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Deindustrialization and growth in MENA countries: A focus on Tunisia

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Abstract - The aim of this paper is to analyze the pattern of deindustrialization in MENA countries, emphasizing its main features and its impact on overall growth, using long time series covering the 1960–2018 period. In light of the increasing importance of services in recent decades, the paper also explores the role of tertiarization, alongside manufacturing, in driving growth. The main results suggest that MENA countries began deindustrializing at low levels of GDP per capita, which is a sign of premature deindustrialization. As a result, they miss key manufacturing benefits and externalities such as technological diffusion, skills development and openness. The results also indicate that manufacturing weight exerts a positive effect on overall growth over the different considered periods in Tunisia, thus confirming its role as an engine of growth. However, this positive impact has declined over time, as manufacturing has been increasingly confined to low-technology, assembly, and outsourcing activities characterized by a lack of sophistication. Furthermore, there is no evidence to consider the service sector, in its current configuration and specialization, as an effective driver of growth and development. Indeed, the increasing weight of services over the last two decades has been primarily driven by low-productivity activities, such as trade (largely informal) and public services, and has relied to a lesser extent on modern, high-productivity activities.

JEL Classification
O11, O14, O4, L6, O55

Key-words
Premature deindustrialization
Structural change
Tertiarization
MENA countries
Growth
Manufacturing sector

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1. INTRODUCTION

In recent decades, MENA countries have experienced a deindustrialization process at low levels of income per capita, characterized by a decline in the share of both industry and manufacturing in value added and employment. This resulted in a delayed structural transformation and failed economic development (Mouelhi and Ghazali, 2020). Intensive competition, the absence of an effective industrial policy and most importantly, the lack of competitiveness are seen as the main culprits for such a premature deindustrialization (Mouelhi and Mechergui, 2023).

Developed and emerging countries have also experienced deindustrialization but at much higher levels of per capita income, i.e. after achieving high levels of development. Therefore, deindustrialization is always seen as a natural process in mature economies, resulting from a productivity increase in the manufacturing sector and/or a structural change from industry to more productive services sector, (Beg et al., 2017).

Historically, industrialization has been at the origin of the growth and development of today's high-income countries, (Rodrik, 2016). It has also played a key role in unleashing the growth potential of East Asian countries over the last two decades, (Attiah, 2019). Given that industry is central to economic performance and job creation, this issue becomes of particular importance in a context of weakened competitiveness, low economic growth rates and steady high unemployment that MENA countries currently face.

A large number of studies have dealt with the deindustrialization issue in developed countries by exploring its intensity, determinants and consequences (Vu et al., 2021; Liboreiro et al, 2021; Alderson 1999; Rowthorn et al, 1997). However, few studies have focused on developing countries (Rodrik, 2016; Naved 2015; Dina, 2010) and particularly on the MENA region (Kirsh, 2018) due to the lack of long time series data.

To address this gap, our study primarily aims to examine the impact of industrialization/deindustrialization on growth and development in MENA countries, as well as how this impact has evolved over time. Moreover, as many studies (Dadush, 2015; Hauge and Shang, 2019) highlight the declining role of manufacturing and the rising prominence of services in driving growth, we seek to investigate the role of services, alongside industry, in economic growth.

Therefore, the first objective of this paper is to analyze the pattern and causes of deindustrialization in a sample of MENA countries, namely Tunisia, Morocco and Egypt in order to emphasize its main features. The second objective is to explore the impact of such a premature deindustrialization on the overall growth and economic development. The third objective is to question the growth effects of tertiarization. To conclude, some proposals are suggested in order to reindustrialize and to boost growth in MENA countries.

Building on these objectives, this paper investigates the scope and patterns of deindustrialization in MENA countries and explores its main underlying causes. More importantly, it examines whether manufacturing continues to act as a key driver of growth and economic development, and whether the ongoing shift toward a more service-oriented economy supports these processes in the region.

We use long-term time series data (1961-2018) for Egypt, Morocco, and Tunisia in the descriptive analysis. These three countries were selected due to the relative similarities in their economic models and industrialization/deindustrialization processes, as well as the availability of comparable data. Our descriptive analysis uncovers several stylized facts, including: (1) an industrialization that began in the 1970s but was prematurely interrupted at relatively low GDP per capita levels, and (2) a deindustrialization starting in the 1990s – particularly sharp in Tunisia.

Our empirical model, based on these stylized facts and Kaldor's (1966) framework, guides regressions testing the effects of manufacturing and services shares on growth. We focus on Tunisia as a representative MENA case, given the availability of comprehensive and complete data and its pronounced deindustrialization pattern. We find that industrialization remains a growth engine, albeit with a diminishing impact. Thus, deindustrialization hampers growth. However, tertiarization shows no evidence as an effective growth driver in its current form in Tunisia.

This paper is organized in the following order: Section 2 draws an overview of the stylized facts related to the deindustrialization process in Egypt, Morocco and Tunisia. Section 3 presents a literature review on the drivers and implications of deindustrialization. Section 4 displays an empirical analysis conducted on the Tunisian case. Section 5 provides the main conclusions and some recommendations.

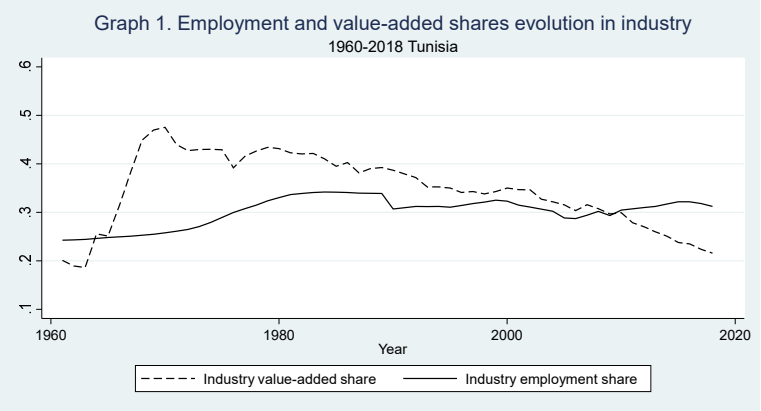
2. THE PATTERNS OF DEINDUSTRIALIZATION IN TUNISIA, MOROCCO AND EGYPT

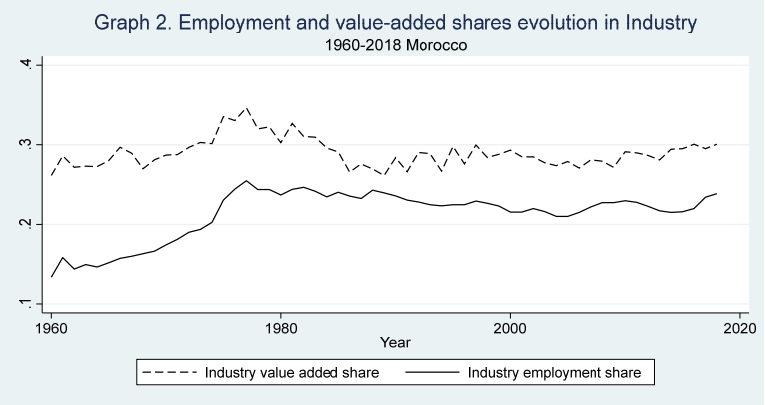
Graphs 1 to 6 present the evolution of the shares of industry/manufacturing in GDP and employment in Tunisia, Morocco and Egypt respectively.

The three countries initiated industrialization and achieved some progress over the 1970s, 1980s and early 1990s, driving a structural change from agriculture to manufacturing (Mouelhi and Ghazali, 2020). As shown in Graphs 4-6, the manufacturing share in GDP peaked at around 20% in the late 1990s for Morocco and Egypt, and 18% for Tunisia. Employment shares peaked at 18% in Tunisia, 14% in Morocco, and 13% in Egypt. This progress occurred primarily in 'light industries' such as textiles, agro-food, and resource-based industries under relatively protectionist policies (see table A in Appendix I).

Following these peaks, the shares of manufacturing employment and value added gradually declined, reaching about 16% by the end of the observation period (2018) in Morocco and Egypt, and 14% in Tunisia. This relative decline is mainly driven by the contraction of the textile industry and, to a lesser extent, the chemical sector. In particular, the textile industry in MENA countries has weakened since the late 1990s, reflecting intensified competition from low-cost Asian producers following trade liberalization and the dismantling of the Multi-Fibre Arrangement (World Bank, 2006). This trend was further reinforced by limited technological upgrading and weak integration into global value chains (Grumiller et al., 2018 ; Grumiller, Raza and Grohs, 2020).

The three countries did not achieve the transition to the next step of industrialization, i.e. to more sophisticated products and high-technology exports – unlike emerging economies – with the share of high-technology exports remaining very low in 2010: 0.9% in Egypt, 4.9% in Tunisia and 7.7% in Morocco.


Graph 1. Employment and value-added shares evolution in industry
1960-2018 Tunisia
.1
.2
.3
.4
.5
.6
1960
1980
2000
2020
Year
Industry value-added share
Industry employment share


Graph 2. Employment and value-added shares evolution in Industry
1960-2018 Morocco
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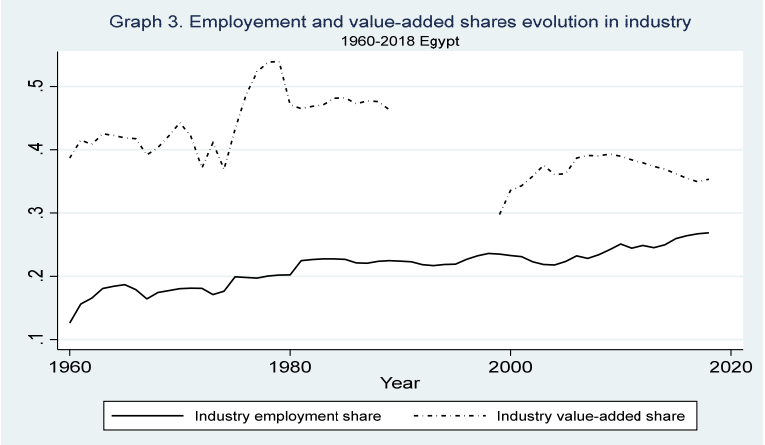
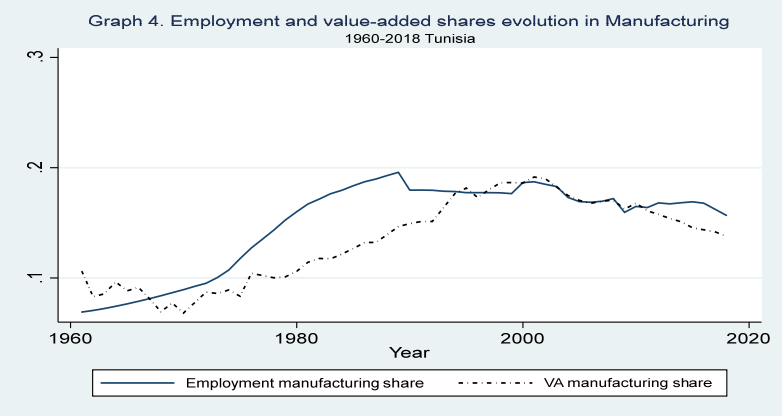
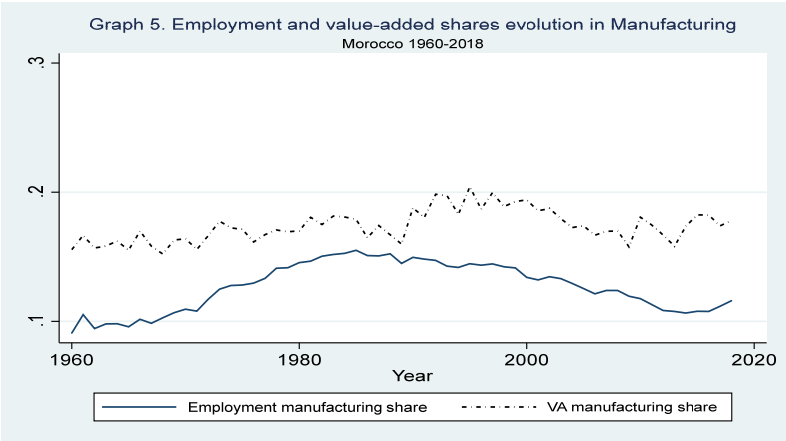
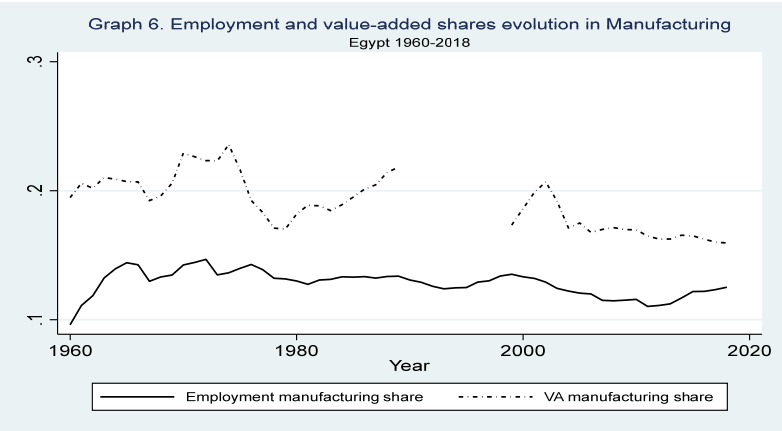
Industry value added share
Industry employment share


Graph 3. Employement and value-added shares evolution in industry
1960-2018 Egypt
.1
.2
.3
.4
.5
1960
1980
2000
2020
Year
Industry employment share
Industry value-added share







Source: Authors' computations from Groningen database (2021).

In the same way, the decline in the weight of industry as a whole began earlier, in the late 1980's, driven by non-manufacturing sector shrinkage and natural resources depletion (see Graphs 1 to 3).

At first glance, the deindustrialization trend in the three countries is likely to reflect an international trend featured by an inverted-U relationship between the manufacturing weight and the income per capita (Tregenna, 2015). For most of the developed countries, productivity growth is the main responsible for the decrease in the industry employment share as well as the structural change leading to shifts to more productive services sectors. This is qualified as a "positive deindustrialization" by Alderson (1997) and Uemura and Tahara (2015).

In contrast, and as shown in Table 1, deindustrialization in Tunisia, Morocco and Egypt has occurred at lower levels of both income per capita and manufacturing shares (in terms of value added and employment) compared to developed countries (UNIDO Report, 2015). This is referred to as "premature deindustrialization" by Rodrik (2016) or "negative deindustrialization" according to Alderson (1997) and Uemura and Tahara (2015).

Table 1 shows that at the turning point—when deindustrialization began in the 1990s, the MENA manufacturing sector share in GDP was around 14%, compared to 25% in developed countries. Egypt, Morocco, and Tunisia performed slightly better, with shares around 20% at their turning points. Even these pilot-country peaks remain substantially lower than those of advanced economies.

Table 1. Deindustrialization turning point by country group

	Sub-Saharan Africa	MENA	Tunisia	Morocco	Egypt	Latin America and C.	West Europe	North America	East Asia
Turning point: period at which deindustrialization begins	1990s	1990s	1990s	1990s	1990s	1990s	1970s	1970s	2000s
Manufacturing share in GDP at the turning point	Around 11%	Around 14%	Around 18%	Around 20%	Around 20%	Around 21%	Around 25%	Around 23%	Around 23%
Manufacturing share in employment at the turning point	Around 5%	Around 16%	Around 18%	Around 14%	Around 13%	Around 16%	Around 26%	Around 23%	Around 19%
Group of Income per capita at the turning point (World Bank classification)	Low income	Lower Middle income	Lower Middle income	Lower Middle income	Lower Middle income	Lower middle income	High income	High income	Upper middle (South Korea) to high income (Japan)

Source: Author' computation, World Bank (WB) classification and ONUDI Report, 2015.

Tunisia and Egypt experienced uprising in 2011, further delaying their economic transition and speeding up deindustrialization. Table 2 shows that the Tunisian manufacturing sector has been witnessing a gradual decrease in its growth rate over the considered periods, (from 7.9% in 1975-1989 to 2.1% in 2005-2018). Egypt is likely to have followed a similar trend as the manufacturing growth rate has been showing a steady decline since the deindustrialization starting point in the 1990s, (Mouelhi and Ghazali, 2020).

Table 2. Average annual growth rate of manufacturing value added by time period

	1960-1975	1975-1989	1990-2005	2005-2018
Tunisia	7.8%	7.9%	5.2%	2.1%
Morocco	5.0%	4.0%	2.7%	5.1%
Egypt	5.6%	7.6%	6.0%	3.6%

Source: Authors' calculation from Groningen data.

The period following 2010 has been more promising for the manufacturing sector in Morocco. Within a stable political environment, the Moroccan automotive industry has experienced a strong growth moving its share in total exports from 13.2% in 2008 to 20% in 2015. This is the result of a target-oriented industrial policy attracting foreign direct investment and multinationals through fiscal and financial incentives, training actions relevant to the specific needs of the automotive sector, simplification of procedures, infrastructure upgrading, etc. (Hahn et al., 2017).

3. DRIVERS AND IMPLICATIONS OF DEINDUSTRIALIZATION: A LITERATURE REVIEW

This section provides a review of the literature on deindustrialization around three main dimensions. First, it examines the structural factors driving deindustrialization in advanced economies. Second, it addresses premature deindustrialization in developing countries. Third, it discusses the implications of deindustrialization for economic growth and development, with particular emphasis on the ongoing debate between manufacturing-led and services-led growth paths.

3.1. Structural factors in advanced economies

A first strand of the literature considers deindustrialization in developed countries as a "natural outcome of the development process". In this perspective, Araujo et al. (2021) emphasize that deindustrialization in already developed economies is "a normal follow-up to the course of the economic development process". Rowthorn and Ramaswamy (1999) argue that it reflects a combination of a desirable structural change and shifts in the composition of demand. During advanced stages of development, labor productivity in manufacturing grows faster than in other sectors, leading to a decline in relative manufacturing prices. However, as per capita income rises and economies mature, demand increasingly shifts from industry toward services. As a result, productivity gains in manufacturing generate a negative net effect on industrial employment and output, as demand no longer reacts sufficiently to falling industrial prices. Empirically, industrial employment declines faster than output, as documented by Rowthorn and Ramaswamy (1999), Lawrence and Edwards (2013), Rodrik (2016).

Innovation and technological change constitute a second major explanation. According to Rodrik (2016), the higher rate of technological progress in manufacturing drives faster productivity growth in that sector, contributing to deindustrialization in advanced economies. However, Rodrik (2016) shows that employment deindustrialization is stronger than output deindustrialization, pointing to the role of unskilled-labor-saving technological change rather than demand-side mechanisms alone. A third mechanism highlighted in the literature

concerns outsourcing and reclassification effects. Rowthorn and Coutts (2004) report that one of the sources of deindustrialization is the reclassification of jobs from manufacturing toward services because of outsourcing of some functions from manufacturing companies to specialized services providers. Finally, the role of trade openness and globalization remains controversial. Wood (1994) argues that "North–South trade has accelerated deindustrialization in the North." In fact, the South – particularly Asian countries – is more competitive in the production of low value-added goods. As a consequence, imports from the south are gradually replacing labor-intensive industries in developed economies moving into more technological and sophisticated exports. He (2023) provides further recent evidence that deindustrialization in developed countries is increasingly shaped by unbalanced trade with China and other emerging Asian economies, which accelerates the decline in the share of industry in GDP, especially in Pacific nations.

Liberalization may also lead to a reallocation of output toward more productive activities and away from less productive ones in developed countries (Kucera and Milberg, 2003), due to increased international mobility of production factors such as capital and technology (Palley, 2015). The relocation of industrial plants by large companies from developed to developing countries thus contributes to deindustrialization in the former. Araujo et al. (2021) give evidence that the relocation of physical production and the degree of financialization reduce the manufacturing value added in developed countries, while trade openness increases it[1].

3.2. Premature deindustrialization in developing countries

In developing countries, deindustrialization is not resulting from a natural dynamism and maturation of the economy. In fact, at this stage, the income elasticity of demand is still greater than unity. Therefore, when labor productivity gains occur in the manufacturing sector yielding to prices decrease, this would stimulate the demand for manufacturing goods and increase the weight of the sector (Araujo et al., 2021). However, other factors are likely to operate. First, trade openness plays a central role. According to Rodrik (2016), MENA countries are part of the developing countries that were hit twice when they initiated their trade liberalization process. On the one hand, they have faced hard competition from emerging Asian and Eastern European countries with solid comparative advantages and high FDI inflows. Small MENA firms operating in small markets have been unable to compete with emergent countries operating at large scales, with high production capacities and high competitiveness. As a result, MENA countries turned to be net importers of manufacturing goods, abandoning a long process of import substitution, as observed by Rodrik (2016). On the other hand, MENA countries have been pressed through trade liberalization to adopt the manufacturing price trends prevailing in advanced economies, "importing" deindustrialization, yet without experiencing the corresponding technological change. More recently, Busse et al. (2024) have analyzed data from 131 developing countries (1991–2020) and found that trade liberalization has generally reduced manufacturing employment in developing countries. The impact varies across regions, with sub-Saharan Africa and Latin America experiencing the strongest deindustrialization effects.

[1] See also Palma (2014) who defines Dutch disease – for both industrialized and developing countries – as a source of drastic premature deindustrialization driven by natural resource discoveries (e.g. gas in the Netherlands), service-export booms (tourism or finance, as in Hong Kong), or radical policy shifts (e.g. Latin America in the 1990s).

Beyond trade openness, inadequate economic policies and hampered competitiveness constitute another major explanation. According to Araujo et al. (2021), the lack of an appropriate industrial development strategy in developing countries following the exhaustion of the import substitution process may help explain productivity stagnation. This stagnation is further associated with the shift toward a liberalizing agenda and market-friendly reforms. Consequently, domestic firms have been unable to respond to new market conditions, leading to a decline in competitiveness (Alderson, 1997) and thus to a negative structural change. Empirically, as shown in Table 3, the Global Competitiveness Index (GCI) for MENA countries is low compared to developed and emerging Asian countries and has been stagnating over recent years. In this regard, the Arab World Competitiveness Report of the World Bank (2018) identifies several factors underlying this weak performance, including poor governance, inadequate infrastructure, corruption, political instability, insufficient workforce skills and educational attainment, and bureaucratic constraints. Moreover, inadequate macroeconomic policies, in the form of overvalued exchange rates and/or high interest rates, respectively hamper exports and increase firms' cost of access to finance. More broadly, the central role of institutional quality in shaping structural change is emphasized by Chenaf-Nicet (2020), who shows that in Sub-Saharan Africa structural transformation is primarily hindered by weak institutions.

Country-level evidence further supports these arguments. Mouelhi and Mechergui (2023), using a long-term time series for Tunisia, show that deindustrialization is mainly a consequence of a lack of competitiveness, illustrated by very low labor productivity growth.

Table 3. Global Competitiveness Index scores, 2013-2017

	2013	2014	2015	2016	2017
Egypt	3,7	3,6	3,7	3,7	3,9
Morocco	4,1	4,1	4,2	4,2	4,2
Tunisia	4,1	4	3,9	3,9	3,9
MENA	4.1	4.1	4.1	4.1	4.2
China	4.8	4.9	4.9	5	5
East Asia & Pacific	4.7	4.6	4.7	4.8	4.9
Brazil	4.3	4.3	4.1	4.1	4.1
Latin America and the C.	3.9	4	4	4.1	4.2
Germany	5.5	5.5	5.5	5.6	5.7
Turkey	4.5	4.5	4.4	4.4	4.4
Europe & Central Asia	4.2	4.4	4.4	4.4	4.4
USA	5.5	5.5	5.6	5.7	5.6
North America	5.4	5.4	5.5	5.5	5.6

Note: Region figures are median scores provided by the World Bank database.
Source: World Bank open trade and competitiveness data (TCdata360).

3.3. The role of manufacturing versus services in economic development: the ongoing controversial debate

"Manufacturing is the engine of growth" (Kaldor, 1966). The theoretical foundation of such an assertion stems from a long tradition of seminal papers belonging to different economic schools of thought. An exhaustive overview of the literature identifies five key channels through which manufacturing drives economic growth (Ciarli and Di Maio, 2013). First, manufacturing generates

increasing returns, technology, and spillover effects, being more likely to experience economies of scale than agriculture or services (Kassem, 2010). The technological change and innovations it incorporates play an important role in economic development (Cornwall, 1977; Maddison, 1987; Collier and Venables, 2007). Ortiz et al. (2009) highlight strong externalities from intensive science and technology application, with continuous technological frontier displacement keeping the sector's learning potential high. Tregenna (2015) emphasizes skilled labor and infrastructure generating industry-wide externalities.

Manufacturing also drives labor productivity, with Felipe et al. (2019) noting its high potential for catch-up and Rodrik (2013) confirming faster unconditional productivity growth for industries distant from the frontier, independent of policies or institutions. Kaldor's first law (1966) reinforces this, linking manufacturing growth to aggregate productivity via increasing returns, learning-by-doing, efficiency gains, and labor reallocation from low-productivity non-manufacturing sectors (Keho, 2018). Strong backward and forward linkages also characterize manufacturing, stimulating investments in banking, transport, insurance, agriculture, and energy (Hirschman, 1958; Ciarli and Di Maio, 2013), with intra-sectoral linkages surpassing other sectors to drive employment and output. Capital accumulation benefits from manufacturing's spatial concentration, fostering high savings and a virtuous growth circle (Szirmai and Verspagen, 2015). Manufactured goods, especially high-tech, enjoy high income elasticities of demand unlike primary products under Engel's Law (Roshan, 2017), unleashing a virtuous cycle of falling costs, rising demand, investment, incomes, and further cost reductions (Felipe et al., 2019). Finally, manufacturing's superior employment multiplier over agriculture and traditional services stems from scale differences and division of labor (Ciarli and Di Maio, 2013; Baker and Lee, 1993; Bivens, 2003), creating indirect jobs via supply chains and linkages, boosting revenues, reducing poverty, and empowering women through specialization (Dosi et al., 2021; Roshan, 2017).

This traditional view now confronts an ongoing controversy, as manufacturing's role declines relative to rising services. Several recent studies have pointed out the declining role of the manufacturing sector at the expense of the modern services sector which is taking the lead in many countries (Dadush, 2015). Modern services have contributed significantly – sometimes more than manufacturing – to growth in countries like Malta, Singapore, and Hong Kong (Hauge and Shang, 2019). The ICT revolution fosters learning in tradable high-tech services (digital, finance, software, telecom), embedding export potential and productivity gains often exceeding manufacturing.

Empirical evidence confirms this evolution. Fagerberg and Verspagen (1999, 2002) tested growth relationships with manufacturing and services shares across diverse countries over long periods, affirming manufacturing's key role – especially for developing nations – but noting its pre-1980s dominance as the primary technological and productivity driver, with services gaining significance since. Szirmai and Verspagen (2015) find positive manufacturing impacts for developing countries with educated workforces, though declining over time, concluding "since 1990, manufacturing is becoming a more difficult route to growth than before," while services effects remain insignificant. Pandian (2017) echoes the post-1990s weakening of manufacturing's growth impact, particularly in less developed countries.

Our contribution is twofold to the deindustrialization literature. First, we offer a comprehensive analysis of premature deindustrialization patterns in the MENA region, an area largely overlooked by existing studies focused on Asia and sub-Saharan Africa. Second, we empirically address the unresolved empirical controversy about manufacturing's declining growth impact relative to the rising role of services through long-period panel regressions.

4. EMPIRICAL ANALYSIS AND DATA OVERVIEW: THE TUNISIAN CASE

The first subsection presents the econometric model as well as the data used. The second displays the economic results. We have chosen to focus in what follows on the Tunisian case for basically two reasons. The first one is that, as shown in section 2, the pattern of premature deindustrialization is more accurate in Tunisia. Morocco, however, has been triggering a reindustrialization process during the 2010's driven by the development of the automotive sector and an export-oriented industrial policy. The second reason is the availability of a large set of data regarding Tunisia over the deliberately extended time frame.

4.1. The econometric model

We use long time series data from 1961 to 2018 to investigate the impact of manufacturing and services weights on the economic growth and development over different periods. Bearing in mind the engine of growth role of the manufacturing sector emphasized in section 3, our purpose here is to assess whether its contribution to growth has remained significant over the years or declined against an increasing role of services.

We estimate the growth model presented in Equation 1 below, following Szirmai and Verspagen (2015) as well as Pandian (2017). The choice of this model is based on the stylized facts and the literature review presented above, as well as Kaldor's framework (Kaldor, 1966), which emphasizes the central role of manufacturing in the growth process.

$$y_t = \beta_1 m_t + \beta_2 s_t + \beta_4 \ln Pop_t + \beta_5 \ln Pop_t^2 + \beta_5 x_t + Post\ 2011 + \varepsilon_t \quad (1)$$

The dependent variable $\boldsymbol{y_{it}}$ is measured as the growth of per capita gross domestic product (GDP) at time t. The main explanatory variables $\boldsymbol{m_{it}}$ and $\boldsymbol{s_{it}}$ are respectively the shares of manufacturing and services in total GDP indicating the extent to which manufacturing activities and services are prevailing[2]. We also interact the manufacturing and services value-added shares with dummies for the pre- and post-1995 periods. This allows to capture the trajectory of the growth effect of both sectors around the 1995' breakpoint- identified from stylized facts and confirmed by a Bai-Perron test (2003) for structural break[3]. The year 1995 marks the beginning of declining manufacturing value-added shares, in the context of Tunisia's deepening trade openness and liberalization toward the EU and WTO. Furthermore, the model introduces a variable that measures the country's size and

[2]Using sectoral shares is a standard approach in the literature on structural transformation and deindustrialization (Rodrik, 2016 ; Chenaf-Nicet et Asse (2021) ; He (2023)). It provides a robust and widely interpretable indicator of changes in economic structure.

[3] Bai-Perron test results (reported in the Appendix II) indicate 1994 as the break date. But we rely more on stylized facts clearly showing the decline in manufacturing shares and employment beginning in 1995.

demographic changes (Pop)[4]. The specification includes also pop2 as the squared population term to capture nonlinear effects. $\boldsymbol{x}$ is a vector including other time varying covariates: the ratio of exports and imports relative to GDP captures exposure to international trade as highlighted in the growth and trade literature (Frankel and Romer, 1997). Macroeconomic shocks are captured using the inflation rate. Furthermore, we include a post-2011 dummy (equal to 1 after Tunisia's popular uprising, a period of political unrest and economic instability that accelerated negative structural change). Table B (Appendix II) sums up the variables used as well as their sources.

4.2. Empirical results

We start by applying Dickey-Fuller and Phillips-Perron time series unit root tests due to the particularly extended observation period we are dealing with (see Appendix II). Results reveal that the majority of series are clearly stationary with the exception of manufacturing and services shares in total GDP as well as the openness indicator that are all integrated of order 1. Therefore, these variables are incorporated into the regression equation in first differenced form. Table 4 reports estimation results using OLS (ordinary least squares) with robust estimation of standard errors. The Durbin-Watson autocorrelation test fails to reject the null hypothesis of no autocorrelation in the majority of models. We also apply the Dickey-Fuller unit root test to the residuals, confirming valid and non-spurious associations.

To address potential endogeneity of the explanatory variable – manufacturing share – we conduct a Hausman specification test, comparing the least square estimates with those obtained using an instrumental variables approach. The results indicate no evidence of endogeneity in manufacturing share (see Appendix II).

Columns 4 and 5 give evidence that manufacturing value added share exerts a strong positive effect on the overall growth over the period 1970–2018. This converges with the engine of growth hypothesis related by the theoretical and empirical literature for developed as well as least developed countries ((Szirmai and Verspagen (2015), Pandian (2017)) for a similar period. Conversely, the increasing share of services is associated with a decline in Tunisia's growth rate. One might ask whether such associations are continuously consistent over Tunisian economic history. For a meaningful answer to such a question, we give in column 5 the outcome of the interaction of the manufacturing and services value-added shares with dummies for the pre- and post-1995 periods. Results give evidence for a persistent positive relationship between manufacturing weight and GDP per capita growth but with a declining trend. This provides further evidence that deindustrialization hampers economic growth. Results suggest also a negative relationship between services value added share and GDP per capita growth either before or after 1995. Thus, based on our model, there is no evidence to consider the service sector, in its current configuration and specialization, as an effective driver of growth and development. While these findings do not confirm the pro-services arguments being conveyed by the post-industrial society discourse (Hauge and Chang, 2019), they give an insightful reflection of the specificity of the Tunisian economic pattern. According to Ayadi and Matoussi (2014), during the 1970s-1980s, the services sector had been still in the inception steps based mainly on a touristic public-led subsector.

[4] The variable population is also a proxy for the labor force.

Table 4. Regressions results

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Growthgdp capita y	Growthgdp capita y	Growthgdp capita y	Growthgdp capita y	Growthgdp capita y
Sg*pre1995		0.413** (0.162)			
Sg*post1995		0.569** (0.230)			
mg*pre1995		0.262*** (0.0748)			
mg*post1995		0.187 (0.145)			
Trade openness	-0.000390 (0.000779)	-0.000272 (0.000780)			
lnPop	-6.108** (2.766)	-5.279* (2.945)	-13.29*** (4.189)	-12.61*** (3.740)	-12.49*** (3.553)
lnPop2	0.193** (0.0873)	0.167* (0.0932)	0.419*** (0.132)	0.398*** (0.118)	0.394*** (0.112)
post2011	-0.0265** (0.00985)	-0.0246** (0.0119)	-0.0441*** (0.0125)	-0.0395*** (0.0119)	-0.0435*** (0.0119)
mg	0.245*** (0.0634)				
Sg	0.450*** (0.131)				
m			1.752* (0.898)	1.805** (0.830)	
S			-1.507*** (0.449)	-1.611*** (0.449)	
Inflation rate				-0.00176* (0.000908)	-0.00150* (0.000868)
S*pre1995					-1.874** (0.759)
S*post1995					-1.394*** (0.383)
m*post1995					0.725 (0.794)
m*pre1995					2.678* (1.479)
Constant	48.20** (21.91)	41.71* (23.26)	105.3*** (33.26)	100.0*** (29.71)	99.03*** (28.23)
Observations	47	47	47	47	47
R-squared	0.691	0.693	0.475	0.518	0.538
DW stat	(5,47)=2.29	(9,47)=2.58	(6,47)=2.16	(7,47)=2.26	(9,47)=2.22
Dickey–Fuller test on residuals (p-value)	0.0000	0.0000	0.0000	0.0000	0.0000

*Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.*

The recent period has not been more appropriate to unleash its potential as pointed out by the World Bank report published in 2014 entitled "The unfinished revolution": "Entry into services sector in Tunisia is among the most restrictive in the world. Barriers to entry have created rents and privileges, and as a result services sectors in Tunisia remain highly inefficient. Furthermore, Mouelhi and Ghazali (2020) explain that the increase in the weight of the Tunisian services sector from the 1980s to the 2000s was basically driven by low-productivity services such as trade and government services and to a lesser extent by modern and highly productive activities. Given its current underproductive structure, the service sector

is unable to function as a driver of growth in Tunisia. Our findings partially align with those of Chenaf-Nicet and Asse (2021), who conclude that in Sub-Saharan African countries – where economies remain highly specialized in low-knowledge-intensive services – the services sector generates only limited spillover effects on income. However, our results should be interpreted with caution and require further analysis. For example, distinguishing between modern and traditional services could provide greater insight into the roles played by various services sub-sectors in promoting growth.

Column 1 reports the regression results of the GDP per capita growth rate on manufacturing and services annual growth rates over the period 1961-2018. Manufacturing fosters growth as the associated coefficient is positive and statistically significant at 1% level. The coefficient for services growth is also positive and highly statistically significant indicating a strong positive association with GDP growth. Interacting the manufacturing and services value-added growth rates with dummies for pre and post 1995 periods (column 2) confirms this outcome over the entire period.

Results regarding other control variables converge with literature findings. We find out a robust U-shaped relationship between the population size and the growth rate of the per-capita GDP as already demonstrated by Valli and Saccone (2011). At a first stage, fertility increase leads to a high share of young and unproductive population decelerating growth. However, in the long period these young cohorts become active and productive promoting thus growth. The inflation rate has a negative and significant impact on growth, confirming its adverse implications for economic performance. As expected, rising price levels can distort investment decisions, reduce purchasing power, and create uncertainty, all of which undermine the conditions necessary for sustained growth.

Furthermore, the 2011 dummy variable consistently displays a negative and significant impact on growth, thereby confirming that the Tunisian uprising have put a brake to the Tunisian development process. The impact of trade openness on growth is not statistically significant across the different models.

5. CONCLUSION

Our study addresses the deindustrialization issue in MENA countries, namely Tunisia, Morocco and Egypt, by exploring its intensity, path, causes and impacts on growth. Given the rising importance of services in recent decades, the paper also assesses the role of tertiarization, alongside manufacturing, in driving growth.

The three countries adopted an industrialization path and registered some progress during the 1970s, 1980s and early 1990s. They have undergone some industrial diversification, primarily within the "light industries", falling short of high-technology and sophisticated products.

The stylized facts indicate that, during the 1990s, these countries experienced deindustrialization at significantly lower levels of both per capita income and manufacturing shares than those observed in developed economies. This phenomenon is commonly referred to as *premature deindustrialization* or *negative deindustrialization*.

We employ long-term time series data covering 1961-2018. Following Szirmai and Verspagen (2015) and Pandian (2017), we estimate a growth model based on stylized facts and Kaldor's (1966) framework, to investigate the impact of the manufacturing and services weights on the economic development over different periods in Tunisia.

On the one hand, the main results suggest that manufacturing weight exerts a positive effect on overall growth, thus confirming its role as an engine of growth and the detrimental impact of deindustrialization. However, this impact has declined over time as manufacturing has been confined to low technological, assembly and outsourcing activities characterized by a lack of sophistication.

On the other hand, the results provide evidence of a persistent negative relationship between services weight and GDP per capita growth over the considered periods. This might be explained by the fact that, over the past two decades, growth in the services sector has been largely driven by low-productivity activities, such as trade (predominantly informal) and government services. Modern and high-productivity sectors have contributed to a much lesser extent.

Overall, results suggest premature deindustrialization harms growth and development in MENA countries. Thus, reindustrialization and manufacturing strengthening are key for growth and job creation. The COVID-19 crisis highlighted industry's strategic role for national security. It showed the need to cut foreign dependence through better infrastructure, education, skills, and industrial policies with financial incentives and regulatory simplification. Both traditional (textiles, agrifood) and modern technological ones (automotive, aeronautics) are needed. Modern sectors are developing in MENA region, especially in Morocco where the automotive sector accounted for 24% in total exports in 2017 providing an increasing number of job creation. Electronic and pharmaceutical industries present similar upgrading opportunities (Hahn et al., 2017).

Nevertheless, MENA countries can still benefit from their past experience and know-how in the traditional sectors (textile, agrifood, etc.) to further develop, integrate within the global value chain and upgrade to higher value activities (UNIDO report, 2015).

That said, all sectors must fully contribute to wealth creation. This maximizes chances to tackle unemployment and foster development. Services, in particular should modernize for greater growth impact. Productive, tech-linked services could benefit from manufacturing upgrades.

The support of governments is here crucial to strengthen the competitiveness and the export orientation of services as well as traditional manufacturing sectors, as a major unskilled-workforce employer. Such an effort would enable to tackle unemployment, which is one of the major challenges in MENA region.

Improving labor productivity, production efficiency and competitiveness, in turn, attracts "relocated" FDI inflows. Post-COVID relocation of Southeast Asian-based European companies – driven by national security concerns – offers MENA a key opportunity as rising Asian wages and transport costs erode their cost advantage. Attracting mega-FDIs brings scale economies, jobs, and high export capacity.

Despite its relevance, this study is constrained by long-term, comparable time-series data for the selected MENA countries, as well as by the absence of sufficiently detailed information to distinguish among activities and subsectors within industry and services. For instance, separating modern from traditional services could help refine our results regarding the apparent negative impact of the services sector's weight on growth. It would also identify which services sectors best support economic development.

REFERENCES

Alderson A.S., 1997, Globalization and deindustrialization: Direct investment and the decline of manufacturing employment in 17 OECD nations, *Journal of World-Systems Research*, 3, 1, 1-3.

Alderson A.S., 1999, Explaining deindustrialization: Globalization, failure, or success?, *American Sociological Review*, 64, 6, 701-721.

Araujo E., Araújo E., Peres S.C., Punzo L.F., 2021, An investigation into shapes and determinants of deindustrialization processes: Theory and evidence for developed and developing countries (1970–2017), *EconomiA*, 22, 2, 129-143.

Ayadi M., Mattoussi W., 2014, Scoping of the Tunisian economy, Working Paper No. 17, Brookings Institution.

Baker D., Lee T., 1993, Employment multipliers in the U.S. economy, Economic Policy Institute.

Bai J., Perron P., 2003, Computation and analysis of multiple structural change models, *Journal of Applied Econometrics*, 18, 1, 1-22.

Beg M., Sertić M.B., Družić I., 2017, Determinants of deindustrialisation in developed European and post-communist countries, *Montenegrin Journal of Economics*, 13, 2, 93-106.

Bivens J., 2003, Updated employment multipliers for the U.S. economy, Working Paper No. 268, Economic Policy Institute.

Busse M., Dary S.K., Wüstenfeld J., 2024, Trade liberalisation and manufacturing employment in developing countries, Structural Change and Economic Dynamics, 70, 410-421.

Chang H.-J., Hauge J., Irfan M., 2016, Transformative industrial policy for Africa, United Nations Economic Commission for Africa.

Chenaf-Nicet D., 2020, Dynamics of structural change in a globalized world: What is the role played by institutions in the case of Sub-Saharan African countries?, *The European Journal of Development Research*, 32, 4, 998-1037.

Chenaf-Nicet D., Asse B., 2021, Premature deindustrialization and development without factories. Are services sectors a new path for the development of sub-Saharan African countries?, Research Square, rs-379649.

Ciarli T., Di Maio M., 2014, Theoretical arguments for industrialisation-driven economic growth and development, in Matambalya F., *African industrial development and European Union cooperation: Prospects for a reengineered partnership*, Routledge.

Collier P., Venables A.J., 2007, Rethinking trade preferences: How Africa can diversify its exports, *The World Economy*, 30, 8, 1326-1345.

Cornwall J., 1977, *Modern capitalism: Its growth and transformation*, St. Martin's Press.

Dadush U., 2015, Is manufacturing still a key to growth?, OCP Policy Center Paper, OCP Policy Center.

Dosi G., Riccio F., Virgillito M.E., 2021, Varieties of deindustrialization and patterns of diversification: Why microchips are not potato chips, *Structural Change and Economic Dynamics*, 57, 182-202.

Eman Attiah, 2019, The role of manufacturing and service sectors in economic growth: An empirical study of developing countries, *European Research Studies Journal*, XXII, 1, 112-127.

Fagerberg J., Verspagen B., 1999, Modern capitalism in the 1970s and 1980s, in Setterfield M., *Growth, employment and inflation*, Macmillan.

Fagerberg J., Verspagen B., 2002, Technology-gaps, innovation-diffusion and transformation: An evolutionary interpretation, *Research Policy*, 31, 10, 1291-1304.

Felipe J., Mehta A., Rhee C., 2019, Manufacturing matters…but it's the jobs that count, *Cambridge Journal of Economics*, 43, 1, 139-168.

FEMISE, 2015, Structural transformation and industrial policy: A comparative analysis of Egypt, Morocco, Tunisia and Turkey and case studies, European Investment Bank.

Grumiller J., Azmeh S., Staritz C., Raza W., Grohs H., Tröster B., 2018, Strategies for sustainable upgrading in global value chains: The Tunisian textile and apparel sector, No. 27/2018, ÖFSE Policy Note.

Grumiller J., Raza W.G., Grohs H., 2020, Strategies for sustainable upgrading in global value chains: The Egyptian textile and apparel sector, No. 33/2020, ÖFSE Policy Note.

Hahn T., Auktor G.V., 2017, The effectiveness of Morocco's industrial policy in promoting a national automotive industry, Discussion Paper No. 27/2017, Deutsches Institut für Entwicklungspolitik.

Hamid N., Khan M., 2015, Pakistan: A case of premature deindustrialization?, *The Lahore Journal of Economics*, 20, 4, 107-141.

Hauge J., Chang H.-J., 2019, The role of manufacturing versus services in economic development, in *Transforming industrial policy for the digital age*, Edward Elgar Publishing.

Haskel J., Slaughter M.J., 2002, Does the sector bias of skill-biased technical change explain changing skill premia?, *European Economic Review*, 46, 10, 1757-1783.

He Y., 2023, Is there 'undue' deindustrialization in developed countries?, *Journal of International Development*, 35, 8, 2351-2372.

Hirschman A.O., 1958, *The strategy of economic development*, Yale University Press.

Kaldor N., 1966, *Causes of the slow rate of economic growth of the United Kingdom: An inaugural lecture*, Cambridge University Press.

Kassem D., 2010, Premature deindustrialization: The case of Colombia, Discussion Paper No. 2010-CSEG-06, Center for Corporate Strategy and Economic Growth, Yokohama National University.

Keho Y., 2018, Manufacturing and economic growth in ECOWAS countries: A test of Kaldor's first law, *Modern Economy*, 9, 897-906.

Kirsch H., 2018, Premature deindustrialization and stalled development: The fate of countries failing structural transformation?, Doctoral dissertation, London School of Economics.

Kucera D., Milberg W., 2003, Deindustrialization and changes in manufacturing trade: Factor content calculations for 1978-1995, *Review of World Economics*, 139, 4, 601-624.

Lawrence R.Z., Edwards L., 2013, US employment deindustrialization: Insights from history and the international experience, Policy Brief No. 13-27, Peterson Institute for International Economics.

Liboreiro P.R., Fernández R., García C., 2021, The drivers of deindustrialization in advanced economies: A hierarchical structural decomposition analysis, *Structural Change and Economic Dynamics*, 58, 138-152.

Maddison A., 1987, Growth and slowdown in advanced capitalist economies: Techniques of quantitative assessment, *Journal of Economic Literature*, 25, 2, 649-698.

Mouelhi R., Mechergui R., 2023, Deindustrialization and trade openness: The Tunisian case, Working Paper No. 1643, Economic Research Forum.

Mouelhi R., Ghazali M., 2020, Structural transformation in Egypt, Morocco and Tunisia: Patterns, drivers and constraints, *Economics of Transition and Institutional Change*, 18, 1, 1-27.

Ortiz C.H., Castro J.A., Badillo E.R., 2009, Industrialization and growth: Threshold effects of technological integration, *Cuadernos de Economía*, 28, 51.

Pandian R.K., 2017, Does manufacturing matter for economic growth in the era of globalization?, *Social Forces*, 95, 3, 909-940.

Palley T.I., 2015, The theory of global imbalances: Mainstream economics vs. structural Keynesianism, *Review of Keynesian Economics*, 3, 1, 45-62.

Palma J.G., 2014, De-industrialisation, 'premature' de-industrialisation and the Dutch-disease, *Revista NECAT*, 3, 5, 7-23.

Rodrik D., 2013, Unconditional convergence in manufacturing, *Quarterly Journal of Economics*, 128, 1, 165-204.

Rodrik D., 2016, Premature deindustrialization, *Journal of Economic Growth*, 21, 1, 1-33.

Rowthorn R., Coutts K., 2004, De-industrialisation and the balance of payments in advanced economies, *Cambridge Journal of Economics*, 28, 5, 767-790.

Rowthorn R., Ramaswamy R., 1997, Deindustrialization: Its causes and implications, IMF Economic Issues No. 10, International Monetary Fund.

Rowthorn R., Ramaswamy R., 1999, Growth, trade, and deindustrialization, IMF Staff Papers, 46, 1, 18-41.

Szirmai A., Verspagen B., 2015, Manufacturing and economic growth in developing countries, 1950-2005, *Structural Change and Economic Dynamics*, 34, 46-59.

Tregenna F., 2015, Deindustrialisation, structural change and sustainable economic growth, Inclusive and Sustainable Industrial Development Working Paper Series WP 02/2015, UNIDO.

Uemura H., Tahara S., 2018, The evolving diversity and interdependence of growth regimes and de-industrialization in European countries and Japan, in *Evolving diversity and interdependence of capitalisms*, Springer.

Vu K., Haraguchi N., Amann J., 2021, Deindustrialization in developed countries amid accelerated globalization: Patterns, influencers, and policy insights, *Structural Change and Economic Dynamics*, 59, 222-233.

Vittorio V., Saccone D., 2011, Economic development and population growth: An inverted-U shaped curve?, Department of Economics and Statistics Cognetti de Martiis Working Paper No. 201105, University of Turin.

Wood A., 1994, *North-South trade, employment and inequality: Changing fortunes in a skill-driven world*, Clarendon Press.

World Bank, 2006, Morocco, Tunisia, Egypt and Jordan after the end of the Multi-Fiber Agreement: Impact, challenges and prospects, Report No. 35376-MNA, Social and Economic Development Sector Unit, Middle East and North Africa Region.

World Bank, 2014, The unfinished revolution: Development policy review, World Bank Group.

World Bank, 2018, The Arab world competitiveness report 2018, World Bank Group.

ANNEX I

Table A. Manufacturing sub-sector shares in GDP

Country	Sector	1976	1997	2018
Morocco	Textiles & clothing	0.027	0.034	0.013
	Food, beverages & tobacco	0.028	0.062	0.042
	Chemicals	0.012	0.028	0.027
	Machinery & transport equipment	0.012	0.0095	0.011
	Other manufacturing	0.073	0.053	0.11
Tunisia	Textiles & clothing	0.022	0.062	0.022
	Food, beverages & tobacco	0.025	0.028	0.028
	Chemicals	0.009	0.017	0.01
	Machinery & transport equipment	0.003	0.0051	0.015
	Other manufacturing	0.039	0.054	0.049
Egypt	Textiles & clothing	0.06	0.019	0.012
	Food, beverages & tobacco	0.03	0.018	0.03
	Chemicals	0.017	0.024	0.018
	Machinery & transport equipment	0.017	0.013	0.006
	Other manufacturing	0.06	0.042	0.079

Source: Authors' computations from Groningen database (2021) and World Bank Indicators.

ANNEX II

Table B. Variables description

Variables	Description	Source	Period
y	Annual percentage growth rate of GDP per capita based on constant price 2015 USD	World Bank Indicators (WBI)	1971-2018
m	The share of manufacturing in total GDP computed as the gross value added of manufacturing sector at 2015 constant price divided by total GDP	Economic transformation database (2021) from Groningen Growth and Development Centre (GGDC/UNU)	1961-2018
S	The share of services in total GDP computed as the gross value added of services at 2015 constant price divided by total GDP	Economic transformation database (2021) from Groningen Growth and Development Centre (GGDC/UNU)	1961-2018
Pop	Total population « based on the de facto definition of population, which counts all residents regardless of legal status or citizenship »	World Bank Indicators (WBI)	1970-2018
Trade openness	Exports of goods and services (% of GDP)	World Bank Indicators (WBI)	1965-2018
Inflation rate	The annual growth rate of the GDP implicit deflator (%) The GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency.	World Bank Indicators (WBI)	1966-2018
mg	The annual growth rate of manufacturing value added at 2015 constant price	Economic transformation database (2021) from Groningen Growth and Development Centre (GGDC/UNU)	1961-2018
Sg	The annual growth rate of services value added at 2015 constant price	Economic transformation database (2021) from Groningen Growth and Development Centre (GGDC/UNU)	1961-2018

Table C. Time series unit root tests

Variable	Description	Dickey-Fuller test for unit root/ Mackinnon approximate p value*	Stationarity
y	GDP/capita growth at constant prices	0.000	Stationary
m	Value-added manufacturing share	0.7894	Non-stationary
D.m	The first difference of value-added manufacturing share	0.000	Stationary
s	Value added services share	0.9875	Non-stationary
D.s	The first difference of value-added service share	0.000	Stationary
Trade openness	Trade openness indicator	0.2269	Non-stationary
D. Trade openness	The first difference of trade openness	0.000	Stationary
Inflation rate	Inflation rate	0.000	Stationary
Ln Pop	Ln Population	0.000	Stationary
m_g	Manufacturing value-added growth rate	0.000	Stationary
s_g	Services valued-added growth rate	0.000	Stationary

**We also conducted the Phillips-Perron unit root test, results converge with Dickey-Fuller findings.*

Bai-Perron break test results

(2) Structural Break Test (Unknown Break Date)			
Test	Statistic	p-value	Estimated Break Date
Supremum Wald	167.301***	0.000	1994

Source: Authors' computations.
Dependent variable in the baseline OLS estimation: Manufacturing value added share.
Period: 1961–2018.
**** p < 0.01, ** p < 0.05, * p < 0.1. Bai-Perron null hypothesis: no structural break.*

Results of the Hausman specification test for endogeneity

Variables	(1) OLS	(2) IV-2SLS
D.m	1.7521**	-0.1341
	(0.7481)	(2.9563)
D.s	-1.5069***	-1.0290
	(0.4045)	(0.8306)
ln(pop)	-13.2926***	-11.8236***
	(3.0619)	(3.7956)
$\ln(pop^2)$	0.4195***	0.3726***
	(0.0967)	(0.1203)
Post-2011	-0.0441***	-0.0478***
	(0.0144)	(0.0155)
Constant	105.3236***	93.8168***
	(24.3496)	(29.9348)
R^2	0.4746	0.3932
F / Wald statistic	7.41	31.32
Prob > F / χ^2	0.0001	0.0000
Hausman χ^2 (4)		0.43
Prob > χ^2		0.9795

Source: Authors' computations.
*Standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.*
Hausman test null hypothesis: OLS is consistent (no endogeneity).
Instrumented variable: D.m
Instrument: the one-period lag of the manufacturing share.

Désindustrialisation et croissance dans les pays MENA : le cas de la Tunisie

Résumé - L'objectif de cet article est d'analyser le phénomène de désindustrialisation dans les pays de la région MENA, en mettant en évidence ses principales caractéristiques et son impact sur la croissance économique. L'analyse est menée sur des séries temporelles longues couvrant la période 1960-2018. À la lumière de l'importance croissante du secteur des services au cours des dernières décennies, l'article examine le rôle de la tertiarisation, parallèlement au secteur manufacturier, dans la dynamique de croissance. Les principaux résultats suggèrent que les pays MENA ont commencé à se désindustrialiser à des niveaux relativement faibles de PIB par habitant, ce qui peut s'interpréter comme un signe de désindustrialisation prématurée. En conséquence, ils n'ont pas suffisamment bénéficié de certains avantages clés du secteur manufacturier et des externalités associées, telles que la diffusion technologique, le développement des compétences et l'ouverture internationale. Les résultats indiquent également que la part du secteur manufacturier exerce un effet positif sur la croissance au cours des différentes périodes considérées en Tunisie, confirmant ainsi son rôle de moteur de la croissance. Cependant, cet effet positif a diminué au fil du temps, le secteur manufacturier étant de plus en plus cantonné dans des activités à faible technologie, d'assemblage et de sous-traitance. Par ailleurs, rien ne permet d'affirmer que le secteur des services, dans sa configuration et sa spécialisation actuelles, puisse être envisagé comme un véritable moteur de croissance et de développement. En effet, l'augmentation du poids des services au cours des deux dernières décennies a été principalement portée par des activités peu productives, telles que le commerce (en grande partie informel) et les services publics, et a reposé dans une moindre mesure sur des activités modernes et à forte productivité.

Mots-Clés

Désindustrialisation prématurée
Changement structurel
Tertiarisation
Pays MENA
Croissance économique
Secteur manufacturier