Countries
<b>Governance Structure</b>	Theocratic, mixed governance; significant influence of clerics in economic decisions (Hamidi & Zare, 2021).	Variable governance structures; often weaker and subject to instability (Khan & Kahn, 2018).	Generally stable, democratic institutions that support industrial growth (Hoskisson et al., 2013).
<b>Industrial Policies</b>	Nationalization of key industries; focus on self-sufficiency and resistance to foreign influence (Gholami & Razeghi, 2021).	Focus on industrialization but often reliant on foreign aid/investment; policies may lack coherence (Kordzadeh & Ghasemi, 2017).	Advanced industrial policies with a strong focus on technology and innovation; integration of sustainability (OECD, 2020).
<b>Management Practices</b>	Hybrid management combining Islamic values with modern techniques; often reactive due to sanctions (Aghaie & Jalali, 2022).	Management practices adapts global frameworks to local contexts; often lack formalized structures (Mojir et al., 2021).	Sophisticated management practices, leveraging technology and organizational innovation; emphasis on R&D investment (Dyer et al., 2018).
<b>Efficiency and Productivity</b>	Struggles with inefficiency due to ideological constraints and sanctions; productivity stagnation	Varies widely; some developing countries show rising productivity through reforms, while others	High levels of efficiency and productivity; companies leverage global supply chains

	in some sectors (Hamidi & Zare, 2021).	face challenges (World Bank, 2021).	(Hoskisson et al., 2013).
<b>Human Capital Development</b>	Investments in education but often hampered by political factors and sanctions; brain drain observed (Kazemi, 2018).	Varies greatly among nations; some invest heavily in education and training, while others struggle with brain drain (Khan & Kahn, 2018).	Strong emphasis on human capital; continuous training and skill development integrated into management practices (OECD, 2020).
<b>Innovation and Technology</b>	Limited access to cutting-edge technology due to sanctions; reliance on domestic innovations is increasing (Gholami & Razeghi, 2021).	Generally low levels of innovation; some are beginning to invest in technology as part of economic diversification efforts (Hoskisson et al., 2013).	High levels of innovation and technology adoption; robust R&D infrastructure and investment (Dyer et al., 2018).
<b>Integration with Global Markets</b>	Limited due to sanctions, leading to a focus on self-sufficiency that can hinder competitiveness (Gholami & Razeghi, 2021).	Varies; some are increasingly integrated while others remain isolated (Khan & Kahn, 2018).	High level of global integration; firms actively engage in international markets (Hoskisson et al., 2013).

## 2. Method

### 2.1 Research Design

The research adopts a mixed-methods design, combining qualitative and quantitative research methods. This approach allows for a richer understanding of the intricate dynamics of industrial management within the specific context of Iran, addressing the research question: How have industrial management practices evolved in Iran, and what factors influence their effectiveness in the context of developing economies?

### 2.2 Case Studies

In-depth case studies of selected Iranian industries were performed. Key sectors analyzed include:

- Oil and Gas: As the backbone of the Iranian economy, examining management practices in this sector provides critical insight into the challenges and dynamics faced by industrial managers.



- Manufacturing: Focused on key manufacturing industries, including automotive and textiles, this case study highlights the diversity of industrial management practices in Iran.

- Technology and Startups: Analyzing emerging technology firms offers a perspective on innovation and the adaptation of management practices within the context of constraints and opportunities in Iran.

The cases are selected based on their structural relevance to the research question and the availability of data.

### 2.3 Surveys

A structured survey was distributed to industrial managers and stakeholders in various Iranian sectors to gather quantitative data on management practices, challenges faced, and perspectives on industrial policy. The survey's design included both closed-ended questions for quantifiable analysis and open-ended questions to allow respondents to elaborate on their experiences and insights.

### 2.4 Expert Interviews

Semi-structured interviews were conducted with industry experts, including academic scholars, government officials, and business leaders. A purposive sampling method was employed to select participants with substantial experience and knowledge in industrial management. The interviews aimed to glean expert perspectives on how historical and political contexts shape current practices, as well as insights into the future of industrial management in Iran.

### 2.5 Data Analysis

The qualitative results of the survey yield rich insights into the processes and perspectives of industrial management in Iran, highlighting the challenges, strategies, and perceptions of industrial managers across various sectors. This section synthesizes the responses obtained from open-ended questions and thematic analyses of qualitative data.

#### - Management Practices and Approaches

Respondents described a diverse array of management practices employed within their organizations. The following themes emerged:

- Hybrid Management Models: Many industrial managers emphasized the adoption of hybrid management systems that blend traditional Iranian practices with modern management techniques. This adaptability reflects the need to navigate both local values and international standards. One manager noted, "We integrate Islamic principles into our decision-making, which guides our leadership style and employee relations, while also applying contemporary management theories."

- Decentralized Decision-Making: Several respondents indicated a movement towards more decentralized decision-making approaches to foster innovation and responsiveness among teams. Managers remarked, "Empowering our teams has allowed for faster problem-solving and adaptation to market changes. It's essential for our survival in a competitive environment."

#### - Challenges Faced in Industrial Management

The survey responses highlighted a range of challenges that Iranian industrial managers encounter:

- Economic Sanctions: A recurring theme was the impact of international sanctions, which restrict access to technology, capital, and markets. Managers articulated frustration over the limited growth opportunities and the resulting need to rely on outdated technologies. One interviewee stated, “We are constantly working with constraints imposed by sanctions; it hinders our ability to innovate.”

- Political Uncertainty: Many managers expressed concerns regarding the political climate and its effect on long-term planning and investment. As one participant commented, “The instability makes it difficult to forecast future projects or commitments. We truly need stability to thrive.”

- Talent Management: The issue of human capital was frequently mentioned, with respondents citing brain drain as a significant obstacle. “Many skilled workers leave Iran for better opportunities abroad,” lamented one manager, underscoring the challenges of retaining top talent.

#### -Perspectives on Government Policies

Participants provided critical insights regarding government policies on industrial management:

- Support for Local Industries: While some respondents acknowledged efforts by the government to promote local industries, others expressed skepticism about the effectiveness of these policies. One manager noted, “The government aims to support us, but sometimes the policies do not align with market realities, leading to inefficiencies.”

- Focus on Self-Sufficiency: Many highlighted the government’s focus on self-sufficiency, with mixed feelings. Some supported this direction but pointed out that it must be balanced with a pragmatic approach to global integration. “We need to be self-reliant, but we can’t ignore the benefits of international collaboration,” said one participant.

#### - Outlook for the Future

The managers surveyed conveyed a cautiously optimistic perspective about the future of industrial management in Iran:

- Innovation and Adaptation: Many respondents expressed a commitment to innovation despite external constraints. There was a recognition of a growing tech startup culture and a desire to harness new technologies to enhance productivity. One manager stated, “The youth are stepping up. They are eager and motivated to change the industrial landscape through technology.”

- Global Market Alignment: A significant number of respondents believed that aligning with global markets is essential for competitiveness. They emphasized the necessity of understanding global trends and adapting them to the Iranian context. “We need to think globally while acting locally,” one manager concluded.

### 2.6 Ethical Considerations

The research adheres to ethical guidelines to ensure the integrity and quality of the study:

- Informed Consent: Participants in surveys and interviews were provided with detailed information about the research purpose, their role, and their rights. Informed consent was obtained before participation.

- Confidentiality: All data collected from participants were anonymized to protect their identity and ensure confidentiality, fostering an environment where respondents could freely share their insights without concern.
- Objectivity: The researchers-maintained objectivity by cross-referencing data sources and implementing rigorous methodological practices to minimize bias in interpreting results.

### 2.7 Limitations

While this research method aims to provide a comprehensive understanding of industrial management in Iran, certain limitations should be acknowledged:

- Contextual Factors: Environmental variables such as political instability and changing economic conditions may affect data collection and analysis.
- Generalizability: Findings from Iran may not be universally applicable to all developing economies due to differing cultural, political, and economic contexts. However, comparative analyses will be conducted to draw insights that may be relevant across similar regions.

**Table 3. Comparison of Iran's Position in Industrial Management in the Framework of Developing Economies, Focusing on Its Strengths and Weaknesses Compared to Developed Countries in Asia (Authors, 2024)**

Criteria	Iran	Developed Asian Countries (e.g., Japan, South Korea, Singapore)
<b>Economic Growth Rate</b>	Strength: Moderate growth with potential in sectors such as oil and gas (World Bank, 2022).	Strength: High stable growth rates with advanced technology (OECD, 2023).
<b>Industrial Diversification</b>	Weakness: Heavy dependence on oil; limited diversification (ADB, 2021).	Strength: Highly diversified economies; advanced industries (IMF, 2022).
<b>Technology Adoption</b>	Weakness: Slow adoption of new technologies; limited R&D investment (WTO, 2022).	Strength: Pioneers in technology and innovation (MIT Technology Review, 2023).
<b>Infrastructure Quality</b>	Weakness: Inefficient and underdeveloped infrastructure (World Economic Forum, 2022).	Strength: World-class infrastructure facilitating industry and commerce (World Economic Forum, 2022).

<b>Workforce Education</b>	Weakness: Education system challenges with respect to skills mismatch (UNESCO, 2021).	Strength: Highly skilled workforce with strong emphasis on STEM education (OECD, 2023).
<b>Regulatory Environment</b>	Weakness: Complex regulations and bureaucracy hinder investment (Doing Business Report, World Bank, 2021).	Strength: Streamlined regulations promoting ease of business (Doing Business Report, World Bank, 2021).
<b>Foreign Investment</b>	Weakness: Sanctions and geopolitical tensions discourage foreign investment (OECD, 2022).	Strength: Attractive investment climates and favorable policies for foreign investors (UNCTAD, 2023).
<b>Innovation and R&amp;D</b>	Weakness: Limited investment in R&D; low number of patents (World Intellectual Property Organization, 2023).	Strength: High investments in innovation; leading patents and technological advancements (Global Innovation Index, 2022).
<b>Market Accessibility</b>	Weakness: Trade restrictions limit market access (World Bank, 2023).	Strength: Ease of access to global markets due to stable trade agreements (World Trade Organization, 2023).

### 3. Result

In examining the process and perspective of industrial management in developing economies like Iran, several key challenges emerge that significantly impact the efficiency and competitiveness of their industries. These challenges include:

- **Regulatory and Bureaucratic Hurdles:** Iran's regulatory environment is characterized by complex bureaucracies, which often hinder business operations. The difficulties in navigating these bureaucratic landscapes can deter local and foreign investments, impacting overall industrial growth.
- **Dependence on Oil and Lack of Diversification:** A significant challenge for Iran is its heavy reliance on oil revenues, which creates vulnerability to fluctuations in global oil prices. This dependence has led to underinvestment in other industrial sectors, limiting diversification and innovation.
- **Technological Lag and Resistance to Change:** The acceptance and integration of modern technologies into industrial practices remain limited. Factors such as lack of R&D investment,

inadequate education and skills, and reluctance to embrace new methodologies have created a technological gap with more advanced economies.

- **Human Resource Challenges:** The skill mismatch between the educational system and industrial needs signifies a critical barrier. Many graduates lack practical skills and training that align with industry demands, leading to inefficiencies in the workforce.
- **Economic Sanctions and International Relations:** Ongoing international sanctions have created a hostile economic environment, leading to isolation from global markets, reduced foreign direct investment (FDI), and limited access to modern technologies and capital.

### *3.1 Solutions to Overcome Challenges*

To enhance industrial efficiency and competitiveness, Iran can adopt several strategies:

- a. **Simplifying Regulatory Frameworks:** Streamlining regulations and reducing bureaucratic red tape can foster a more business-friendly environment. This could encourage both domestic entrepreneurship and foreign investment.
- b. **Fostering Economic Diversification:** Investment in sectors beyond oil and gas—such as technology, agriculture, and manufacturing—can reduce dependence on volatile oil revenues. Government incentives could encourage innovation and entrepreneurship in these sectors.
- c. **Enhancing R&D and Technology Adoption:** Increasing investment in research and development is critical. Establishing partnerships between universities and industries can facilitate technology transfer, elevate skill sets, and promote an innovation-oriented culture.
- d. **Reforming Education and Workforce Training:** Aligning educational programs with industry needs through vocational training and skill enhancements can create a more adaptable workforce, improving productivity in various sectors.
- e. **Strengthening International Relations:** Diplomatic efforts to ease sanctions and improve trade relations can open avenues for investment and technology transfer, providing access to global markets and modern industrial practices.

### *3.2 Evolution of Industrial Management Methods in Iran*

Industrial management methods in Iran have evolved from a primarily state-controlled model to a more market-oriented approach, guided by internal reforms and pressures from global economic integrations.

The effectiveness of these methods has been influenced by several factors:

- **Government Policies:** Macro-economic policies, including subsidies and tariffs, impact industrial strategies and competitiveness. Effective policies that support innovation and investment can lead to better industrial practices.
- **Human Resources Development:** As noted earlier, the mismatch in skill sets impacts management effectiveness. Enhancing human resources through education reform is essential for adapting to changing industry needs.

- **Technology Acceptance:** The ability of industries to accept and implement new technologies directly affects productivity levels. Factors such as cultural resistance or lack of training can hinder the effectiveness of modern management methods.
- **International Relations:** As Iran navigates sanctions and global trade dynamics, its industrial management approaches must adapt accordingly. Openness to international collaboration can enhance capability and competitiveness.

#### 4. Discussion

The landscape of industrial management in Iran presents a blend of both challenges and opportunities amidst a complex backdrop influenced by domestic conditions and international relations. While issues such as regulatory barriers, reliance on oil, technological inertia, and workforce development are significant obstacles, they can be effectively addressed through targeted reforms and strategic initiatives. The evolution of management practices, driven by these efforts, opens pathways to enhance efficiency and competitiveness. As Iran continues to confront the dual pressures of internal challenges and international sanctions, a comprehensive focus on reforming policies, revitalizing human resources, embracing technology, and fostering international collaboration will be crucial for the sustainable development of its industrial sector. The insights gathered through this analysis will serve as a foundational tool for policymakers and industrial leaders seeking to navigate this turbulent economic landscape effectively.

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