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# **INDUSTRIAL SOVEREIGNTY OF MOROCCO: HOW FAR HAVE WE COME?**

SOUVERAINETE INDUSTRIELLE DU MAROC : OU EN  
SOMMES-NOUS?

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## Summary

In a difficult geopolitical and economic context at the global level, States are moving towards the consolidation of their sovereignty in the industrial domain. Morocco, for its part, has included industrial sovereignty among its strategic objectives. This research has a double objective; the first one consists of an attempt to conceptualize the construct of “Industrial sovereignty” that still escapes academic canonization and to extract the most relevant indicators for the construction of a scale for its measurement. The second aims to analyze the drivers of Morocco's industrial sovereignty based on the indicators selected. The research reveals that despite the great efforts undertaken, this objective is far from being achieved given a plethora of impediments that keep it dependent on external hegemony.

**Keywords:** Industrial sovereignty, Industrial policy, Global Value Chains, FDI, Global businesses, Morocco

## Résumé

Dans un contexte géopolitique et économique difficile au niveau mondial, les États s’orientent vers la consolidation de leur souveraineté dans le domaine industriel. Le Maroc, de son côté, a inscrit la souveraineté industrielle parmi ses objectifs stratégiques. Cette recherche a un double objectif ; le premier consiste en une tentative de conceptualiser le construit de « souveraineté industrielle » qui échappe encore à la canonisation académique et d’en extraire les indicateurs les plus pertinents pour la construction d’une échelle de mesure. Le second vise à faire une analyse des moteurs de la souveraineté industrielle du Maroc à partir des indicateurs retenus. La recherche révèle que malgré les efforts considérables déployés, cet objectif est loin d’être atteint compte tenu de la pléthore d’obstacles qui le maintiennent dépendant de l’hégémonie extérieure.

**Mots-clés :** Souveraineté industrielle, Politique industrielle, Chaînes de Valeurs Mondiales, IDE, Métiers Mondiaux du Maroc, Maroc

## INTRODUCTION

The global economic context is hardening under the effect of multiple crises in in diverse fields: health, energy, finance, security and geopolitics. The result is economic tensions, which will govern international relations during the 2020 decade (Guillou, 2023). These crises have demonstrated the extent of the interdependence of globalized economies and consequently their vulnerability to external constraints since nearly 70% of international trades are based on global value chains (OECD, 2020). These interdependencies are beginning to be called into question and the debate on foreign dependence is put back at the center of the agora (Degans, 2022; Cohen, 2022; Leonard & Shapire, 2021; Voy-Gillis, 2021; Guillou, 2023).

For (Amir-Aslani, 2021), we are entering a new era of deglobalization and regionalization of interests. The concept of sovereignty is starting to be heard more and more and the industrial sector is first concerned. The geopolitics of value chains are disrupted by the trade war (United States/China) and the war in Ukraine, factors that should accelerate investments in supply chains and regional value chains (IRES, 2022). (Cohen, 2020) believes that the fragmentation of globalized value chains creates situations of dependence. Their fragilities push manufacturers to evaluate its reduction in strategic sectors including national health, energy and food security. (Delbecque, 2022) squarely places industrial sovereignty as a condition of national security. Debates on reindustrialization and relocation are resurfacing in country strategies and legislation (Cohen, 2022). Concentration movements are increasing (mergers/acquisitions) for the protection of strategic companies with the implementation of “re-internalization” strategies such as the case of Europe and the United States (IRES, 2022). (Degans, 2022) affirms that deindustrialization endangers economic security since it leads to a decline in the creation of wealth in the territories and therefore their inevitable weakening, a loss of expertise and ultimately an increase in unemployment. The internationalization of supply chains increases uncertainties and requires responsiveness (Jaidi & Msadfa 2017). Hence, the risks of dependence are requiring the reconnection with a strategy of industrial sovereignty. (Cohen, 2022), believes that the industry cannot be left to market forces alone and that competition is far from pure and perfect. Therefore, the intervention of the State is justified and it is requested to rehabilitate a national industrial policy. He added that the ambition for industrial sovereignty becomes a real necessity and no longer a simple fashionable and discourse topic. (Irwin, 2020), shares the same idea and believes that the Covid 19 pandemic has brought to the surface the question of industrialization, free trade and specializations. According to him, the rise in inflationary tensions, triggered by the war in Ukraine, changed the perception that economic actors had of the industrial development of nations.

For (Guillou, 2023), industrial policy is the spearhead of economic sovereignty. She cites the example of the policy of protecting industries as well as that of promoting certain technologies considered fundamental to the economic future of the nation. On another register, (Jaidi & Msadfa 2017; Voy-Gillis, 2021) believe that it is imperative to

link the question of industry to those of innovation, the environment, digital technology and infrastructure. Questions linked to environmental issues, particularly induced by climate change, only accentuate the need to reconsider the foundations of the industry in all its dimensions. Other factors are pushing towards the wave of industrial sovereignty, notably the concentration of a certain number of goods and services in small geographical areas, the increase in labor costs in emerging countries as well as the costs of transport, logistics and carbon impact.

On this register, the choice that Morocco has made since its accession to the WTO in 1995 has led to its integration into globalization. The free trade agreements that allowed the introduction of foreign investment flows have also exposed its industry to international competition. Indeed, the rate of openness of the Moroccan economy increased by approximately 31% between 1985 and 2020, going from 45.11% in 1985 to 76.06% in 2020. Its insertion into global value chains has begun from the 2000s and industrial plans were put in place to be in tune with its political orientations and choices. The first was the Emergence Plan I (2005), followed by the National Pact for Industrial Emergence (2005-2009) and the Industrial Acceleration Plan (2014-2020) which made it possible to develop Morocco's global specializations (the automotive, aeronautics, textiles and leather, agri-food, electronics and offshoring services). The latest one is labeled "the Industrial Acceleration Plan (2021-2025)" that aims to consolidate the achievements in the industry sector and their generalization to all regions in Morocco (IRES, 2022).

Therefore, the discussion on industrial sovereignty in Morocco is very recent, particularly after the Covid 19 pandemic. Currently, it is listed among the country's strategic challenges. The debate on relocation in UE countries and the desire to repatriate a large part of their activities to their origin country, particularly in strategic sectors for Morocco such as automobiles or aeronautics, have exacerbated this desire for industrial Moroccan sovereignty. In this momentum, the 2023 finance law placed the industrial sector at the top of the priorities and identified the challenges of Morocco's industrialization, notably greening, digitalization and human capital. The issue of upgrading the industrial sector is not only linked to the recovery of the trade balance, but rather a basic ingredient of national sovereignty. The latter involves the promotion of "Made in Morocco" and its rise in competitiveness, the reduction of its dependence on foreign countries as well as the consolidation of its position in promising sectors and the assurance of a new positioning in global value chains.

According to (PWC Maroc, 2023), Morocco has free trade agreements with more than 100 countries and it is the only African country with a free trade agreement with the United States. According to the Office des Changes, between 2021 and 2024, more than 170 investment agreements have been signed, totaling around \$21 billion. Half of these FDI are intended for the industrial sector with an increase of more than 31% in 2022. FDI amounted to 3.6 billion dirhams (360 million dollars) during the year 2024, compared to 3 billion of dirhams (\$298 million) at the same period in 2023 (Office des Changes, 2023). Despite this profusion, (Nouri, 2022) believes that the results of this

opening of the Moroccan economy to international competition with the aim of integrating globalization and allowing Moroccan companies to access the international market remain contested given certain negative externalities such as the erosion of the Moroccan industrial sector, the increase of unemployment, dependence on imports, etc. However, the question of industrial sovereignty cannot be analyzed without an anamnesis of the Moroccan industrial saga since the country's independence. The latter remains linked to all the policies and choices made by Morocco as well as its vision of the future and how it prepares for it. The pressure is all the greater with the installation of Industry 4.0 and the emergence of Industry 5.0, 6.0 that pose more challenges to this sector. Indeed, technological and digital sovereignty are considered sine qua none conditions of industrial sovereignty. Industry 4.0 brings about a paradigm shift in industrial revolutions that also induces digitalization, social and environmental considerations which involve efforts in innovation and R&D (IRES, 2023).

All of these factors challenge the model of economy of scale and “Best Cost”, on which Morocco is positioned and its lag behind the technological level. The transition from an industry based on comparative advantages to one based on competitive advantages requires a profound upgrade of a country's entire industrial ecosystem. In addition, Moroccan industry is under pressure from the environmental factor since it is called upon to contribute to the preservation of water resources and to move towards low-carbon, responsible and sustainable production. The energy transition, with the immense potential that Morocco has in the renewable energy sector, could constitute a valuable opportunity to allow the country to soften the impact of its energy dependence that remains the real Achilles heel of its energy sovereignty.

On another register, it is legitimate to ask the question about the opportunities for Moroccan industrial sovereignty in this global momentum of relocation and reindustrialization (On shoring or Re-shoring, Near shoring, Freindshoring) which accompany the global momentum of countries in search of reconquest of their industrial sovereignty. In other words, how could Morocco benefit from growing geoeconomic fragmentation or avoid its negative impacts?

Based on all of the preceding elements, our analysis in this research revolves around the question of the possibility of industrial sovereignty for Morocco. The aim of our study is to present in what extent Morocco can claim industrial sovereignty, which refers to non-dependence on foreign countries without necessarily entering into protectionism. Thus, we will try to answer the following question: To what extent does Morocco's industry respond to sovereignty indicators? Several interrogations emerge from this central question:

- How does Morocco define its industrial sovereignty? What views, values and representations are attached to it?
- What industrial policy was mobilized to achieve this sovereignty?
- Which sectors should be strengthened in view of existing companies, comparative advantages and geopolitical issues?
- Is Morocco capable of converging its integration into the international economy and its

national interests?

- How to articulate industrial sovereignty and climate change?
- What is the relationship between industrial development policy and foreign trade policy?
- How to seize the opportunity of the African Continental Free Trade Area (ACFTA) to strengthen its industrial sovereignty?
- What lessons were learned from failures and successes?

To answer our central question, we relied on an interpretative analysis of industrial sovereignty as formulated in the managerial doxa. On this basis, we will deduce a certain number of conclusions on the level of Moroccan industrial sovereignty with regard to the policies and indicators that we have drawn from the theoretical material. At the level of the empirical study, we used statistics and data established by Moroccan institutions as well as international organizations specializing in the industrial issue. Our journey is in four stages. The first consists of an attempt to conceptualize industrial sovereignty and to give an approximate and precise definition. This part will constitute the basis for constructing our conceptual model of industrial sovereignty, which constitutes the second stage of our reflection. The third step consists of a reading grid of Moroccan industrial sovereignty based on the conceptual model outlined from the theoretical substrate. The fourth and final stage consists of a global reflection on industrial sovereignty in Morocco, the constraints that weigh on it and some recommendations, which appear to us to be serious avenues for its consolidation.

## **1. Industrial sovereignty: theoretical foundations**

### **1.1 An attempt of definition**

In light of the literature review, the construct of “industrial sovereignty” covers several meanings and is difficult to delimit. The documentary analysis demonstrates that the construct's definition is still not stabilized by academics as well as by the managerial sphere. The multidimensional nature of industrial sovereignty calls for deepening conceptualization to represent its usable indicators in a canonized typology of industrial sovereignty. Its constitution of two concepts “sovereignty” and “industrial” reinforces its complexity. Sovereignty, *stricto sensu*, was defined at the end of the 19th century by the jurist Louis Le Fur as “the quality of the State of being obliged or determined only by its own will, within the limits of the superior principle of law, and in accordance with the collective goal that it is called to achieve”. Georg Jellinek affirms that “*a sovereign state can delegate or transfer powers, without this reducing its sovereignty, on the condition that it retains the possibility of taking them back*” (in Voy-Gillis, 2021). For (Ikenberry, 2000), “*sovereignty is the authority of a state to govern itself and the ability to operate free from external control*”. Sovereignty is “*understood in its triple meaning of sovereign authority (State), national sovereignty (the relationship with the outside world, at borders) and collective control of the future*” (Cohen, 1992). For (Degans, 2022), “*sovereignty can be understood as the ability to maintain control of one's*

*destiny*”. Éric Germain defines it as “*the capacity for an entity to give itself its own rules, it is the power of power*” (in Degans, 2019). It can be associated with different dimensions: national, economic, industrial, digital, political, monetary, etc. We focus in this research on the industrial dimension.

The concept of “industrial sovereignty”, on the other hand, refers to a certain level of independence but is not homogeneous and encompasses various dimensions, depending on the context, content and scope (Frost & Sullivan, 2020). Its connection with several concepts such as economic sovereignty, economic security, digital and technological sovereignty demonstrate the complexity of this construct and the difficulty of delimiting it. Economic sovereignty refers to the concept of economic security, which refers to the capacity for a country to hold the economic means necessary to protect its vital interests in the context of a military or economic conflict (Dupeyrat, 2020). For (Saint-Etienne, 2016), in addition to political and military independence, national sovereignty presupposes economic independence that can be defined more precisely as the response of the productive offer to the main needs of the population: food, energy and other strategic goods and services.

In the past, economic sovereignty has been assimilated to industrial sovereignty because “the industrial object best reflects the capacity of influence of a great power” (Cohen, 1992). In a restricted sense, industrial sovereignty can be defined as “control by public authorities of industry” (Cohen, 1993) and as a condition for the security of the nation (Delbecque, 2020). Industrial sovereignty refers to a country's ability to control its own resources and be autonomous in the production of goods essential to its economy and national security (Robert, 2024). According to (Frost & Sullivan, 2020), industrial sovereignty consists of studying the different options that would allow the country to produce locally what it needs as a priority.

(Degans, 2022) asserts that industrial sovereignty means maintaining the economic activity of the country and its sensitive businesses in the event of a crisis. (Dupeyrat, 2020) assimilates industrial sovereignty to the control of FDI, mergers and acquisitions of strategic companies (in cybersecurity, aerospace, semiconductors, etc.) and technology transfer. It assumes a certain level of autonomy in selected industries, security of supply lines and in access to raw materials (Frost & Sullivan, 2020). (Degans, 2022) adds to the imperatives of industrial sovereignty the requirement for reciprocity in international trade and the defense of national interests. (Edgerton, 2023) linked industrial sovereignty to the control of production and the choices of States in terms of technology, national innovation or adoption of those produced by others. This reality is particularly appreciated in times of conflict or reconstruction. According to (Le Masson & Weil, 2023), the industrial sovereignty of a State is also assessed by its power of invention and its capacity to invent solutions to future problems. (Videlin, 2023), believes that the public enterprise has established itself as an instrument of industrial sovereignty and that a return of state action in industrial policies is necessary for industrial sovereignty.

For (Bréchet, 2020), industrial sovereignty has several components. The first and most

fundamental is based on the industrial capacities of a country that allow it to control sovereign domains with maximum freedom in relation to external constraints: defense, health, energy, basic food products and information technology. The second component concerns the control of strategic industries (aeronautics, arms (as an exporting industry), land mobility, electronics, all industries (turbines, nuclear industry). Two other components of industrial sovereignty are related to the control of critical metals and materials and financial stability. Industrial sovereignty must be supported horizontally by an ecosystem, which underlies the whole: training, legal security, networks of subcontractors, market economy, capacity to finance reindustrialization, etc.

(Frost & Sullivan, 2020) adds another brick to this building and links industrial sovereignty to technological and digital sovereignty. Technological sovereignty refers to technologies or industries that are considered important for developing a country's competitive advantage on the global stage or being the key foundational technology for the development of other related or dependent technologies (AI, batteries, quantum computing, etc.). As for digital sovereignty, it is closely linked to data processing and security on the Internet, communication technologies, machine learning, IoT and AI. From the different definitions, we can deduce that industrial sovereignty implies reasoned protectionism as preached by Friedrich List (1789 – 1846). While defending free trade, he argues that a country will lose if it opens up to international trade when its industry is too weak. Imports will have the effect of discouraging the development of national industry. This country must therefore adopt a protectionist policy until its industries strengthen and can be competitive internationally. List advocates a structural and organic approach to international trade. For the latter, free trade is good when the terms of trade are balanced and when the technological and economic differential between the two nations is not abysmal.

To summarize all of these definitions, we will give our own definition of industrial sovereignty: *“A basic component of economic sovereignty and security, industrial sovereignty is a multidimensional concept. It assumes that a State has the capacity to produce locally goods and services capable of meeting the vital needs of its population, its businesses and its institutions. It assumes that a State is capable of guaranteeing its autonomy and resilience in the face of economic, health and geopolitical shocks and crises. Industrial sovereignty undertakes that a State has the capacity to control its resources as well as secure supply chains to satisfy vital needs for “strategic” goods and to be able to act without being subject to the will of another. State or company (energy, food, health, data control, machines, etc.). It also implies having a well-established industrial policy and an industrial productive tool that meets these needs as well as the existence of national champions. Industrial sovereignty presupposes that a State has the capacity to protect its strategic companies, enjoys financial health as well as the latitude to control FDI. Industrial sovereignty is also related to its control of critical links in value chains, the diversification of supply sources and the capacity for innovation and protection of its technologies. It in no case presupposes autarchy or outright protectionism but the guarantee of autonomy and the capacity to construct a*

*balance of power favorable to its strategic interests”.*

## 1.2 Categories of sovereignty industries

(Brugère, 2014) gives sovereignty industries very specific characteristics such as their technological nature, their capacity for innovation and their extremely regulated environment. (Brugère, 2014) cites the areas of sovereignty industries such as (defense, aeronautics, security, energy, etc.) We present in the table below a list of industry categories deemed strategic for a nation developed by the firm (Frost & Sullivan, 2020). In the following section, we will present the actions undertaken by a certain number of States to consolidate their industrial sovereignty.

**Table 1: Categories of sovereignty industries**

Source: (Frost & Sullivan, 2020)

<b>Critical Industries</b> <b>Industries or</b> <b>resources crucial</b> <b>to maintaining</b> <b>national security</b> <b>and health</b>	<b>Competitive</b> <b>industries</b> <b>Industries or</b> <b>technologies seen as a</b> <b>competitive</b> <b>advantage for a</b> <b>single country or</b> <b>region</b>	<b>Strategic industries</b> <b>or future</b> <b>technologies</b> <b>considered</b> <b>fundamental for the</b> <b>development of</b> <b>derivative</b> <b>technologies or</b> <b>essential</b> <b>transformation of</b> <b>those already</b> <b>existing</b>
Pharmacy Medical material Personal protective equipment Defense Energy Aeronautics Geopositioning	Batteries Fuels hydrogen Microelectronics Automotive Advanced manufacturing Industrial and agricultural machines Chemical engineering Telecoms	Infrastructure for digital economy IA, Quantum computing, blockchain

## 2. Actions undertaken at the global level to strengthen industrial sovereignty

In this section, we present the actions undertaken at the global level to strengthen industrial sovereignty. China announced in 2020 its self-sufficiency strategy through “dual circulation” and “Make in China 2025” to reduce the central place of foreign demand (international circulation) while stimulating domestic demand (the internal circulation) to better protect against external shocks. The United States, for its part,

adopted the policy of “America First,” moving away from trade liberalization by withdrawing from the Trans-Pacific Partnership and moving toward protectionism. Already before the pandemic, the United States had shown the way by demanding the return of critical facilities to the country and by declaring a selective embargo against China (Cohen, 2022). According to (Lohrey & Martin, 2023), the United States has enacted the Inflation Reduction Act, which allows investments on American soil to benefit from substantial advantages. The United States promotes the concept of “Friendshoring” which means that FDI should be directed towards geopolitically close countries.

In France, Morocco's second trading partner after Spain, voices are being raised for a return to “industrial Colbertism”. With this in mind, France has rescued its companies in difficulty and strengthened the protection of key industrial sectors to avoid the takeover of strategic companies by non-European interests in the fields of energy, defense, biotechnologies, transport or food (Voy-Gillis, 2021). The implementation of the France 2030 program and its variations into sectorial programs based on reindustrialization and relocation (Cohen, 2020). A study (PwC Strategy & CNA, 2021) on the relocation of strategic purchasing identified four industrial sectors, which represent approximately 70% of the volume of imports in France, namely health/pharmaceuticals, agri-food, electronics and process and assembly industries.

France has also made the choice both to invest massively in research and innovation, and to develop a real industrial policy allowing it to regain control of its value chains (Cohen, 2020). Projects relating to industrial policy have multiplied in a national as well as a European framework: hydrogen, batteries, semiconductors, quantum computers, servers, etc. In aeronautics, this involves financing research on electric aircraft and then hydrogen engines, to subsidize the renewal of the fleet, and to increase military public procurement. In the automotive sector, a new localization conditionality is introduced in exchange for the recovery plan. The “Varin” report on securing the supply of mineral raw materials was submitted to the French government in January 2022.

On the EU side, the vulnerability of the European production system came to light after the Covid 19 crisis and the war in Ukraine. Highly dependent on Asia for its production and on Russia for its energy, the EU activated the clause provided for in the Treaty of Rome of 1957 regarding Important Projects of Common European Interest (IPCEI) to build the necessary alliances between companies. The EU has also carried out controls on foreign investments to avoid takeovers of European companies operating in sensitive and strategic areas such as infrastructure, high technologies or personal data, etc. The EU has implemented a number of plans such as the legislative package on semiconductors known as the “Chips Act”. It has also carried out several efforts on building excellence in industry and technology, the relocation or reconstruction of manufacturing capacities in sectors essential to health or national security, the development of strategies and risk management measures aimed at ensuring the uninterrupted supply of strategic goods and services. It also provides public support to selected industries and businesses in the form of subsidies, tax incentives, etc.

**Table 2: Global trends in industrial sovereignty**

Source: (Frost & Sullivan, 2020) updated by the author

Geographic area/country	Global trends in industrial sovereignty
EUROPE	<ul style="list-style-type: none"> <li>- FDI screening (a framework was adopted on 2019 and entered into force on 2020). (18) Member States had implemented control mechanisms in their internal regulations and six (6) are in progress. The sectors concerned are (aeronautics, railway, batteries, and biotechnologies).</li> <li>- Strategy for building excellence in a given industry or technology.</li> <li>- Relocation or reconstruction of manufacturing capacities.</li> <li>- Protection of markets of strategic technologies or resources against hostile takeovers.</li> <li>- Reactivation of the “Important Projects of Common European Interest” (IPCEI) which allows Member States to finance major cross-border innovation projects (batteries, microelectronics and hydrogen technologies).</li> <li>- Action Plan on synergies between civil, defense and space industries.</li> <li>- Action plan in terms of intellectual property to be maintained and technological sovereignty.</li> <li>- New EU pharmaceutical strategy in 2020</li> <li>- Further legislation and guidance on green public procurement (new GPP criteria for textiles, data centers, server rooms, cloud services, imaging equipment, consumables and print services).</li> <li>- Action Plan on Critical Raw Materials Developed in 2020, includes a list of critical raw materials, a prospective study until 2050 and proposals on how to reduce Europe's dependence on third countries, diversify supplies and improve resource efficiency.</li> <li>- The European Green Deal which should boost Europe as a technological hub</li> </ul>
UNITED STATES	<ul style="list-style-type: none"> <li>- Strengthen FDI filtering.</li> <li>- “America First” policy, meaning an abandonment of trade liberalization towards protectionism</li> <li>- The trade war with China initiated</li> <li>- Energy Act of 2020</li> </ul>
CHINA	<ul style="list-style-type: none"> <li>- Technological sovereignty as a strategic decision</li> <li>- Economic strategy of “dual circulation”</li> <li>- Aims to acquire technological independence in aerospace, semiconductors and robotics</li> <li>- Imposes restrictions on foreign companies interested in launching into its technological activity</li> <li>- Subsidies public companies and grants them numerous privileges</li> <li>- Restriction of foreign investments</li> </ul>
JAPAN	<ul style="list-style-type: none"> <li>- Strengthen control of FDI</li> </ul>

	<ul style="list-style-type: none"> <li>- Provides subsidies to companies that repatriate their manufacturing capabilities from China</li> <li>- Implementation of a \$2.2 billion program for the restructuring of supply chains</li> </ul>
INDIA	<ul style="list-style-type: none"> <li>- Joined the European Alliance for Multilateralism in 2019</li> <li>- Focus on digital sovereignty (blocking of 59 Chinese apps due to data security concerns)</li> <li>- Promotion the ‘Made in India’</li> </ul>
AUSTRALIA	<ul style="list-style-type: none"> <li>- Strengthening FDI filtering</li> <li>- Implementation of FMCEA (Failure Mode Analysis of impacts and criticality)</li> </ul>
GERMANY	<ul style="list-style-type: none"> <li>- Strengthening powers of control and authorization of FDI</li> <li>- Call for actions to reduce the potential for supply shortages of medicines and medical equipment, by building facilities for larger storage or relocation of manufacturing to Europe</li> <li>- Supervision of the European cloud GAIA-X project</li> <li>- Support of the concept of European Champions by adapting European Competition Law</li> </ul>
FRANCE	<ul style="list-style-type: none"> <li>- The reform of French control of foreign investments driven by law no. 2019-486 relating to the growth and transformation of businesses, known as the Pacte law, as well as decree no. 2019-1590.</li> <li>- Protection of strategic companies by increasing the share of state capital, by recapitalizing, or even nationalizing</li> <li>- Call for the repatriation of pharmaceutical laboratories to France, in order to reduce dependence on supplies (up to 80% today) from Asia and India</li> <li>- Start of production of strategic goods locally</li> </ul>
UK	<ul style="list-style-type: none"> <li>- Introduction of the FDI selection framework</li> <li>- Development of its own state aid program</li> <li>- Implementation of regulations protecting technological independence</li> </ul>
ITALY	<ul style="list-style-type: none"> <li>- Strengthening control and authorization of FDI</li> <li>- Special tax incentives to encourage the repatriation of activities</li> <li>- Expanding the scope of the “golden share”, a protection system beyond defense and security companies, and included telecoms, energy networks and health companies</li> </ul>
Poland	<ul style="list-style-type: none"> <li>- Strengthening control and authorization of FDI</li> <li>- The development of the national pharmaceutical industry</li> <li>- The Polish Digital Sovereignty Charter</li> </ul>
Spain	<ul style="list-style-type: none"> <li>- Strengthening control and authorization of FDI</li> <li>- Thinks about relocation, nearshoring and health sovereignty</li> <li>- Prefers to strengthen resilience by exploiting European interdependencies</li> </ul>

## 2.1 Les Actions undertaken by Morocco to strengthen industrial sovereignty

Morocco has taken “protectionist” regulatory measures at the level of the amending finance law of 2020, in order to limit imports of certain products (increase in customs duties from 25% to 30%). The operationalization of national preference mechanisms in the context of public procurement has been activated to encourage local production and reduce the trade deficit in accordance with circular No. 15-20-cab of 21 Moharrem 1442 (September 10, 2020). Decree 2.22.431 published in the BO on March 9, 2023 establishes the principle of national preference as well as the mechanisms facilitating access for SMEs, self-employed people and cooperatives to public markets. The Decree No. 2-22-30 taken to implement Law No. 91-14 relating to foreign trade provides for a framework for imports and exports of goods and services capable of achieving the protection of national production, in particular agricultural products and ensure flow control. To do this, it provides in particular for the protection of national production in the form of tariff protection or quantitative restrictions. In addition to customs duties and taxes, Morocco has also implemented complex controls for imported products after the Covid 19 crisis. It has also increased customs duties to 90% for a list of products from Turkey.

Likewise, Morocco carried out several encouragements for the industrial sector such as the granting of various exemptions for companies in Industrial Acceleration Zones (ZAI), subsidies for material and immaterial investment, which can go up to 30% of the amount of investment by the Industrial Development and Investment Fund (FDII). Likewise, the Istitmar PME or VSE Program was set up to support growth and technological investment of up to 30% of the investment project. The Investment Promotion Fund (FPI) partially covers certain expenses such as the acquisition of potential land (limit of 20% of the cost of the land), external infrastructure (limit of 5% of the investment amount or 10% for the spinning, weaving, finishing sector) and training (limit of 20% of the training cost). This same Fund provides investment aid in the form of a contribution of 10% of the acquisition cost of new capital goods capped at 20 million MAD, for projects whose investment amount in capital goods is greater than 2.5 million MAD. The Finishing, Printing, Dyeing Fund gives a 20% bonus to material investment dedicated to upstream textile projects.

As part of its reindustrialization efforts, the Central Guarantee Fund has set up several programs, notably the “Mezzanine PME” program intended to finance investment and/or working capital needs experienced by viable industrial or exporting companies suffering from undercapitalization. The “Green INVEST” program is intended to finance, jointly with the bank, investment projects relating to the green economy initiated by Moroccan companies. The Ministry of Industry and Trade has signed 13 investment agreements with industrial operators in the agri-food and pharmaceutical sectors, totaling an investment of more than 1.731 billion dirhams. Morocco has also chosen to diversify its trade partners by choosing not to take a position in the polarization that has been created between Western countries on one side and China and Russia on the other side. (The

Economist, 2023).

Conceptual model of industrial sovereignty: Indicators and measurement scale

We relied on the analysis of (Bellit & all, 2020) who identified a certain number of indicators to measure industrial sovereignty while recognizing their imperfect nature. These are: the trade balance, the import content of final demand, the rate of dependence on imports for manufactured goods, the origin of imports to determine the countries on which dependence is the most large, the share of inputs of foreign origin of manufactured goods produced locally, the number of manufacturing stages abroad and lastly the share of imported strategic products. In addition to this first work, the analysis of the theoretical substrate allowed us to extract a set of indicators to build our conceptual model of industrial sovereignty. Table 3 summarizes all the indicators used in the construction of a scale for measuring industrial sovereignty.

**Table 3: Indicators used in the construction of a scale for measuring industrial sovereignty**

(Source: author)

Indicator	Theoretical basis
Control of industry by public authorities	(Cohen, 1993) ;(Videlin, 2023)
Weight of industry in GDP	(Voy-Gillis, 2021)
Share of industrial employment in total employment	(Demmou, 2010)
Public investments in industry	(Degans, 2022)
Maintaining economic activity and sensitive businesses in the event of a crisis	(Degans, 2022)
Rate of dependence of national production on imports	Alsif et al. (2019) ; (Robert, 2024) ; (Bellit ; Granier ; Mini, 2020)
Control of FDI (Share of foreign companies)	(Degans,2022) ; (Dupeyrat, 2020)
Control and protection of strategic industries (takeover bid, M&A, sale, etc.)	(Degans, 2022) (Cohen, 2006) ; (Dupeyrat, 2020) ;(Delbecque, 2020)
Existence of industrial champions	(Frost & Sullivan, 2020)
Autonomy in selected industries	(Degans, 2022) ; (Frost & Sullivan, 2020)
Securing supply lines	(Degans, 2022)
Controlling dependency and access to Critical Raw Materials	(Bréchet, 2020) ; (Voy-Gillis, 2023) ; (Frost & Sullivan, 2020)
Control of one's own resources	(Robert, 2024)
Securing Organizations of Vital Importance <ul style="list-style-type: none"> <li>- Defense</li> <li>- Food Safety</li> <li>- Energy sovereignty</li> </ul>	(Delbecque, 2020 2022) ; (Dupeyrat, 2020) ; (Frost & Sullivan, 2020) ; (Bréchet, 2020)

<ul style="list-style-type: none"> <li>- Water supply</li> <li>- Continuity of electronic communications</li> <li>- Continuity of transport</li> <li>- Digital and technological sovereignty</li> <li>- Financial security</li> <li>- Health sovereignty</li> </ul>	
Mastering critical links in value chains	(Cohen, 2020)
Innovation, R&D, number of patents filed	(Le Masson & Weil, 2023)
Technology transfer control	(Dupeyrat, 2020)(Arcesati & Rasser, 2020)
Industrial infrastructures	(Degans, 2022)
Relocation or reconstruction of manufacturing capacities	(Bellit ; Granier ; Mini, 2020)
The existence of an economic security policy	(Dupeyrat, 2020)

### 3. Analysis of Moroccan industrial sovereignty through the conceptual model

#### 3.1 Indicators of Moroccan industrial sovereignty

Based on the indicators of the conceptual model, we attempt in this section to develop a scale for measuring the memory of Moroccan industry.

**Table 4: Indicators of Moroccan industrial sovereignty**

Source: (author)

Indicator	Statistics or data relating to Morocco
Control of industry by public authorities	The public portfolio in the industrial sector does not exceed 12% (source: draft Finance Law 2020). According to the Finance Bill 2016 appended Report on PCC, the public portfolio is composed of: - 212 public-owned corporations; - 44 State-owned companies with direct contribution from the Treasury; - 442 subsidiary companies and public contributions
The weight of industry in GDP	15% (Statista, 2024)
Share of industrial employment	23.95% (World Bank, 2022)
Contribution of industry to wealth creation	Industrial GDP recorded sustained growth from (2005 to 2020) going from 78,616.00 MD in 2004 to 166,382.00 MD in 2020. The share of industrial GDP in national GDP is 15% during the period 2004-2020. The industrial sector contributes 17.5% to the total value added at current prices. With an added value of 212.4 billion dirhams (billion dirhams), a total production of 738.7 billion dirhams. In 2022, the sector's total turnover amounted to 801.5 billion dirhams (billion dirhams). The major contributions

	<p>come from the agri-food industry (184.8 billion dirhams), chemicals and paracheicals (184.4 billion dirhams), the automobile industry (143 billion dirhams), the mechanical and metallurgical industries (72.8 billion dirhams), and the textile (60.4 billion dirhams).</p> <p>Source (Ministry of Industry and Commerce, 2022)</p>
Public investments in the industry	<p>Amounting to 33.9 billion dirhams in 2022, with major contributions from the chemicals and paracheicals sector (9.2 billion dirhams), the agri-food sector (8.7 billion dirhams), and the automobile sector (8.1 billion dirhams). ). (Ministry of Industry and Commerce, 2022).</p>
The trade balance	<p>Industrial exports reached 243,264 million dirhams in 2019 (Office de change). 85% of exports consist of manufactured goods (source Ministry of Industry). Except for energy and food products, the coverage rate of imports by exports is improving for all product groups. The coverage rate of the trade balance for semi-finished products increased by 7.3 points, and stood at 62.9% in 2020 compared to 55.6% in 2019. Exports of semi-finished products remain relatively stable while their imports fell by 10.9%.</p> <p>Going from 87.1% in 2019 to 93.4% in 2020, the coverage rate of imports of raw products by their exports achieves a gain of 6.3 points. That of consumer goods also improves: 78.9% in 2020 compared to 75.4% in 2019. Likewise, capital goods record a coverage rate of imports by exports of 48.3% in 2020 in increase of 0.5 points compared to 2019. These developments are explained by a drop in imports greater than that of exports (Office des changes, 2020).</p>
Maintaining the country's economic activity and sensitive businesses in the event of a crisis	<p>Morocco has demonstrated resilience, particularly regarding exports, during the Covid 19 pandemic (AMDI, 2022)</p> <p>On the economic and social level, it set up the “Special Fund for the management of the coronavirus pandemic”, with a capacity of 3% of GDP.</p>
Rate of dependence of national production on imports	<p>The imported content of exports is around 31.5%. The dependence of national production on foreign countries is (16.1% on the supply side) and (11.7%) on the demand side (DEPF, 2022). The import penetration rate stands at 34.3% in 2020. The origin of Morocco's intermediate goods are (EU, China, and Turkey) (DEFE, 2022).</p> <p>According to Morocco’s Trade Value Added Index</p>

	<p>(TiVA), it is 0.69. It is therefore more specialized in activities downstream of the chain. It mainly ensures the transformation and production of certain parts and components, but above all assembly using manufacturing inputs, the large part of which is imported (OECD, 2020).</p> <p>The foreign added value incorporated in its exports remains the most important. The automobile industry is the most dependent on foreign inputs with a share of around 60%, followed by machinery and petroleum product refining activities.</p>
Control of FDI	<p>Public institutions responsible for controlling FDI:</p> <ul style="list-style-type: none"> <li>- Ministry of Economy and Finance (Department on State Owned Entreprises and Privatisation (DEPP)</li> <li>The Office des Changes (public institution created in 1958, placed under the supervision of the Ministry of Finance).</li> <li>- The Ministry Delegate to the Head of Government, responsible for Investment, Convergence and Evaluation of Public Policies, responsible for developing and monitoring the implementation of State policy in the areas of investment, improvement of the business climate, convergence and evaluation of public policies.</li> <li>- Dahir n° 1-19-18 of 7 Jomada II 1440 (February 13, 2019) promulgating Law No. 47-18 reforming regional investment centers.</li> </ul>
Control and protection of strategic industries (takeover bid, M&A, sale, etc.)	<p>The National Agency for the Strategic Management of State Participations and monitoring of the performance of public establishments and enterprises, has the mission of ensuring the property interests of the State shareholder, of managing its participations and of ensuring the monitoring and the assessment of the performance of Public Establishments and Enterprises (EEP).</p>
The existence of national champions	<p>Morocco has 20 companies with turnover exceeding \$1 billion (McKinsey Global Institute, 2023).</p>
Share of foreign companies	<p>The main foreign companies in Morocco:</p> <p>Aeronautics: EADS (European Aeronautic Defense and Space Co),</p> <p>Agriculture: Dagrif,</p> <p>Food: Bel Fromageries SA, Bestfoods, Danone, Kraft Foods International Inc., Nestlé SA, Procter &amp; Gamble, Co., Insurance: AXA,</p> <p>Automotive &amp; transport: Delphi Corp, Peugeot SA, Renault SA, Valeo SA,</p> <p>Bank: Banque de Crédit et de Commerce International), Caisse d'Epargne, Groupe, Crédit</p>

	<p>Mutuel, Chemistry: Air Liquide, Ecolab Inc, Distribution: Auchan, Casino Groupe, Decathlon, Lewinger, Pro Natura, The Savola Group, Bourbon Groupe, Daewoo Group, MCC (Mondragon Corporacion Cooperativa), Suez Environnement SA, Unilever, Veolia Environnement, Household appliances: FagorBrandt, Electronics: Lenovo, Philips (Royal Electronics), STMicroelectronics NV, Energy &amp; water: EDF SA, Libyan Petroleum, Ondeo, Repsol YPF, Total SA, Equipment: Gerber Scientific, Inc, Metabowerke GmbH, Rostaing, Telecommunications equipment: Alcatel Lucent, Nexans SA, Computer equipment: Dell Computer, Corp., GFI Informatique, Xerox Corp., Real Estate: Emaar Properties PJSC, Mining &amp; metals: Arcelor SA, Tires: Goodyear Tire &amp; Rubber Co, Business Services: Dubai Ports World, Transport : AP Moller Maersk, Environmental services : Pizzorno, Sita SA, Veolia, IT Services: Atos Origin, Bugbusters, Capgemini, EDS Corp. (Electronic Data Systems), Iliad, Jet Multimedia, Steria, Unilog SA, Tobacco: Altadis etc</p>
Securing supply lines	<p>Safety stock policy (Morocco covers 60% of its medicine needs but the sector's raw materials are 100% imported (CESE, 2021). Food and energy supplies were generally ensured during the Covid 19 pandemic (Court of Audit Annual public report 2022).</p>
Dependence on raw materials <sup>1</sup>	<p>Morocco is less dependent on exports of basic products with a marginal share of 28% (UNCTAD, 2023). Total natural resource rents represent 1.7% of GDP in 2017-2018, compared to 4.7% in 2008-2009.</p>
Integration into GVCs	<p>The 3 most integrated industries are: computer products, electronic and optical devices, automobiles, textiles recording the highest levels of foreign value in Moroccan exports with an average of 50% (DEFE, 2022) The degree of integration of Moroccan exports into</p>

<sup>1</sup>According to UNCTAD (2023), when these commodities account for 60% or more of a country's merchandise export earnings, that country is considered "commodity dependent."

	<p>global production upstream of 46.7% and 15.3% downstream in 2018 (DEFE, 2022). This result indicates a greater dependence of national companies on foreign inputs than that of foreign exporting companies on Moroccan intermediate products. A high GVC rate is synonymous with dependence on foreign companies and vulnerability to external shocks.</p>
<p>Controlling dependence and access to Critical Raw Materials</p>	<p>Although it has 26 strategic and critical metals, Morocco remains forced to import CESE (2023). The level of vulnerability (above 70%) linked to the concentration of production in countries with a low level of political stability (CESE, 2023). Risks: price volatility, supply disruption</p>
<p>Control of one's own resources</p>	<p>Examples: mines are part of the public domain of the State Article 3 of law 33.13 on mines. Mining activity in Morocco is therefore an activity subject to a regulated regime of authorizations, permits or licenses Articles 20, 31 and 45 of the same law. (EESC, 2023) The private sector controls the majority of electricity production (84%). The Moroccan agency for renewable energy (Masen) supervises the renewable energy sector.</p>
<p>Securing organizations of vital importance</p> <ul style="list-style-type: none"> <li>- Food Safety</li> <li>- Energy sovereignty</li> <li>- Water supply</li> <li>- Electronic communications continuity</li> <li>- Transport continuity</li> <li>- Digital technological sovereignty</li> <li>- Financial security</li> <li>- Health sovereignty</li> </ul> <p style="text-align: right;">and</p>	<p><b>Food Safety:</b> 59th out of 113 countries according to the Global Food Security Index (GFSI, 2019).</p> <p><b>Energy sovereignty:</b> A rate of energy dependence penalizing Moroccan industry of more than 90% (CESE, 2023). Moroccan energy potential in renewable energies, now more competitive. It represents a production capacity equivalent to the gas and oil of Nigeria or Venezuela (CESE, 2020).</p> <p><b>Average water supply per inhabitant and per year of fresh water</b> does not exceed 650 m<sup>3</sup> per inhabitant per year compared to 1000 m<sup>3</sup> at the beginning of the 2000s. In 1960, this figure reached 2500 m<sup>3</sup> per inhabitant per year (IRES, 2022).</p> <p><b>Transport continuity</b> Stoppage or very limited operation of urban public transport. (General Treasury of the Kingdom (2019) Continuity of rail transport Civil aviation has been affected but activity has not stopped (the International Air Transport Association IATA). With the transport and transit of goods operating normally, the impact of Covid19 on trade seems to have been contained for the moment (Delegation of the European Union to Morocco, 2020).</p>

	<p><b>Electronic communications continuity</b>  In accordance with the principle of continuity of public service expressed in article 154 of the 2011 constitution, electronic communications operated continuously and public and commercial services were granted to Moroccans: distance education; e-government, e-Customs, DAMANCOM of the National Social Security Fund, e-Justice and SIMPL-TVA..etc”. the Digital Development Agency has implemented several services: the digital registry, E-Parapheur, National Complaints Management Platform: Chikaya, the Ziara platform is a service portal of the General Delegation of the Prison Administration and Reintegration (DGAPR) etc. Decree 20.20.343 published on April 15, 2020 defined the legal framework for teleworking in Morocco.</p> <p><b>Technological security</b>  The “Digital Quality of Life Index” (DQL) 2023 ranks Morocco in 40th place. The 2020 Cybersecurity Index of the International Telecommunications Union ranks Morocco 50th out of 197 countries.  Law No. 43-20 relating to trust services for electronic transactions promulgated by Dahir No. 1-20-100 on December 31, 2020 is a legal framework that organizes electronic signatures, stamps and timestamps.</p> <p><b>Digital and technological sovereignty</b>  The “Network Readiness Index” by (the Portulans Institute, 2022) ranks Morocco in 93rd position in 2020. In terms of technology, which includes three sub-pillars: accessibility, content and technologies of the future Morocco ranks 78th. At the level of the “Government” sub-pillar, Morocco has a good score in the indicator relating to online public services (50.91) and a good ranking in terms of R&amp;D spending by the Government and higher education. (39th).  With regard to governance, Morocco ranks in 80th position and in the “regulation” sub-pillar, where it ranks 37th and 66th in the “impact” criterion, which reflects digital maturity. The position is 118 out of 130 in 2021 at the level of the “inclusion” sub-pillar, the latter particularly encompasses the socio-economic gap in the use of digital payments, the</p>
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	<p>gender gap in the use of the internet and the rural gap in the use of digital payments.</p> <p>In terms of connectivity, Morocco ranks 86th in the Global Connectivity Index 2022.</p> <p>Robotic density remains low in Morocco. Morocco is lagging behind and comes in 54th place out of 70 countries studied. The density does not exceed 10 robots per 10,000 employees in industry (UNCTAD 2017).</p> <p><b>Health sovereignty</b> Ability to guarantee its national strategic stock of medicines and health products, by meeting 70% of the needs of the national market for medicines and vaccines.</p> <p>Medical and paramedical supervision in Morocco (17 per 10,000 inhabitants including 7 doctors and 10 nurses) and a hospitalization capacity of only 6.2%, which remains below the critical threshold, set by the World Health Organization.</p> <p><b>Financial security</b> (Public debt/GDP 75.5) Current balance/GDP (-4) External debt/GDP (50.4) Foreign exchange reserves, billions of USD (31.6) The country has comfortable foreign exchange reserves of more than 32 billion euros. These reserves represent almost six months of source imports (PwC Morocco, 2023).</p>
R&D and patents	<p>Only 0.8% of GDP is allocated to R&amp;D in Morocco compared to an average of 2 to 3% in (OECD) countries. According to (OMPIC, 2022) a positive development has been noted (15,174 trademark applications – 4,462 filings of industrial designs and models for registration – more than 2,520 filings of invention patent applications).</p> <p>Industrial patents (OMPIC) recorded 2,802 applications for invention patents in 2023, of which only 271 are of Moroccan origin, while 2,531 come from abroad in comparison with China.</p> <p>In 2023, only 10% of invention patent applications filed in Morocco are of Moroccan origin. Among these 10%, Moroccan companies only represent 17%, with the majority of Moroccan patents being filed by universities and research centers (OMPIC, 2023).</p> <p>Morocco falls to 70th place in the 2023 Global Innovation Index 2022.</p>

Control of sectors deemed critical for the energy transition	Morocco has been ranked by “the International Renewable Energy Agency” among the top five countries in the world for the potential for competitive green hydrogen production. Renewable Energy Country Attractiveness Index) ranks Morocco in first place Morocco, world No. 1 in Renewable Energy indexed to GDP in the Renewable Energy sector indexed to GDP. Morocco has several rare earth indices, of which the resources of the Mont Tropic deposit have been confirmed.
Control of Technology Transfer	Law No. 42-18 relating to the control of the export and import of dual-use goods, civil and military, and services related to them.
Specializations	Textile and Leather, Agri-food, Metallurgy, Automotive, Aeronautics, Electronics and offshoring of services.
Industrial infrastructure	The World Economic Forum (WEF) ranks Morocco in 53rd among 140 countries in (2019).
Relocalisation	-
The existence of an economic security policy	Economic Intelligence actors in Morocco (non-exhaustive list) National Center for Scientific and Technical Research Economic, Social and Environmental Council The Moroccan Institute of Scientific and Technical Information Mohammed VI Polytechnic University Moroccan Foundation for Advanced Science, Innovation and Research The Royal Institute of Strategic Studies Moroccan Agency for Investment and Export Development (AMDIE) Policy center for the new south
Reindustrialization	13 investment agreements with industrial operators in the agri-food and pharmaceutical sectors, totaling an investment of more than 1.731 billion dirhams and generating more than 1,780 direct and 2,700 indirect jobs, as well as an additional turnover of more than 2.9 billion dirhams.

Based on the classification of the categories of sovereignty industries, we draw up the situation in Morocco below.

**Table 5: Categories of sovereignty industries**

Source: (established by the author)

<b>Critical Industries</b>
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Pharmacy	Representing approximately 5 billion DH, the national pharmaceutical industry is one of the sectors with the highest added value in the country which represents more than 5.2% of industrial GDP (FMIIP, 2020.) After phosphates, the Moroccan pharmaceutical industry constitutes Morocco's second largest chemical activity and occupies second place on the African continent (source: Ministry of Industry and Commerce). However, local manufacturing has declined in recent years. It went from 80 to 50%.
Medical material	10% of medical equipment is produced locally and 90% is imported. Demand comes from the public sector for 70% (purchase of new equipment) and from the private sector for 30% (source: French Chamber of Commerce and Industry of Morocco, 2018).
Personal protective measures/equipment	According to the global health security index, Morocco occupies 38th place.
Aeronautics	Morocco, benefiting from solid expertise in the field of aeronautics with an integration rate of 40%, is planning for 2030, with an aircraft 100% made in Morocco. Morocco occupies the 20th position in world aeronautics (Ministry of Industry and Commerce, 2024).
Geopositioning	According to the “Global Soft Power index”, Morocco occupies 50th place in 2024 with a score of 40.6 points out of 100. Morocco maintains its place at the top of the Maghreb countries and is on the podium of the most influential countries in Africa. For the “Fragile State Index”, the average value of Morocco is 68.2 index points in 2023. For comparison, the world average in 2023 based on 177 countries is 65.53 index points. Concerning the global peace index, Morocco ranks 84th in the world in 2023. It is considered one of the 30 safest countries in the world in 2021 according to “Global Finance”.
<b>Competitive industries</b>	

The batteries	<p>Morocco holds 70% of the world's phosphate reserves, which allows it to manufacture LFP (lithium-iron-phosphate) batteries, which are very popular in the automotive industry for energy storage. Morocco is a major player in the green mobility value chain, and cooperates with China on this register (project to build a cathode factory and recycling complex for battery components in Jorf Lasfar with BTR New Material Group, a subsidiary of China Baoan Group and a global leader in the manufacturing of lithium-ion (Li-ion) electrode materials, is expected to produce the first components by 2025.</p> <p>Project to build a factory with the Guangzhou Tinci Materials Technology group, and another factory with the Gotion High-Tech group with an annual production capacity of approximately 100 gigawatt hours (GWh) of batteries for electric vehicles in Bouknadel here 2030.</p> <p>Other actors cooperate with Morocco on this subject, notably Huayou Cobalt, Zhejiang Hailiang. With these investments, Morocco positions itself as a major player in the green mobility value chain, and strengthens its economic cooperation with China.</p>
Hydrogen	<p>The World Energy Council has placed Morocco as one of the 6 countries with a strong potential for production and export of energy as part of its “Power-to-X Roadmap” study.</p> <p>Morocco can capture up to 4% of global demand for green hydrogen.</p>
Microélectronique (semi-conducteurs)	<p>Morocco produces electronic components of world quality manufactured by predominantly Moroccan skills, including 40% technicians and engineers. It has housed the STMicroelectronics company since 2020. This project has set up a new production line specializing in the manufacturing of cutting-edge silicon carbide products used in electric cars by the world's main automobile manufacturers (source: Minister of Technology). Industry and Commerce).</p>
Automobile	<p>Leading exporting sector in Morocco and positioning as a production and export platform for equipment and motor vehicles through the establishments of foreign groups such as Renault, Peugeot, Snop, Gmd, Bamesa, Delphi, Yazaki, Sews, Saint-Gobain, PSA Peugeot Citroën. Since 2000, the automobile industry has generated annual growth of 83.8 billion DH (Ministry of Industry and Commerce, 2024).</p>
Industrial and agricultural machines	<p>Morocco is among the most autonomous countries in the world in terms of steel production, which has allowed it to develop the Mechanical and Metallurgical Industries (IMM) with a value of 46.8 billion in turnover, 10.5 billion in added value, 7 billion in exports and generate 67,600 jobs (source: Ministry of Industry and Commerce).</p>
Chemical engineering	<p>Morocco is the 3rd world producer of phosphate (30 Mt./year) after China and the USA, the world's leading exporter of phosphate and</p>

	the 2nd world producer of chemical derivatives (phosphoric acid, phosphate fertilizers, etc.). With the (OCP), leader in phosphate chemistry, the chemical and paracheimical industries (ICP), take 30.4% of industrial investments and bring together more than 950 companies which generate 63.5 billion in turnover with 58,000 people employed (source: Ministry of Industry and Commerce).
Telecommunication	Morocco ranks 79th out of 131 countries in The Networked Readiness Index in 2022, which measures the application and impact of information and communication technologies (ICT) in global economies.
Infrastructure for the digital economy	The International Telecommunications Union Index ranks Morocco 87th and 94th in terms of “internet quality”.
Blockchain	L’Agence du Développement du Digital (ADD) a inclus dans sa feuille de route la blockchain et elle a annoncé des soutiens de financements pour soutenir la recherche dans ce domaine. Le Maroc dispose de tous les ingrédients (infrastructure, capital humain, etc.)
AI	According to the “Government AI Readiness Index 2023” report from Oxford Insights, Morocco ranks 88th globally in terms of artificial intelligence (AI) readiness.
Quantum computing	The UM6P houses the most powerful SuperComputing Data Center in Africa under the name of the “African Supercomputing Center”, ranking Morocco in the world’s Top 100 smart centers. (Source: Mohammed VI Polytechnic University website).

### 3.2 Analysis of indicators of Moroccan industrial sovereignty

#### a. The historical saga

In its attempts to find the appropriate industrial model with the strengths and general orientations of the country, Morocco has alternated different industrial policies including import substitution (1960-1979), the export promotion policy (1980-2004) and the policy of Global Trades in Morocco (2005-2020) (Lamsaddar & Ouia, 2023). However, the industrial sector has not been able to achieve its rightful place in the Moroccan economy. Relegated to third position after agriculture and tourism in 1965, ambitious industrial prospects came to a complete halt at the end of the 1970s. This led to the abandonment of industrial policies for a long period (1983-2005) (Nouri, 2022). The stage from after the SAP to the present day has been marked by insertion into globalization and the transition from comparative advantage to competitive advantage (Assimi, 2023). As a result, agriculture, finance, real estate and services dominated with 30% of value added until 2009. The year 2000 marked a new bifurcation in the saga of industrialization in Morocco with the launch of the “Emergence Plan 2005-2009” which aimed to revive Morocco's historical productive specializations (agrifood, textiles, automobiles, and offshoring). The strengthening of “Made in Morocco” sovereignty

emerged in the third pillar of the “2014-2020 Industrial Acceleration Plan” which aimed to increase the share of the industrial sector to 23% of GDP through the creation of industrial ecosystems, the establishment of support tools adapted to the industrial fabric and the strengthening of Morocco's positioning internationally.

The import substitution policy was officially launched in 2020 and the objective of which is to promote Moroccan industry in strategic sectors, in order to replace imports with national production. Likewise, the Industrial Recovery Plan (2021-2023) demonstrates Morocco's desire to reconnect with industrial sovereignty. In addition to the consolidation of the import substitution policy, the strengthening of exports, Moroccan capital in industry and decarbonization, he launched “The Industrial Project Bank”. The sectors concerned are textiles and leather, chemicals and parachemistry, construction materials, green economy, plastics processing, agri-food, mechanical and metallurgical industries; electrical and electronics, mobility and transport. The import substitution policy is likely to reduce Morocco's exposure to threats, limit its dependence on the international supply chain for both finished goods and intermediate goods and mitigate foreign currency outflows through imports as well as its protection against the wave of relocations of foreign industries, which were strengthened after the Covid 19 pandemic. Indeed, without production aimed at satisfying the needs of local markets, the country finds itself in a very unfavorable situation in the event of a breakdown in supply global chains. However, such an approach does not go against an export promotion policy if it is targeted and conditioned by performance criteria (El Abdellaouy & al., 2021).

The Moroccan industrial model remains vulnerable because of many persistent deficiencies in terms of basic prerequisites facilitating the integration of Moroccan companies into global value chains. In addition, its dependence on FDI flows towards strategic sectors, several constraints limit their contribution to the creation of industrial added value, notably technical progress, innovation, R&D, human capital, ICT, institutional governance and industrial infrastructure (Assimi, 2023). The report (UNIDO, 2023) provides an assessment of the progress of 153 countries across key indicators, including production and export capacity of manufactured goods, technological progression, as well as the level of global influence on activity manufacturing. These indicators show that Morocco is still far from entering the category of emerging industries like Turkey, Mexico, Poland or even Romania. According to the competitive industry performance index (CIP), Morocco ranked 66th in 2023. With this in mind (IRES, 2022) identified seven sectors that can be used to develop new global professions in the Morocco which can constitute powerful levers for its industrial sovereignty These are the naval industry, railway, green electricity, green chemistry, pharmaceutical industry, logistics and transport, crafts and culinary arts. According to (IRES, 2022), the naval industry (civil and military) is considered a strategic issue for the country's national sovereignty and could help further anchor the country's “maritimality”. The railway industry could make Morocco a global provider by developing railway industrial clusters with training centers and research and

development laboratories. Green electricity on its part, Morocco has the potential to become an exporter in Africa and Europe. Morocco also has the potential to become a world leader in green chemistry due to its wealth in phosphates. The pharmaceutical industry also needs to be developed by targeting the manufacturing of generic drugs as well as supporting the development of new types of drugs to improve access to care for the most deprived on a national and continental scale. Another targeted sector is logistics and transport, which offers good opportunities to developing countries, but requires aeronautical, maritime and road infrastructure. The last sector concerns crafts and culinary art to highlight the enormous Moroccan capital in this segment.

### b. Dependence on FDI

Morocco's industrial policy has been based largely on the policy of attracting foreign direct investments. However, dependence on these investments should decrease through the injection of Moroccan capital, which remains very low according to (Nouri, 2022). The automotive and aeronautics ecosystems majority owned by foreign capital evidences this. In addition, the trade balances of the free trade agreements concluded by Morocco are in deficit. Exports, although diversified, present few comparative advantages and remain concentrated on traditional trading partners. They are not always able to diversify or find new geographic outlets, which raises questions about the degree of competitiveness of exported products (Assimi, 2023). Morocco's trade deficit reached a record level of EUR 28.1 billion (+41%) in 2022. The increase in food and energy supplies represents almost 50% of the overall increase in imports (Directorate General of the French Treasury, 2024). Indeed, the Moroccan market share at the global level is very modest since it does not exceed 0.1% (IRES, 2022). It is clear that Morocco remains dependent on FDI as well as foreign demand addressed to Morocco by the EU with a rate of (45.4% of the total). China, for its part, managed to establish itself as the country's second supplier in 2020 and 2021. Morocco's main customers and suppliers are broken down as follows:

**Table 6: Main customers and suppliers of Morocco**

(Source: Foreign Exchange Office, 2024)

Clients		Suppliers	
Spain(19, 6 %)	Royaume-Uni (3,8 %)	Spain (14, 1 %)	Italy (4,5 %)
France (18,6%)	United States (3,3 %)	France (10,1 %)	Germany(4, 1%)
Africa (outside AMU): 7,7 %	Germany (3,2 %)	China (10 %)	Russie (3,1 %)
India (6, 4 %)	The Netherlands (2,1%)	United States (7,4 %)	Africa (outside AMU) 2,7 %
Italy (4,5 %)	Türkiye (2, 6 %)	Saudi Arabia(6, 5%)	United Arab Emirates(2 %)
Brazil (4%)	AMU : 1,4 %	Türkiye (5, 2 %)	India (1, 9 %)

Overall, dependence on (FDI) leads to the vulnerability of the Moroccan economy to

fluctuations in international markets. In addition, the integration of small and medium-sized enterprises (SMEs) into industrial ecosystems remains limited, preventing them from fully benefiting from economic spinoffs or technology transfer. The free trade agreements signed with the EU therefore deepen Morocco's structural deficits and dependence. For example, the EU-Morocco FTA has hardly improved the access of Moroccan companies to EU manufacturing markets. , because the obstacles were already low. Likewise, Moroccan exports to EU markets have been rather disappointing, while Morocco's trade deficit with the EU has increased significantly (Berahab & Dadush, 2020). This dependence on FDI reopens the debate on Moroccan private capital. For (Zeroual & Oubenal, 2017), the latter is concentrated in professions with low technical risk, as is the case for the textile industry. However, a real take-off of a country's industrial sector cannot be achieved through public initiative alone. We cite as an example the zaibatsu, Japanese family conglomerates such as (Mitsubishi, Nissan, etc.), which constituted the backbone of the Japanese military-industrial complex (Cohen. 2022).

### **c. Value chains and vulnerability**

Morocco's integration into global value chains (GVCs) has been strengthened over the past 20 years with export-oriented ecosystems (automobile, aeronautics), allowing it to become one of the rare countries to have a rate of participation in GVCs as important as that of emerging countries such as Russia, India or Turkey. Morocco has specialized in the construction and assembly stages, therefore on a positioning upstream of the value chains, as a result, the share of foreign added value contained in Moroccan exports has progressed regularly to reach 31% in total (and nearly 51% for the automotive sector) (Mrani Alaoui, 2022).

This sustained upstream progression is asymmetrical to that downstream, which makes the Moroccan economy more vulnerable to potential supply shocks from countries positioned further upstream of the GVCs. However, increasing participation in GVCs should not be considered as an objective in itself, it is about benefiting from technology transfer (Mrani Alaoui, 2022). As a result, the improvement of Morocco's positioning in GVCs remains conditioned by the transition from consumption to technological production. Indeed, the high level of value creation within a GVC is often achieved upstream, in particular activities such as conceptual development, R&D or the manufacturing of spare parts and essential components, but also downstream, for example in the areas of marketing, branding or customer services.

Strengthening integration at the regional level could constitute a springboard for better integration of Morocco into GVCs. Exploiting the complementarity of production factors and resources at the regional level would strengthen the competitiveness of industries and links with local economies, thus inducing ripple effects that are growth catalysts. (El Abdellaouy & al., 2021) recommends in this sense that Morocco exploits proximity and regional value chains. This involves, for example, Morocco specializing

in products that the EU imports from Asia, particularly China, and for which it wishes to find closer alternative supply markets. The development of African regional chains is also essential as part of the pursuit of economic integration at the continental level. (El Abdellaouy & al., 2021) recommends the diversification of foreign suppliers to stem the risk of industrial relocation initiated by Europe, in sensitive sectors for the national industry (automobile, aeronautics or services). As a result, Morocco is called upon to strengthen its positioning in certain strategic sectors, the pharmaceutical and agri-food industries, and strategic industrialists such as the green and digital economy, notably semiconductors in the automobile industry. It is necessary to encourage self-concentration, and no longer rely on the export sector and to create real national benefit.

#### **d. Technological dependence**

Morocco is struggling to expand into the high-tech products segment and is therefore at risk of what economists call “the middle-income country trap” (Lo, 2019). For (El Abdellaouy & al, 2021), one of the indicators of Morocco's dependence on technology and knowledge can be seen in the fact that the enormous majority of intellectual property protection rights paid by Morocco comes under foreign patents. This situation benefits MNCs specializing in seeds and pesticides, the pharmaceutical industry, etc., which obviously also results in a significant transfer of foreign currencies abroad. For (Nouri, 2022), the absence of a Unit dedicated to technological transfer, and the preference given to short-term employment contribute to Morocco's technological dependence. Indeed, with a very low level of investment in R&D, which does not exceed 0.8% of GDP and low involvement of the private sector, and a mediocre level in terms of filing of invention patents by residents, it is very difficult to embrace technological independence. Morocco also scores low on indicators relating to adoption and investment in emerging technologies and robot density. For content, Morocco has a low score in the development of mobile applications and local content (DEPF, 2021).

#### **e. Dependence on strategic and critical minerals**

According to the (CESE, 2022) report, Morocco is vulnerable in the supply chain of critical minerals. Indeed, out of the 24 strategic and critical minerals, Morocco displays total dependence on imports for around 17 of them, or 74% of the list. These include rare earths, lithium, aluminum, graphite, tungsten, sulfur, magnesite, molybdenum, potash, etc. This strong dependence on foreign countries risks weakening the national sectors, which depend on these minerals in the event of a geopolitical, logistical or economic shock. Among the most critical minerals, identified by the risk of supply disruption according to the criteria of production concentration and the decreasing degree of instability, graphite should be mentioned; germanium; tin; tungsten; magnesite; rare earths; aluminum and titanium. Beyond the vulnerability factors of Morocco's supply chains for critical minerals, there is reason to emphasize the weakness

of the recycling and valorization of mining and industrial waste to generate national secondary production and mitigate thus, at least in part, dependence on imports. This situation is explained by an insufficient valorization of numerous strategic minerals, which match the country's potential in terms of positioning on global value chains.

## **Conclusion**

Industrial sovereignty is a strategic issue for the future of Morocco. This is a project for an entire society and is not just the prerogative of a given department. The industrialization process is the result of a political and social process which cannot be reduced to its economic dimension. The approach to building industrial sovereignty is systemic and holistic. This hero's journey begins with the base, namely a revised and corrected education system which in our opinion constitutes the cornerstone of the structural change so hoped for by Moroccans. This is the sine qua none condition for developing the human capital necessary for the creation of an ecosystem of knowledge and innovation bringing together universities and manufacturers. The promotion of research and development within universities is crucial to stimulate innovation which continues to constitute the leading provider of patents in Morocco. The overhaul of the education system is imperative to provide the skills necessary to support the development of industry 4.0, the prevalence of disruptive technologies and the energy transition. Industrial sovereignty cannot be achieved with a mediocre global education index (154th place out of 218 countries in 2024) thus placing itself behind South Africa, Tunisia, Namibia, Cape Verde, or even the Libya. Morocco has No Moroccan university appears in the QS world ranking, which results in the absence of an average ranking for these establishments. Upgrading “Made in Morocco” cannot be done without investment in intellectual capital which contributes not only to improving productivity, but also to differentiating the finished product of the chain and strengthening its presence on global networks. Development at the GVC level is linked to that of local GVCs, hence the importance of balanced territorial development. Morocco has immense potential, particularly green molecules (hydrogen, ammonia and methanol, etc.) to succeed in its ecological transition and reduce its energy dependence. Dependence on critical and strategic minerals can be mitigated by reconfiguring the mining sector and adopting circular economy principles. Morocco will have to define its own list of strategic and critical minerals in order to support industrial projects and establish itself as a “regional champion of low-carbon energy”, as well as to make “Made in Morocco” a marker of quality, competitiveness and sustainability. The development of national locomotives or champions is necessary to boost technological and organizational innovations and their domination of their industries in the international market, which raise the profile of their countries. In the same perspective, FDI must be accompanied by a requirement for technological transfer to face current and future challenges, namely: digitalization, climate change, the tightening of regulatory measures imposed by States to achieve carbon neutrality, electric mobility, and consumer preferences. At a time when Morocco is displaying the ambition to position itself as an export platform to the African

continent, the establishment of the African Continental Free Trade Area (ZLECAF) could represent a potential asset to promote its projection and intra-African trade. Moroccans, for their part, must show industrial patriotism by moving away from rentier logic, encourage investments in industrial sectors, and trust in their local production because industrial sovereignty begins first by believing in oneself.

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