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## The middle east : decline and resurgence in west Asia

Mohamed Saleh

► **To cite this version:**

Mohamed Saleh. The middle east : decline and resurgence in west Asia. The cambridge economic history of the modern world: Volume 2, 1870 to the Present, 2, Cambridge University Press, pp.213-250, 2021, The Cambridge Economic History of the Modern World Series, 9781316671603. hal-03546704

**HAL Id: hal-03546704**

**<https://hal.science/hal-03546704>**

Submitted on 25 Mar 2022

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**The Cambridge Economic History of the Modern World**

**Stephen Broadberry and Kyoji Fukao (editors)**

**Volume 2: 1870-2010**

**Part A: Regional developments**

## **Chapter 8:**

### **“The Middle East: Decline and Resurgence in West Asia”\***

Mohamed Saleh

July 25, 2019

The modern economic history of the Middle East and North Africa (henceforth, MENA) region has been the subject of a voluminous body of scholarship. Pioneering economic historians of the region all provided invaluable narratives of MENA history (e.g., Issawi 1982, Owen and Pamuk 1998, Owen 2002, Kuran 2012). The objective of this chapter is to first provide the reader with an overview of the economic growth of the MENA region between 1870 and 2010. It will then analyze the underlying sources of growth (geography versus institutions) and the proximate sources of growth (labor, physical capital, and technology). In this regard, the chapter’s main contribution lies in putting together major empirical facts about the MENA region at the country-level on the long-term trends of key variables in economic development. These variables

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\* Toulouse School of Economics: Manufacture des Tabacs, 21 Allée de Brienne, F-31015, Toulouse Cedex 6, France. E-mail: mohamed.saleh@tse-fr.eu. The author gratefully acknowledges the excellent research assistance by Mennatallah El-Ayadi, and the financial support of the ANR-Labex IAST.

include GDP per capita, democracy, population, fertility, mortality, migration, labor force participation, human capital, physical capital, and technology.

The chapter includes four groups of countries within the definition of the MENA region: (1) the Levant (Iraq, Israel, Jordan, Lebanon, Palestine, and Syria), (2) the Arab peninsula (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, and Yemen), (3) Egypt, Iran, and Turkey, and (4) North Africa (Algeria, Libya, Morocco, and Tunisia). The chapter does *not* include though other African and Asian countries with significant Muslim populations such as Sudan, Mauritania, Pakistan, Afghanistan, and Indonesia.

The chapter proceeds as follows. Section 2 provides an overview of MENA economic history, starting with the de-industrialization of the Ottoman Empire and its integration into the world economy from 1870 up to World War I. This will be followed by a discussion of the collapse of the Ottoman Empire and the inter-war period from 1914 to 1950. I will then discuss the post-Colonial state-led development period in the 1950s and 1960s, and the subsequent shift to the market economy that coincided with the surge in oil prices from the 1970s until 2010.

Section 3 is the chapter's core contribution. It first documents the long-term trend of real GDP per capita in 1870-2010, where I mainly draw on Pamuk's (2006) estimates and the revised Maddison's estimates (Bolt and van Zanden 2013). I then draw on various secondary data sources to document the underlying and the proximate sources of economic growth. Data sources include published statistics produced by the World Bank and the United Nations, and individual-level population census samples published by Integrated Public Use Microdata Series (IPUMS) at Minnesota Population Center.

A puzzling fact that emerges about the economic performance of the MENA region is that it lagged behind the rest of the world (with the exception of sub-Saharan Africa) in the second half of the twentieth century, with respect to democracy, fertility decline, and female labor

force participation. The discussion of the role of geography and institutions highlights how geography, in particular, the abundance of natural resources, largely shaped the path of economic development in the region. It is also correlated with the emergence and persistence of undemocratic political institutions and coercive labor institutions. This is the case for the Arab States of the Persian Gulf, Libya, Algeria, Iran, and Iraq (Group A). By contrast, MENA countries that were less rich in natural resources (Group B) witnessed more diverse political development paths, although their political upheavals resulted more often in dictatorships. Their less reliance on natural resources made tertiarization more pronounced, though.

## **2. MENA economic history since 1870: An overview<sup>1</sup>**

### **2.1 Europe's rising influence and MENA's de-industrialization (1870-1914)**

The economic history of MENA since 1870 has been largely shaped by the rising European influence in the region. The region's increasing contact with Europe via trade, Europeans' settlement in the region, and European capital inflows into the primary sector and the related trade sector, was associated with the "de-industrialization" of the MENA region throughout the nineteenth century. MENA traditional manufacturing sector lost competition to the more advanced and industrialized European manufacturing.

Trade with Europe grew rapidly during the nineteenth century. Starting from the 1850s, the economies of many MENA countries became centered around the exportation of primary commodities (cash crops) such as cotton in Egypt, Turkey, and Iran, silk and fruits in the Levant, tobacco in Turkey and the Levant, and sugar in Egypt.

The expansion of the cultivation of cash crops was facilitated by the availability of uncultivated land. But faced with local labor scarcity, there was a surge in slave imports from Sudan, and in the coercion of local labor by large landholders. Expansion of the cultivation and exportation of cash crops were also made possible by the increase in European capital inflows,

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<sup>1</sup> This section draws on Issawi (1982) and Owen (2002).

and the rise of the banking sector. This period also witnessed the emergence of private property rights on land. MENA countries started to formalize land titles and codify the land tenure rights. This process was correlated with the expansion of cash crops.

Europeans started to settle in the region to benefit from trade. North Africa, Egypt, and Palestine received an influx of European immigrants. Under the capitulation agreements between European states and the Ottoman empire, Europeans residing in the region held extraterritorial rights and were thus subject to their own consulates in the case of conflicts with local Ottoman subjects. Iran held similar agreements with Russia and other European powers under the Qajar dynasty (1794-1925). Although these agreements were initially reciprocal, the shift in the balance of power towards Europe meant that it was European settlers in the MENA region who benefited from the capitulations the most.

It was not only European nationals who benefited from the capitulation agreements though, as European consulates started to sell the protégé status that granted access to European consular courts to Ottoman subjects. This was first directed at local subjects working in European consulates, but then extended to other groups, especially non-Muslim minorities. It has been suggested that the economic superiority of local non-Muslim minorities that has been observed throughout the nineteenth and the twentieth centuries was a consequence of the capitulations and the access to the European legal systems that came with the protégé status. But this narrative needs to be revised. First, while urban non-Muslim minorities: Armenians, Greeks, Levantine Christians, and Jews, may have benefited from the capitulations because they were traders and moneychangers, Coptic Christians of Egypt, the largest non-Muslim population in the region, did not, because they were artisans and bureaucrats. Second, the narrative often blurs the line between local non-Muslims and European immigrants who happened to belong to the same religious affiliation. In doing so, it tends to emphasize the “foreignness” of local non-Muslims. For example, European Christians and Jews are put in the same group as local Christians and Jews. This mixes up ethnic divisions with religious affiliation.

Along with trade and migration, the transportation sector grew. Large-scale transport projects were carried out in MENA including, most notably, the Suez Canal that was opened in 1869. Steam ships started to navigate the eastern Mediterranean. The first railways line in the region was opened in the 1850s connecting Cairo and Alexandria in Egypt. The railways network expanded thereafter in the entire region. Telegraphs started to penetrate the region as well.

The result of the growth of trade in cash crops and of transport was a secular decline of the manufacturing sector. Egypt's attempt at state industrialization in textiles under Muhammad Ali Pasha, its autonomous Ottoman viceroy in 1805-1848, failed and most Egypt's state textile manufactories closed down by 1868. In other MENA countries, the share of artisans declined. The de-industrialization was, at least partially, a consequence of the Anglo-Ottoman 1838 Treaty that reduced tariffs imposed by the Ottoman Empire.

Faced by the rising influence of European powers, the Ottoman Empire attempted to increase its capacity to levy taxes and to conscript a modern army via implementing a series of military and fiscal reforms during the nineteenth century in what is known as *Tanzimat*. However, the increased Ottoman public debt led to its default in 1875. Egypt followed course in 1876. European powers gradually captured Ottoman province: Algeria in 1830, Tunisia in 1881, and Egypt in 1882. Morocco, which was not part of the Ottoman Empire, was divided between French and Spanish states in 1912. The Levant remained part of the Ottoman Empire until the aftermath of WWI. Iran remained independent throughout the period under the Qajar dynasty.

## **2.2 The collapse of the Ottoman Empire and the inter-war period (1914-1945)**

The fall of the Ottoman Empire in the aftermath of WWI led to the formation of British and French mandates over the Levant: Iraq, Jordan, and Palestine became British mandates, whereas Syria and Lebanon fell under the French mandate. The inter-war period also witnessed the formation of modern nation-states, with many MENA countries gaining their full or partial independence. Egypt gained its partial independence from Britain in 1922, following a popular

revolt in 1919, while Britain continued to hold de facto power on Egypt, especially over the Suez Canal. Iraq gained its independence in 1932. The modern Turkish state was founded in 1923. An Iranian coup in 1921 brought the Qajar dynasty to an end and resulted in the establishment of the rule of the Bahlavi dynasty in 1925. Saudi Arabia was founded in 1933.

The new independent states attempted to impose national control over the economic realm. The capitulations were abolished in Turkey in 1923, Iraq in 1922, Iran in 1928, and Egypt in 1937. The Mandates of Syria, Lebanon, Palestine, and Jordan did not allow the capitulations. National central banks started to emerge. States also regained control over their tariff and trade policies by abolishing the commercial treaties with the European powers. Governments tried to increase nationals' share in firm ownership, via establishing national banks and providing credit to locals through private banks.

### **2.3 State-led development in the post-colonial period (1945-1973)**

The post-colonial period witnessed the rise of military regimes with socialist and nationalist ideologies. State-led development became the norm in the 1950s and 1960s under the presidential dictatorships of the region, including Egypt, Syria, Algeria, Tunisia, Iraq, and Libya. At the core of their economic agendas was a stated objective of completing the process of national independence. The major pillars of their legitimacy were the provision of public free education to the masses, confiscation of private entrepreneurships, nationalization of banks and private assets, and land redistribution. Guaranteed employment in the government and public sector for university and secondary school graduates became prevalent in most MENA countries, leading to an expansion in white-collar jobs, especially teachers and accountants.

It remains an open question whether the state-led programs indeed achieved their objectives. While the programs stripped Europeans from their privileges, leading to their eventual exodus, they often targeted native non-Muslims. The exodus of the region's urban non-Muslim minorities (with the notable exception of Egypt's Copts), started in the aftermath of WWI but

intensified in the aftermath of WWII. And while the beneficiaries of the nationalization and land redistribution programs were in principle the masses, the programs more often than not ended up redistributing economic and political power to a new middle class of military and police officers. This new class quickly adopted the habits of the old elite and maintained the colonial exclusive institutions.

The Arab-Israeli conflict which started during the interwar period with the intensified migration of European Jewry to Palestine has been an important factor that shaped the economic and political development of the region in the post-colonial era. It has been often used by military dictators to justify the lack of democratization of the region and the persistence of their notorious military regimes. It has also consumed a large portion of the economic resources of the region.

#### **2.4 The shift to the market economy (1973-2010)**

The 1973 oil crisis enabled the Arab states of the Persian Gulf to increase their economic and political power. Migration from MENA countries to these countries, in addition to Iraq and Libya, increased. Many MENA countries started to shift to liberalize the economy, while keeping their military dictatorships intact. However, the resulting market systems were still dependent on the state and turned into a form of crony capitalism.

The liberalization of MENA economies was correlated with a surge in inequality. Alvaredo et al. (2018) document that the MENA region has one of the highest levels of income inequality in the world today. If we add to this the lack of democratization and the poor condition of human rights in the region, one can only conclude that the post-colonial regimes did not liberate MENA peoples from colonization. They instead preserved the coercive institutions, many of them are even pre-colonial, to maintain their power over the masses.



### **3. Economic performance of the Middle East in 1870-2010**

This section first documents the long-term trend of the economic performance of the Middle East in 1870-2010, measured by real GDP per capita. Second, I examine the underlying sources of growth: the relative roles of geography and institutions in driving economic growth in the region. Finally, I examine the proximate sources of growth, or the factors of production: labor, physical capital, and technology.

#### **3.1 Real GDP per capita in 1870-2010**

Figure 1(A) shows the long-term trend of real GDP per capita in 1870-2010. Data for the pre-1950 period are scarce; only two data points are available for 1870 and 1913. Figure 1(B) depicts the corresponding average growth rates of real GDP per capita calculated over 1870-1913, 1913-1950, and over 5-year intervals thereafter. Growth rates enable us to appreciate whether MENA countries achieved Modern Economic Growth (MEG), defined as sustaining an average growth of real GDP per capita of 1 percent per annum for a sufficiently long period of time so as to quadruple the standard of living.

##### *3.1.1 Levant*

There are two major facts about the Levant. First, with the exception of Iraq, the Levant is generally less rich in natural resources than the oil-rich countries in the region. Despite this fact, or perhaps because of it, the Levant has generally witnessed a steady growth trajectory starting from 1950, as its GDP was less sensitive to oil prices. The second fact is that the Levant was at the core of various foreign and civil conflicts: the Arab-Israeli conflict, the Iraq-Iran wars, the First and Second Gulf Wars, and the Lebanese Civil War. These conflicts led to sharp fluctuations in the region's GDP, even within its non-oil rich countries.

The non-oil rich but largely stable Israel witnessed the largest increase in its GDP per capita, which quadrupled between 1950 and 2010 reaching almost 20,000 PPP USD in 2010.

Syria's GDP per capita witnessed a steady increase too, albeit with several fluctuations due to political turmoil, reaching 7,500 PPP USD in 2010 (the second richest country in the Levant after Israel as of 2010). Similarly, Jordan witnessed an increase in its real GDP per capita since 1950 albeit with fluctuations due political turmoil, reaching ~5,000 PPP USD in 2010. Lebanon's GDP per capita increased steadily until 1980, but then declined due to the Lebanese Civil War in 1975-1990, before it recovered to reach slightly less than 5,000 PPP USD in 2010. Palestine's economic performance improved steadily between 1950 and 2000, but it declined in 2000-2010, following the Second Intifada in 2000-2005. Iraq's GDP per capita increased between 1950 and 1980 (it was the second richest country in the region after Israel in 1980), but then declined steadily due to the Iraq-Iran War in 1980-1988, the Gulf War in 1990-1991. The growth rates in panel (B) show that, within the Levant, only Israel sustained a positive growth rate from 1950 onwards, followed by Palestine (only until 2000). Jordan has maintained a positive growth rate since 1990. Syria, Lebanon, and Iraq, all witnessed sharp fluctuations between positive and negative growth rates due to political unrest and, in the case of Iraq, fluctuations in oil prices.

### *3.1.2 Arab Peninsula*

Despite its political stability, the oil-rich Arab peninsula (with the exception of Yemen) witnessed a less stable growth trajectory than the Levant due to the sensitivity of its economy to international oil prices. United Arab Emirates, the richest country in this group with a real GDP per capita of 15,000 PPP USD in 2010, witnessed an impressive growth between 1913 and 1960, a period of stability in 1960-1980, followed by a sharp decline in 1980-1985 after the end of the 1970s oil crisis, and another period of stable economic performance in 1985-2010. The second and third richest countries, Kuwait and Qatar, exhibited a similar path of economic performance: an increase between 1913 and 1950, fluctuations in 1950-1980, a sharp decrease in the early 1980s, and a stable performance since then. With its larger population, Saudi Arabia stands as the fourth richest country in the region in 2010. It also witnessed an increase in its real GDP per

capita in 1950-1980, followed by a decline. Oman, which relies less on oil than its neighbors, has witnessed a steady rise in its GDP per capita since 1965. The same applies to Bahrain, which exhibited a less impressive growth path. Finally, Yemen, the poorest country in the Arab peninsula, witnessed an increase in its GDP per capita since 1965. In terms of growth, whereas the oil-rich countries in the Arab Peninsula (Kuwait, Qatar, UAE, Saudi Arabia) witnessed sharp fluctuations due to changes in oil prices, other countries in the region (Oman, Bahrain, Yemen), which are less dependent on oil, have mostly maintained positive growth rates since 1950.

### *3.1.3 Egypt, Turkey, and Iran*

Within this group, Iran is a major oil producer. Nevertheless, it is the non-oil-rich Turkey that is the richest country in the group at 8,000 PPP USD in 2010 and that witnessed a steadily growing GDP per capita over the period. In comparison, Iran's GDP per capita increased slowly between 1913 and 1950, rapidly between 1955 and 1975 (due to oil), before it declined sharply in 1975-1980, because of the political unrest that accompanied the Iranian Revolution. Its GDP per capita did not recover until after 1990. Compared to Turkey and Iran, Egypt had a less impressive growth trajectory, with a modest increase in 1955-1967, the period of the state-led development in the post-colonial period, followed by a decline in 1967-1975 due to the Arab-Israeli Wars in 1967-1973. Egypt's GDP per capita did not start to recover until after 1975. In terms of growth, while Egypt and Turkey have witnessed MEG since 1950, the rapid growth of Iran in 1956-1975 was reversed after 1975 and its positive growth rates did not occur again until after 1990.

### *3.1.4 North Africa*

Within this group, Algeria and Libya are major producers of oil and natural gas. However, consistent with the pattern that I documented in other regions; it is the non-oil-rich countries (Tunisia and Morocco) that maintained positive growth rates since 1950. Tunisia is the richest country in North Africa, whereas Morocco exhibited steady growth although at a slower rate. By

contrast, Algeria's GDP per capita increased steadily until 1985, but then declined due to the Algerian Civil War in 1991-2002, and only began to recover in the 2000s. Libya's GDP per capita increased sharply between 1960 and 1980 (albeit with fluctuations) but has declined steadily thereafter.

### *3.1.5 Summary*

To sum up, and as Pamuk (2006) previously documented, although MENA oil-rich countries are still among the richest in the region after Israel, the heyday of their economic performance was reached around 1980, and their incomes declined thereafter due to fluctuations in oil prices. That was certainly the case for the Arab states of the Persian Gulf. It was also the case for Libya whose GDP per capita fell even below the two non-oil producing countries in North Africa: Tunisia and Morocco. Political unrest due to foreign and civil wars caused other oil-rich countries in the region (Algeria, Iran, Iraq), to witness frequent swings in their economic performance. Within the non-oil-rich camp, the more politically stable Egypt, Jordan, Israel, Morocco, Tunisia, Turkey, and Yemen had steadier economic performance paths, with Israel and Turkey standing out as the most economically successful countries in the region. Political turmoil in Lebanon, Palestine, and Syria, triggered strong fluctuations in their growth trajectories, though.

## **3.2 Underlying sources of growth**

Sources of economic growth can be classified into two groups: (a) underlying sources that include geographic and institutional factors, and (b) proximate sources, which are essentially the factors of production (excluding land and natural resources): labor, physical capital, and technology. In this sub-section, I discuss the underlying sources of economic growth in the region: Can the variation in economic growth across MENA countries be attributed to the variation in their geographic conditions, or rather to the variation in the quality of their economic and political institutions, such as the rule of law and democracy?

### **3.2.1 Geography**

MENA countries vary widely in their geographic conditions. First, there is wide variation in the availability of water resources and of temperate climate that makes agriculture possible. On the one hand, a few MENA countries are traditionally endowed with fertile cultivable land, either because of the existence of rivers (Iraq and Egypt), or rainfall (Turkey, Iran, Syria, Lebanon, Israel, Palestine, Tunisia, Morocco). These countries typically have moderate climates and are mostly in the northern part of the region. On the other hand, Jordan and the Arab peninsula countries are mostly arid, with the exception of Oman and Yemen. Most of the surface area of Egypt, Libya, and Algeria is part of the African Sahara.

Second, MENA countries vary with respect to the abundance of natural resources, such as oil and natural gas. While the Arab countries of the Persian Gulf, Libya, Iran, Iraq, and Algeria are rich in natural resources, other MENA countries in the region are not as rich.

Third, market access is largely determined by location and the length of the coast line on important international navigation routes. All MENA countries have access to the coast, with the exception of Jordan. The Persian Gulf is perhaps the most important navigable route in the region due to its huge oil reserves, followed by the Red Sea and the Mediterranean Sea that are also important for oil transportation. In these seas, the Strait of Hormuz (UAE, Oman, and Iran), the Suez Canal (Egypt), and the Strait of Bab-el-Mandeb (Yemen) stand out as the most significant navigation bottlenecks.

### **3.2.2 Institutions**

The quality of the political and economic institutions varies across MENA countries. Figure 2 plots the long-term evolution of the Polity IV democracy index that ranges from 0 to 10, from the least to the most democratic. The figure reveals a well-known fact about the MENA region, namely that with two exceptions, Israel and Turkey, all the other countries in the region are

lagging behind the rest of the world with respect to democracy. It also reveals that although this has been a fact since 1950, there were short episodes of democracy in the histories of certain MENA countries (Syria and Egypt) that failed and were replaced by military regimes. In the Levant, Israel had the highest democracy index value in 1950 although it declined in the recent decades. Lebanon's democracy score improved in the 2000s following the civil war. Syria had relatively high democracy scores in the 1940s and 1950s (albeit with interruptions of military rule), but it descended into absolute authoritarianism since the late 1950s. Jordan and Iraq had very low democracy scores throughout their history. Arab States of the Persian Gulf all have absolute monarchies (democracy score = 0). Egypt had a relatively high democracy score during its liberal period in 1922-1952, but it descended into absolute military rule since 1952. By contrast, Turkey's democracy score improved throughout the twentieth century, despite episodes of military coups. Iran and North African countries all have very low democracy scores.

Perhaps correlated with authoritarianism, labor rights are generally weak in MENA region. Disguised forms of slavery are prevalent throughout the region, whether in the agricultural sector or among immigrants in the Arab states of the Persian Gulf. In fact, the region ranks among the worst regions in the world with respect to labor rights.

Despite the poor democratization of MENA countries and its coercive labor institutions, they mostly score better with respect to rule of law and property rights. UAE has particularly high scores on both indexes. Qatar, Jordan, Israel, Tunisia, Morocco, Bahrain, Oman, and Saudi Arabia have relatively high scores as well.

Political stability varies across MENA countries. The Arab-Israeli conflict that started in the first half of the twentieth century with the increased European Jewish migration to Palestine under the British Mandate resulted in a series of wars in 1948, 1956, 1967, 1973, 1982, 1987, 2000, 2006, and 2009 that directly involved, Egypt, Syria, Lebanon and Jordan, besides Israel and Palestine. The Persian Gulf region witnessed a series of wars between Iraq and Iran in 1980-1988,

and Iraq and a US-led international coalition in 1990-1991. Apart from international wars, Yemen witnessed a devastating civil war in 1962-1970, Lebanon in 1975-1990, and Algeria in 1991-2002. Popular revolts, military coups, and militant insurgencies by a faction of the population were commonplace throughout the region. The main exception here are the Arab states of the Persian Gulf which were generally politically stable throughout the second half of the twentieth century.

### **3.2.3 GDP sectoral composition**

Geography and institutions shape the composition of GDP across the primary, secondary, and tertiary sectors in the MENA region. Figure 3(A) shows the share of the primary sector in GDP, which includes agriculture, hunting, forestry, fishing and production of livestock. In the Levant, Syria had the highest share of the primary sector at around 30 percent, followed by Palestine, Lebanon, and Jordan, but it declined in all four countries over time. In the Arab Peninsula, Oman had in 1960 the highest share of the primary sector at 80 percent, although it declined rapidly thereafter due to oil discoveries. Turkey had a relatively high share of agriculture in GDP in 1960 (60 percent), compared to Egypt and Iran, but again, the share of agriculture declined in the three countries over time. The share of the primary sector persisted at around 20 percent in North Africa (the less agricultural Libya had a much lower share though).

Figure 3(B) shows the share of the secondary sector in GDP, which includes mining, manufacturing, construction, electricity, water, and gas. One can interpret the mining component of the secondary sector as a proxy for the contribution of oil to GDP, although I am not able to separate mining from the other sub-sectors in the secondary sector. The other significant sub-sector in the secondary sector, behind mining, is construction which is significant in many MENA countries. In the Levant, the share of the secondary sector increased in Syria and Jordan, reaching about 35 percent, but decreased in Lebanon and Palestine to 15 and 25 percent respectively. In the Arab Peninsula, the share of the secondary sector is the highest due to its reliance on oil. Iran had a relatively high share of the secondary sector due to oil, but the share

declined over time. Egypt and Turkey had a lower but increasing share of the secondary sector. In North Africa, Libya and Algeria had the highest shares of the secondary sector due to oil and natural gas industries.

Figure 3(C) shows the share of the tertiary sector, which includes services and trade. In the Levant, the share of the tertiary sector is high in Lebanon, Jordan, and Palestine exceeding 70 percent of GDP. The share of the tertiary sector in the Arab Peninsula is also sizable especially in Bahrain, Qatar, and Saudi Arabia. Turkey witnessed a secular increase in the share of the tertiary sector that exceeded 60 percent by 2010. It also accounts for about 50 percent of GDP in Egypt and Iran. In North Africa, Tunisia and Morocco have a relatively high share of the tertiary sector, compared to Algeria and Libya that rely more on oil.

To sum up, while the oil-rich Arab States of the Persian Gulf, Iran, Iraq, Libya, and Algeria have a relatively high share of the secondary sector, the primary sector is significant in Turkey, Syria, Egypt, Morocco, and Tunisia, due to agriculture. “Tertiarization,” or the increase in the share of the tertiary sector was more pronounced in non-oil rich countries, such as Jordan, Lebanon, Tunisia, and Morocco. Only Turkey and Israel witnessed successful industrialization.

### **3.2.4 Summary**

One can classify MENA countries into two groups. Group A includes oil-rich countries: Algeria, Iran, Iraq, Libya, and the Arab States of the Persian Gulf (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates). Group B includes non-oil-rich countries: Egypt, Israel, Jordan, Lebanon, Morocco, Palestine, Syria, Tunisia, Turkey, and Yemen.

In Group A, the abundance of natural resources has been often blamed for crippling the democratization process of these countries. As the state does not rely on taxation as the main source of its revenue, the masses do not have enough incentive to rebel thus reducing their bargaining power vis-à-vis the ruling elite, which is a necessary condition to introduce democracy.



Furthermore, the richness of the elite due to oil revenues enables it to grant subsidies to the masses to quiet rebellion. Consistent with this conjecture, the political systems of all countries in this group are authoritarian: either absolute monarchies (Oman, Qatar, Saudi Arabia, United Arab Emirates), absolute monarchies with relatively more personal liberties (Bahrain, Kuwait), or presidential dictatorships (Algeria, Iran, Iraq, Libya).

In Group B, the relative scarcity of natural resources and the traditional reliance of most countries in this group on agriculture, imply that the social conflict is typically over the control of the coercive power of the (military) state, which enables the confiscation of agricultural land. This social conflict resulted, more often than not, in military coups, and only exceptionally, in democratic transitions. This pattern persisted even after the decline of the share of the primary sector. Industrialization succeeded in only two countries in this group: Israel and Turkey. This implied there was no significant capitalist class or “bourgeoisie” in most countries in Group B. The remaining countries in this group witnessed tertiarization and only limited state industrialization. Private business owners in the tertiary sector continued to rely on the (military) state. In terms of political system, Group B has more diverse regimes than Group A: two democracies (Israel, Turkey), authoritarian regimes with more personal liberties (Jordan, Lebanon, Morocco), and presidential dictatorships (Egypt, Palestine, Syria, Tunisia, Yemen).

### **3.3 Proximate sources of economic growth**

There are two categories of the proximate sources of growth which are impacted by geography and institutions. The first are those that relate to labor, and the second are those that relate to physical capital and technology.

#### **3.3.1 Labor**

Economic growth can be partially driven by labor. This can be via an increase in the potential *quantity* of labor, measured by population growth, which is in turn attributable to natural increase

(births minus deaths) and/or net immigration. This potential labor force can be employed in production or not depending on the labor force participation rate and on the employment rate. Besides the increase in the labor force, economic growth can take place due to improvements in the *quality* or productivity of labor, or its stock of human capital, as measured by its educational, occupational, and health attainment. I examine these labor-related drivers of economic growth in the MENA region below.

*Population growth: natural increase or immigration?*

Figure 4(A) depicts the long-term trend of population size in MENA. All countries in the region, whether in Group A or Group B have witnessed rapid population growth since at least 1950. This growth could have been driven by natural growth, the difference between births and deaths, and by (net) immigration. Figures 4(B) and 4(C) depict the crude birth and death rates per 1,000 people since 1950. Most MENA countries had 40-50 births per 1,000 people in 1950-1955, that were much higher than crude death rates (20-30 per 1,000), thus contributing to the rapid population growth starting from the 1950s that we observe in Figure 4(A). The interesting exceptions here are Israel, where the birth rate was relatively low as of 1950-1955, and Lebanon which had an exceptionally low death rate in 1950-1955.<sup>2</sup> This pattern is consistent with the notion that both countries are among the most progressive in the region with respect to health and women rights. Mortality exhibited a rapid decline in all MENA countries since 1950, reaching a crude death rate below 10 per 1,000 by 2010 (except for Yemen). In the absence of pre-1950 data on crude death rates, it is not possible though to date the start of the mortality decline in the MENA region. By contrast, the birth rate started to decline only later on, leading to an eventual slowdown in population growth. The lowest birth rates in MENA (slightly more than 10 births per 1,000) in 2005-2010 were achieved by Lebanon, UAE, and Qatar. Furthermore, Israel, Bahrain, Kuwait, Oman, Saudi Arabia, Iran, Turkey, Algeria, Libya, Morocco, and Tunisia all

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<sup>2</sup> Notably, Oman, Saudi Arabia, and Morocco had relatively low death rates in 1950-1955 (~10-15 per 1,000).

reached relatively low birth rates (20-25 births per 1,000) by 2010. However, Iraq, Palestine, Jordan, Syria, and Egypt (all in Group B) still had relatively high birth rates in 2010 (more than 25 births per year).

The decline in birth rates indicate that many countries in the MENA region witnessed a demographic transition, i.e. a decline in fertility following the earlier decline in mortality. Examining the total fertility rate (TFR), the number of children ever born per woman (figure not shown) enables me to date the demographic transition. Whereas Lebanon, Iran, UAE, Tunisia, Turkey, Qatar, Bahrain, and Morocco achieved TFR below 2.5 by 2010, the majority of MENA countries still have relatively high total fertility rates.

Apart from the natural population growth, a number of MENA countries witnessed significant emigration and immigration waves that contributed to the population growth. Figure 4(D) depicts the net migration rate, the number of immigrants minus the number of emigrants divided by the population. In the Levant, only Israel maintained positive net migration rates in 1950-2010, peaking in 1950-1955 and 1990-1995, due to the continued Jewish immigration to Israel, mostly from Europe. Palestine witnessed consistently negative net migration in 1950-2010 except in 1990-2000, the biggest shock being in 1965-1970 due to the 1967 war. Jordan absorbed most of the Palestinian diaspora in 1950-1970, especially the two large Palestinian emigration waves in 1948 and 1967. The civil war in Lebanon resulted in a large negative net migration shock in 1975-1990. Iraq also witnessed negative net migration shocks starting from 1985.

The Arab States of the Persian Gulf in Group A were by far the largest recipients of immigration in the MENA region that exceeded 10 percent of the population in UAE and Qatar, although immigration to Saudi Arabia slowed down after 1985. Similarly, Iran witnessed a large positive net migration rate in 1970-1990 that paradoxically was not reversed during the Iranian Revolution (although it became negative in 1990-1995). Libya witnessed large positive net migration rates in 1955-1985 but then stopped afterwards.

To sum up, the rapid population growth in MENA countries after 1950 is mostly attributed to natural population increase except in the Arab States of the Persian Gulf and Libya in Group A, and Jordan and Israel in Group B, which received large immigration waves. Palestine, Lebanon, and Iraq witnessed large emigration shocks due to political instability, but these waves were offset by the high fertility rates in these countries.

### *3.2.2 Labor force participation and employment*

Even if MENA countries witnessed rapid population growth in the second half of the twentieth century, the labor force may not have increased as much due to the non-participation of a significant share of the population in the labor market, especially women. Low rates of female labor participation in the region have been long documented. They are attributable to both (1) the under-enumeration of women employment in population censuses and household surveys, and (2) institutional and cultural factors that hinder the participation of females in the formal labor market (e.g., discrimination against females).

To examine the evolution of labor force participation among males and females, I first employ the World Bank Development Indicators (WDI) for the period 1960-2010. Figure 5(A) shows that male labor force participation is at least 60 percent in MENA countries, although there were negative shocks in certain years in Jordan, Egypt, Algeria, and Tunisia. By contrast, females were traditionally much less likely to participate in the labor market in most MENA countries, although they achieved considerable progress in recent years. The paradoxical exception here is Turkey where female LFPR was the highest in the MENA region (65 percent) in 1960 but declined systematically over time. Israel had the second highest female LFPR in 1972 (32 percent) and improved over time to reach 53 percent in 2010. However, the largest gains in female LFPR were achieved by the Arab States of the Persian Gulf in Group A: Kuwait, Qatar, UAE, and Bahrain. Females in Egypt, Tunisia, and Morocco achieved only modest progress.

I augment the analysis of LFPR by employing the individual-level population census samples that are available on IPUMS-International for Iraq, Israel, Jordan, Palestine, Egypt, Iran, Turkey, and Morocco. I restrict each population census sample to individuals between 30 and 60 years of age (prime working age), in order to isolate secular changes across cohorts from life-cycle changes in labor force participation. I then pool the population census samples for each country and plot the percentage of those who are in the labor force among each of males and females across (decennial) cohorts of birth. Figure 5(B) shows the long-term trend of labor force participation by sex and cohort of birth. While males had close to universal participation in the labor force (at least 80 percent) in most countries in the sample, female labor force participation rate is very low. The two exceptions here are Turkey and Israel. The former had female LFPR around 40 percent for all cohorts born between 1920 and 1960. The latter had increasing female LFPR reaching more than 60 percent for the 1960s cohort. Females in all other countries made little progress, except Jordan. Employment rates (figure not shown) exhibit very close trends to LFPR, implying that unemployment is not significant within this age group (30-60 years of age).

### *3.2.3 Human capital: educational, occupational, and health outcomes*

Did the “quality” of the labor force, or its stock of human capital, increase in the MENA region? To address this question, I plot in Figure 6 the long-term trends of the educational, occupational, and health attainment of labor. Figure 6(A) indicates that the average years of schooling has gone up across cohorts of birth in MENA countries, and that female education converged to that of males, or even exceeded it. Israel has the highest educational attainment in MENA and female education exceeded that of males by the cohort born in the 1960s. A similar pattern is observed in Jordan, where females also outperformed males in recent cohorts of birth. Palestine presents an interesting case where females were traditionally better educated than males, and males managed to converge in educational attainment only later on. Iraq witnessed an improvement in male educational attainment up to the 1960s cohort but then it declined, probably due to the

political unrest in the country starting from 1980. Educational attainment of Iraqi females did not converge to that of males. Outside Iraq and the Levant, Iran made the most significant improvement in educational attainment for both males and females, achieving complete convergence by the cohort born in the 1980s. Both Turkey's and Egypt's educational attainment increased significantly over time, but the male-female educational gap persisted. Morocco's male and female educational attainment improved over time but remained lower than other countries in the group, and also did not achieve gender equality in educational attainment.

Figure 6(B) shows the long-term trend of occupational attainment across cohorts measured by the percentage of white-collar workers among employed individuals. An interesting pattern emerges: while the share of white-collar workers increased up to the 1960s cohort, it declined in younger cohorts. Jordan had the highest share of white-collar workers although it declined among males starting from the cohort born in 1960, and among females starting from the cohort born in 1970. Palestinian females increased their share of white-collar workers, while males witnessed a decline in the share of white-collar workers starting from the 1960 cohort. Similarly, Iraqi males witnessed a decline in the share of white-collar workers starting from the 1960 cohort, although Iraqi females improved their share. Egypt had the highest share of white-collar workers among employed males reaching 30 percent in the 1960 cohort, although it started to decline afterwards. Egyptian female occupational attainment improved as well although it also declined after the 1960 cohort. In Iran, Turkey, and Morocco, male occupational attainment also improved and then declined. Female occupational attainment improved as well, although the male-female occupational gap persisted.

Finally, Figure 6(C) shows the long-term trend of health attainment as measured by life expectancy at birth. All MENA countries witnessed a secular improvement in health conditions, where life expectancy at birth almost doubled in most MENA countries between 1950 and 2010.

To sum up our findings so far, although educational attainment improved in most MENA countries across cohorts, occupational attainment improved up to a certain cohort and then declined. Furthermore, while the gender educational gap disappeared in many countries, the occupational gap (among employed individuals) was more likely to persist. There are two explanations for these findings. First, the secular improvement in occupational attainment up to the 1960s cohort was perhaps driven by the expansion in the government size in the post-colonial period. Newly founded bureaucracies, public schools that provided education to the masses, and public hospitals that provided health services, were all in need for recruitment of teachers, physicians, and accountants, hence the improvement in occupational attainment that is observed across cohorts up to the 1960 birth cohort. This process was often formalized in issuing employment guarantees in the government and public sector for secondary school and university graduates. However, the over-employment in the government led to a reduction in size after a certain point, hence triggering the decline in occupational attainment. Second, while female educational attainment increased, it was less translated into better outcomes on the labor market; female labor participation increased but remained modest, and the gender occupational gap persisted. This suggests that female education was aiming at non-labor market outcomes more than labor outcomes, such as finding a better match on the marriage market.

### **3.3.2 Physical capital and technology**

It is not possible to disentangle the contribution of physical capital in driving economic growth in the MENA region. But to have an idea about its potential contribution, I employ the share of fixed capital formation in GDP as a proxy for changes in physical capital in Figure 7(A). Gross capital formation consists of “outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.”<sup>3</sup> Investment in fixed assets and infrastructure in MENA

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<sup>3</sup> According to the World Bank, “fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales, and work in progress.”

region was mostly state-led and partially driven by state revenues from natural resources. It often occurred subsequently to civil and foreign wars due to the reconstruction efforts. In the Levant, the share of gross capital formation in GDP fluctuated between 20 and 40 percent. It peaked in Israel and Syria in the 1970s, in Jordan in the 1980s, and in Lebanon in the 1990s (in the aftermath of the Civil War). In the Arab Peninsula, gross capital formation share in GDP is lower, fluctuating between 10 and 30 percent. It increased in most Gulf States (Oman, Bahrain, Kuwait, and Saudi Arabia) in the 1970s and 1980s, in the aftermath of the Oil crisis, and in Kuwait in the 1990s following the Gulf war. Iran had systematically higher gross capital formation rate than Egypt and Turkey, although gross capital formation in the latter countries increased in the 1980s. In North Africa, Algeria, Morocco, and Tunisia had gross capital formation rates between 20 and 30 percent of GDP, whereas the oil-rich Libya had very low gross capital formation rates that only increased in the 2000s.

How much did technology contribute to real GDP per capita growth? The share of high-technology exports out of manufactured exports sheds some light on this question. Figure 7(B) plots the long-term trend of this variable over time. In the Levant, only Israel had a relatively high share of high-tech exports at 15-20 percent. Lebanon had a high share of high-tech exports in 2009-2010. Jordan's share of high-tech exports was about 8 percent in 2000 but declined afterwards to less than 5 percent. Both Palestine and Syria have negligible shares of high-tech exports (less than 5 percent). In the Arab Peninsula, only Oman had a relatively high share of high-tech exports that reached 15 percent in 1989 but declined afterwards. Egypt, Iran, and Turkey all had low shares of high-tech exports. In North Africa, only Morocco had a relatively high share of high-tech exports (more than 10 percent) but it also declined in recent years.



To conclude, physical capital and technical progress played less of a role in driving economic growth in MENA countries. The main exception here is Israel, and to a lesser extent, Oman, Morocco, Jordan, and Lebanon, which all made some progress in this regard.

#### **4. Conclusion**

This chapter highlighted some major empirical facts about the pattern and sources of economic growth in the MENA region between 1870 and 2010. Some are probably old facts, while others are new and interesting. Consistent with what we know from Pamuk (2006), oil-rich MENA countries (Arab states of the Persian Gulf, Algeria, Iran, Iraq, Libya) did not exhibit a steady growth trajectory due to the sensitivity of their economies to oil prices. To the contrary, the non-oil-rich countries (Egypt, Israel, Jordan, Lebanon, Morocco, Palestine, Syria, Tunisia, Turkey, Yemen) had more stable growth trajectories albeit with varying degrees of success. Another major source of economic instability in the region is the political turmoil due to civil and foreign wars which hit Algeria, Iran, Iraq, Lebanon, Libya, and Palestine. The post-2010 democratic uprisings in the Levant and North Africa, and the consequent devastating civil wars that hit Libya, Syria, and Yemen, certainly added to the economic instability of MENA countries.

While this narrative suggests that geography, and in particular, the abundance of natural resources, largely shaped the growth trajectories of MENA countries, institutions played an important role too, although some may argue that these were themselves an outcome of geography. Oil-rich countries are in general authoritarian, because the elites use oil revenues to avoid mass rebellion. Non-oil-rich countries on the other hand are more diverse, but the lack of the bourgeoisie, except in Israel and Turkey, arguably hindered democratization in these countries too in the post-colonial period. Tertiariation did not change the power balance between the society and the state. The result of all this was the persistence of the coercive political and labor colonial institutions that were in some cases inherited from their Ottoman predecessors in the pre-colonial period and that continue to serve elite interests.

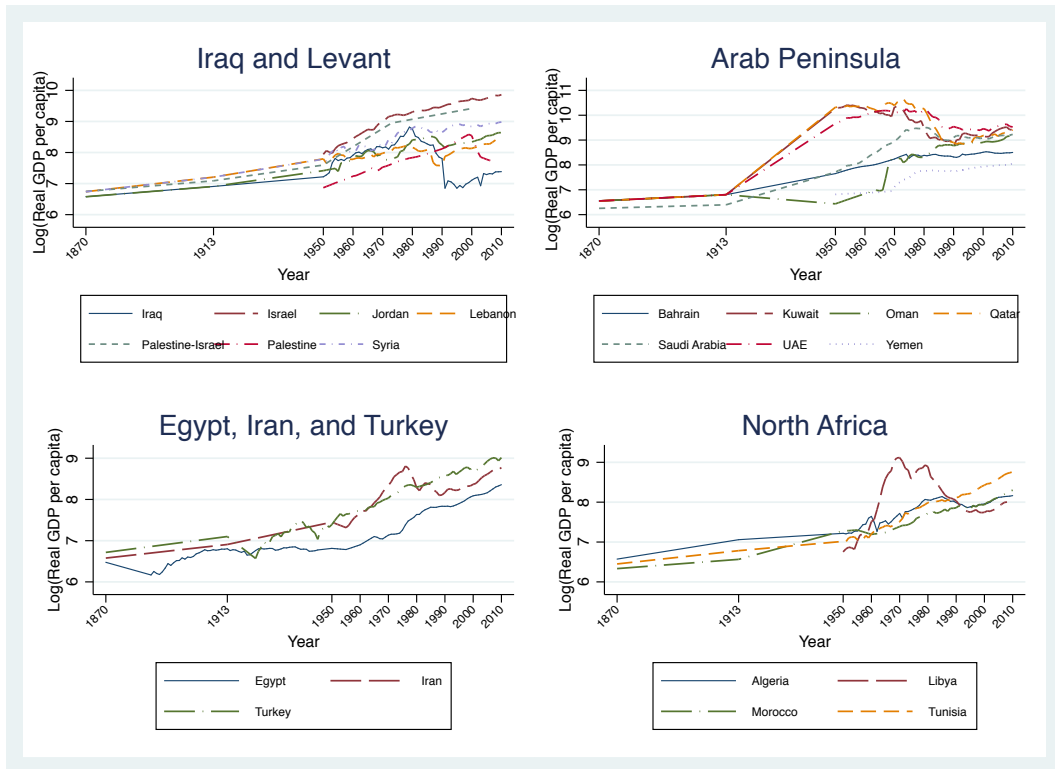
Geography and institutions affected labor, physical capital, and technical progress, the proximate sources of growth. Population grew rapidly in MENA countries mainly due to natural growth, but migration had its effects especially in oil-rich countries (immigration) and during episodes of political turmoil (emigration). Human capital increased in terms of educational, occupational, and health attainment, although part of this improvement was mechanistic due to the policies of public mass education and the guaranteed employment in the government and public sectors, which were adopted by the post-colonial military regimes. Investment in physical capital played a role in economic growth in war-struck countries and in oil-rich countries. Technical progress was minimal in most MENA countries except in Israel and a few others.

The chapter leaves a lot to future research, though. The economic history of the MENA region requires a novel narrative that focuses on the living conditions of the local populations and that gives equal voice to all MENA peoples. This narrative should depart from the traditional nationalist-colonial dichotomy. The persistence of MENA's coercive institutions should be documented objectively, regardless of the identity of the ruling elite, whether it is the Ottoman empire, the colonial administration, or the post-colonial military states, and whether it is foreign or local. This new narrative is possible. It can be built, not only on the colonial sources as has been traditionally the case, but more importantly on the various novel data sources such as population censuses and cadastral surveys that are preserved at the local archives of MENA countries, and that were either digitized or await digitization. These under-used local archival sources can arguably reshape our understanding of the economic history of the region. Instead of focusing solely on the macro-level and institutional questions, which have inspired the current literature and that continue to inspire scholars until today, the novel micro-level large-scale data sources, coupled with rigorous econometric techniques and in-depth historical analysis, can reshape our understanding of these big-picture questions that still occupy MENA scholars.

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(A) Real GDP per capita, 1870-2010



(B) Growth rate of real GDP per capita (%), 1870-2010

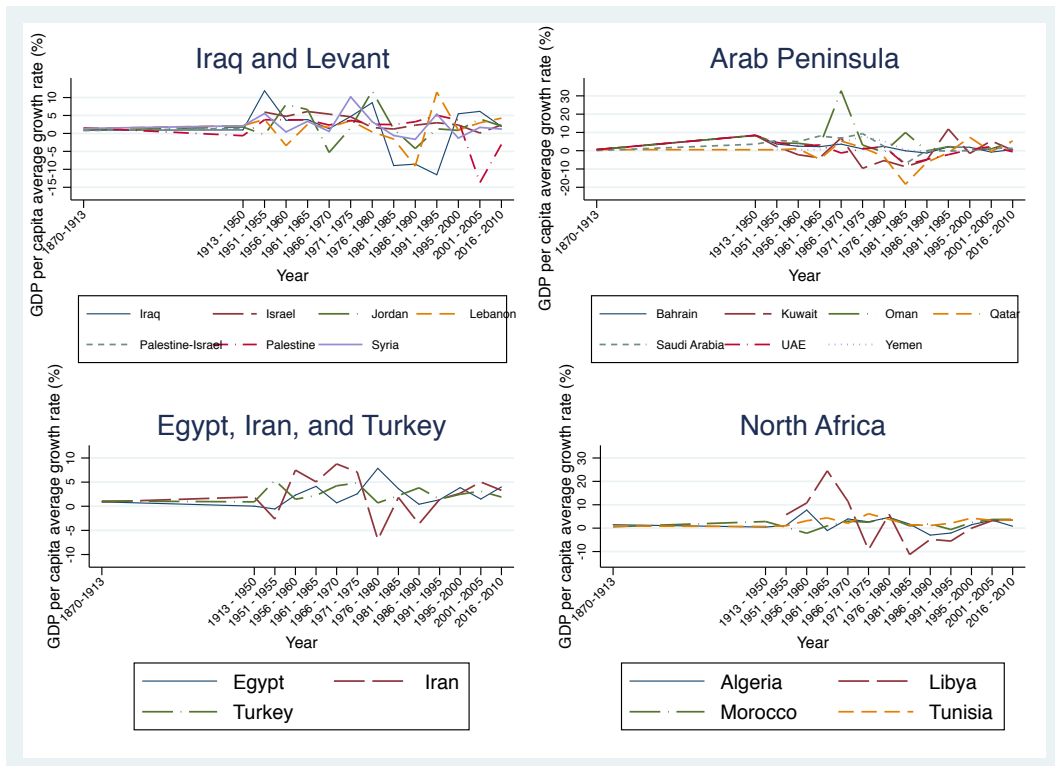
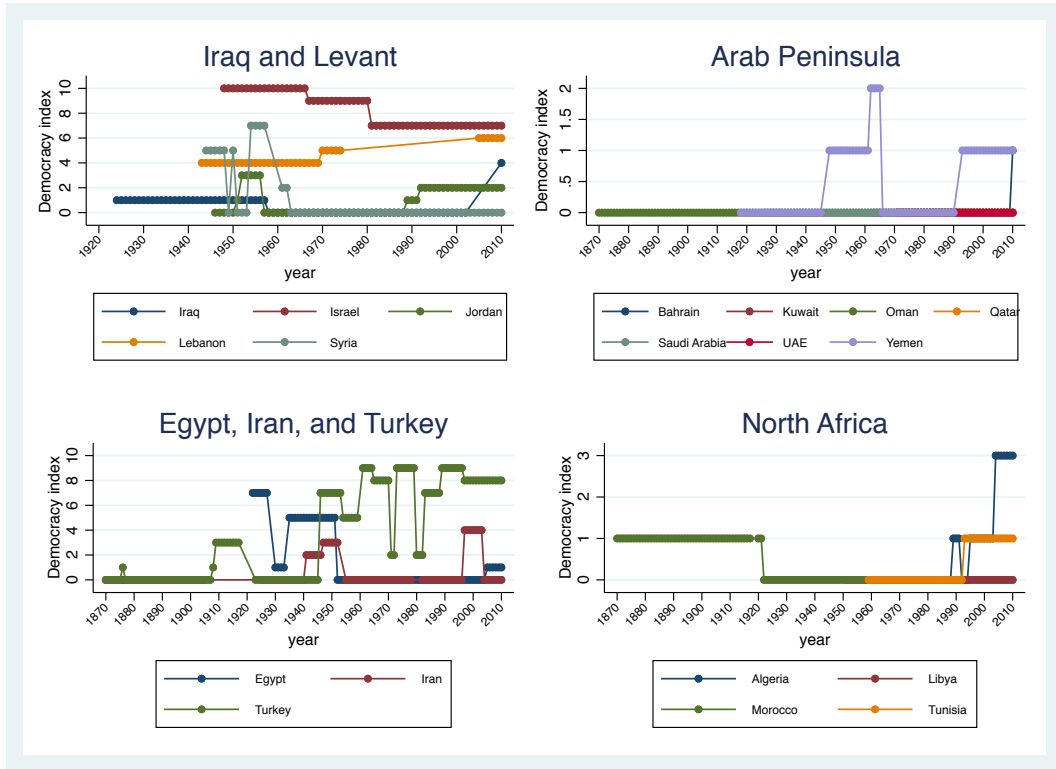


Figure 1: Real GDP per capita and its growth rate, 1870-2010

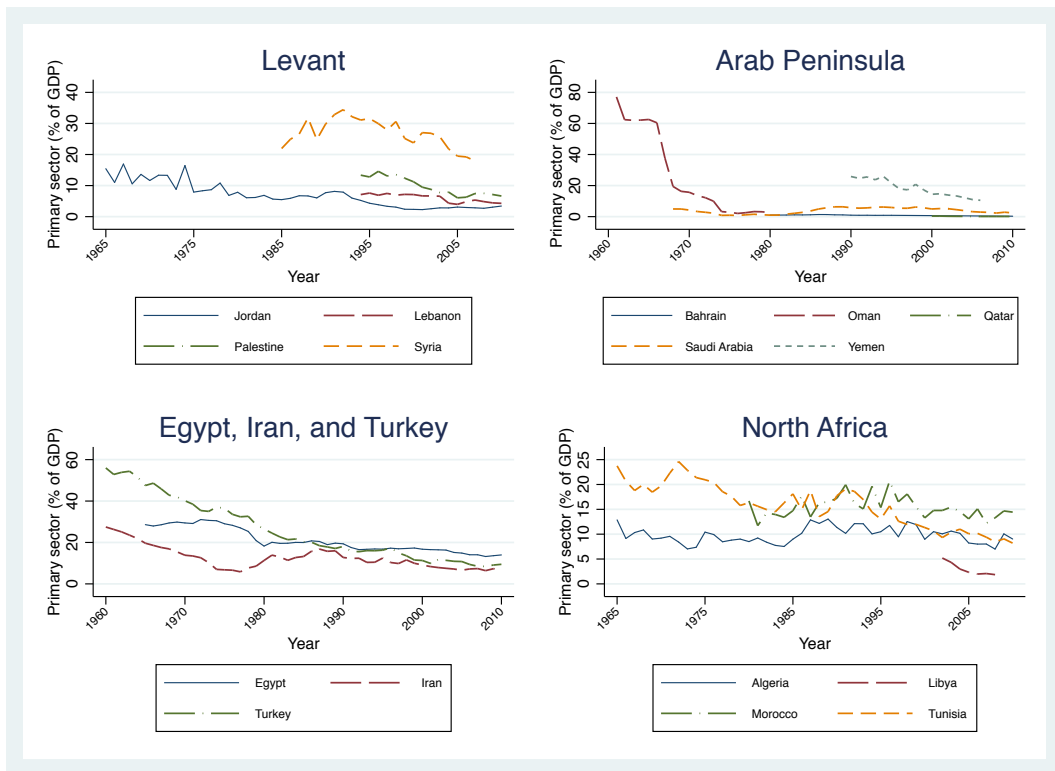
Notes: Real GDP per capita is calculated in PPP \$. Growth rates are the average rates over the indicated periods.  
Sources: (1) 1870-1945: Pamuk (2006); Yousef (2002). (2) 1870-2010: Bolt and van Zanden (2013).



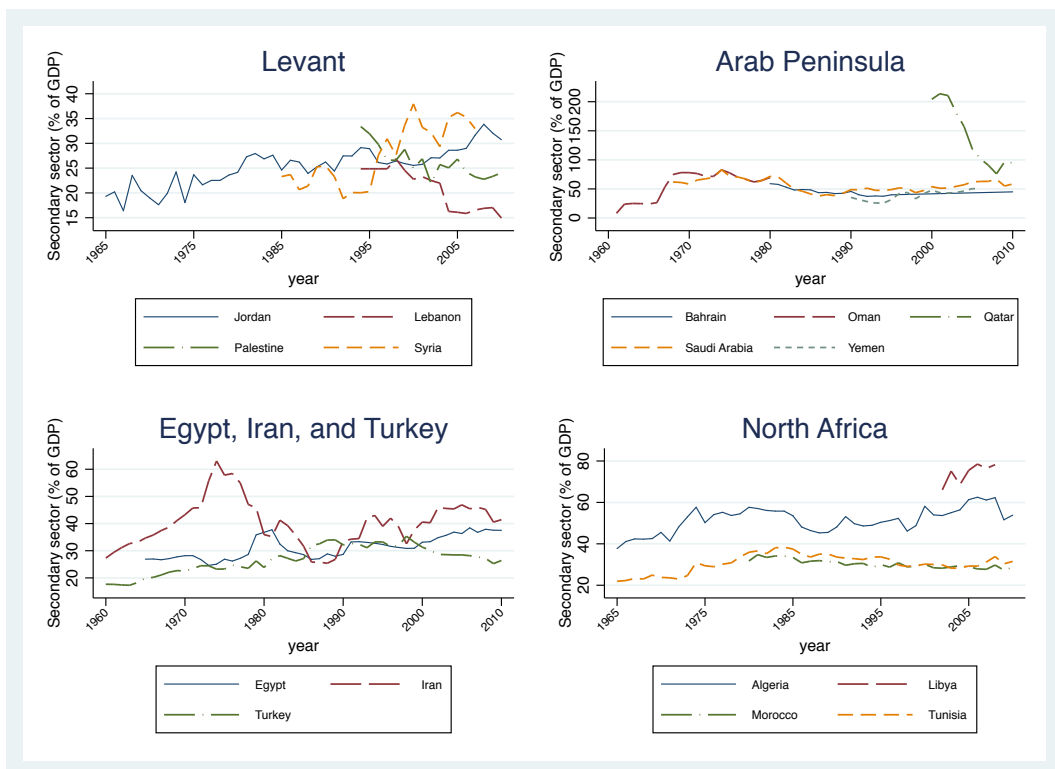
**Figure 2: Democracy index, 1870-2010**

Notes: The Democracy indicator is an additive eleven-point scale (0-10). The operational indicator of democracy is derived from codings of the competitiveness of political participation, the openness and competitiveness of executive recruitment and constraints on the chief executive  
 Source: Polity IV Project (2016).

**(A) Primary sector share of GDP, 1960-2010**

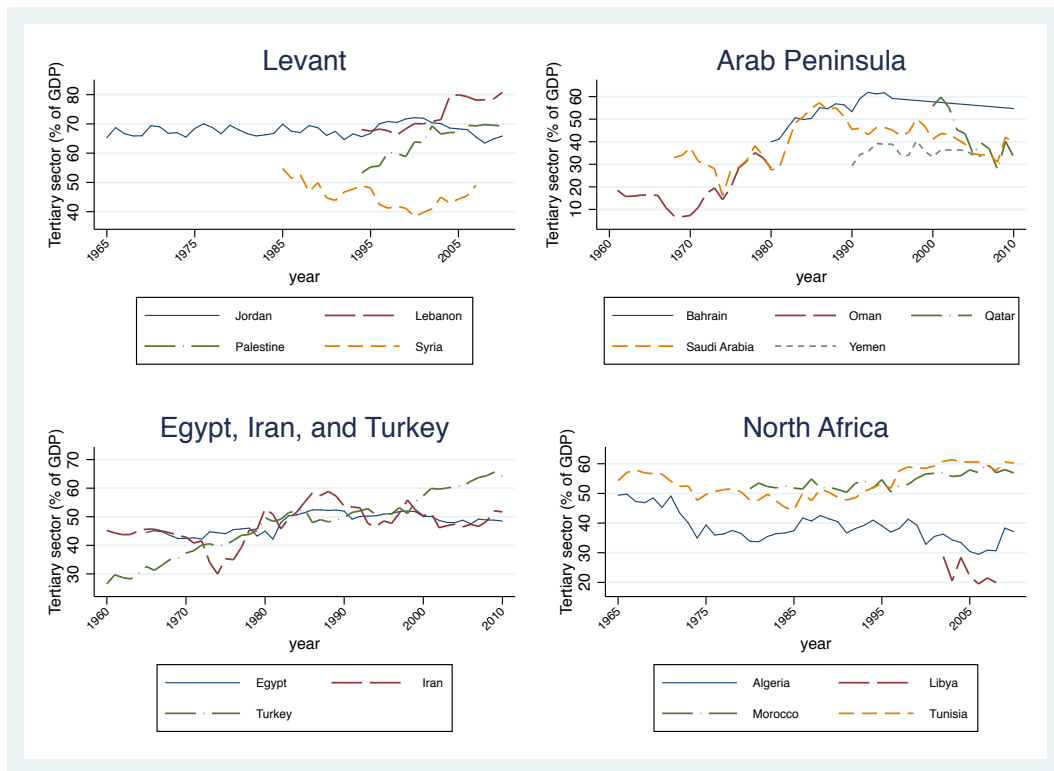


**(B) Secondary sector share of GDP, 1960-2010**



**Figure 3: Sectoral composition of GDP, 1960-2010**

(C) Tertiary sector share of GDP, 1960-2010

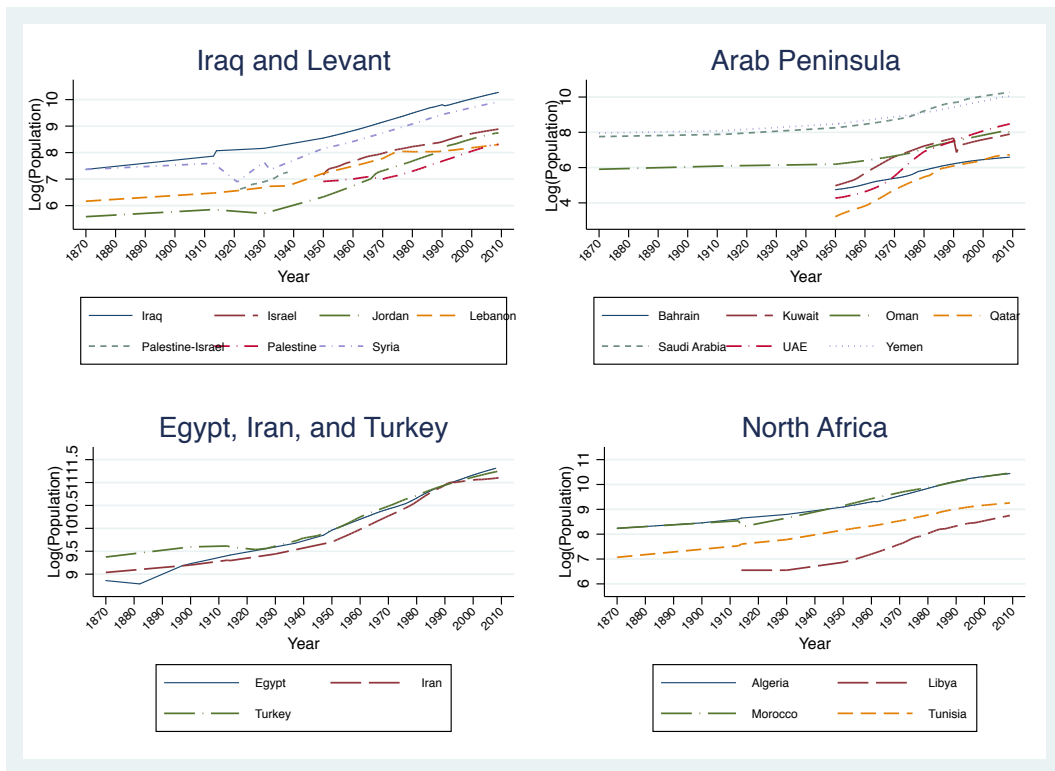


**Figure 3: Sectoral composition of GDP, 1960-2010**

Notes: Primary sector comprises value added in forestry, hunting, and fishing, and cultivation of crops and livestock production. Secondary sector comprises manufacturing, which corresponds to ISIC divisions 15-37, and includes value added in mining, manufacturing (also reported as a separate subgroup), construction, electricity, water, and gas. Tertiary sector comprises services, which correspond to ISIC divisions 50-99, and include value added in wholesale and retail trade (including hotels and restaurants), transport, and government, financial, professional, and personal services such as education, health care, and real estate services. Also included are imputed bank service charges, import duties, and any statistical discrepancies noted by national compilers as well as discrepancies arising from rescaling. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3.

Source: World Bank national accounts data, and OECD National Accounts data files, consulted from World Development Indicators.

(A) Population, 1870-2010



(B) Crude birth rate (per 1,000), 1950-2010

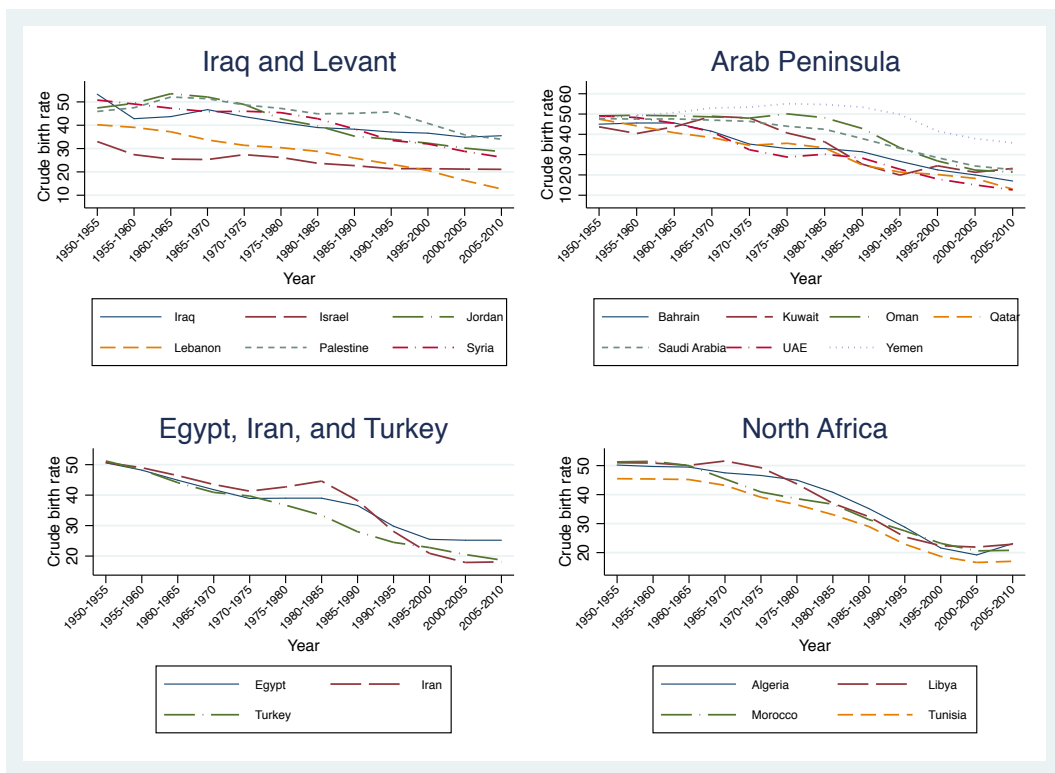
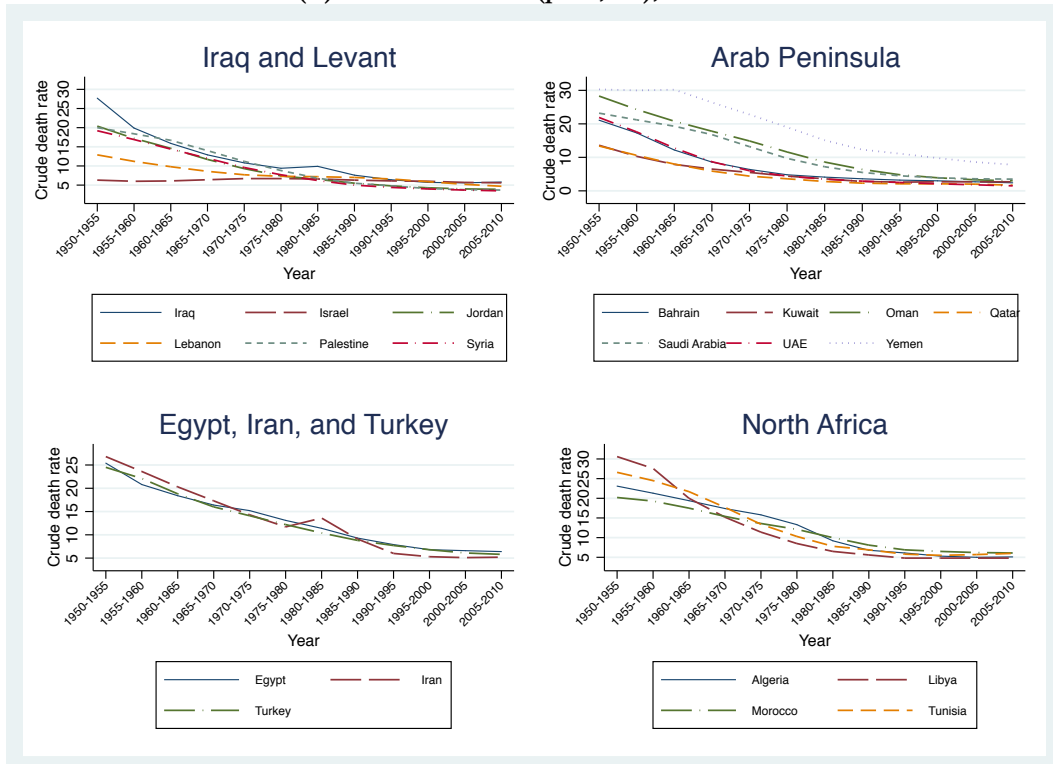


Figure 4: Population, births, deaths, and migration, 1870-2010



(C) Crude death rate (per 1,000), 1950-2010



(D) Net migration rate (per 1,000), 1950-2010

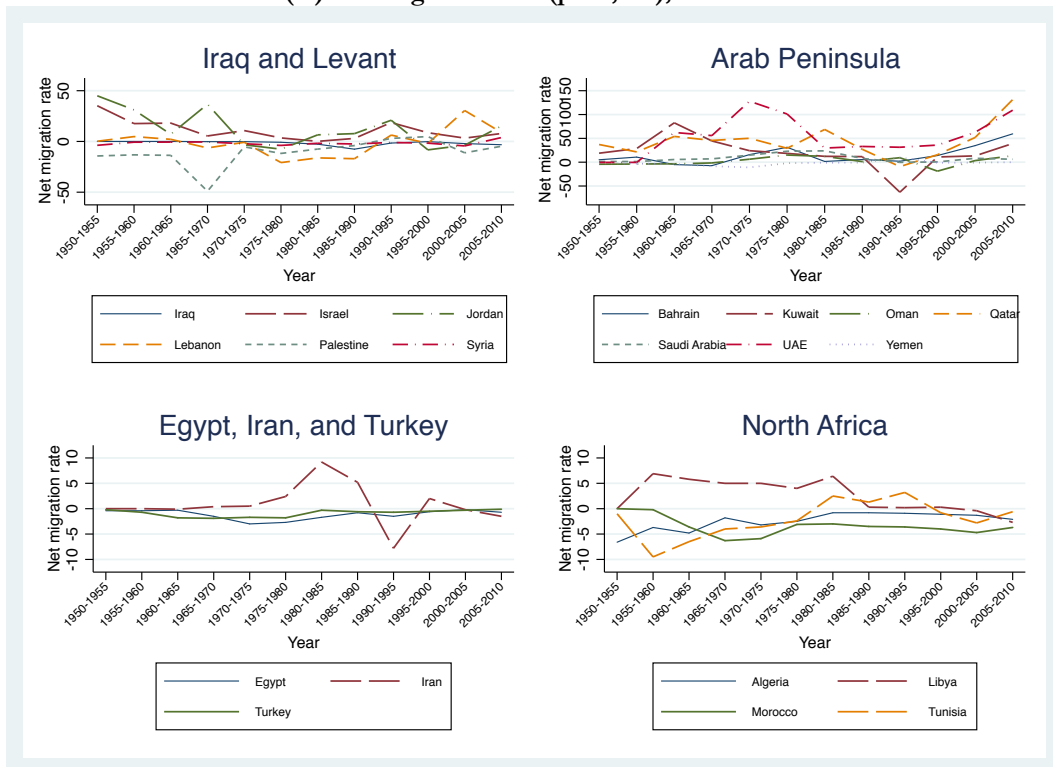
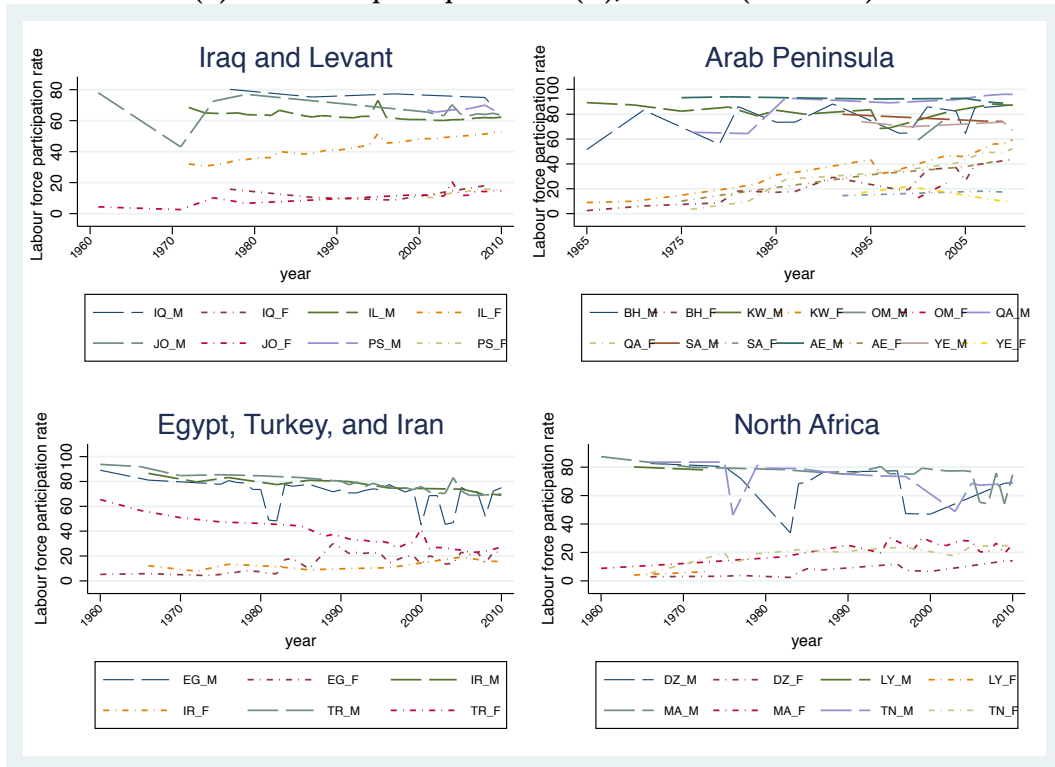


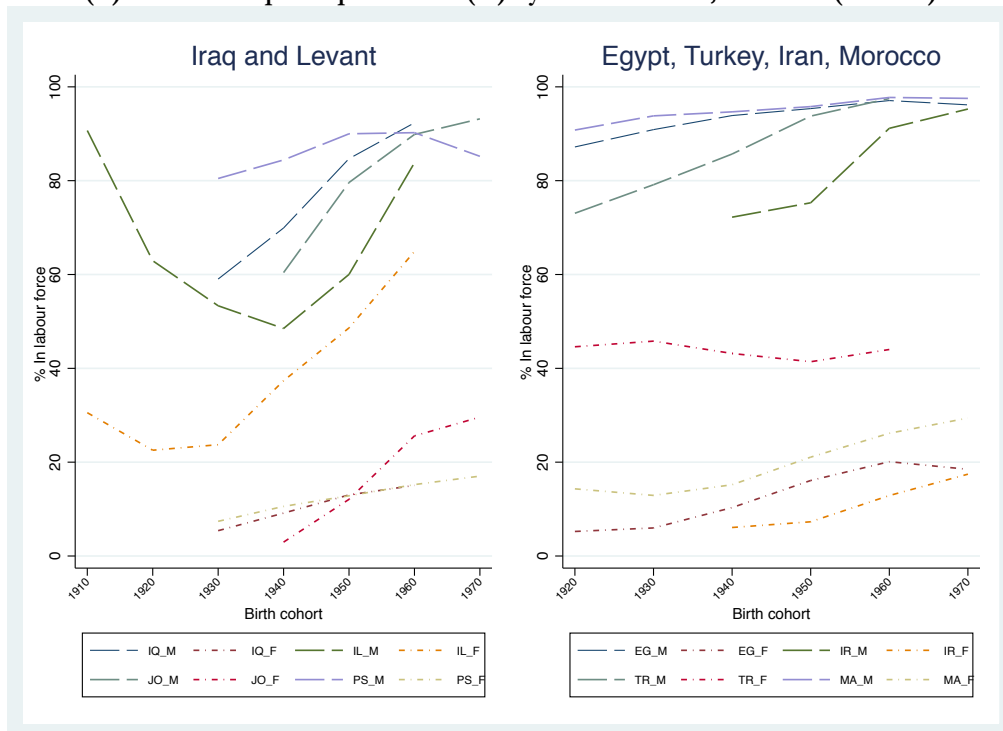
Figure 4 (cont.): Population, births, deaths, and migration, 1870-2010

Notes: Crude birth/death rate is the number of births/deaths over a given period divided by the person-years lived by the population over that period. It is expressed as average annual number of births/deaths per 1,000 population. Sources: Population: Bolt and van Zanden (2013); Issawi (1982) and Hershlag (1997). Additional data points for Egypt's population are from the Egyptian population censuses of 1882, 1897, 1907, 1917, 1927, 1937, and 1947. Births, deaths, and migration: United Nations, Department of Economic and Social Affairs, Population Division (2015).

**(A) Labor force participation rate (%), 1960-2010 (ILOSTAT)**



**(B) Labor force participation rate (%) by cohort of birth, 1910-1970 (IPUMS)**

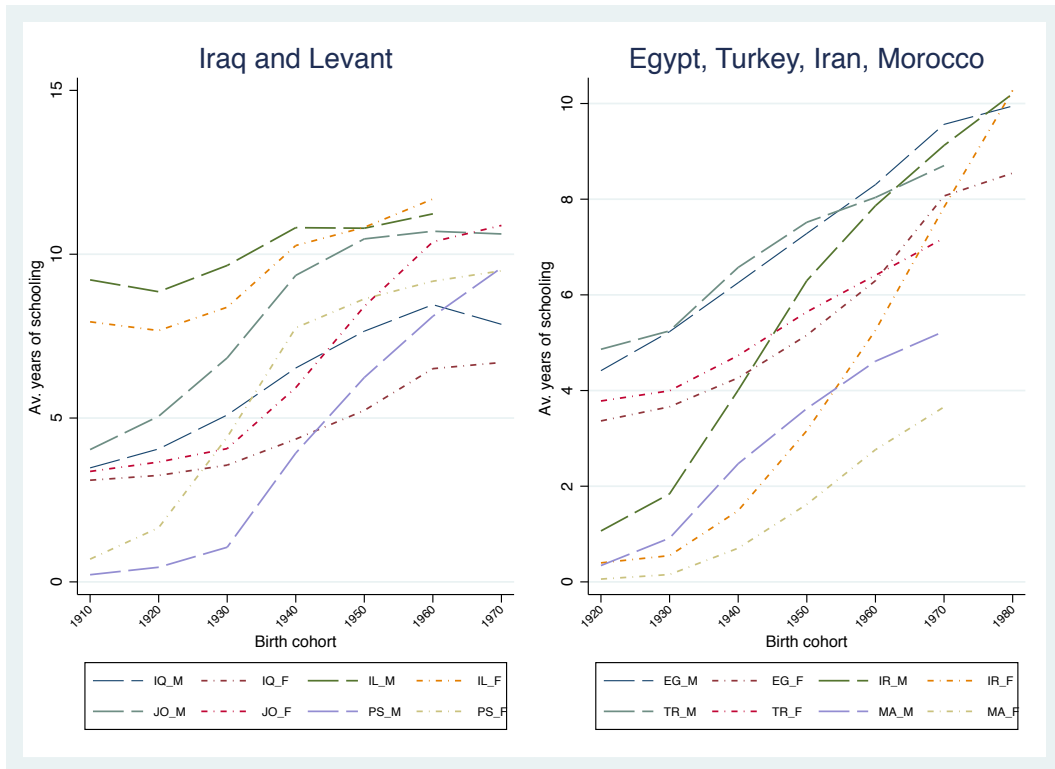


**Figure 5: Labor force participation rate**

Notes: Labor force participation rate is the proportion of the population aged 15 and older that is economically active (employed + unemployed): all people who supply labor for the production of goods and services.

Sources: Panel (A): International Labor Organization, ILOSTAT database (2017), World Development Indicators. Panel (B): Individual-level population census samples of Egypt (1986, 1996, 2006), Iran (2006, 2011), Iraq (1997), Israel (1972, 1983, 1995), Jordan (2004), Morocco (1982, 1994, 2004), Palestine (1972, 2007), and Turkey (1985, 1990, 1994, 2000). Samples are pooled for each country and restricted to individuals between 30 and 60 years of age. Retrieved from Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 6.4 [dataset]. Minneapolis, MN: University of Minnesota, 2015.

(A) Average years of schooling by cohort of birth, 1910-1980



(B) Share of white-collar workers (%) by cohort of birth, 1920-1970

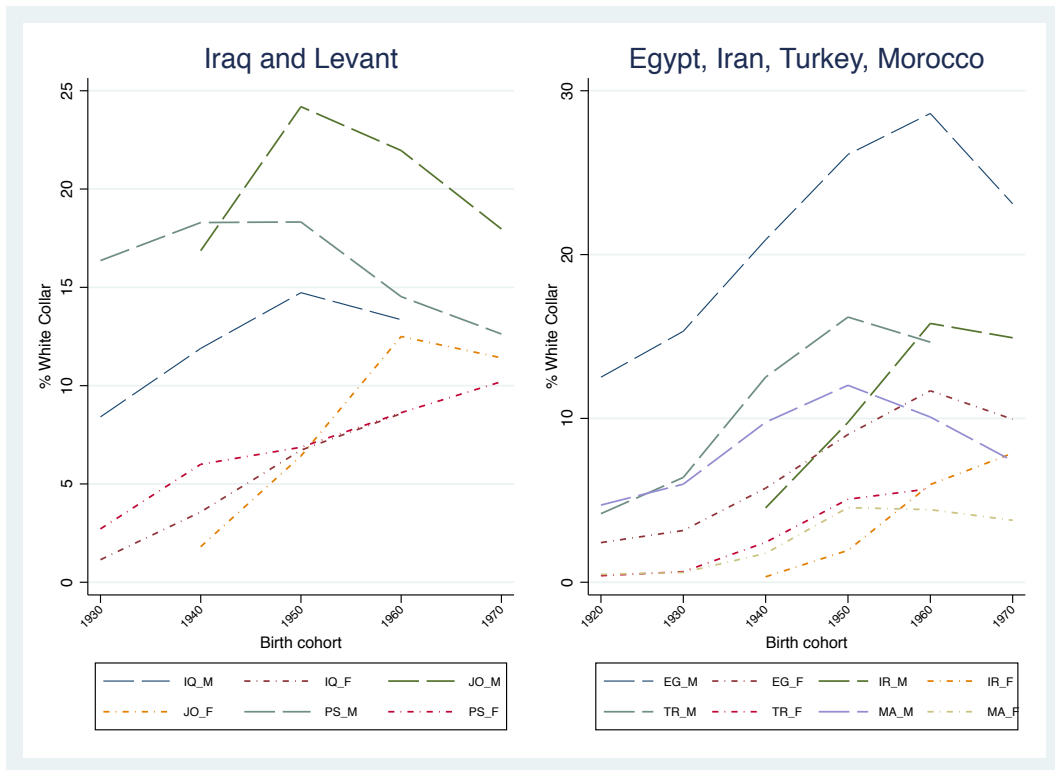


Figure 6: Human capital

(C) Life expectancy at birth, 1950-2010

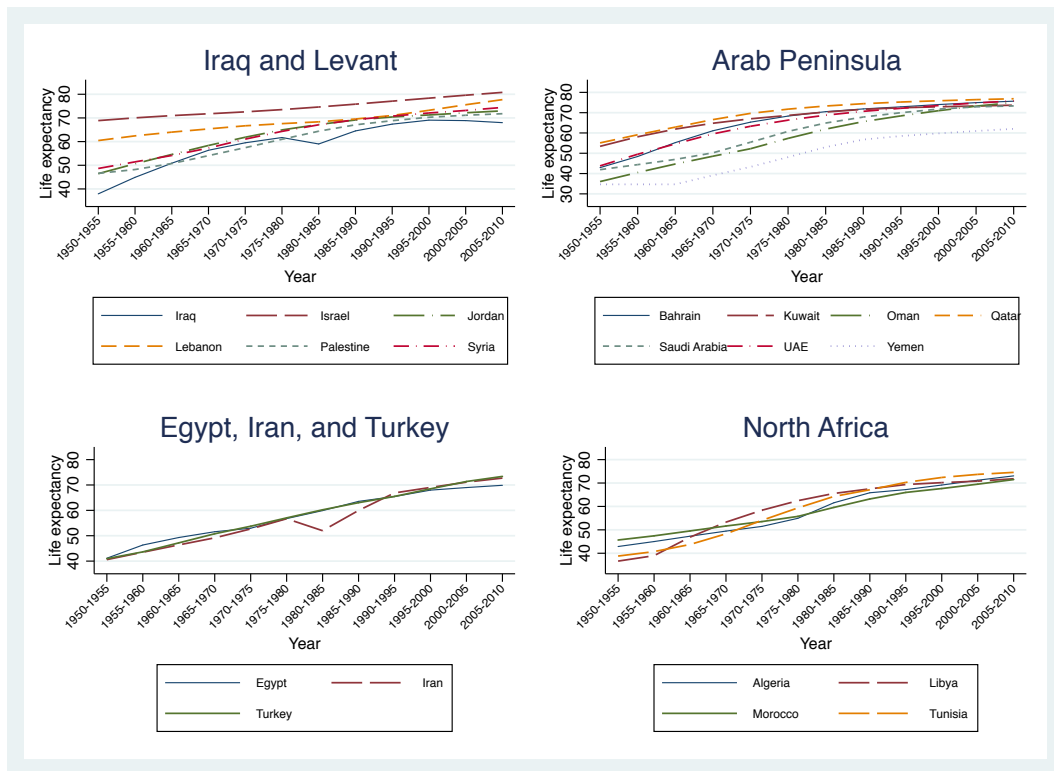
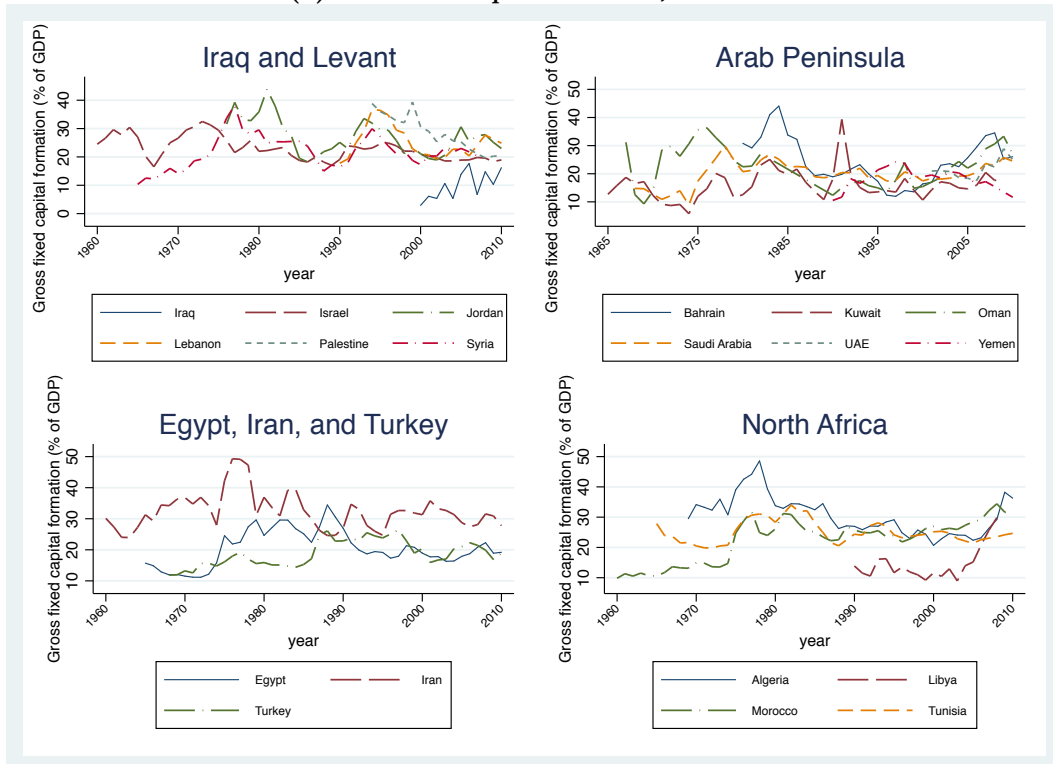


Figure 6 (cont.): Human capital

Notes: Panel (A): The average years of schooling is calculated based on the educational attainment variable: 0 years of schooling if no schooling, 3 years of schooling if less than primary completed, 5 and 6 years of schooling if primary (5 years) completed and primary (6 years) completed, respectively, 9 years of schooling if lower secondary general or technical completed, 12 years of schooling if secondary general or technical completed, 14 years of schooling if some college completed or have post-secondary technical education, and 16 years of schooling if university completed. Panel (B): Occupations are defined according to ISCO88 one-digit classification. White-collar workers are legislators, senior officials, managers, professionals, technicians and associate professionals, and clerks. Panel (C): Life expectancy at birth is the average number of years of life expected by a hypothetical cohort of individuals who would be subject during all their lives to the mortality rates of a given period.

Sources: Panels (A) and (B): Individual-level population census samples of Palestine (1972, 2007), Iran (2006, 2011), Iraq (1997), Israel (1972, 1983, 1995), Jordan (2004), Morocco (1982, 1994, 2004), Turkey (1985, 1990, 1994, 2000), and Egypt (1986, 1996, 2006). Population census samples are pooled for each country and restricted to individuals between 25 and 60 years of age in Panel (A) and between 30 and 60 in Panel (B). Retrieved from Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 6.4 [dataset]. Minneapolis, MN: University of Minnesota, 2015. Panel (C): United Nations, Department of Economic and Social Affairs, Population Division (2015).

(A) Gross fixed capital formation, 1960-2010



(B) High-technology exports (% of manufactured exports), 1988-2010

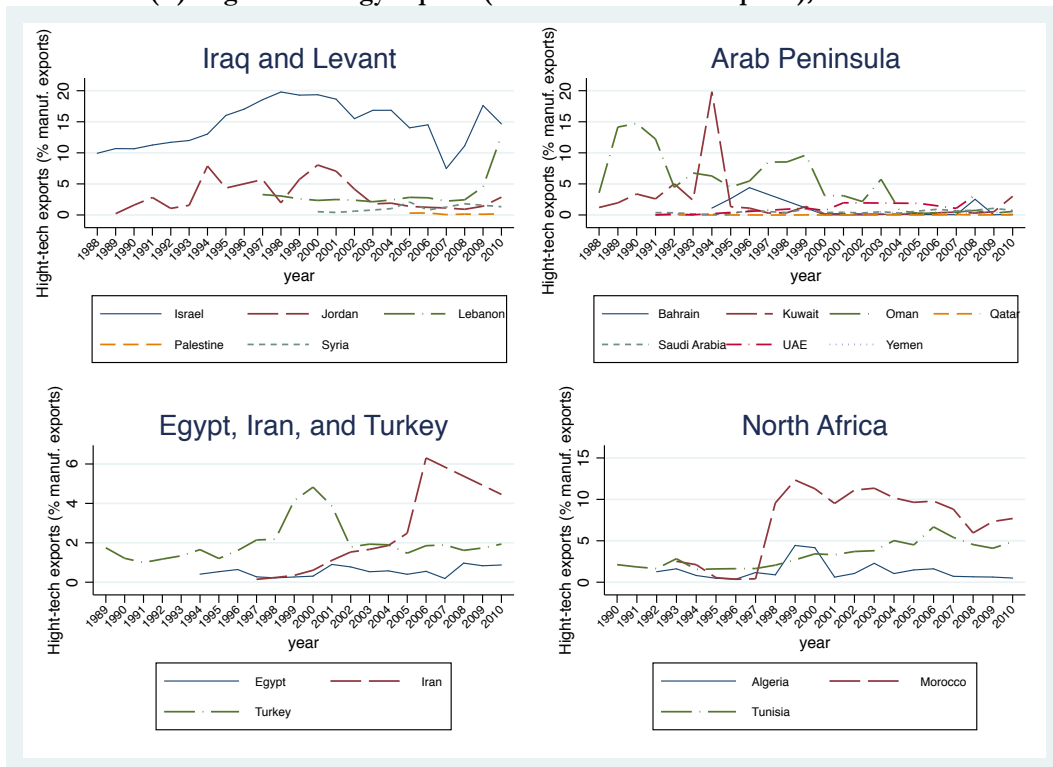


Figure 7: Physical capital and technology

Notes: Gross fixed capital formation includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. According to the 1993 SNA, net acquisitions of valuables are also considered capital formation. High-technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.

Sources: Panel (A): World Bank national accounts data and OECD National Accounts data files. Panel (B): United Nations, Comtrade database through the WITS platform, World Development Indicators.