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Deutsches Institut für
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German Development
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Discussion Paper

27/2017

The effectiveness of Morocco's Industrial Policy in Promoting a National Automotive Industry

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Bonn 2017

Discussion Paper / Deutsches Institut für Entwicklungspolitik

ISSN 1860-0441

Die deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar.

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data is available in the Internet at <http://dnb.d-nb.de>.

ISBN 978-3-96021-052-8

Printed on eco-friendly, certified paper

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This Discussion Paper was conducted within the framework of the DIE research project "Stabilisation and Development in the Middle East and North Africa". Published with financial support from the Federal Ministry for Economic Cooperation and Development (BMZ).

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Abstract

Since the 1980s, international production patterns have fundamentally changed, creating opportunities for developing countries to integrate into global value chains (GVCs). Morocco, which is among the first countries in the Middle East and North Africa to pursue an export-led economic policy, has used this opportunity, among others, to develop an automotive supplier industry, which became one of the country's industrial lead-sectors. This paper analyses how industrial policy and industry-level dynamics contributed to the emergence of an automotive supplier industry. We find that, although Morocco achieved its overall goal of establishing such an industry, this industry remains limited to low-value activities. With the aim of deepening the level of integration into GVCs and acquiring a dynamic competitive advantage in the automotive sector, the nature and objective of industrial policy in Morocco has changed in the past couple of years. Instead of focusing primarily on its labour-cost advantage to attract lead-firms to localise in Morocco, decision-makers currently are taking a more systemic approach to industrial policy, focusing on fostering synergies across sectors, creating ecosystems for different parts of the value chain, and using targeted support measures for enhancing workforce capabilities and competencies. We find evidence for a tendency towards the co-design of policy measures by public and private stakeholders, which, if it persists, could lead the way towards a more effective industrial policy. The main challenge for the future of the automotive sector in Morocco lies in a stronger inclusion of local firms in the value chain and a gradual shift towards higher value added. This will require a stronger focus on developing advanced technological skills and a higher level of investment in research and development.

Acknowledgements

We would like to thank the United Nations Economic Commission for Africa (UNECA) and especially Aziz Jaid for his invaluable support, council and inspiring discussions during the field research in Morocco. Furthermore, we would like to acknowledge all interview partners who have contributed to this work by devoting their time to discuss with us the details of the Moroccan automotive sector. Special thanks also go to the Friedrich-Alexander-University Erlangen-Nürnberg for enabling the field research through a scholarship of the “Fonds Hochschule International” and to the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE) for supporting the preparation of this report and the fieldwork. We are especially grateful to Markus Loewe, Tilman Altenburg, Amirah El-Haddad and Annabelle Houdret for valuable feedback on various drafts of this discussion paper.

November 2017

Tina Hahn and Georgeta Vidican-Auktor

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Abbreviations

AMDI	Moroccan Investment Development Agency / Agence Marocaine de Développement des Investissements (Invest in Morocco)
AMICA	Moroccan Industry Association for Automotive Producers / Association Marocaine pour l'Industrie et le Commerce de l'Automobile
ANPME	National Agency for the Promotion of Small and Medium Enterprises / Agence Nationale pour la Promotion des Petites et Moyennes Entreprises (Maroc PME)
EU	European Union
EUR	euro
FDI	foreign direct investment
FTA	free trade agreement
GDP	gross domestic product
GM	General Motors
GVCs	global value chains
ha	hectare
IFMIA	Institute for Vocational Training for the Automotive Sector / Institut de Formation aux Métiers de l'Industrie Automobile
ISI	import substitution industrialisation
ISO	International Organization for Standardisation
MAD	Moroccan dirham
MENA	Middle East and North Africa
MNC	multinational corporation
OEM	original equipment manufacturing
OFPPPT	Office for Professional Formation and Employment Promotion / Office de la Formation Professionnelle et de la Promotion du Travail
PAI	Plan for Industrial Acceleration / Plan d'Accélération Industrielle
PNEI	National Pact for Industrial Development / Pacte National pour l'Emergence Industrielle
R&D	research and development
SME	small and medium-sized enterprise
SOMACA	Société Marocaine de la Construction Automobile
VAT	value added tax

1 Introduction

The 1980s and 1990s were characterised by a fundamental change in international trade patterns. Not only did the share of trade in world output reach unprecedented levels, but also the organisation of production was transformed: apart from deeper global integration due to international governance systems and organisations, multinational corporations (MNCs) have evolved to play a pivotal role. Free trade enabled MNCs to spread not only their final products across borders, but also their production processes (Gereffi, Humphrey, & Sturgeon, 2005). This process of breaking down the supply chain and the internationalisation of production altered the role distribution between developed and developing countries and enabled latecomer developing countries to pursue previously impossible development strategies; it offered them an opportunity to integrate themselves into new industries and upgrade their capabilities.

Although this process has been extensively researched in the emerging economies of Asia and Latin America, our understanding of how national governments and firms engage with these new opportunities to improve their positions within global value chains (GVCs) in the Middle East and North Africa (MENA) remains insufficient. Despite MENA countries' proximity to the European market, low labour cost relative to Europe, and preferential market access, most countries hardly took advantage of new market opportunities. Moreover, the phenomenon of premature deindustrialisation in developing countries described by Rodrik (2015) – by which the manufacturing value added shares in the gross domestic product (GDP) decline sooner, and at much lower levels of income, than has been the case for advanced economies – is also observed in the MENA region (Achy, 2015). This raises concerns about these countries' abilities to attain rapid growth and converge with income levels of the advanced economies.

Within the region, Morocco's manufacturing sector shows a similar pattern of decline since the mid-1990s, both in terms of the share of value added in GDP and in terms of job creation (Achy, 2015). At the same time, empirical evidence shows that, in contrast to other countries in the region, growth in the manufacturing sector in Morocco has evolved from being mainly triggered by labour accumulation towards a stronger contribution of capital and total factor productivity (Achy, 2015). Sectors that contributed to this evolution are the automotive sector and, to a lesser extent, the aeronautics sector.

The automotive sector in Morocco is currently the second largest on the African continent after South Africa's. In the past decades, in spite of its small market size, Morocco not only attracted foreign direct investment (FDI) in this sector, but also diversified and became more sophisticated in the production process. As our analysis shows, this development was supported especially by innovative industrial policy practices based on coordination across stakeholders, efforts to attract investment in manufacturing, a deepening of the supply chain and the development of workforce capabilities. In a region that has a tradition of rent-seeking, top-down decision-making (Cammatt, Diwan, Richards, & Waterbury, 2015) and that suffers from frequent economic and political crises, this outcome is surprising.

In this paper, we examine how industrial policy and industry-level dynamics in Morocco contributed to the emergence of an automotive supplier industry following the opening of the economy to foreign investors. We argue that its recent success can be attributed to increasing collaboration among public and private stakeholders. However, future development – in terms

of achieving higher levels of competitiveness on global markets – will depend on deepening the level of local integration, that is, closing gaps in the supply chain, upgrading along the supply chain, and building up capabilities through technology transfer and learning. Such developments are also crucial for enabling Morocco to effectively position itself and engage in the future with disruptive trends currently being observed in developed and emerging economies. Such trends are triggered by technology (e.g. digitalisation), environmental sustainability (e.g. policies for lowering emissions in the transport sector) and changing consumer preferences (e.g. higher demand for electric vehicles).

Morocco was among the first countries in the region to adopt an export- and private sector-oriented policy. Already in the late 1960s, Morocco had entered negotiations on preferential trade agreements with the European Economic Community and intensified these efforts in the course of the policy shift (Cammett et al., 2015). With these preconditions, the country's geographic proximity to European and African markets, and its wage differential, Morocco offered the potential for a strong supplier base for European lead-firms in several sectors. To this end, various economic reforms and industry-level policy measures aimed at enhancing competitiveness and attracting foreign investment in strategic sectors were introduced (Vidican et al., 2013).

The automotive industry is a strategic sector for Morocco, growing considerably from 13.2 per cent of total exports in 2008 to 20 per cent in 2015 (El Kandili, 2015; Office des Changes, 2016a), and offering an annual increase of employment of 17.2 per cent between 2009 and 2012, leading to 75,000 employees in 2013 (DEPF [Direction des Etudes et des Prévisions Financières], 2015, p. 19; AMICA [Association Marocaine pour l'Industrie et le Commerce de l'Automobile], 2015). The decision of Renault – a French automotive original equipment manufacturer (OEM) – to upscale its engagements in the country in 2003, and again in 2013 (by building a major production site in Morocco), has been critical to enabling the local industry's integration into GVCs (Abdelmoumen, 2013), attracting at least 10 global suppliers. This dynamic, also known as “follow sourcing”, is quite typical within the automotive sector, as manufacturers prefer to take at least some of their first-tier suppliers with them when entering new markets to ensure high quality and smooth production processes (Humphrey & Memedovic, 2003). Although Renault has been crucial in triggering this dynamic, sectoral policies of the Moroccan government have facilitated successful development by improving framework conditions, providing incentives to international supplier companies and fostering skills development. More recently, policies have also been aimed specifically at upgrading and deeper integration along the value chain. All these measures contributed towards attracting a larger number of suppliers, beyond those that followed Renault. Within the region, Morocco's nearest competitor in terms of automotive exports is Tunisia, but it hosts no vehicle OEM (exports amount to USD 1.2 billion in auto parts, compared to USD 2.5 billion in Morocco in 2012) (Maturana, Salmon, Espinosa, & Brekelmans, 2015, p. 17). Egypt has a much smaller sector, which is focused on basic assembly and produces only for the local market (exports amounting to USD 400 million in 2012), whereas Algeria's automotive sector is even smaller (Maturana et al., 2015, p. 17).

Thus, this early success of Morocco in developing an automotive industry and improving its position in GVCs warrants a more detailed examination. Here, we examine in what ways industrial policy and industry-level dynamics contributed to the growth observed in the automotive sector and what policy implications can be derived to support future development. Results from this discussion paper are intended to inform decision-makers in

Morocco with regards to the effectiveness of policy interventions as well as to contribute to literature on sector-level dynamics that influence the localisation of value chains.¹

The analysis is based on both primary and secondary data. Primary data was collected in Morocco in spring 2016 through semi-structured interviews. More than 70 stakeholders were contacted beforehand, of which only some agreed to be interviewed; this led to a sample that cannot be considered representative.² Twenty semi-structured interviews were conducted with various stakeholders, including: policy-makers (five interviews) concerned with industrial development; industry representatives (three); MNCs, including Renault (two); local as well as multinational suppliers (six); and representatives from academia and research involved with learning processes and knowledge transfer in the automotive sectors (four) (see Annex on the list of interviews and detailed characteristics of the six interviewed suppliers). Primary data was supplemented with information from academic studies, various policy and research reports, as well as from media sources (see Hahn, 2016, for more details).

To better understand Morocco's industrial development strategy and its effectiveness in promoting the automotive sector, we start in Section 2 with a discussion of industrial policies in emerging and developing countries geared towards this sector. In Section 3 we describe the case of Morocco, starting with a short overview of its socioeconomic environment followed by the current state of the automotive sector. In Section 4 we take a closer look at Morocco's industrial policy strategy more generally, with a focus on its goals, strategic approaches, instruments and achievements. Based on findings from fieldwork, Section 5 examines in detail the effectiveness of industrial policy in developing the automotive sector in Morocco. Finally, Section 6 synthesises lessons learnt and derives policy recommendations for decision-makers.

2 Getting the engine running: patterns in developing an automotive industry

To contextualise the discussion on the development of the automotive sector in Morocco, this section gives an overview of the fundamental changes and global developments that took place in the automotive industry from the 1980s until the end of the 1990s, as those changes were crucial in enabling developing countries to advance a domestic automotive industry. Moreover, specific studies on the emergence of local automotive sectors in different national contexts are discussed to highlight various factors that contributed to their success. These case studies suggest that several factors have played a role in developing a globally competitive automotive industry: attracting MNCs that are lead-OEMs to invest domestically and – by offering selective policies for upgrading capabilities in local supplier firms – encourage OEMs to intensify technology transfer through monitoring and international collaborations as well as building strategic coalitions across the main stakeholders in the sector.

1 A more detailed discussion of this study can be found in Hahn (2016).

2 We plan to conduct subsequent studies in Morocco, which will enable us to design a more comprehensive and statistically representative sample, building on our first research engagement in the sector.

2.1 The changing framework of the automotive industry

While in the 1990s, car sales and production more or less stagnated in North America, Western Europe and Japan – traditionally the core regions of the automotive industry – developing and emerging countries became increasingly relevant for the industry and turned those years into a period of rapid expansion with regards to production and sales. Aside from the need of existing OEMs to acquire new markets, the main trigger for this expansion was a broad policy change that had taken place in many developing countries. Having pursued a policy of import substitution since the 1950s, they had increasingly started to introduce liberalisation policies, which changed the prospects of market entry for the automotive industry in the 1990s. Yet, global production remained concentrated, with 13 car manufacturers accounting for 87 per cent of global car production in 2001 (Humphrey & Memedovic, 2003, p. 5).

At the same time, not only output markets, but also the structure of the value chains were transformed. Firstly, suppliers increasingly moved away from standardised products to customisation. This also implied that they had to take more responsibility regarding design and technology to fulfil the car manufacturers' requirements, rather than producing pre-designed products. Secondly, suppliers started to provide whole systems; thus, it became the role of first-tier³ suppliers to assemble complete units, for example seats or seating systems. This also required the first-tier suppliers to assume a stronger role in coordinating with second-tier suppliers. Previously, the value chain had a higher level of integration: car manufacturers would pre-design the respective units and subsequently outsource the production of the different parts to their suppliers, to then again assemble them in-house. Finally, this change in the division of labour between the manufacturers, and especially their first-tier suppliers, created the necessity for the former to influence their suppliers' production processes and quality systems to ensure efficiency. Hence, cooperation increased and long-term partnerships were developed (Humphrey & Memedovic, 2003, pp. 2-33).

This altered structure of the value chain placed more weight on first-tier suppliers, which led to the emergence of large global companies with substantial market power in this segment. Consequently, car manufacturers preferred the suppliers that also purveyed to the original production site – or at least one of their other suppliers to come along with them – when entering new markets in developing countries. This ensured consistent quality levels and required less effort than developing an equivalent local company. Although there are exceptions, for example in the form of joint-ventures with local companies in India or China, the opportunities for entering the value chain for local firms in developing countries were, hence, mainly within the second- and third-tier of suppliers (Humphrey & Memedovic, 2003; Nam, 2011).

3 The tiered supply chain model prevails in industries where the final product consists of complex components and sub-assemblers (such as in the automotive and aeronautics sectors). Companies that make the final product for sale to the consumer are called original equipment manufacturers (OEMs). First-tier (or Tier 1) suppliers provide components directly to the OEM. Second-tier (or Tier 2) suppliers provide their products (goods or services) to the first-tier suppliers, not directly to the OEM. Lower tiers provide less-processed products (sub-assemblies, components, materials, all the way to raw materials).

2.2 Developing a local automotive sector – examples from around the world

Evidence from scientific studies suggests that government policy sets the framework by attracting MNCs and facilitating the inclusion of local firms in GVCs. In the automotive sector, value chains are producer-driven (Gereffi et al., 2005), which means that OEMs (car manufacturers) and large global suppliers perform most innovation activities such as the production of engines and transmissions, and almost all vehicle assembly functions (Lorentzen, 2010). The strategy of the industry leader – usually the manufacturer – then seems to trigger as well as to facilitate the upgrading capability within an industry. Furthermore, selective policy interventions geared towards the upgrading capabilities of local firms also play an important role. As the case of South Africa suggests, selective policies planned and monitored by a diverse coalition of stakeholders are fundamental for the development of a competitive industry (Barnes, Kaplinsky, & Morris, 2003, p. 20).

Rothstein (2005) analyses the development of the automotive commodity chain in Silao, Mexico. He shows that the strategic planning of local government officials made it possible to attract a whole network of companies to the region and was the key driver of developing a local automotive industry. The authorities first convinced a large car manufacturer as lead-firm to set up a production site and subsequently also international suppliers to relocate to the region, which enabled a gradual substitution of imported parts with local production. In 2014, Mexico was the fourth-largest vehicle exporter and value added – as a share of total manufacturing value added – exceeded 15 per cent, indicating the country's high specialisation in the sector (OECD [Organisation for Economic Co-operation and Development], 2016). However, recent data also shows that value added created within the country, in comparison to imported components, remains limited, indicating a prevalence of low-value activities, such as assembly (OECD, 2016). To attract global MNCs in the first place, officials in Silao, Mexico, generally negotiated tailored agreements, which included, for example, investments in the local infrastructure as well as direct investment incentives, such as provision of land, support of training measures, grants and tax reductions/exemptions. In combination with a feasibility study proving the availability of skilled labour, this finally convinced General Motors (GM) to open a factory in Silao. Having achieved the first step of their strategy, the officials sought to replace imported parts with locally produced ones. Hence, they also offered tailored incentive packages to first- and, subsequently, second-tier suppliers, which were successfully implemented and led to several new factories being set up, including suppliers that did not directly work for GM.⁴ One key aspect of the Mexican strategy's success was, according to Rothstein (2005), that the responsible officials had a thorough understanding of the value chain in the sector and the related dynamics. However, the author also highlights that this case only offers limited generalisability, since fortune also played an important role, and other industries with different patterns of value chain governance would consequently also require a different strategy. It also needs to be highlighted that, on a national basis, Mexico did not implement targeted programmes to develop its automotive industry, but rather followed horizontal

4 An important question is to what extent the successful development can be attributed to the influence of the OEM vs. the impact of industrial policy, that is, did it play any role once the OEM had made its decision to invest? Clearly attributing the outcomes to one or the other is, however, very difficult and was not attempted by the cited studies.

schemes, such as financial incentives for FDI or training measures geared towards small and medium-sized enterprises (SMEs) (OECD, 2016).

Contrasting those findings, Pavlinek, Domanski and Guzik (2009) examine to which extent the inclusion of Central European countries in automotive value chains has influenced the emergence of a local industry and upgrading processes among local suppliers in the Czech Republic, Slovakia, Hungary and Poland. Their analysis builds on a combination of quantitative research based on trade data as well as qualitative research in three of the four countries. Their results show that within the predominantly foreign-owned industry, some MNC subsidiaries were indeed able to increasingly produce products with high value added and engage in research and development (R&D). Nevertheless, low-value activities still remained present within the market and were extended as well.

The authors identify three main determinants for developing a local automotive industry: local conditions, corporate strategies and public policy. The local conditions in their study combined the cost advantages of a low wage level with a skilled labour force.⁵ The second determinant – MNC strategies – led to the creation of supplier networks and stimulated improvement in the capacities of local subsidiaries. Although the initial decision to enter a country was mainly driven by cost advantages, the MNCs became more invested after having seen the local workforce's learning capabilities and the reliability of local suppliers. However, the authors also state that the MNC strategies in Central Europe were not a pre-designed, comprehensive approach that was continuously pursued, but rather that it was evolutionary and developed with the local conditions. Finally, public policies were found by the authors to only have limited influence, compared to the other two factors.⁶ Nevertheless, some countries, such as Slovakia, did make a policy effort to encourage FDI through investment incentives, additional infrastructure projects and the development of industrial zones.

Oriented towards analysis on the meso- and micro-levels and providing a more detailed analytical structure than Pavlinek et al. (2009), McDermott and Corredoira (2010) examine the impact of relational factors on the development and upgrading efforts of local automotive suppliers in Argentina. In the 1990s, Argentina sought to revive its automotive industry and, similarly to the case of Rothstein (2005), implemented policies and incentives to attract FDI in the sector. However, MNCs subsequently assumed a strong role in shaping the industry, especially with regards to its structure, training and quality. McDermott and Corredoira's (2010) thesis is, however, that the capability of firms to survive in the industry – and to increase the value added of their products – differs between firms, not only because of their internal capabilities or market conditions, but also due to their respective networks.⁷ The study utilises a quantitative approach based on data from auto parts suppliers and is

5 Although the authors do not specifically refer to geographical location as being an important factor, proximity to Western Europe should have also played an important role in the development of the automotive sector in Central and Eastern Europe.

6 The reasons provided in the paper remain unclear as to why this was the case. Although the authors do not discuss this further, weak results could either be because these countries did not pursue pro-active public policies, or because the policies in place did not deliver the intended results. (We are grateful to Tilman Altenburg for this point).

7 These dynamics are also confirmed in other sectors and country contexts (see Loewe et al., 2013).

complemented by a survey. McDermott and Corredoira (2010) cannot find clear evidence that multiple relationships with different stakeholders within, or outside, the automotive industry improve upgrading capabilities per se. Nevertheless, their findings show that there is a tendency for suppliers within the second- and third tiers to benefit more strongly from direct relationships with assemblers, whereas first-tier suppliers rather benefit from social ties to other suppliers on the same tier. This may be due to a reluctance of first-tier suppliers to share knowledge with those on lower tiers in order not to compromise their competitiveness. Concerning stakeholders outside the industry – such as consultants, banks, associations, universities and public agencies, except for universities – the results are either insignificant or their impact is even negative, as in the case of government ties and consultants. This leads the authors to the conclusion that, although ties to universities seem to be beneficial for acquiring additional knowledge, governments tend not to provide adequate support for companies.

Also, approaching the topic from the firm- and industry levels, Okada (2004) investigates the mechanisms and determinants that prompted local firms in the Indian automotive industry to actively develop the skill levels of their employees, which is considered important for competing on the global market. This study is based on qualitative research conducted in India and confirms the findings of Pavlinek et al. (2009) concerning the role of the multinational lead-firm, and Rothstein (2005) regarding the influence of government policy. In this case study, again, intensifying economic liberalisation attracted FDI and led to the market entry of MNCs, while at the same time government interventions targeting small-scale firms, which included protectionist measures as well as subsidies, had shaped the industry since the 1950s and contributed to a higher degree of localisation. Consequently, different dynamics unfolded. Firstly, increased competition and pressure from manufacturers pushed firms to intensify their upgrading efforts. Secondly, the lead-firm played a major role not only by exerting pressure, but also through the institutional mechanisms they introduced, for example those regarding monitoring and international collaboration. Local assemblers also strengthened their local suppliers with regards to qualitative, technological and productive aspects, for example through joint ventures with international suppliers, to preserve their competitiveness. Thirdly, this led local firms to hire more qualified employees, change organisation strategies and introduce formal training programmes. Thus, skills development became increasingly standardised and codified.

Barnes et al. (2003) (among others) show that, in the case of South Africa, the development of the automotive sector was the result of a comprehensive industrial policy framework that included not only macro-level interventions, but also horizontal (correcting for economy-wide market failures) and selective measures. Macro-level policies (such as competitive exchange rates, effective property laws, macroeconomic stability and inflation-reducing measures) were meant to create a favourable environment for industrial activity. The objective was not only to attract MNCs to produce locally, but to also position South Africa as a production hub for global operations. Horizontal policies were meant to improve competitiveness, through sharing knowledge and improving capabilities. Most important, however, were the carefully designed, selective policies under the Motor Industry Development Programme, which included a series of incentives to support exports that were reduced over time, as well as mid- and high-level skills development programmes (Lorentzen, 2010; Black & Bhanisi, 2006). As Barnes et al. (2003) explain, the industrial policy framework in South Africa was driven by a coalition of stakeholders – including government, industry, academia and trade union representatives – and the active

involvement of OEMs in upgrading unskilled and semi-skilled workers (Lorentzen, 2010); (see also Altenburg, Hampel-Milagrosa, and Loewe (2017) for a more general discussion on the effects of regulatory environment for the upgrading of micro and small enterprises).

With a focus on state-business relations in the automotive sector in Egypt, El-Haddad, Hodge and Manek (2017) stress that decades of protectionism, manifested in tariffs and local content requirements, reduced opportunities for upgrading in this sector and prevented local companies from participating in GVCs. More recently, policy-makers have used a “mix of protection and access to international expertise” (El-Haddad et al., 2017, p. 38) seeking to improve competitiveness in this industry. Specifically, various support measures for local manufacturers have been made available, along with investment incentives to attract OEM firms. Here, the sector has been dominated by a few powerful local firms in strong alliances by using the state-oriented policy towards capturing benefits/rents for individual firms rather than through competitiveness improvements at the sectoral level.

The specific case of Morocco’s automotive sector has not been extensively researched. Benabdejlil (2013) provides a case study on a Moroccan automotive supplier who succeeded in becoming a first-tier supplier for an MNC (for exhaust pipes/stamping) and shows that formal as well as informal learning processes contributed significantly to his success. Whereas the former refer to formalised processes – such as knowledge transfer through training, establishing internal structures for internal knowledge transfer, and the support from Renault – the latter point to informal relationships with, for example, old colleagues, suppliers or other company owners. Benabdejlil, Lung and Piveteau (2016) specifically analyse the strategy and influence of the local MNC – Renault – on sectoral development. The authors describe that, as in the case of Mexico, Morocco succeeded in attracting an MNC as the industry leader by offering a mixture of financial incentives such as tax exemptions and subsidised loans, the provision of land, and further improving external factors such as the local infrastructure. They find that, although the emergence of an automotive cluster in the area around the manufacturer is undeniable, real integration in terms of interdependencies and spillovers, which would characterise comprehensive economic integration, is still lacking (Benabdejlil et al., 2016, pp. 4, 20). Hence, they describe that, at the time of their research, only 2 out of 18 first-tier suppliers were Moroccan firms, despite initial efforts of the MNC and the state to upgrade local companies to fulfil the necessary requirements. Possible explanations given by the authors relate to the implementation of these efforts, which was criticised by local actors as being intrusive and partially inefficient, as well as lowering the leverage of local companies with regards to price negotiations as compared to international ones, which reduce their competitiveness in the cost-driven automotive environment. Nevertheless, a comprehensive assessment of industrial policy for the development of the automotive sector in Morocco is missing.

3 Morocco's economy and automotive sector

To contextualise the subsequent discussion on industrial policy strategy and achievements in the automotive sector, we offer here a bird's-eye perspective on the country's economic and social situation, followed by a description of the current state of the automotive sector. This overview is by no means exhaustive, but rather aims to provide an understanding of the general context for the development of the automotive sector, which we discuss in Sections 4 and 5. This overview shows that although Morocco has seen generally successful development with regards to socioeconomic indicators, high-unemployment and a declining – or at least stagnating – share of manufacturing in GDP remain serious bottlenecks. Despite that, the country's automotive industry has flourished and experienced strong growth since the mid-2000s.

3.1 A snapshot of Morocco

A constitutional monarchy under King Muhammad VI since 1999, Morocco's economic and political environment has been closely entangled with that of Europe, not only due to its geographical proximity (13 km separate Morocco from Spain) but also because of its history. From 1912 until 1956, Morocco was a French protectorate, and some regions in the northern part of the country were under Spanish rule, which solidified the economic and political ties up to current times.

More recently, during the widespread uprisings and pro-democracy movements that occurred throughout the MENA region in 2011, Morocco demonstrated high levels of stability and resilience. Following protests in major Moroccan cities, the King passed a new constitution that attributed greater powers to the prime minister and the parliament, without significantly limiting his own powers, however. More comprehensive social development programmes were also implemented, but major disparities in terms of development between urban and rural areas persist, income inequality remains high, even compared to the regional level, and the performance of some key public sectors, especially education and health, is suffering. These shortcomings have been the source of recent unrest, which intensified at the end of May 2017, mostly in northern Morocco.

However, the Moroccan economy has experienced continuous positive development in the past decade, with an average annual growth rate of 4.8 per cent from 2004 to 2014 (World Bank, s.a.). The services sector, which comprised 54.9 per cent of GDP in 2013, dominates the composition of Morocco's GDP, followed by the industrial sector (28.5 per cent) and the agricultural sector (16.6 per cent) (Oxford Business Group, 2015, p. 11).

Despite the generally positive economic developments in the country, Morocco has not succeeded in increasing the industrial sector's share of overall GDP. On the contrary, having represented one-third in the 1980s – and remaining rather stable throughout the 1990s – its share has declined in recent years (Achy, 2015).

Morocco has improved with regards to social indicators; however, it still lags behind other countries of the region: with a literacy rate of 67 per cent in 2011, according to the World Bank, Morocco remains below Egypt (73.9 per cent in 2012) and Tunisia (79.7 per cent in 2011). Furthermore, just as in other countries of the MENA region, youth unemployment

remains high (20.2 per cent in 2014; in urban areas this rate reaches almost 40 per cent), especially in comparison to the total unemployment rate of 10.2 per cent (in 2014). A major problem for Morocco is the high unemployment rate among educated youth (with university degrees), which reached 26 per cent in 2014.⁸

In spite of these challenges, Morocco has also seen positive developments in the private sector (along with Tunisia) and has become a regional leader in several sectors. After continuous improvement in recent years, the country ranked 75 out of 189 economies in the World Bank's Doing Business Report 2016, right behind Tunisia. Both countries, thus, lead the group of North African countries – the next one to follow is Egypt, at rank 131. Also, in comparison to the greater MENA region, their performance in terms of investment climate is only surpassed by some of the Gulf States (i.e. United Arab Emirates, Bahrain, Qatar and Oman) (World Bank, 2016). Nevertheless, a major issue remains corruption. According to Transparency International's assessment in the framework of the Corruption Perceptions Index 2015, Morocco ranks 88 out of 168 countries and is on the same level as Algeria and Egypt – a rank that has only seen minor deviations since 2010 (Transparency International, 2016). This picture is reinforced by the results of an enterprise survey that was conducted by the World Bank in 2013, in which 20.6 per cent of the companies named corruption as the biggest obstacle to their business (World Bank, 2013).

3.2 The current state of the Moroccan automotive industry

The automotive sector is regarded as one of the main drivers of industrial development and employment in Morocco (DEPF, 2015, pp. 19, 23). In recent years, it has experienced strong growth with regards to key indicators such as FDI, employment creation and exports. Nevertheless, the industry remains dominated by labour-intensive activities such as vehicle assembly and wiring and has just recently started to expand towards activities that create a higher value added, such as engines.

Between 2009 and 2012, the average annual increase in employment was 17.2 per cent, reaching 70,000 workers at the end of that period (see Figure 1). Equivalently, FDI in the sector reached EUR 217.6 million⁹ in 2013, representing 45.3 per cent of total FDI in the manufacturing sector (DEPF, 2015, p. 19). By 2014, Morocco was the second-largest vehicle producer in Africa with a market share of produced vehicles of 35 per cent,¹⁰ right behind South Africa.

This growth process is mirrored by the total number of produced vehicles, which rose from 18,546 in 2003 to 227,570 vehicles in 2014 (DEPF, 2015, p. 3). Equivalently, exports increased on average 26.73 per cent per year from 2009 to 2013 and reached more than EUR 3.6 billion¹¹ in 2014. This performance has made the automotive industry the largest export

8 The unemployment problem is even more pronounced when one considers the high rate of underemployment and employment in the informal sector. Consistent estimates lack in this regard, ranging between 30 and 40 per cent (Vidican-Auktor, 2017).

9 Equivalent to 2.4 billion Moroccan dirham (MAD).

10 A decade ago, in 2003, Morocco's market share in the automotive sector was only 5 per cent.

11 Equivalent to MAD 40 billion.

sector of the Moroccan economy, with a share of 20 per cent of total exports in 2015 and 24.6 per cent during the first five months of 2016 (DEPF, 2015, p. 22; Office des Changes, 2016a, 2016b).

The positive performance of the automotive industry in Morocco is also reflected by the import-export ratio for the sector. As Figure 2 shows for the HS code 87 (vehicles other than railway or tramway rolling-stocks, and parts and accessories thereof), in 1998 imports were more than 20 times the value of exports. By 2016 the ratio of imports to exports in this sector declined to 1.4, showing a growing participation of Morocco in the foreign market. The largest export market for automotive products from Morocco is Europe, with France (not surprisingly) absorbing almost half of exports (JICA [Agence Japonaise de Coopération Internationale], 2013, p. 53).

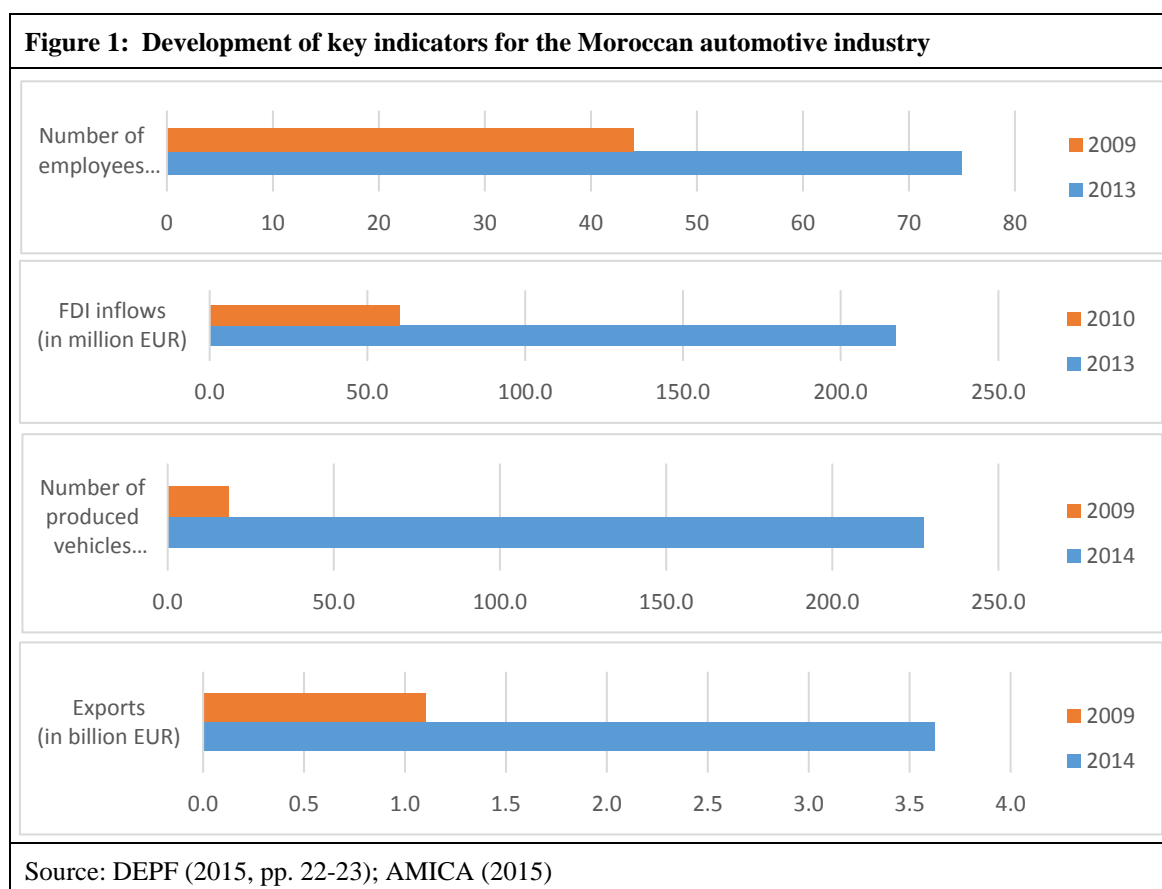
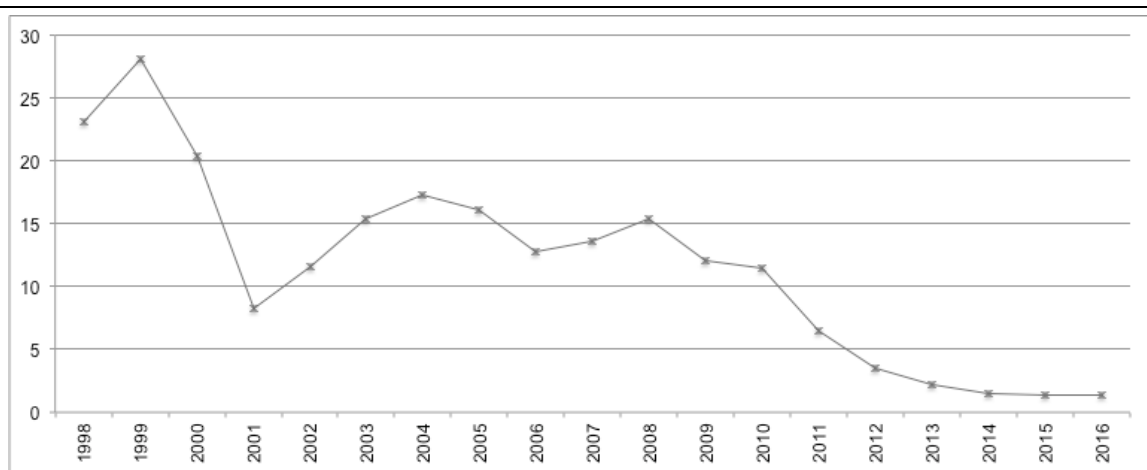


Figure 2: Import–export ratio in the automotive sector in Morocco (HS code chapter 87)

Source: Based on data from Office des Changes (2016b)

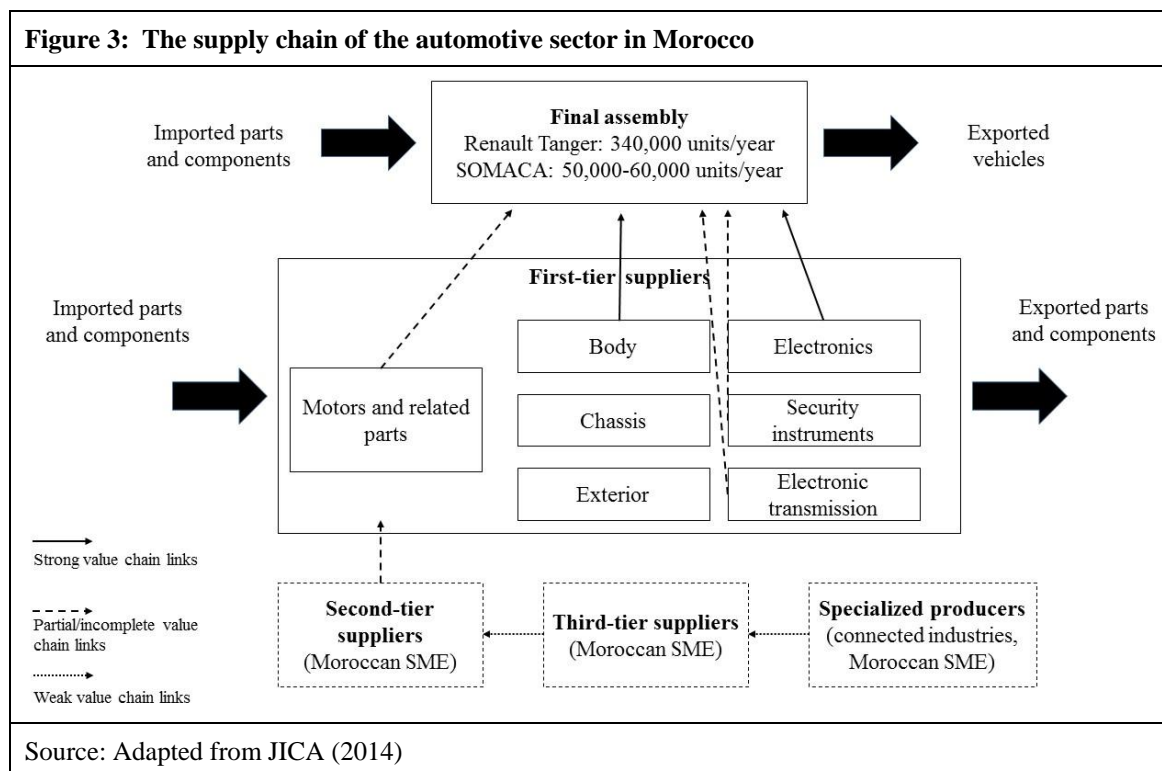
One contributing factor to this growth in exports has been the initial level of market protection, which has been consistently declining, however. The average import tariff level on the manufacture of motor vehicles, trailers and semi-trailers (ISIC Rev. 3.1 code 34) decreased from 59 per cent in 1993 to 15 per cent in 2011 (see Table 1). JICA (2013) also shows that tariffs for vehicles imported from the European Union (EU) declined from 13 per cent in 2008 to zero in 2012, whereas tariffs on vehicles imported from non-EU countries declined from 32.5 per cent in 2008 to 17.5 per cent in 2012. During this period, value added – as reflected in trade data on “value added temporary admission for inward processing without payment” – also shows slight improvement (an average growth rate of 40 per cent per year), although there have been large fluctuations since 2008 (most probably due to changes in the global and regional markets for automotives and the financial crisis).

Table 1: MFN tariff rates for the automotive sector (ISIC Rev. 3.1 code 34)

ISIC Rev.3.1 code	34	341	342	343
Code description	<i>Manufacturer of motor vehicles, trailers and semi-trailers</i>	Manufacturer of motor vehicles	Manufacturer of bodies (coachwork) for motor vehicles	Manufacturer of parts and accessories for motor vehicles
1993	58.74	55.00	77.08	54.23
1997	19.13	19.06	26.25	18.71
2002	29.68	32.81	41.25	28.63
2003	30.06	29.73	37.81	28.29
2008	21.40	-	-	21.40
2009	20.45	-	-	20.45
2011	15.23	-	-	15.23

Source: Based on the database of World Integrated Trade Solutions (s.a.)

Viewed from a value chain perspective, Renault is currently the only foreign OEM producing in the country (see Figure 3).¹² With a local production capacity of 340,000 cars per year, Morocco is by far the largest site of Renault in Africa, alongside Algeria and South Africa (Wolf, Mihram, & Frische, 2017, p. 76). From a sales perspective, the Renault Group also dominates the Moroccan market, with a market share of 37.03 per cent in 2014. This equals 45,212 sold units, of which approximately 23,392 originated from local production in Morocco (10.3 per cent of the total production in 2014; the remainder was exported) (DEPF, 2015, p. 6; Office des Changes, 2016a; Djama, 2015). This dependence on Renault as an OEM will decrease in the immediate future, as more foreign manufacturers are entering the Moroccan market. From 2019 onward, Renault will be joined by PSA Peugeot-Citroen. Ford is also currently sourcing parts and components locally¹³ (DEPF, 2015, pp. 10, 19; AMICA, 2015; L'Opinion, 2015; Fiorello, 2015), along with several Japanese, Italian and Spanish suppliers. The activities performed within the sector are mainly concentrated on the manufacturing of parts and components and the assembly of vehicles. Additionally, distribution and some after-sales activities also take place in Morocco.



Economically, the strongest performance within the sector can be seen in the assembly of vehicles, which made up 48.7 per cent of the sector's exports in 2014, equalling EUR 1.8 billion.¹⁴ This share reflects the enormous average annual growth of this segment (70.1 per cent) in the 2007-2013 period. The sub-sector of wiring exhibits the second-best performance.

12 The decision of Renault to invest in Morocco was largely driven by the company's strategic objective to increase the production of entry models and generous incentives provided by the Moroccan government, as will be described in more detail in the next section.

13 Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat.

14 Equivalent to MAD 19.5 billion.

With EUR 1.6 billion¹⁵ in exports, the segment comprised a share of 43 per cent in 2014, growing on average 7.7 per cent annually from 2007 to 2013 (DEPF, 2015, pp. 10-11).

Considering that those two segments already make up 91.7 per cent of the sector's exports, other segments such as seats and seating systems, which come in third place at EUR 150.8 million¹⁶ in 2014, are nearly negligible by comparison. It needs to be highlighted, though, that since these figures represent exports, they do not provide a detailed picture of the share and value added of parts and components produced in Morocco and then directly processed in the country, for example as part of the vehicles assembled by Renault.

Geographically, the Moroccan automotive industry is strongly concentrated in three locations: Tangier (43 per cent), Casablanca (39 per cent) and Kenitra (7 per cent). Whereas the industry has been active in Casablanca for more than 50 years due to the presence of Société Marocaine de la Construction Automobile (SOMACA), Tangier and Kenitra are relatively new to the market and were developed in the framework of the National Pact for Industrial Development (PNEI). Nevertheless, Tangier has already become the predominant location – a rise that has, among other factors, been fostered by the presence of Renault in the area as well as the nearby harbour and the free trade zone Tanger-Med¹⁷ (DEPF, 2015, p. 19; Royaume du Maroc, 2008, p. 25).

Information on the total number of companies active in the sector varies, depending on the source, between around 150 and more than 200 companies; however, official numbers generally represent the more conservative estimate.¹⁸ According to a study based on export data from the Office des Changes (2013, p. 7), the sector showed a rather strong concentration in 2012, with 10 companies accounting for 75.5 per cent of the total turnover and 8 companies accounting for 79 per cent of the turnover in the wiring segment, which was the dominant exporting sub-sector at the time. With regards to the number of companies, the wiring sector also dominated in 2016, accumulating 23 per cent of the supplier companies present, followed by metal processing, plastic processing and seats & seating systems (Office des Changes, 2016c). This shows that most companies present in the market engage in activities that are labour-intensive and are considered to produce low to medium value added, such as wires, seats, body parts, bumpers and exhaust pipes (Pavlinek et al., 2009). A development towards the production of more technology-intensive components can nevertheless be observed in Morocco, as the agreement with Peugeot includes not only vehicle assembly, but also engine production (Flanders Investment & Trade, 2015).

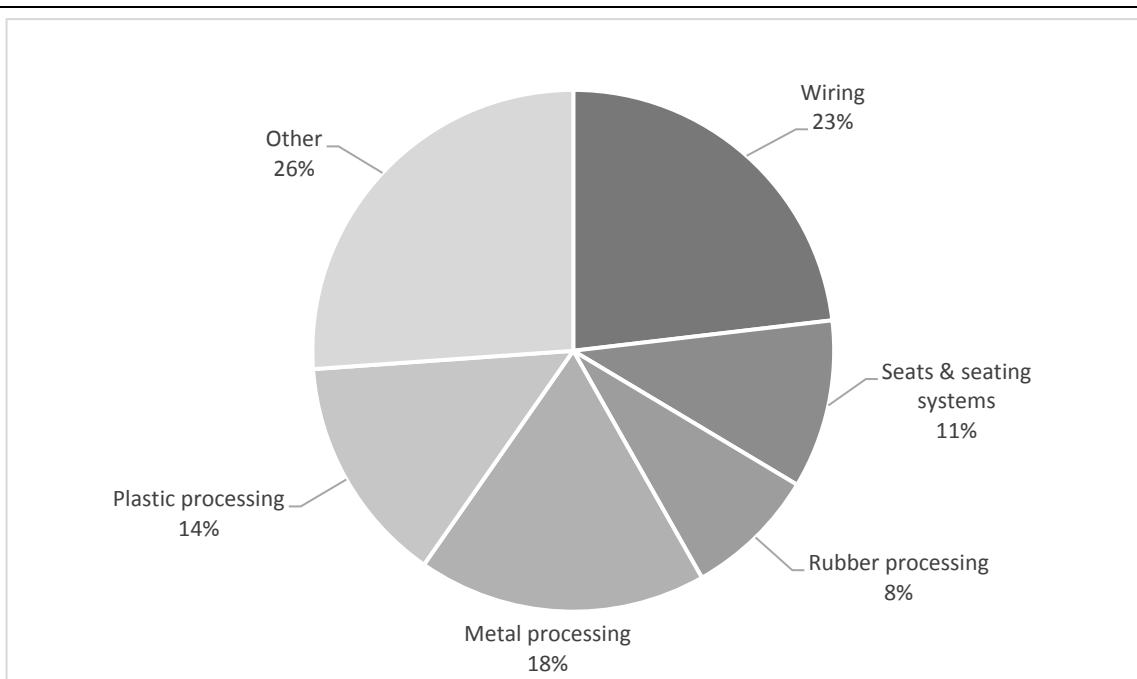
15 Equivalent to MAD 17.2 billion.

16 Equivalent to MAD 1.7 billion.

17 The cluster Tanger Automotive City within the Tanger-Med industrial zone brings together more than 40 Tier 1 and Tier 2 suppliers, mostly consolidated around Renault's activities (Tanger Automotive City, s.a.).

18 Interview #16 with an industry institution on 25 May 2016 in Tangier.

Figure 4: Sectoral distribution of supplier companies based on number of firms



Source: Based on numbers obtained from Office des Changes (2016c)

3.3 Initial drivers – factors contributing to the sector's emergence

Despite its only recent success, the automotive industry has long been present in Morocco. Import substitution industrialisation (ISI), strong protectionist measures and a lack of commitment from international manufacturers have long prevented the development of this sector. Eventually, it was the leadership of Renault, combined with favourable policy measures implemented by the government, that triggered the dynamic of follow sourcing and the subsequent emergence of an export-oriented automotive sector.

The Moroccan automotive sector dates back to 1959, when SOMACA was founded in Casablanca. SOMACA was created with the purpose of assembling complete vehicles for the local market.¹⁹ From the beginning, SOMACA received technical assistance from the Italian manufacturers Fiat and Simca, which each had a 20 per cent stake in the company's shares. Other shareholders were the state of Morocco (38 per cent), the French manufacturer Renault (8 per cent) and Moroccan private investors (14 per cent). As a result of the Italian assistance, the first cars that were produced in 1962 were four models of Fiat and two models of Simca (DEPF, 2015, pp. 19-20). In 1966, the product portfolio was extended when Renault and SOMACA signed an agreement for the assembly of the models Renault 4 and Renault 16, leading to a total production of 10,000 vehicles in 1968 (Attijariwafa Bank, 2012).

¹⁹ Interview #12 with a supplier/industry institution on 24 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier.

The first major policy change within the industry occurred two years later, in 1968, when the *Loi de Valorisation* was adopted and implemented. The law required a minimum of 40 per cent of the components within a vehicle assembled in Morocco to be produced nationally, with the goal of fostering the integration of suppliers in the country. In the meantime, 1975 marked a record, with the peak of production by SOMACA at slightly more than 25,000 vehicles. However, starting with the decline of Simca in 1980, and despite the production of two more Renault models, automotive production in Morocco experienced a sharp downturn after that, which resulted in the production of only 8,482 vehicles in 1995 – an all-time low (DEPF, 2015, p. 20).

In 1995, a new agreement between Morocco and Fiat finally marked the turning point: it envisioned and implemented the expansion and further development of the Moroccan automotive sector through the production of an inexpensive model destined for the local market. Although the agreement was not extended at the end of its run-time in 2003 – and, thus, only lasted eight years – it drew a number of European, Japanese²⁰ and American suppliers to Morocco and fostered the establishment of local suppliers, leading to enhanced local integration.

Shortly after, Fiat, Renault and Sopriam (now PSA Peugeot-Citroen) signed agreements with the state in 1996 for the production of light, inexpensive vehicles with a specified rate of local integration (25 per cent) – the *Véhicule Utilitaire Léger Economique* (Flanders Investment & Trade, 2015, p. 2). In 2002, the Moroccan government made its first unsuccessful attempt to sell the shares of SOMACA that were held by the Moroccan state. However, once the cooperation with Fiat ended, Renault became the majority shareholder in 2005 and became the sole manufacturer in the market (DEPF, 2015, pp. 20-21).

Morocco's integration into the global economy was facilitated by the signing of various free trade agreements (FTA) starting in the 1980s. Already in the late 1960s, Morocco had entered into negotiations on preferential trade agreements with the European Economic Community and intensified these efforts during the course of the policy shift (Cammatt et al., 2015, pp. 46-50). Since then, various trade agreements between Morocco and the EU have been concluded (such as the Neighbourhood Action Plan Morocco), and the country was granted advanced status with the EU in 2008 (based on the EU Association Agreement). Furthermore, Morocco became a member of the Euro-Mediterranean Partnership, which was aimed at deeper economic integration, in 2000 and eventually entered negotiations with the EU on a Deep and Comprehensive Free Trade Agreement in 2013 (European Commission, 2015a, 2015b; European External Action Service, s.a.). In addition to its relations with the EU, Morocco is also a member of the World Trade Organization, the Greater Arab Free Trade Area as well as the Arab Maghreb Union, and it has also concluded another FTA with Tunisia, Jordan and Egypt in the framework of the Agadir Declaration. Further bilateral FTAs have been established with the United States and Turkey. Morocco has also concluded 63 bilateral investment treaties (African Development Bank, 2012, p. 137; Moroccan Investment Development Agency, "Free trade agreements", s.a.; United Nations Commission for Trade and Development, s.a.; World Trade Organization, s.a.).

20 By 2014 six Japanese companies were operating in Morocco, employing more than 26,000 workers. See JICA (2014) for more details.

These FTAs contributed towards and positively influenced the emergence of export activities in the sector.²¹

At the end of 2005, production of the Dacia Logan started²² in Morocco and was destined for European and Middle Eastern markets, marking a novel period for the country. The first vehicles exported to the French market left in 2007, and in 2009 export markets included not only European countries, but also Egypt and Tunisia, with an increased annual production of more than 90,000. In 2007, an agreement was concluded between Morocco and the Renault-Nissan Group, which led to a vast expansion of the company's engagement in the country. It contained the creation of an environmentally friendly production site in Tangier costing more than EUR 600 million – the largest project of the automotive industry south of the Mediterranean Sea.

Several factors led to the decision by Renault to invest in Morocco, despite the small local market size. On the one hand, Renault's corporate strategy placed a stronger focus on the company's entry model, which had been very successful on the European market. Its factory in Romania was already reaching its limits and the manufacturer was looking for a new manufacturing site. At the same time, Morocco – where Renault was already active through SOMACA – was seeking to expand its automotive industry and was willing to provide attractive incentives. As more than 90 per cent of the produced vehicles were destined for export, the manufacturer was granted an exemption from corporate taxes for five years (and a cap of 8.75 per cent thereafter) as well as reduced value added tax (VAT). Furthermore, the investment was subsidised with a low-interest loan of EUR 200 million by the Hassan II fund, and three local banks provided loans of EUR 105 million in total. This was complemented by the provision of 300 hectares (ha) of land, the construction of a new training centre and training subsidies (Benabdejlil et al., 2016).

The factory opened in February 2012, increasing Renault's total local production to 227,579 vehicles in 2014, of which 175,000 units were manufactured in Tangier and the rest by SOMACA. On 5 May 2015, the factory in Tangier celebrated the production of its 400,000th vehicle. Additionally, the project did not centre on the factory only, but it also fostered the creation of a whole local network of infrastructure and suppliers. This included the presence of national and international first-tier suppliers, training institutes as well as a rail connection to the harbour, and it led to the direct and indirect creation of more than 35,000 jobs at the end of 2013 (DEPF, 2015, pp. 20-21).

Further contributing to the expansion of the Moroccan automotive industry, in 2015 PSA Peugeot-Citroen concluded an agreement with the Moroccan state on the establishment of a new production site in Kenitra, with a planned capacity of 200,000 vehicles and 200,000 motors, scheduled to start operations in 2019 (Flanders Investment & Trade, 2015, p. 4).

21 As one can expect, the effects, however, have not been positive for all firms. One supplier, for example, described the difficulties likely to have occurred to other local businesses as well. He explained that with the opening of the economy, and especially the FTA with the EU, his company was suddenly deprived of all protection that it had received until then. Due to the subsequent inflow of imported goods and market diversification, his major client suffered substantial losses and, hence, his company was also strongly affected. These market changes nearly forced him to give up the business.

22 Dacia is a subsidiary of Renault.

4 Industrial policy in Morocco and the roadmap to developing an automotive industry

The development of the automotive sector in Morocco followed a rather conventional pathway similar to other emerging and developing countries, as discussed in Section 2. What is interesting, however, is that Morocco's relative success in building a domestic industry happened at a time when the global automotive industry was in decline and the MENA region was suffering from economic and political instability. To better understand the factors that contributed to this positive development (on which we elaborate in Section 5), we first discuss the national industrial policy goals and strategies from the 1950s onwards, followed by the specific policy measures aimed at the automotive sector and the main stakeholders involved in influencing its development pathway.

4.1 Industrial policy goals and strategies

As is true for the MENA region as a whole, Morocco has witnessed fundamental shifts in its development policy since the end of the Second World War. From the 1950s and 1960s onwards, following the example of Turkey, ISI became the prevalent paradigm. The rationale behind this approach was to trigger the industrialisation processes through the development of manufacturing sectors. Since those emerging sectors are not yet efficient, and, thus, competitive, they need to be protected from international competition until they mature – an idea that stems from the “infant industry” argument. ISI generally implies high levels of trade protectionist measures and state intervention (Cammatt et al., 2015, pp. 46-59). In Morocco, the manifestation of this policy became evident, for example, in the “Moroccanization Decree” (Haddad & Harrison, 1993, p. 54), which was passed in 1973 and severely limited the freedom of foreign investors. It restricted foreign ownership of firms in certain areas of the industrial, commercial and services sectors to a maximum of 49 per cent. In the beginning, the ISI strategy led to high growth rates and large socioeconomic gains according to indicators. However, a set of factors such as the excessively high level of protectionism, the resulting market inefficiencies and lack of competitiveness of state-owned companies (along with high levels of imports and increased public spending) eventually created financial imbalances in the form of a twin deficit (Cammatt et al., 2015, pp. 46-59). This was the case throughout the Middle Eastern region. In Morocco, high public expenditures were mainly financed by revenues from phosphate exports and foreign debt. This unsustainable finance structure led to two successive balance-of-payment crises in 1978 and again in 1983 (Currie & Harrison, 1997, pp. 47-48). Consequently, Morocco was among the first countries in the MENA region to abandon the ISI strategy by reducing public expenditures and restructuring its debts with Western countries. It was also among the first to then focus on exports and private-sector promotion (Cammatt et al., 2015, pp. 46-59).

The first major economic reform that occurred in Morocco directly followed the crisis in 1983 and touched upon the areas of investment and trade. The reform of the investment law lifted the ownership restrictions in some sectors – leading to their complete abolition by 1985 – and provided incentives for foreign investors to enter the country. These incentives included the guarantee to repatriate profits, dividends and capital, as well as a guarantee against expropriation and nationalisation. Changes in the area of trade, on the other hand, led to the gradual reduction of the so-called Special Import Tariff, which was a “uniform tariff levied on the cost, insurance, freight, [and] value of imports” (Currie & Harrison,

1997, p. 48) that could reach a maximum of 400 per cent, which was gradually reduced to a maximum of 45 per cent in 1985. Quantitative trade restrictions were gradually lifted as well. Many, although not all, goods that had needed authorisation before they could be imported were exempted from that requirement, and the complete list of prohibited import products was revoked in 1986. Despite these improvements, the tariff system was still complicated and especially products at higher processing stages continued to be affected by restrictions (Currie & Harrison, 1997, pp. 46-48; Haddad & Harrison, 1993, pp. 54-56).

Throughout the 1990s, the Moroccan government continued its liberalisation policy, which then, for example, also included the privatisation of public companies. Starting from the mid-1990s onwards, industrial policy in Morocco increasingly focused on the promotion of private-sector²³ and export activities. One of the first important measures in this regard was the establishment of the Hassan II Fund for Economic and Social Development in 2000. Its purpose was to financially support the building or acquisition of professional buildings (up to 30 per cent of the costs) and the acquisition of equipment (up to 15 per cent of the costs) in specific industries, among them the automotive and aeronautics industries (Moroccan Investment Development Agency, "Hassan II Fund", s.a.).

A turning point for industrial development in Morocco was the launch of the *Plan Emergence* in 2005, a framework for a new industrial policy for the 2009-2015 period and a kick-starter of substantial development within the automotive sector. The concept of this plan was reviewed and refined in 2008 and then formalised as the PNEI. Its goal was to create 220,000 jobs, increase the industrial sector's GDP by EUR 4.5 billion²⁴ and exports by an additional EUR 8.6 billion,²⁵ as well as to attract further private investment of EUR 4.5 billion²⁶ in the industrial sector by 2015. To attain these goals, six key industries were identified to serve as engines for growth and development: offshoring, automotive, aeronautics, electronics, textiles and food processing. For each of these sectors, a specific set of measures and incentives was developed and laid down in the PNEI (Royaume du Maroc 2008, pp. 6-7, 14). Five main areas were the focus of PNEI (JICA, 2014): (1) promoting the six target sectors; (2) improving the competitiveness of SMEs; (3) strengthening training and education for industrial development; (4) improving the business climate; and (5) creating an agency specifically dedicated to promoting foreign investment.

The measures described in the PNEI for the key industries differ in their specific details, but they generally include tax benefits and various incentives; support for training measures; investments in infrastructure and logistical platforms; the promotion of the respective sector abroad by state actors, for example through the establishment of dedicated expos, together with private actors; the provision of land and establishment of free-zones; as well as the reimbursement of a certain share of the investment amount (Royaume du Maroc, 2008).

23 As pointed out by Amirah El-Haddad, the term "private" is relative in the Moroccan context, as many (especially large) companies belong to the King and benefit from subsidies that are meant to benefit the public sector.

24 Equivalent to MAD 50 billion (EUR 1 = MAD 11.03 according to the exchange rate from 2 April 2016) (OANDA, 2016). This exchange rate applies throughout the paper.

25 Equivalent to MAD 95 billion.

26 Equivalent to MAD 50 billion.

In addition to measures targeted at the different key industries, the PNEI included further initiatives to improve framework conditions on a broader level (so-called neutral or horizontal industrial policy measures), such as enhancing the business climate, which encompassed among other things corruption, financing, regulatory frameworks and training provisions. SMEs, which represent 93 per cent of the Moroccan private sector (JICA, 2014, p. 22),²⁷ are also explicitly mentioned in the strategy and supposed to be strengthened through mainly financial areas, but also through specific support in different areas such as IT. Specific weaknesses of Moroccan SMEs that are identified and addressed by the PNEI include weak growth rates, low investment and financing capacities, family-based ownership structures, low integration rates as well as low levels of access to international markets (Royaume du Maroc, 2008, pp. 46-50).

The creation of 110,000 jobs between 2008 and 2011, an increase of 22 per cent in exports, an increase in FDI (with an annual average of 23 per cent since 2009) are the results officially ascribed to the PNEI (MCINET [Ministère de l'Industrie, du Commerce, de l'Investissement et de l'Economie Numérique], s.a.). Nevertheless, this is difficult to prove, as other factors may have influenced these developments as well. The success of PNEI, especially in some key sectors such as automotive and aeronautics, is often seen by analysts as a direct result of “combined efforts and cross-cutting policies of various ministries and sector players” (Oxford Business Group, 2015).

The successor to the PNEI is the Plan for Industrial Acceleration (PAI), which extends the previous industrial policy to the 2014-2020 period.²⁸ Based on official figures, the PAI aims at increasing the part of the GDP generated by the industrial sector from 14 per cent to 23 per cent, reducing the balance-of-trade deficit, creating 500,000 jobs, reducing the share of informal employment as well as improving the vertical integration of micro, small and medium-sized enterprises.²⁹ The PAI is furthermore supported by a newly created investment fund of about EUR 1.8 billion,³⁰ the Fund for Industrial Development (Fond de Développement Industriel). The plan targets five of the original six key sectors (food processing is no longer being pursued) and complements them with six additional sectors (chemistry and parachechemistry, pharmaceuticals, building materials, renewable energy, electrical industry, and metallurgy and metalworking). Furthermore, it takes a more encompassing view, aiming at value chain integration in general and improving network relationships between MNCs and local companies – it thereby explicitly targets SMEs and also aims at a better integration of microenterprises (AMICA, 2015; Invest in Morocco, 2015, p. 5; MCINET, s.a.; Moroccan Investment Development Agency, “Le plan d'accélération industrielle”, s.a.). As such, the PAI identifies 10 metrics grouped into three blocks of

27 SMEs are an important part of the Moroccan economy, employing 46 per cent of the labour force (perhaps even more, if informal employment is considered) and covering 30 per cent of exports, 33 per cent of investments and 38 per cent of domestic output (JICA, 2014, p. 22).

28 In contrast to the previous strategy, no encompassing formal document has been published. Thus, information on concrete details had to be gathered from the different institutions involved in its implementation.

29 The PAI has come under various critiques by Moroccan analysts, raising doubts as to whether the proposed targets can be realistically attained by 2020; see, for example, http://telquel.ma/2014/04/23/industrie-le-plan-surrealiste-delalamy_135488

30 Equivalent to MAD 20 billion.

measures (see Table 2): (1) industrial ecosystems for a more integrated industry; (2) support tools adapted to the industrial base; (3) a stronger international positioning. The implementation of the PAI is monitored by an inter-ministerial committee that meets every three months, overseeing the accomplishment of initiated projects and execution of agreements between various partners (MCINET, s.a.).

Table 2: Policy measures of the PAI		
Focus	Objective	Measures
Industrial ecosystems	Creation of sector-level industrial clusters	Develop close partnerships between lead-firms and SMEs.
	Expand local content (in French, <i>compensation industrielle</i>)	Increase technology transfer and local value added.
	Support transition from informal to formal economy	Entrepreneurship training, mentoring, networking partnerships, support for investment and shared infrastructure, basic and advanced computerisation.
	Matching skills to business needs	Implement "career development centres" for the youth; Entrust leading companies with the role of defining and designing training schemes; Provisional training for each ecosystem.
Targeted measures	Support measures for improving SME competitiveness	Support measures for computerisation, product quality, innovation and research tax credits, access to market and financing, productivity enhancement measures.
	Financial intervention tools	Creating the Industrial Development Fund of about EUR 1.8 billion.
	Infrastructure for rent	Creating industrial parks that include a "one-stop-shop", pool of workers, ad hoc services and training packages.
International positioning	Close tracking of FTAs	Carry out impact assessments on FTA and ensure continuity; Measures to protect national industry from unfair competition; Reinforce regulation of imports; Consolidate support actions and export development plans for high-potential sectors.
	Developing a "deal making" culture for FDI	Create a dedicated team to aggressively attract investors; Capitalise on intermediation professionals (merchant banks and specialised experts).
	Extend cooperation with African countries by establishing mutually beneficial partnerships	Establish an international investment fund; Build on Casablanca Finance City, an economic and financial hub, a bridging platform between the north and south; Coordinate the joint intervention of operators; Organise outreach events.
Source: Based on information provided on the website of the Ministry of Industry (MCINET, s.a)		

4.2 Policy interventions for the automotive sector and main actors

To better understand how Morocco's industrial development strategy was applied to the automotive sector, we discuss below in more detail the specific sectoral-level policies and the stakeholders involved in policy-making and implementation.

4.2.1 Policies geared towards the automotive sector

Regarding the automotive industry, the PNEI pursued three goals in order to further develop the sector. Firstly, second- and third-tier suppliers should gain a stronger presence among the companies active in the country; secondly, capacities for specialised assembly such as trucks should be developed; thirdly, another large international manufacturer should be attracted to settle in Morocco in addition to Renault.

To realise those three goals, tailored incentives were offered to different stakeholders, that is, suppliers, manufacturers and specialised manufacturers, along with measures aimed at improving the overall business environment (see Table 3).

Objective	Measures
Attracting more suppliers	<ul style="list-style-type: none"> – Support up to 10% of the investment amount for sites established within a free-zone (detailed eligibility criteria specified in the Hassan II fund agreement); – Support employee training and develop a training programme in accordance with the requirements of the automotive sector; – Real estate offer according to international standards.
Attracting more manufacturers	<ul style="list-style-type: none"> – Attractive and competitive incentive framework for suppliers (not further specified); – Approx. 300 ha of land for production facilities; – High-level logistics (not further specified); – High-quality training programmes.
Attracting specialised manufacturers	<ul style="list-style-type: none"> – Support up to 10% of the investment amount for sites established within a free-zone (detailed eligibility criteria specified in the Hassan II fund agreement); – Support employee training and develop a training programme in accordance with the requirements of the automotive sector; – Real estate offer according to international standards.
Improving general conditions	<ul style="list-style-type: none"> – Training programme tailored towards the automotive sector including four profiles: management, engineers, technicians, operators; – Support for marketing and public relations; – Creation of Integrated Industrial Platforms in Tangier and Kenitra, offering general services such as telecoms, banking and health care services, advanced logistical and engineering services, and training programmes.
Source: Royaume du Maroc (2008)	

For suppliers as well as specialised manufacturers, these incentives included covering 10 per cent of the investment if the company establishes a site within one of the free-zones, support of training measures and the development of sector-specific training programmes, as well as offering appropriate real estate within the free-zones. Furthermore, the state committed itself to raising awareness of the companies' needs for financing within the banking sector and ensuring that appropriate offers are available. The incentives for manufacturers are less clearly

stated – possibly as they are subject to individual negotiations. Nevertheless, financial support, provision of land, logistical capacities, training and attractive offers for suppliers have been specifically mentioned in our interviews. These stakeholder-specific measures were complemented by a training programme tailored to the needs of the firms active in the automotive sector and were targeted to different qualification levels of employees. Furthermore, two sectoral hubs or free-zones (export-processing free-zones) in Tangier and Kenitra were developed, and the state committed to engage in different marketing activities to attract international companies (Royaume du Maroc, 2008, pp. 21-25). In these free-zones, investors benefit from several advantages, such as exemption from VAT and customs duties, specific taxation frameworks, simplified customs procedures, no constraints on capital, as well as repatriation of capital and profits (Wolf et al., 2017, p. 77).

To achieve and further develop the goals, which were already set within the framework of the PNEI, the PAI takes into account the specifics of the automotive sector and targets companies on a more differentiated level (see Table 4).

Table 4: Objectives of the PAI for the automotive sector	
Objective	Measures
<ul style="list-style-type: none"> – Attract more international manufacturers – Develop Morocco into a major sourcing base for Europe – Expand the local value chain/ further integration 	<ul style="list-style-type: none"> – Creation of ecosystems consisting of certain sub-sectors, led/organised by “locomotives”, i.e., a major company of the sub-sector that can identify needs and foster their development – Specific financial incentives for suppliers of the different ecosystems (subsidies, tax exemptions, customs benefits, financial support for training)
<ul style="list-style-type: none"> – Improve logistical efficiency 	<ul style="list-style-type: none"> – Facilitated access to finance
<ul style="list-style-type: none"> – Development of local expertise 	<ul style="list-style-type: none"> – Training programmes according to the needs of the sector
Source: AMICA (2015)	

As mentioned earlier, a novelty that the PAI brings is the concept of industrial ecosystems, which are specific sub-sectors of an industry that are to be supported (due to their perceived competitive potential) and further developed. In the case of the automotive industry, seven ecosystems have been identified: wiring; metalworking and stamping; interior and seating; batteries; heavy goods vehicles and industrial bodywork; motors and transmission (which was still in a planning stage at the time of research); and one ecosystem dedicated to Renault as well as one to Peugeot. Within each of these ecosystems, a major supplier company is present that has assumed the role of ecosystem leader and is supposed to take an active part in its development.³¹ Furthermore, for every ecosystem, a specific set of subsidies has been allocated that supports the investments of companies with transfers of 20-30 per cent of the investment amount. This detailed differentiation (into sub-sectors) aims at attracting (and supporting) specifically those companies that perform activities identified as still missing in the market. The whole concept is in addition to measures concerning access to finance and training. These include, for example, the coverage of up to EUR 3,000 in training costs for

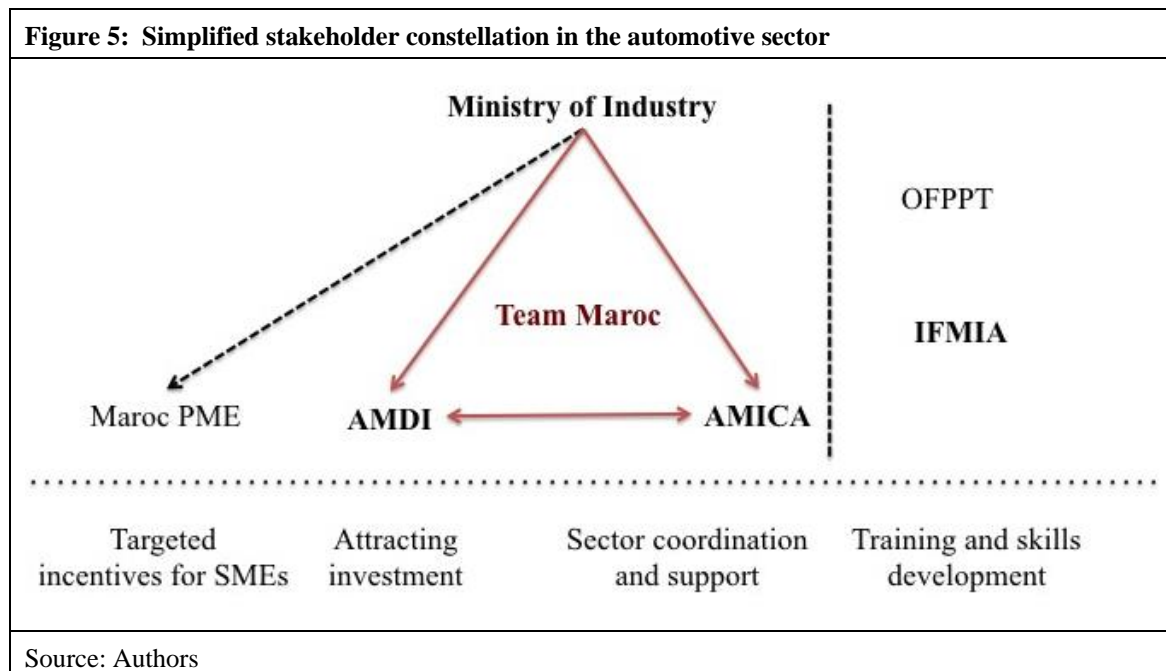
31 For further research, it would be interesting to examine the motivations of these companies for assuming the role of ecosystem leaders, as well as whether this decision was influenced by the government, industry association or the firm, and if there were multiple companies interested in the position and how the leader was chosen.

newly hired employees and those who are in their first three years of working at the company – depending on their qualification levels – and the possibility to use the investment subsidy as a deposit for an investment loan (AMICA, 2015).

The described measures are the means through which the strategic development of the sector and the industry-specific goals that have been set for 2020 shall be realised. According to the strategy, the development priorities for the sector, which at the same time reflect its needs, are, firstly, to further develop the supplier base – especially with regards to the second- and third-tier suppliers for deeper sectoral integration – and secondly to attract new suppliers and automobile manufacturers to Morocco. Ultimately, the PAI’s success will be measured against the three targets that have been set for the industry: (1) expanding the production capacity from 400,000 (2013) to 1,000,000 vehicles, (2) increasing the rate of local integration³² from 40 per cent (2013) to 80 per cent, (3) and raising the employment numbers generated by the automotive sector from 75,000 (2013) to 165,000 jobs (AMICA, 2015). Progress with the implementation of the industrial development strategy are being reviewed and discussed annually within the framework of the “Congress of the Moroccan Industry” (Assises d’Industrie du Maroc), a cross-stakeholder forum/conference for the strategic industrial sectors in Morocco.

4.2.2 Main actors in the automotive sector

The stakeholders involved in supporting the development of the automotive sector are illustrated in Figure 5. In the following, we discuss the role that each of them plays in the decision-making process.



32 Meaning the percentage of inputs that need to be produced by companies established under Moroccan law (see Section 5.2 for a more detailed discussion).

The main actor responsible for the development and execution of Morocco's industrial policy is the Ministry of Industry, Trade, Investment and Digital Economy (Ministère de l'Industrie, du Commerce, de l'Investissement et de l'Economie Numérique – hereafter Ministry of Industry). Although the Ministry of Industry takes the final decisions, other private and governmental institutions are included in the decision-making process. Especially within recent years, the approach has gradually changed from purely state-led initiatives (based exclusively on top-down decision-making) to public-private cooperation between the Ministry of Industry and industry representatives, which takes the role of the market more into account.³³

A stakeholder that belongs to the network of the Ministry of Industry is the National Agency for the Promotion of Small and Medium Enterprises (ANPME), now Maroc PME. Maroc PME has been operational since 2004, when it began its first programme in cooperation with the European Commission (all of its operations were taken over by the Moroccan government starting in 2008). The institution's purpose is to support the development of Moroccan SMEs with a maximum turnover of EUR 18.1 million³⁴ before taxes. In the period from 2010 to 2014, technical assistance measures (such as for IT, management and finance) were supplemented with financial support for investment projects. In total, the programme aimed at distributing up to EUR 453,309³⁵ per year among 50 companies. At the end of the period, about 1,500 companies had benefitted from these measures. In 2015 the measures were expanded to also support investments in innovation. The programmes are funded financially by the Support Fund for Enterprise Competitiveness (Fond d'Appui à la Compétitivité des Entreprises), which is financed through the Industrial Development Fund (Fond de Développement Industriel).³⁶ Although the automotive sector is eligible for those measures, only about 8-10 per cent of the institution's projects benefitted companies in this sector, mainly due to eligibility criteria regarding firm size.³⁷

A major role, especially with regards to strategy implementation, is attributed to the Moroccan Investment Development Agency (AMDI), or as it is called now Invest in Morocco. The institution is organisationally a part of the Ministry of Industry and was founded to support the resources of the department responsible for industrial development. Its main task is to attract international companies, serve as their point of contact and support them if they want to settle in Morocco.

Accounting for the increased influence of private actors, the Ministry of Industry has also established close collaboration with the core stakeholders in the automotive sector: the Moroccan Industry Association for Automotive Producers (AMICA). Through AMICA, the automotive industry has committed itself to the Ministry of Industry's strategy by signing so-called performance contracts, which are contracts that relate to the creation of the already described ecosystems specified in the PAI. AMICA further supports policy-makers with its

33 Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat; Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier.

34 Equivalent to MAD 200 million.

35 Equivalent to MAD 5 million.

36 Interview #19 with Maroc PME on 31 May 2016 in Rabat.

37 Interview #19 with Maroc PME on 31 May 2016 in Rabat.

knowledge of the sector (for instance, by playing an important role in the definition of sectoral targets).³⁸ The cooperation between the Ministry of Industry, Invest in Morocco, AMICA and the private sector has become institutionalised to an extent where it is also referred to as “Team Maroc”.³⁹ An example of how Team Maroc works is illustrative. After the arrival of Renault, AMICA analysed the cost structures within the automotive sector to identify weaknesses that need to be addressed to further develop the industry and attract large international companies. Four key areas were identified: (1) development of the supplier base, (2) development of competences, (3) optimisation of logistical costs and delays and (4) financing of investments for the automotive industry. For each area, a commission within the association was subsequently created to advance the respective issue. Additionally, one more commission for strategy and monitoring was implemented. All members of these commissions are member companies of AMICA. Input from these commissions feeds into policy discussions with the Ministry of Industry. This cooperation is a step towards establishing a permanent channel of communication between industry and governmental stakeholders, and thus an integrative approach to policy-making. Nevertheless, it should also be highlighted that tensions between their goals might arise, which create opportunities for the government to avoid political capture.

The positive influence of AMICA on the development of the sector has been explicitly mentioned and emphasised during interviews conducted for this paper.⁴⁰ The association also takes an active role in the area of training and skills development, since it manages two of the three existing training institutes (professional formation) for the automotive sector, the Institutes for Vocational Training for the Automotive Sector (IFMIA) (IFMIA Casablanca, Kenitra, Tanger Free Zone), and is their link to the companies in the sector.⁴¹

Skilled labour was often emphasised as an important asset in the Moroccan market, especially by international – but also Moroccan – companies. The qualification of the workforce was mentioned among the top three reasons for choosing Morocco whenever this specific question was asked. No interview partner reported ever having had difficulties finding qualified employees, although it was mentioned that competition is noticeable in Tangier. Nevertheless, companies stated that complementary in-house training is usually necessary because of specific requirements. The companies’ satisfaction may also be a major reason behind a positive finding: all interviewed companies stated that 90-100 per cent of their employees are Moroccan; even a representative of a manufacturer confirmed that not more than a dozen internationals remained within their factories.⁴²

38 In 2014 a specialised department (Structure d’Animation) was established within AMICA, consisting of two senior consultants and four junior consultants, to contribute towards the successful implementation of PAI (Interviews #1, #12, #16).

39 Interview #7 with Invest in Morocco on 19 May 2016 in Rabat; Interview #16 with an industry institution on 25 May 2016 in Tangier; Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #12 with a supplier/industry institution on 24 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier.

40 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #5 with IFMIA Kenitra on 18 May 2016 in Kenitra; Interview #13 with a supplier on 25 May 2016 in Tangier.

41 Interview #3 with IFMIA Casablanca on 15 May 2016 in Casablanca; Interview #16 with an industry institution on 25 May 2016 in Tangier.

42 Interesting to find out would be how skill-intensive the jobs covered by Moroccan workers are in comparison to those of the foreigners (or the types of activities performed by local and foreign workers).

This positive perception of the availability and skill levels of labourers in the market has evolved in recent years and been linked to deliberate political measures.⁴³ The IFMIA professional training centres, created in 2011 (AMICA, 2016a) (owned by the state but managed by private entities), were specifically aimed at satisfying the skill-needs of the companies in the automotive sector. These centres support the existing system – in which vocational training is provided by the Office for Professional Formation and Employment Promotion (OFPPT, s.a.)⁴⁴ – but also compete with it. As was explained by representatives of two IFMIA centres (IFMIA Tanger-Med (TM) and IFMIA SA – parent company of the other IFMIA centres, as explained below), in the past, education programmes were mainly based on creating volume, not quality, leading to a market mismatch.

Therefore, the IFMIA centres, which are meant to address this market mismatch problem, have become integral actors of the automotive sector. In the case of IFMIA TM, the managing entity is Renault, whereas the other two (Casablanca and Kenitra) are managed by AMICA through the company IFMIA SA. Although the types of training offered by the two institutes differ in the details (e.g. the content of the trainings), they can be broadly differentiated into two types: apprenticeships with practical elements, which are aimed directly at the workforce,⁴⁵ and trainings that are conducted with companies upon their request. The respective modules for both types have been developed in cooperation with the automotive industry and can be adapted if their requirements change. The success of this model is reflected in the amount of applications for the apprenticeship programmes, which regularly exceed the available places, as well as the high hiring rate that is reported by the IFMIA.

However, the output that can be generated by the institutes is somewhat limited: the different apprenticeship trainings have a capacity of 80-1,300 persons per year, depending on the type and which IFMIA centre is attended. The trainings that are conducted by the IFMIA are supported financially by the state in different ways: for a company that wants to train its staff, a reimbursement of costs of up to EUR 6,000 per person through the Hassan II fund is possible during the first year of employment, and a reduced amount also for the second and third years with the company. Afterwards, however, trainings can still be financially supported through a different procedure,⁴⁶ which was reported as being bureaucratic and time-consuming.⁴⁷

43 In several interviews, the interviewees stated that some years ago there were still issues with regard to finding qualified labour, but that this was not the case anymore.

44 Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier.

45 As an example, IFMIA Casablanca offers two tracks: one is a two-year programme training technicians that includes practical and theoretical elements and addresses students who have graduated from high school; the other one is a three to nine-month training course as operator (i.e. logistics, machines) for people who do not obtain a high school diploma and/or come from another profession.

46 Funding can under certain conditions also be obtained through a system that is financed by a vocational training tax that companies have to pay and is managed by the OFPPT.

47 Interview #3 with IFMIA Casablanca on 15 May 2016 in Casablanca; Interview #5 with IFMIA Kenitra on 18 May 2016 in Kenitra; Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat; Interview #9 with IFMIA Casablanca on 20 May 2016 in Casablanca; Interview #12 with a supplier/industry institution on 24 May 2016 in Tangier; Interview #14 with a manufacturer on 25 May 2016 in Tangier; Interview #15 with IFMIA TM on 25 May 2016 in Tangier.

5 Challenges in the Moroccan automotive sector

As Morocco has already managed to attract large investments into the sector, the challenges ahead lie in achieving higher levels of local integration, scaling-up industrial activities and upgrading across the value chain. As such, we focus specifically on these aspects here. Our analysis shows that Renault played a major role not only in drawing additional suppliers to the country, but also in setting standards and developing skills through training. At the same time, we find evidence that standards and requirements pose a major obstacle for local companies, whose integration into the automotive value chain remains rather weak. Although conclusive data is not available, other statistics indicate that only a handful of local companies are active in the market, spearheaded by the few local enterprises that managed to establish direct business relations with Renault.

As one supplier said: “The automotive sector [...] developed in a very fast manner, especially during the last five years. What triggered it was the arrival of Renault.”⁴⁸ Prior to Renault’s investments, it was the state that successfully negotiated the terms, provided support and created the policy framework, eventually leading to the manufacturer’s settlement and the strong sectoral growth.⁴⁹ More recently, however, the close collaboration among various stakeholders in Morocco, previously described as Team Maroc, gave companies in this sector direct influence on policy design. The concerted efforts of these stakeholders in scaling-up domestic production, achieving higher levels of local integration, and building up capabilities through knowledge transfer and targeted training programmes contributed significantly to the current achievements in the sector, in spite of the lower levels of local integration and technology transfer. As this analysis shows, its future development depends on intensifying these activities to capitalise on these early successes and to face global competition.

5.1 Local integration and economies of scale

The large range of government incentives – ranging from the provision of land to fiscal advantages targeting international investors – contributed towards making Morocco an industry platform.⁵⁰ More recently, industrial policy is focused on deepening the sector with targeted support for the four ecosystems. Those ecosystems were developed in close collaboration of the government with AMICA and industry representatives; the private sector continues to play an important role in their further development through specific working groups active in the different ecosystems (as discussed in Section 4).

Deepening the local integration of the industry serves the interests of both the state and the industry stakeholders. It allows the government to help international companies commit to the country, at least to a certain extent, through closer and more extensive local networks, allowing for better prices and logistical advantages. From the perspective of the international companies, local integration improves the possibilities for local sourcing and

48 Interview #1 with a supplier on 12 May 2016 in Casablanca.

49 Interview #10 with a manufacturer on 22 May 2016 in Casablanca; Interview #16 with an industry institution on 25 May 2016 in Tangier.

50 Interview #18 with the Ministry of Foreign Trade on 27 May 2016 in Rabat; Interview #14 with a manufacturer on 25 May 2016 in Tangier.

scale-economies, which in turn has a positive influence on the cost structures and competitiveness of suppliers because logistical expenditures can be reduced.⁵¹ One of the interviewees reported that his company benefited from being part of the battery ecosystem, due to specific regulation measures that limited the export of raw materials and, thus, facilitated its local valorisation and improved his access to inputs. He stated this as being the second most influential factor for the growth of his business.⁵² Another example can be found in the wiring ecosystem, where most companies in the market are active in the area of assembly. To improve the local provisioning of parts and increase the anchoring of those manufacturers in the industry, the government attracted a complementary company producing connectors to settle in Morocco – a win for both sides.⁵³

Before the arrival of Renault, there were only a few sub-sectors present in Morocco that could provide a viable source of experience and knowledge.⁵⁴ Most dominant among them was the wiring sector, followed by the sectors of seating, glass and window panes, and exhaust pipes.⁵⁵ However, even within those sub-sectors, integration remained shallow and inputs were mainly imported.⁵⁶ Despite the low levels of local diversification at that time, the wiring and seating sub-sectors have maintained their significance in the market until today, comprising two of the three largest export items within the automotive sector (DEPF, 2015, pp. 10-11). They also represent two of the seven ecosystems. Furthermore, some local companies were active in the aftermarket rather than production, which is marked by lower product requirements.⁵⁷

The key statistic that is available to evaluate the role of Moroccan companies is the rate of local integration. Already in 2003, when Renault became majority shareholder of SOMACA, the manufacturer and the Moroccan government agreed on a rate of local integration, that is, a percentage of total inputs that needs to be produced locally (35 per cent), with the objective of raising this to 70 per cent over the long term.⁵⁸ The state and Renault have upheld their agreement on achieving a certain rate of integration until today, although the current targeted rate for the medium-term ranges slightly lower, between 60 and 65 per cent. The current rate varies, depending on the source, but it is generally agreed to revolve around 40 per cent.⁵⁹

51 Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier; Interview #14 with a manufacturer on 25 May 2016 in Tangier.

52 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #20 with a supplier on 3 June 2016 in Casablanca.

53 Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat.

54 This is primarily because SOMACA was only assembling vehicles based on imports and no vertical business environment was developed at that time. Furthermore, the volumes produced by SOMACA were described as being too small to attract significant investment in the sector – investment that could have enhanced its broadening and depth (Interview #7 with Invest in Morocco on 19 May 2016 in Rabat).

55 Interviews #7, #8, #10, #16, #18.

56 Interview #11.

57 Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier; Interview #20 with a supplier on 3 June 2016 in Casablanca.

58 Interview #9 with IFMIA Casablanca on 20 May 2016 in Casablanca.

59 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat; Interview #7 with Invest in Morocco on 19 May 2016 in Rabat; Interview #8 with a German-Moroccan bilateral cooperation institution on 20 May 2016 in Casablanca; Interview #9 with IFMIA Casablanca on 20 May 2016 in Casablanca; Interview #10 with a manufacturer on 22 May

Although the rate of local integration provides a means to evaluate local participation, its explanatory power is somewhat limited, as will be shown.

The compilation and publication of statistical data – and, in this framework, also the publication of different official studies – are handled by the Office des Changes, which hence, plays an important role in monitoring policy goals. For the general collection of data, the Office des Changes cooperates with the Ministry of Industry as well as customs officials and banks. In the case of local integration, however, data that is solely based on customs is not sufficient, since the movement of goods in and out of the free-zones is not controlled in the same way as outside. Additionally, customs data, by its nature, only accounts for exports and imports, thus allowing no deeper insights into the patterns within the industry. Therefore, the Office the Changes cooperates directly with companies of the industry, and especially Renault, to obtain data and determine the rate of local integration.⁶⁰ The definition of a local company – on which this statistic is based – is its legal form. This implies that, as soon as a company is registered under Moroccan law, it is considered local, and no further difference is made between international origin and Moroccan origin.^{61 62}

The definition and framework of the rate of local integration create two issues, which limit its explanatory power regarding the evaluation of the role of Moroccan companies within the automotive industry. Firstly, since the definition of a local company is based on legal status only, the 40 per cent rate of local integration does not indicate the number of Moroccan companies actually involved. It needs to be highlighted at this point that, although this definition creates an issue for the present analysis, it cannot be deemed problematic per se, since the creation of local subsidiaries by international companies may be a strategic goal itself, which then needs to be reflected in such a statistic. The second issue that arises is that – although it was only implicitly mentioned in most interviews – the agreement of attaining a certain rate of local integration seems to only pertain to Renault. This is also confirmed by the high amount of imported inputs of the suppliers in the sample.⁶³ This means that the rate only reflects Renault's level of integration, whereas the suppliers may or may not be well integrated. Furthermore, the share of Moroccan companies reflected in the statistic would only include those that deliver directly to Renault, that is, first-tier suppliers. However, it would be assumed that companies which have just started or are in the process of adapting to international standards would rather be found among the second- and third-tier suppliers, or even the fourth-tier. Thus, the real depth of the industry and the real share of Moroccan companies remain unknown.

2016 in Casablanca; Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier; Interview #14 with a manufacturer on 25 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier; Interview #18 with the Ministry of Foreign Trade on 27 May 2016 in Rabat.

60 Interview #17 with Office des Changes on 26 May 2016 in Rabat; Interview #18 with the Ministry of Foreign Trade on 27 May 2016 in Rabat.

61 Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat.

62 Throughout the remainder of this thesis, however, the term “Moroccan company” refers to a company of Moroccan origin only.

63 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #2 with a supplier on 14 May 2016 in Casablanca; Interview #9 with IFMIA Casablanca on 20 May 2016 in Casablanca; Interview #13 with a supplier on 25 May 2016 in Tangier; Interview #20 with a supplier on 3 June 2016 in Casablanca.

As a large number of international suppliers have, in fact, founded local subsidiaries, the rate of local integration clearly implies that the share of Moroccan companies most probably lies below 40 per cent. This is supported by the statement of one interviewee, who said that “among the 150, there are only a dozen [...] we are at less than 20 [companies]”,⁶⁴ implying that the share is even considerably lower. After being asked for specific examples of Moroccan companies that are still in the industry, nine other companies were named during the interview, which underlines this assessment.

Although no company pertaining to one of the lower tiers could be interviewed, the obtained information provides some indications as to its answer. When they were asked about how they source their inputs, all companies, except one, stated that they import 80-100 per cent of their inputs. In the case of the one exception, some inputs could be obtained locally, but also this company affirmed that their suppliers are predominantly foreign.⁶⁵ Hence, there are also no implications of a broad integration or a broad upgrading movement within the lower tiers, even if this has been one of the main objectives of industrial policy. AMICA (2016b) as well as some interview partners have identified the lack of economic investment and even the complete absence of certain lines of business in these lower parts of the value chain as being some of the main remaining weaknesses of the automotive industry in Morocco.⁶⁶

5.2 Knowledge transfer, learning and local capabilities

Regarding the previously discussed integration of Moroccan companies, it should be stressed that the sectoral policy was intended to build up the automotive industry by attracting MNCs to settle in the country. This is unequivocally reflected in the already described set of measures included in the PNEI and the PAI; although they do not exclude Moroccan companies, they also do not explicitly target them.⁶⁷ Thus, no clear strategy or framework that is geared towards the deliberate inclusion of Moroccan companies could be identified during the research. It seemed rather that this topic was on the agenda to be more prominently included in the future, with the target of deepening sectoral integration. However, the success of Morocco's strategy in creating an automotive industry that is sustainably embedded in the country's economy will ultimately depend on the strength of linkages between lead-firms and local companies, the degree of knowledge transfer and spillovers to the broader economy. All these aspects would contribute to subsequent industrial upgrading.

Different types of collaboration that would be beneficial for upgrading were referred to by interviewees, such as joint ventures between Moroccan and international companies. Only

64 Ibid.

65 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #2 with a supplier on 14 May 2016 in Casablanca; Interview #20 with a supplier on 3 June 2016 in Casablanca.

66 Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat; Interview #7 with Invest in Morocco on 19 May 2016 in Rabat; Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier.

67 Interview #14 with a manufacturer on 25 May 2016 in Tangier.

up to four joint ventures and two other cooperations were, however, mentioned.⁶⁸ Yet, very little detail was given, and it was not clear if, and how, the policy framework had influenced these joint ventures.⁶⁹ Another mentioned objective was the creation of synergies between different sectors. Three large projects have been mentioned in this context. The first one concerns the recycling of metal and battery waste; secondly, Dolidol, a company that originally manufactured bed linens, successfully entered the automotive industry, providing it with felt⁷⁰; and thirdly, the recent case of Maghreb Steel, a metal producer that shall provide suppliers with local inputs that would otherwise have to be imported from Europe.⁷¹ These examples suggest opportunities for expanding the local supplier base in Morocco and for spillover effects across the broader economy.

With regards to the general development of the Moroccan automotive industry, Renault has also played a pivotal role in transferring knowledge and learning within the sector. Different stakeholders have mentioned this aspect and highlighted the manufacturer's influence when it comes to attracting international suppliers⁷² – although not all companies entered the market just because of Renault⁷³ – and deepening local integration (as defined by the government), on the one hand, but also its efforts regarding training. One example is the opening of its factory in Tangier, to which Renault sent several hundred trainers to Morocco, in addition to standard training procedures that exist within the company. In addition to that, the company took a major lead in the development of IFMIA TM.⁷⁴

With regards to its suppliers, of which Renault had 24 in Morocco in 2015 (Benabdejilil et al., 2016, p. 13), the manufacturer demands certain standards and certifications: these include standard certifications such as ISO TS and ISO 14001, as well as the manufacturer's internal ratings system, which is based on specific criteria. If a company wants to be accepted as a supplier for Renault, it must undergo a thorough assessment process. To verify adherence with the demanded standards after a company has become a supplier, Renault conducts regular audits. However, the manufacturer also closely monitors all suppliers (regardless if

68 Official data on the ownership structure of companies active in this sector is difficult to obtain, and therefore this remains a task for future research. Whether local contact is produced with foreign or national ownership is an important question that deserves further exploration.

69 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat; Interview #7 with Invest in Morocco on 19 May 2016 in Rabat; Interview #10 with a manufacturer on 22 May 2016 in Casablanca; Interview #14 with a manufacturer on 25 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier; Interview #20 with a supplier on 3 June 2016 in Casablanca.

70 Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat.

71 Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat; Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier; Interview #20 with a supplier on 3 June 2016 in Casablanca.

72 Interview #11 with a supplier/industry institution on 23 May 2016 in Tangier; Interview #12 with a supplier/industry institution on 24 May 2016 in Tangier; Interview #13 with a supplier on 25 May 2016 in Tangier; Interview #16 with an industry institution on 25 May 2016 in Tangier.

73 Interview #2 with a supplier on 14 May 2016 in Casablanca.

74 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #6 with the Ministry of Industry on 19 May 2016 in Rabat; Interview #7 with Invest in Morocco on 19 May 2016 in Rabat; Interview #10 with a manufacturer on 22 May 2016 in Casablanca; Interview #15 with IFMIA TM on 25 May 2016 in Tangier.

they are local or international) in their development process, offers assistance and grants them one year to obtain the required certifications after they have already started supplying.⁷⁵ This close cooperation is in line with the abovementioned structural changes within the automotive industry. The nature of the relationship between manufacturer and suppliers was also confirmed by other interview partners; they stated that if a supplier encounters any issues in satisfying the demands, both companies work together to find a solution.⁷⁶ Nevertheless, the selection process is very demanding, and since all companies – international as well as Moroccan – must fulfil the same requirements, they were referred to, even by the manufacturer itself, as one of the main factors preventing Moroccan companies from reaching this level of the value chain.⁷⁷

A second challenge that was brought up is that Renault regularly demands cost reductions of around 5 per cent from its suppliers. Although international suppliers know how and where to reduce costs, it was mentioned that Moroccan companies struggle to comply with that requirement. Furthermore, this issue also affects lower tiers, since a first-tier supplier will usually pass on the demand to reduce prices to its own suppliers, that is, second- and third-tier.⁷⁸ This challenge seems to be characteristic of clusters of MNCs in developing countries that operate as enclaves largely delinked from the local economy (Altenburg & Meyer-Stamer, 1999), where high barriers to entry for suppliers persist. Support programmes would be needed to enable a number of potential suppliers to attain the high standards demanded by MNCs (in this case Renault and Peugeot), as well as stronger knowledge spillovers.

It is not surprising that only a few Moroccan companies could be found to have so far succeeded in satisfying the demanded standards. However, the interviewed ones reported that, although the process of becoming one of the official suppliers was challenging, they were indeed followed very closely by the manufacturer, which provided high levels of expertise, especially in the field of management. For one of the companies, it was no less than the product demands of Renault that triggered major development processes within the company, as it was the manufacturer that specifically asked the supplier to enter the field of stamping. It was also mentioned, though, that the manufacturer's capabilities – when it comes to the knowledge transfer of technology – might be somewhat limited, since a large amount of this information lies with the major suppliers (this was not the case for the product of the interviewee's company). In light of the structural shifts that have occurred in the automotive industry within the last 20 years, this argument seems indeed reasonable; however, in our interviews, it was not confirmed by the manufacturer.⁷⁹

Interviewees also stated that it was especially difficult for Moroccan companies to satisfy standards with regards to quality. This relates directly to the technology they work with, on

75 Interview #14 with a manufacturer on 25 May 2016 in Tangier.

76 Interview #2 with a supplier on 14 May 2016 in Casablanca; Interview #10 with a manufacturer on 22 May 2016 in Casablanca.

77 Interview #10 with a manufacturer on 22 May 2016 in Casablanca; Interview #14 with a manufacturer on 25 May 2016 in Tangier; Interview #18 with the Ministry of Foreign Trade on 27 May 2016 in Rabat.

78 Interview #14 with a manufacturer on 25 May 2016 in Tangier.

79 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #20 with a supplier on 3 June 2016 in Casablanca.

the one hand, and to the qualification of their workforce, on the other hand.⁸⁰ Furthermore, it was mentioned that keeping up with international cost and price levels is another difficulty, which may also stem from missing economies of scale.⁸¹ These statements are in line with the findings described in relation to Renault. It also complements the finding that suppliers currently import a large percentage of inputs.⁸²

Moroccan companies within the sample, which succeeded in satisfying Renault's standards and requirements, did invest in the qualifications of their workforce through internal trainings. The interview partners also stated to have engaged in R&D to further improve their business.⁸³ However, other research findings indicate that those companies were rather the exception, and that investments in training and research seem to be lacking among Moroccan companies. When specifically asked about the share of Moroccan companies, representatives from IFMIA stated that it was no more than approximately 10-15 per cent of all companies, or even less.

Possible reasons that were mentioned is the lack of awareness of Moroccan companies regarding the possibilities for receiving funding for trainings. The described funding mechanisms are available to all companies in the strategic sectors of Morocco, although the IFMIA has no mission to specifically target Moroccan companies.⁸⁴ Similarly, it was mentioned that especially international companies hire large numbers of new staff and, therefore, have employees who are within their first three years of working for the company. Although another funding mechanism for the training of employees who have been with the company for a longer time exists, Moroccan companies have reportedly had bad experiences and tried to avoid the bureaucratic process.⁸⁵ Apart from that, it was further stated by some interview partners that Moroccan companies generally lack the culture of training employees and engaging in apprenticeships, given that there is no guarantee that the employee will stay in the company.⁸⁶

The creation of clusters within the industry – a measure considered important by the Ministry of Industry – was not perceived by the interviewees to have been effective. Some of them confirmed that they do cooperate with other companies but that – apart from cooperation within AMICA or business relationships, which are both not limited to the respective cluster – the form of contact was generally described to be of an informal

80 Interview #7 with Invest in Morocco on 19 May 2016 in Rabat; Interview #9 with IFMIA Casablanca on 20 May 2016 in Casablanca; Interview #10 with a manufacturer on 22 May 2016 in Casablanca; Interview #15 with IFMIA TM on 25 May 2016 in Tangier; Interview #18 with the Ministry of Foreign Trade on 27 May 2016 in Rabat; Interview #19 with Maroc PME on 31 May 2016 in Rabat.

81 Interview #14 with a manufacturer on 25 May 2016 in Tangier.

82 A full understanding of these difficulties faced by local companies would require more insights into the learning and development processes that took place within these companies over the years.

83 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #20 with a supplier on 3 June 2016 in Casablanca.

84 Interview #9 with IFMIA Casablanca on 20 May 2016 in Casablanca.

85 Ibid.

86 Interview #4 with a German-Moroccan bilateral cooperation institution on 20 May 2016 in Rabat; Interview #9 with IFMIA Casablanca on 20 May 2016 in Casablanca; Interview #15 with IFMIA TM on 25 May 2016 in Tangier.

nature.⁸⁷ Only in one case was it explicitly mentioned that two companies from the same sub-sector cooperate with regards to a shared sourcing of their inputs.⁸⁸ A possible reason for this could be that, on the one hand, clustering in the cases of Kenitra and Tangier has been created through the established free-zones, which are mainly of interest to international companies rather than Moroccan ones. On the other hand, Casablanca and Kenitra are geographically rather close to each other, so that from an interactional point of view, they probably should not be regarded separately, as the movement of goods, people and/or information from one to the other can quickly be realised.

6 Conclusions and policy implications

Morocco succeeded in developing the automotive industry while most peer countries in the MENA region have struggled to build up a competitive sector and are confronted with major economic and political instability. As we find, the success of this industry is partly due to a unique tendency (relative to the region) to move away from a top-down decision-making process and towards a more collaborative and pragmatic approach of industrial policy-making, led jointly by the government, the private sector, and training and investment promotion agencies. However, more research is needed to examine the specific processes, links and dynamics across policies and stakeholders, also in reference to other countries in the region. In addition, as Morocco is a constitutional monarchy and the King (the Royal cabinet) is highly influential in policy-making, we recognise the need for a more in-depth analysis of the King's role in the political economy of industrial policy for the automotive sector as well as for other economic sectors.

Our findings, however, allow us to clearly identify the achievements attained so far and the challenges ahead, and to discuss the main policy implications for enabling Morocco's automotive sector to shift to a new level of development by deepening the level of local integration and upgrading capabilities. Below, we briefly summarise these main achievements and remaining challenges, followed by suggested policy recommendations.

6.1 Main achievements

Several outcomes reflect Morocco's current success in the automotive sector: the presence of OEMs and international suppliers, skills development and the co-design of policy interventions by diverse stakeholders.

Successful attraction of OEMs and international suppliers

From 2005 onwards, Morocco's policy has consistently followed the objective of developing the automotive industry into an industrial lead-sector. The turning point was the decision of Renault to set up large manufacturing facilities in Morocco and to gradually

87 Interview #1 with a supplier on 12 May 2016 in Casablanca; Interview #20 with a supplier on 3 June 2016 in Casablanca.

88 Interview #13 with a supplier on 25 May 2016 in Tangier.

scale-up its operations starting in the early 2000s. In this process, jobs have been created, exports and value added increased, and a growing number of international suppliers from Europe, North Africa and Asia have entered the automotive sector.⁸⁹ The government's efforts to attract other globally competitive OEMs – beyond Renault – have also paid off, and thus competitive dynamics in the sector have been intensified.

Development of local capabilities

Although limited, evidence of upgrading along the supply chain does exist, but more research is needed to measure these effects more precisely.⁹⁰ These effects are widely attributed to both Renault's active role in upgrading the capabilities of local suppliers (as discussed in Section 5.2) and to AMICA's effort to target training programmes to the needs of the private sector. Thus, although Morocco's education system suffers from major shortcomings, firms in the automotive sector seem to be generally satisfied with the availability of skilled workers.

Co-design and implementation of policies

Policy design played an important role for creating the right framework conditions. Specifically, the targeting of support measures for the private sector has come about as the result of close and pragmatic coordination between the Ministry of Industry, the OEM (Renault), AMICA, training agencies and lead-suppliers in the sector. This so-called coalition of stakeholders, aimed at achieving higher levels of industrial upgrading and improving competitiveness, appears innovative and progressive relative to Morocco's peers in the MENA region. It also points towards a shift of policy-making in the direction of Evans' (1995) concept of "embedded autonomy" and away from collusive state–business relations. Again, further research is needed to explore the specific mechanisms of such cooperation, how risks of political capture are handled and the extent to which such an approach is also being applied in other strategic industrial sectors.

6.2 Remaining challenges

In spite of these achievements, important challenges remain, especially with relation to deepening local integration, intensifying the levels of technology and knowledge transfer, and diversifying export markets.

Increasing local integration

As our analysis shows, the level of local integration has been below the initial objective (40 per cent or less, as compared to the long-term target of 70 per cent). As such, the participation of Moroccan SMEs in the automotive supply chain remains limited, mainly

89 This was the result of follow sourcing as well as industrial policy (an indicator for this is that not all suppliers work directly with Renault). However, it is difficult to clearly attribute the contribution of either of them.

90 To contextualise these results, it is important to mention that such outcomes take time and that dynamism in the sector occurred only relatively recently (a bit more than a decade ago) with Renault's sizeable investment.

due to difficulties in satisfying quality standards and keeping up with international cost and price levels (thus also scaling-up production). Future developments will, therefore, determine whether the Moroccan automotive industry remains largely delinked from the local economy, or if it becomes more embedded and linked to it.

Strengthening local capabilities

Training programmes, although assessed to be effective, are limited in terms of capacity (demand is much higher than supply). Meanwhile, the education system still suffers in terms of its practical orientation in engineering studies. The low rate of upgrading among Moroccan SMEs is also the result of a lack of expertise in R&D and design – know-how that would enable the sector to move up the value chain towards more technology-based manufacturing and away from being a low-cost manufacturing hub. The focus on technology acquisition through licensing or joint ventures also appears to be limited.

Addressing these gaps in capabilities is crucial for the future of the Moroccan industry. This is not only because it would enable Morocco to manufacture more technologically sophisticated products; it is also critical in light of current technology-driven, disruptive trends we observe in the automotive sector (e.g. electrification), both in developed but also in emerging countries. If radical changes are to happen in the global automotive industry, countries such as Morocco that are seeking to improve their position in GVCs should actively consider these medium/long-term trends in their industrial policy and capabilities-building efforts. By doing so, they would avoid future losses and misguided incentives.

Increasing export diversification

Furthermore, Morocco's reliance primarily on European export markets increases its vulnerability to changes on the global market. Secondary data shows that the European car market sharply declined between 2007 and 2014 and is only recovering slowly. Thus, Morocco's future success depends on its diversification of export markets to other developing and emerging countries. The African market presents promising opportunities for such expansion, which would ensure economies of scale, given Morocco's small market.

6.3 Policy implications

The main achievements and the challenges faced by the automotive sector in Morocco lead us to policy implications that are relevant for its future development in two areas: the targeting of policy measures, and policy design and implementation.

Targeting of policy measures

The Moroccan policy-makers made specific efforts to identify the needed support measures. However, several gaps remain, in particular with regards to supplier development programmes focused on standardisation and quality improvement; increasing the access to – and the effectiveness of – training programmes; and identifying specific measures to close/reduce gaps in the supply chain (horizontally, such as in suspension systems, lighting systems, powered axles, as well as vertically with regards to second- and third-tier suppliers).

Thus, improved targeting of policy interventions to address these shortcomings should be the focus of industrial policy in the next phase. Measures to further enhance synergies with other sectors in Morocco (such as electronics, textiles and steel, as discussed in Section 5.2.2) should also be prioritised to maximise spillover effects and increase the base of local suppliers. Lastly, policy measures should also be oriented towards addressing current trends in the global automotive industry (as discussed above) by targeting R&D activities for future technologies.

Policy design and implementation

Morocco offers a comprehensive set of incentives and support measures addressing most types of industrial development needs. However, the effectiveness of the “value proposition” depends to a large extent on policy design and implementation (Altenburg & Lütkenhorst, 2015). We argue that two main aspects need to be strengthened in this area: the co-design of policies through stakeholder consultation processes as well as monitoring, experimentation and flexibility in implementation.

Stakeholder consultation processes, such as those pursued by Team Maroc, could be further institutionalised and should become part of a systematic decision-making process. The sequencing of policies to ensure that the objectives stated in the PAI will be achieved also needs to be the result of coordinated exchanges among stakeholders. The current efforts to establish ecosystems that deepen capabilities in existing market segments and identify entry points in missing segments are also positive, but these initiatives need to be intensified.

Monitoring, experimentation and flexibility in policy design and implementation are crucial here. Setting performance standards, learning through trial and error, monitoring and evaluation of progress, and coordination through cross-stakeholder alliances are essential for ensuring that the automotive sector in Morocco evolves in line with changing market conditions and deepens the level of integration locally but also in GVCs. The monitoring and evaluation of the industrial policy strategy at regular intervals (almost on an annual basis since 2000, as part of the Congress on Industrial Development in Morocco) and the revisions made to the industrial development strategy (from PNEI to PAI) contributed towards identifying potential gaps in current performance levels and reflecting on future directions. This process, however, is rather new and not yet highly systematic. The challenges that Morocco faces as a small market and emerging player in the automotive sector are enormous in light of changing global market conditions, increasing levels of electrification in the automotive sector and competitive pressures from other, more established players in the developing and emerging economies. Its reorientation (or diversification) towards export markets in Africa – and its success in adapting to future competitive pressures – calls for Moroccan policy-makers to prioritise long-term strategies that are flexible enough to respond to changing market conditions as well as technology-driven changes in the automotive industry.

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Annex

Table A1: List of interviews			
Number of interview	Stakeholder category	Geographic cluster	Date
#1	Supplier (sector: batteries)	Casablanca	12 May 2016
#2	Supplier (sector: motors)	Casablanca	14 May 2016
#3	Training institution: IFMIA Casablanca	Casablanca	15 May 2016
#4	German-Moroccan bilat. cooperation institution	Rabat	16 May 2016
#5	Training institution: IFMIA Kenitra	Kenitra	18 May 2016
#6	Policy-maker: Ministry of Industry	Rabat	19 May 2016
#7	Policy-maker: Invest in Morocco	Rabat	19 May 2016
#8	German-Moroccan bilat. cooperation institution	Casablanca	20 May 2016
#9	Training institution: IFMIA Casablanca	Casablanca	20 May 2016
#10	Manufacturer	Casablanca	22 May 2016
#11	Industry institution/ supplier (sector: metal processing)	Tanger	23 May 2016
#12	Industry institution/ supplier (sector: seating)	Tanger	24 May 2016
#13	Supplier (sector: plastic processing)	Tanger	25 May 2016
#14	Manufacturer	Tanger	25 May 2016
#15	Training institution: IFMIA TM	Tanger	25 May 2016
#16	Industry institution	Tanger	25 May 2016
#17	Policy-maker: Office des Changes	Rabat	26 May 2016
#18	Policy-maker: Ministry of Foreign Trade	Rabat	27 May 2016
#19	Policy-maker: Maroc PME	Rabat	31 May 2016
#20	Supplier (sector: metal processing)	Casablanca	3 June 2016

Table A2: Characteristics of interviewed suppliers				
Number of interview	Location	Sector	Origin⁹¹	Direct supplier to Renault (first-tier)
#1	Casablanca	Batteries	Moroccan	Yes (in process)
#2	El Jadida	Motors	French	No
#11	Tanger	Metal processing	French	Yes
#12	Tanger	Seating	Spanish	Yes
#13	Tanger	Plastic processing	German	No
#20	Casablanca	Metal processing	Moroccan	Yes
Source: Authors' interview data				

91 As deduced from interviews and official sources, for international suppliers country indicates location of parent group headquarters.

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