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Factors determining the performance of the automotive industry in Morocco: a qualitative study

Les facteurs déterminants de la performance de l'industrie automobile au Maroc : une étude qualitative.

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Résumé

L'industrie automobile marocaine s'est imposée comme un pilier central de l'économie nationale et un moteur clé de l'industrialisation. L'objectif de cet article est de montrer comment les principaux acteurs de l'industrie automobile marocaine perçoivent les facteurs essentiels qui influencent la performance du secteur. Pour ce faire, les auteurs se sont basés sur une méthodologie qualitative, en utilisant des entretiens semi-structurés afin de collecter les informations auprès de huit professionnels et experts dans le domaine. Les résultats obtenus confirment l'importance des conditions politiques, institutionnelles et économiques spécifiques, ainsi que de la promotion du capital humain, de l'acceptation de la technologie, des ressources naturelles, de l'infrastructure et de la disponibilité du financement.

Mots clés : Industrialisation ; industrie automobile ; croissance économique ; infrastructures, capital humain ; facteurs économiques.

Abstract

The moroccan automotive industry has established itself as a central pillar of the national economy and a key driver of industrialization. The objective of this article is to demonstrate how the principal stakeholders in the Moroccan automotive industry perceive the keys factors influencing the sector's performance. To do this, the authors employed a qualitative methodology, utilizing semi-structured interviews to collect information from eight professionals and experts in the field. The findings corroborate the significance of particular political, institutional and economic conditions, in addition to the advancement of human capital, the endorsement of technology, natural resources, infrastructure and the accessibility of finance.

Keywords: Industrialization; automotive industry; economic growth; infrastructure, human capital; economic factors.

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Introduction

The automotive industry is of significant strategic importance for many countries, making a substantial contribution to economic growth, attracting investment, improving exports and creating employment opportunities for young people. In the specific context of Morocco, this industry is undergoing remarkable development, positioning the country as a prominent emerging player in the automotive sector in North Africa. However, the performance of this industry is influenced by a multitude of factors, including economic, political, institutional, technological and natural resource-related considerations, as well as infrastructure.

In this context, the research question that we seek to answer is as follows: what are the factors that influence the performance of Morocco's automotive industry?

The objective of this research is to gain a comprehensive understanding of the perceptions held by key stakeholders in the Moroccan automotive industry regarding the keys success factors (KSFs) that shape the sector's performance. To this end, in order to understand our problem, the methodology adopted as part of our research work is qualitative, operationalized by an exploratory qualitative study carried out with experts from the sector's professional organizations and members of the management committees of companies operating in the automotive sector in Morocco.

This paper is therefore structured around three main points. The first section presents a discussion of the conceptual and theoretical framework, followed by an examination of the perceptions of stakeholders in the Moroccan automotive industry regarding the sector's key success factors. The final section presents the results of a qualitative study conducted on this topic.

1. Conceptual and theoretical framework

The concept of KSFs was first introduced in the academic literature in 1961, in an article by R. Daniel on the crisis in information management. For him, an information system had to be discriminating and selective in order to assist managers in making decisions based on the most pertinent information from the vast array of existing data. This concept was subsequently developed by Rockart (1979), who proposed the KSFs as the core areas essential to a company's success.

Over time, a number of researchers have sought to define KSFs. For example, Hardaker and Ward (1987) consider KSFs to be those sub-objectives and/or outcomes that are directly related to and essential for the achievement of the organization’s vision, mission and long-term goals.

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In his publication, Daft (1988) defines KSFs as internal domains, including resources, skills, competencies, attributes, and conditions, as well as market-related domains, such as product characteristics and profitable market segments.

However, KSFs are usually identified at two distinct levels: the industrial level and the organizational level (Rockart, 1979; Leidecker & Bruno, 1984 and Lynch, 2003). Each sector possesses a specific set of KSFs, which are determined by the sector itself.

Indeed, the process of industrialization, as an economic transformation, has been extensively examined through a multitude of theoretical frameworks. These include William Arthur Lewis's analysis of surplus labor, Walt Rostow's theory of take-off and Alexander Gerschenkron's theory of relative industrial backwardness.

Moreover, William Arthur Lewis (1954) put forth a foundational theory in the field of industrialization in developing countries, underscoring the pivotal role of surplus labor transfer from agriculture to an expanding industrial sector. Johnson (1970) and Harris(1970) built upon this theory by underscoring the significance of government policies, capital investment, and education in the industrialization process. Similarly, Michael Todaro and Stephen C. Smith (1971) highlighted the importance of government policies and investment in human capital in promoting industrialization, challenging the notion that it is a purely spontaneous phenomenon.

Building upon Arthur Lewis's theory of surplus, Ranis and Fei (1964) introduced the concepts of income redistribution and profit reinvestment, examining the ways in which the gains generated by a growing industry could stimulate economic development. Thompson and Smith (1980) undertook an in-depth examination of the long-term implications of industrialization on socio-economic structures, including labor standards, education and urbanization. Kuznets (1966) also analyzed patterns of economic growth and structural change, studying the transition from an agrarian to an industrial and service economy. In a similar vein, Anderson and Silver (1975) investigated the effects of economic transformations on income distribution and social mobility, while Myrdal (1968) focused his analysis on regional disparities and socio-economic inequalities.

In their study, Green and Wilson (1982) examined the political and institutional factors influencing economic development, with a particular focus on the impact of government policies and institutions on the development process. Additionally, Sachs (2005) underlined the significance of strategic planning and infrastructure investment for economic development, whereas Patel and Kramer (2008) investigated the topic of sustainability in economic

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development. Furthermore, Martin and Sunley (2015) and Zhao and Chen (2019) have highlighted the importance of optimally utilizing human and natural resources to drive economic growth and development.

Rostow's (1960) theory of take-off conceptualized the industrialization process in five distinct phases, based on case studies of England, France and Germany. His model offers a linear structure for understanding the transition of societies to industrial modernization.

In relation to the theory of delayed industrial development, Gerschenkron (1962) posits that developing countries are capable of bypassing specific technological phases, thereby expediting their industrialization process. Furthermore, Amsden (1989) and Wade (1990) have also underscored the pivotal role of government policies in this industrial acceleration.

In conclusion, these theories provide alternative insights into the mechanisms and dynamics of industrialization, demonstrating the significance of economic, political and social aspects in this process of economic transformation.

2. Key success factors according to the literature review

In order to analyze the industrial environment and its performance, a number of studies have recommended the mandatory presence of several factors, such as economic conditions, the institutional factor, the stock of available technology and human capital, as well as the quality of infrastructure and favorable conditions linked to the financing of the economy.

Macroeconomic conditions, as exemplified by gross domestic product (GDP), inflation and the exchange rate, directly influence investment decisions, competitiveness and the innovation strategies of companies (Barro, 1991; Romer, 1990). Romer's (1990) theory of endogenous growth emphasizes the significance of investment in human capital and research and development (R&D) for economic development, underscoring the role of economic conditions as a catalyst for innovation and industrial growth.

In the Moroccan context, the impact of economic conditions on the automotive industry is crucial. Economic fluctuations influence vehicle supply and demand, production costs, and foreign investment flows, which in turn determine the viability and competitiveness of local industrial players (Porter, 1990). Thus, incorporating this variable into the analysis provides a better understanding of how companies can adapt and prosper in a fluctuating economic environment, by implementing resilient and innovative strategies.

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A second important factor in sectoral analysis is institutional and political factors. Regulatory frameworks, public policies and political stability have a significant influence on industrial development. North (1990) highlights the role of institutions in determining economic performance, emphasizing that institutional frameworks shape the incentives of economic actors and influence economic development trajectories.

Furthermore, Rodrik, Subramanian, and Trebbi (2004) argue that political institutions play a determining role in economic success. Favorable political and institutional reforms, such as tax incentives for R&D investment, can encourage innovation and strengthen the competitiveness of local companies on the global market (Acemoglu, Johnson, and Robinson, 2005).

The study of industrial dynamics shows the importance of human capital as a determining factor in industrial performance. In the automotive sector, the skills, education and training of

The role of workers in stimulating innovation and enhancing economic performance is of paramount importance. Becker (1964) was among the first to conceptualize the significance of human capital, proposing that investment in education and training is pivotal to boost the productivity of individuals and, subsequently, that of economies. This viewpoint was further substantiated by Mincer (1974), who established a direct correlation between educational attainment, professional experience and income levels, demonstrating the positive influence of human capital on economic growth.

The existing literature also stresses that the success of a country's industrialization depends significantly on the accumulation of locally available technologies (Cohen & Levinthal, 1990), where the country's capacity to absorb this foreign technology plays a key role in the adoption and effective adaptation of foreign technologies (Zahra & George, 2002). Furthermore, investment in research and development (R&D) is crucial for stimulating innovation and improving industrial competitiveness, as shown by Romer's (1990) work on endogenous growth, which highlights the importance of public spending on R&D for technological progress. The study of the involvement of parent companies of multinational firms in technology transfer to local subsidiaries, as examined by Blomström and Kokko (1998), highlights the conditions under which technology transfer can effectively contribute to the industrial development of host countries. These authors suggest that the willingness of parent companies to share technology and know-how is a determining factor in a local industry's ability to innovate and develop.

With regard to access to advanced technology, the economic literature indicates that institutional and regulatory barriers and skills deficits can limit the ability of firms to integrate

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advanced technologies (Nelson and Winter, 1982). This underlines the importance of an enabling environment, where public policies play a key role in facilitating access to these technologies and supporting absorptive capacities within local industries (Porter, 1990).

The adoption and adaptation of foreign technologies as a development lever for the Moroccan automotive industry is in line with Porter's (1990) theory of the competitive advantage of nations.

Natural resources have a significant impact on the entire industrial value chain. These resources, such as the rare metals used in the manufacture of electronic components and batteries for electric vehicles, play a crucial role in determining the competitiveness and sustainability of car manufacturers. In this sense, Hartwick (1977) and Dasgupta and Heal (1979) have highlighted the importance of natural resource management for economic development, suggesting that resource endowments can be both a blessing and a curse, depending on how they are managed and exploited.

Finally, easier access to finance enables companies in the sector to develop new technologies, improve production processes and respond effectively to constantly changing environmental and regulatory requirements. According to Rajan and Zingales (1998), access to capital is crucial for investment in research and development R&D, underlining the importance of external financing for companies' capacity to innovate. In addition, Hall (2002) identifies the financing of innovation as a significant challenge for small and medium-sized enterprises (SMEs) in highly competitive and technologically advanced sectors such as the automotive industry, where investment in R&D can be particularly costly.

Adapting to ecological standards and changing consumer preferences requires significant investment, making access to finance an essential lever for the competitiveness and sustainability of automotive companies. By analyzing access to finance in this context, we can identify both the opportunities and the obstacles that companies face in their efforts to innovate and develop sustainably.

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Table 1: Summary of Literature on KSFs

Theme	Description of results	Scientific references
Economic conditions	**Economic conditions** such as competitiveness and macroeconomic stability could have a direct impact on the success of the industrial sector.	Barro (1991); Romer, 1990) Porter (1990), North (1990)
Political and institutional factors	**Political institutions** play a decisive role in economic success.	Acemoglu et al (2005); Rodrik et al (2004); (Barro1990; Calderón and Servén, 2004).
human capital	The study of industrial dynamics shows the importance of **human capital** as a determining factor in industrial performance	Becker (1964); Mincer (1974)
Stock of foreign technologies adopted	the success of a country's industrialization depends significantly on the accumulation of locally available **technologies**	(Nelson and Winter, 1982); Cohen and Levinthal (1990); Zahra and George, (2002); Romer (1990); Blomström and Kokko (1998); Porter (1990)
Natural resources	**Natural resources** play a crucial role in determining the competitiveness and sustainability of carmakers.	Hartwick (1977); Dasgupta & Heal (1979)
Public infrastructure	Investment in i**nfrastructure** has a positive effect on industrial development.	Agenor, (2006); Aschauer, (1989) ; Barro, (1990) ; Calderón & Servén, (2004)
Access to sources of financing	**Access to finance** is crucial for investment in R&D. It is a key factor in improving companies' capacity for innovation.	Rajan & Zingales (1998); Hall (2002)

Source: elaborated by the authors

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3. Moroccan automotive industry stakeholders' perception of KSFs

3.1.Methodology and purpose of the study

To gain an in-depth understanding of professionals' perspectives on the factors influencing the performance of the automotive industry in Morocco, it is essential to conduct semi-directive interviews with experts and stakeholders from the private and public sectors. In order to gain a deeper insight into the subject under study, we chose to adopt a qualitative approach, which is particularly suited to exploratory research (Charreire-Petit & Durieux, 2014).

3.1.1. Data collection methodology and tools

Our methodology is based on individual semi-structured interviews, which have been demonstrated to be an effective means of gathering a wide range of information relevant to our research topic. This type of interview is commonly used in management science research (Marie-Laure et al., 2008), enabling a particular phenomenon to be explored in detail (Bompar, 2010).

In order to achieve the objective of this research, an interview guide was developed based on seven themes derived from the literature review. The study population consisted of eight individuals, experts and professionals active in the Moroccan automotive sector, selected according to the criteria outlined in the table below.

Table 2: Categories of participants in the qualitative study

N°	Category	Affiliation	Role in industry	Experience (years)
1	Expert 1	Private sector	Engineering / R&D	15
2	Professional 1	Public sector	Project monitoring and management	10
3	Expert 2	Private sector	Research and Development	20
4	Professional 2	Public sector	Laws and regulations	8
5	Expert 3	Private sector	Production	12
6	Professional 3	Private sector	Marketing & Communication	7
7	Expert 4	Public sector	Consultant	25
8	Professional 4	Private sector	Logistics	9

Source: elaborated by the authors

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3.1.2. Process for collecting and analyzing qualitative data

The interview guide was designed to address the research question and objectives through a series of carefully prepared questions. Prior to finalizing the guide, the questions were discussed with experts in the field to ensure their relevance and informativeness for the study.

The themes and sub-themes that constitute the interview guide are presented in the following analysis grid:

Table 3: Analysis grid

Axis 1:	Economic conditions and performance of the automotive industry
Axis 2:	Political and institutional conditions and the performance of the automotive Industry
Area 3:	Human capital and performance in the automotive industry
Axis 4:	Technology Adoption and Adaptation and Automotive Industry Performance
Area 5:	Natural Resources and Infrastructure and the performance of the automotive Industry
Area 6:	Access to sources of financing and performance in the automotive industry

Source: **elaborated by the authors**

The semi-structured interviews were conducted between 1er April and the end of May 2023, and were digitally recorded. Each interview lasted between 40 and 50 minutes. As part of our analytical methodology, a multi-stage procedure was adopted.

Thus, verbatim transcripts of the discussions with the participants were prepared. The information gathered was then examined using a thematic analysis method based on protocols established in the specialist literature (Coffey & Atkinson, 1996; Corbin & Strauss, 2008; Rubin & Rubin, 2005).

To support this analytical approach, we chose to use Nvivo11, a software package designed for computer-assisted qualitative analysis. This software offers a structured work environment, divided into two main sub-systems. The first sub-system designated, "File", compiles information relating to the documents integrated into the tool. The second sub-system, known as "Nodes", facilitates the consolidation of the coding themes established by the analyst, thereby enabling the organization and categorization of the data collected.

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3.2.Summary of results

A content analysis was conducted on the basis of the responses provided by the individuals we encountered. This methodological allowed to approach enables the data to be processed with a high degree of objectivity and reliability by extracting the pertinent elements from the interviews themselves (Jean-Claude & Françoise, 2005). The analysis technique employed facilitated an in-depth understanding of the professionals' perspectives on the factors influencing the performance of the automotive industry in Morocco. Once each interview had been transcribed, the text was segmented and specific codes were assigned to each segment identified. Additionally, the data was employed to discern a number of themes that, according to the participants, encapsulate the pivotal factors influencing the performance of the automotive industry within the Moroccan context. The results obtained are presented below:

- ✓ **Economic conditions and performance of the automotive industry**

The influx of foreign capital into the Moroccan automotive industry and the scale of their export production activity has contributed to a period of economic growth in the country. One of the experts interviewed stated that the economic conditions in Morocco have created a favorable environment for the automotive sector, attracting foreign investors. However, fluctuating interest rates remain a challenge, sometimes adversely affecting long-term investment in the industrial sector." These comments underline the dual nature of the opportunities and challenges facing the Moroccan automotive industry, which is marked by promising economic growth, but held back by a degree of financial instability.

Furthermore, inflation represents a significant challenge, directly influencing individuals' purchasing power and, consequently, the demand for new vehicles. Despite the Moroccan economy's progress, inflation presents a challenge in terms of reducing consumers' purchasing power and, consequently, reducing demand for new vehicles, as one expert notes. This perspective demonstrates the necessity of considering inflation as not only an economic indicator but also as a direct factor influencing demand in the automotive sector.

The issue of financing costs is a significant concern for companies in the sector, particularly in light of the impact of interest rates and inflation. An expert notes, "interest rates and inflation have a direct impact on financing costs for companies in the sector. High rates can impede investment in new technologies and reduce production capacity, which are essential for maintaining competitiveness." This statement reveals the financial implications of economic conditions on the sector's ability to innovate and expand.

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It is argued that stable GDP and proactive economic policies are pivotal to the advancement of the automotive sector in Morocco. One expert has asserted that GDP stability and the economic policies pursued by the public authorities have been instrumental in the growth of the automotive sector, underscoring the beneficial impact of government and economic stability in bolstering the industry.

In light of the reliance on imported components and equipment, another expert proposes a strategy of enhancing local capabilities. The reliance on imported components can intensify the impact of inflation on the Moroccan automotive sector. Cooperative strategies with local suppliers could help mitigate this effect and stimulate the local economy. This proposal highlights the importance of an integrated strategy that prioritizes the local supply chain to ensure the autonomy of the automotive sector.

In our study, the experts stress the need for prudent risk management and financial hedging strategies tailored to the economic context. "The impact of interest rates and inflation on the automotive sector requires particular attention. Financial hedging strategies and prudent risk management are essential for manufacturers and suppliers to navigate this economic environment," says one expert, emphasizing the strategic measures required to ensure the sector's stability and growth.

- ✓ **Political and institutional factors and the performance of the automotive industry**

Morocco's political stability is unanimously recognized by the experts and players who took part in our qualitative study as a key factor in attracting foreign investment in the automotive sector. As one expert put it, "Morocco's political stability has been a key factor in attracting foreign investment in the automotive sector. Clear and favorable regulations, particularly those that facilitate the export and import of components, can only stimulate the development of the sector." This statement highlights the importance of a stable and predictable regulatory framework to encourage investment and sectoral growth.

Furthermore, as one expert pointed out, "laws and regulations favoring foreign direct investment have greatly contributed to the expansion of our sector". This means that laws and regulations designed to encourage foreign direct investment are singled out as significant levers for the expansion of the automotive sector, highlighting the need for a long-term political vision to ensure the sustainability and development of the automotive industry.

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Institutional support for innovation and R&D is recognized as a driver of industrial performance. To this end, tax incentives and government subsidies are important elements in this area. However, according to one expert, "there is still a long way to go to reach the level of support seen in the leading automotive countries".

The importance of collaboration between universities, research centers and companies is also highlighted. One expert points out, "I think the automotive sector could achieve more through greater collaboration between universities, research centers and businesses." It is clear from this statement that the government should play a crucial role in facilitating these partnerships, which are essential for innovation and technology transfer.

Consistent implementation of strict environmental regulations and vehicle safety standards is seen as a driver of innovation. "The adoption of strict environmental standards and vehicle safety regulations could act as a driver of innovation in the automotive sector," says one expert. Nevertheless, regulatory constraints sometimes represent a major challenge, particularly for small businesses. However, political stability is seen as an advantage, offering "a reassuring framework for navigating these regulations and seeking opportunities for growth," according to one expert. This statement highlights the balance that will need to be struck by public authorities between regulation and support for entrepreneurship.

- ✓ **Human capital and performance in the automotive industry**

The human capital dimension, including investment in education and training, can only encourage creativity and innovation. Thus, the vital role of education and technical training is underlined by an expert mentioning that "Education and technical training play a key role in providing the automotive industry with skilled workers capable of managing complex production processes." This statement recognizes the importance of these elements for the technological advancement and competitiveness of the sector. Also in the same vein, one expert mentions that "encouraging a culture of continuous innovation among employees can transform ideas into revolutionary products or processes." These ideas suggest that the potential for innovation is the result of harnessing technical skills for industrial development. Similarly, another respondent points out that "human capital is at the heart of innovation and competitiveness in the Moroccan automotive industry." This perspective highlights the ability of well-trained employees to quickly adopt new technologies and adapt to market changes.

Another expert emphasized the importance of technical expertise and skilled labor, noting that "in recent years, Morocco has invested heavily in vocational training, which has directly

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improved the quality of our industrial companies and our attractiveness to foreign investors". His statement underlined the positive impact of this investment on strengthening industrial capacity and attracting foreign investment.

Investment in R&D is considered essential for the development of new products and processes, thereby improving industrial productivity. "Qualified human capital in this field enables Morocco to position itself as a leader in certain automotive niches, such as the manufacture of hybrid and electric cars," says one expert, highlighting the link between specialized human capital and industrial innovation.

- ✓ **The adoption and adaptation of technology and performance in the automotive industry**

Most of our interviewees highlighted the importance of technology transfer in the development of the automotive industry in the Moroccan context. In this regard, one expert highlighted the importance of adopting foreign technologies to improve the competitiveness of the Moroccan automotive sector on the market. "The adoption of foreign technologies in the automotive industry is essential to remain competitive on the global market," he says. This point of view highlights the process of adapting these technologies to Morocco's specific needs in order to maximize their effectiveness.

The speed with which advanced technologies can be adapted is also highlighted as a crucial challenge in the face of rapid changes in the market. "The Moroccan automotive sector has made great strides in adopting advanced technologies. However, the challenge lies in adapting these technologies quickly," shares another expert. This perspective reveals the importance of agility in technological integration to remain relevant in a constantly evolving competitive environment.

The impact of investment in R&D is unanimously recognized as fundamental to the development of innovative solutions. One expert states, "R&D investment is crucial to developing innovative solutions that can improve the performance and competitiveness of the Moroccan automotive sector." This underlines the importance of R&D in sector competitiveness, from new materials to the design of more fuel-efficient vehicles.

International collaboration in technological adaptation is seen as a key skill that distinguishes industry leaders. "This requires close collaboration between local engineers and international partners," says one expert, referring to the integration and customization of foreign

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technologies. This approach underlines the role of international cooperation in technological innovation adapted to local production conditions.

To sum up, technology transfer from developed to emerging countries is seen as a lever for developing innovative products and improving productivity in automotive companies. This issue was discussed in depth with a high-level expert. "Technology transfer and investment in R&D are fundamental... insofar as they enable productivity to be boosted in response to market demand. This statement highlights the direct link between technology transfer, with innovation and production efficiency as its main vectors, and industrial performance, positioning Morocco as a competitive player in certain segments.

- ✓ **Natural resources and public infrastructure**

The natural resources used in the manufacture of automotive components have been identified as a determining factor in production costs and product durability. "The use of natural resources... plays a crucial role in determining production costs and product durability," says one expert. This observation highlights the need for efficient management of natural resources to maintain economically viable and environmentally responsible production.

In addition, the importance of high-quality public infrastructure for transporting raw materials and finished products is emphasized. In this respect, infrastructure, including roads and ports, is essential for the economy, directly influencing the logistical capacities and competitiveness of the industrial sector on the international market.

- ✓ **Access to natural resources**

An evaluation of the utilization of natural resources has identified deficiencies in their development. One speaker posited that, while Morocco exhibits relatively favorable access to natural resources, improvements can be made in the exploitation, development and processing of these resources.

The role of natural resources extends beyond the sphere of production to encompass innovation, particularly in nascent segments such as electric vehicles. As one expert posits, "Natural resources are not only pivotal for production; they also determine the industry's capacity for innovation". This assertion implies that the advancement of local supply chains for these resources can fortify the sector's autonomy and sustainability.

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Access to and sustainable utilization of natural resources have been identified as pivotal parameters. As another expert notes, "Although Morocco has considerable natural resources, the challenge lies in developing these resources in a sustainable and economically viable manner". This perspective underlines the importance of investing in environmentally-friendly extraction and processing technologies in order to facilitate sustainable industrial development.

- ✓ **Public infrastructure**

Reliable public infrastructure, particularly in terms of logistics and digital connectivity, is crucial to operational efficiency. "Reliable public infrastructure reduces logistics costs and improves operational efficiency," says another expert, highlighting the importance of maintaining and continually developing this infrastructure to support the industry. This statement is complemented by the observation that significant investment in transport and digital infrastructure has boosted the competitiveness of the Moroccan automotive sector.

As far as transport infrastructure is concerned, it is noted that the current state in Morocco effectively supports the automotive sector. However, "to maintain and improve this competitiveness, it is crucial to continue investing in the maintenance and expansion of this infrastructure," stresses one expert. This reflects the need for ongoing investment to ensure the long-term competitiveness of the sector.

Digital infrastructures are recognized for their growing role in the sector, not only for production management but also for the development of new products and services. "Morocco has made significant progress in this area, but must continue to invest to remain at the forefront of innovation," says one expert, pointing to the need for a forward-looking vision in infrastructure and technology investment.

- ✓ **Access to finance and the automotive industry's performance**

Access to sources of finance is often seen as fundamental to the development of the sector, especially for SMEs who face a range of challenges in obtaining finance tailored to their specific needs. One expert highlights "the obstacles associated with traditional financing conditions, highlighting an urgent need to diversify financing options".

The significant impact of financing on investment and modernization in the industrial sector is illustrated by the crucial importance of being able to "invest in new technologies and modernize their facilities". These words make it clear that "without adequate access to finance, it becomes difficult to keep up with the rapid pace of technological innovation," adds another speaker from the automotive sector.

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The diversity of funding sources is recognized as "crucial to meeting the varied needs of businesses at different stages of their development". This suggests a strategic approach to the use of the different financing options available, to maximize opportunities for growth and modernization in the sector in question.

Barriers to finance are described as a major obstacle, where "high collateral requirements, sometimes exaggerated interest rates, and a lack of awareness of alternative financing options can hinder ambitions to expand and modernize." The statement highlights the specific financial challenges faced by SMEs, underlining the importance of facilitating wider access to finance.

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Conclusion

The performance of the automotive industry in Morocco is influenced by a complex combination of interdependent factors, ranging from economic conditions and political stability to human capital, technological adaptation, natural resources and infrastructure, and access to finance.

Recent economic growth in Morocco has proved to be a key factor in attracting foreign investment in the automotive sector.

Morocco's political stability is seen as a key factor in attracting foreign investment. Institutional support for innovation and R&D is increasing, but more needs to be done to reach the level of world leaders in the automotive industry. For the development of the automotive sector in Morocco, collaboration between universities, research centers and companies is a lever for promoting innovation and technology transfer.

Human capital is at the heart of innovation and competitiveness in the Moroccan automotive industry. The importance of investment in education and ongoing training for staff, as well as investment in R&D, are levers for improving industrial productivity.

It has also been shown that adopting and adapting foreign technologies is crucial to maintaining the competitiveness of the Moroccan automotive sector on the global market, by meeting the challenges of international competitiveness.

Natural resources and infrastructure play a crucial role in determining production costs and product sustainability. High-quality public infrastructure is essential to the sector's performance, having a positive influence on logistics capacity and competitiveness on the international market. The importance of efficient management of these natural resources enables us to move up the ladder of sustainable development.

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