# The Impact of Formal and Informal Institutions on Economic Growth

A Case Study on the MENA Region

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1. Auflage 2011. Buch. XVI, 234 S. Hardcover ISBN 978 3 631 61616 1 Format (B x L): 14,8 x 21 cm Gewicht: 440 g

## <u>Wirtschaft > Internationale Ökonomie > Volkswirtschaften einzelner Länder und</u> <u>Regionen</u>

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### 1. Introduction

In 2007, Germany realized a GDP per capita of USD 25,106, the United States of USD 38,063, and Norway of USD 42,065. However, Egypt's GDP per capita in 2007 amounted to USD 1697 and Yemen's merely USD 561. By contrast, the United Arab Emirates' (UAE) GDP per capita accounted for USD 26,071.<sup>1</sup> The relative numbers differed little in 1990, with Norway realizing the second highest GDP per capita behind the US. But why do some economies perform so much worse than others? Why are the per capita incomes and, therefore, living standards so much lower in some countries and why does the situation persist? Hence, why have many underdeveloped and less developed countries been unable to significantly improve their economic performances over recent decades?

Regarding the Arab region, GDP per capita virtually stagnated for more than 20 years from 1980. During the same period, GDP per capita in the world's highly industrialized states further increased and the gap between the MENA region and highly developed countries widened.<sup>2</sup>

However, the differences between Arab countries and highly developed Western states exist not only economically. The countries also differ regarding their political, legal, and social systems and, of course, regarding their histories.

In recent decades, and especially since 9/11/2001, the MENA region has moved into the public spotlight, not only because of its economic development, but also because of its domestic and external conflicts, oil richness, Islamic fundamentalism, and terrorism as well as cultural and religious differences.

Since the MENA region and highly developed Western states differ in so many variables, could it be the case that they are all linked? Can these different economic performances be traced back to varying political, legal, social, cultural, and historical paths?

#### Convergence in the neoclassical model

According to the neoclassical growth model, differences in growth performances can be explained by the fact that the observed economies are situated at different places on the model's growth path. In the long run, however, all countries will

<sup>&</sup>lt;sup>1</sup> GDP per capita in constant 2000 US dollars. Data accessed July 2, 2009, from the World Bank World Development Indicators Online (WDI) database.

<sup>&</sup>lt;sup>2</sup> MENA (Middle East and North Africa): Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, the UAE, West Bank and Gaza, and Yemen, according to the World Bank's WDI definition.

realize the equilibrium growth rate – that is to say the growth rate of technological progress.<sup>3</sup>

This argument is based on the assumption of diminishing returns to scale. Accordingly, less developed countries exhibit a relatively low capital stock. Therefore, every additional unit of capital causes relatively high returns. The more capital is accumulated the more the returns per unit of capital decrease. Therefore, less developed countries realize higher returns to scale and thereby higher growth rates. The more capital a country accumulates, that is to say the more developed it is, the lower the growth rates are. This process continues until a country has reached the equilibrium. Therefore, in equilibrium, the per capita growth rate constantly corresponds to the rate of technological progress (or is equal to zero depending on model assumptions). Hence, the growth rates of all observed countries converge to the rate of technological progress.

There are concepts of convergence that can be differentiated.  $\beta$ -convergence indicates that the growth rate is negatively correlated with the level of per capita income. Hence, poor countries will realize higher growth rates and, therefore, grow faster than rich countries.  $\sigma$ -convergence says that the disparities between income levels will decrease. That is to say, in equilibrium all countries will realize the same level of per capita income.

Furthermore, we can differentiate between conditional and absolute convergence. Here, the distinguishing characteristic is the steady state. If it is assumed that all observed economies realize the same preferences and production functions then the countries will move on the same steady state growth path and will at least be situated in the same steady state. That is to say, poor countries grow faster than rich ones and, therefore, realize higher growth rates. However, income disparities decrease and all observed economies will realize at least the same growth rates (zero or the rate of technological progress) and the same level of per capita income, since they all converge to the same steady state.

Conditional convergence emanates from varying preferences and production functions. Hence, decreasing returns to scale are assumed to hold for all observed economies, but the countries differ regarding their saving rates and population growth rates. Therefore, the economies move on different growth paths and will end up in different steady states. That is to say, poor countries will grow faster than rich ones, since decreasing returns to scale are assumed. But income levels will differ in equilibrium, since every economy realizes its unique steady state (Barro & Sala-i-Martin, 2004; Hagemann, Erber & Seiter, 1998; Reichart, 2005).

<sup>&</sup>lt;sup>3</sup> If the model includes technological progress. In the case without technological progress, the equilibrium per capita growth rate is zero.

However, empirical evidence shows that growth rates and income levels do not converge on a global level. That is to say, convergence can be observed within certain groups of countries, so-called convergence clubs. These groups consist of relatively similar countries regarding their levels of factor accumulation and technology. Differences in growth rates and living standards indeed decrease within these groups, for example the Organisation for Economic Cooperation and Development (OECD) countries.

However, especially between poor and rich countries, convergence cannot be observed. But convergence theory insists that underdeveloped countries should realize higher growth rates and, therefore, close the gap in income levels and growth rates. Nevertheless, these two groups, underdeveloped and highly developed countries, drift further apart except for some exclusions.<sup>4</sup>

Why countries realize different growth rates and why poor countries should theoretically realize higher growth rates than rich countries was examined by Abramovitz (1986). Accordingly, poor countries have the potential to catch up. That is to say, because of their low levels of factor accumulation, underdeveloped countries are, assuming decreasing returns, able to realize higher growth rates per unit of capital than rich countries can. So far, the theory follows the neoclassical model. Poor countries benefit from the fact that they can adopt rich countries' technologies. That is to say, underdeveloped countries do not have to innovate by themselves but they can inherit technologies and ideas from highly developed countries. Poor economies can catch up by adapting such technologies. If these countries use their potential, adopt technologies, and thereby realize high growth rates, they are able to catch up to developed economies and thereby implement similar growth rates and income levels. However, if a former underdeveloped country is able to not only adopt technologies but also innovate and increase the pace of technological progress, it might even be able to forge ahead and overhaul the highly developed countries. By contrast, if an underdeveloped country is not able to use its potential to adapt the technologies of highly developed economies, it might not be able to close the gap and instead fall further behind regarding growth rates and income levels.

Abramovitz's theory explains why some countries are not able to catch up. Accordingly, the potential to catch up depends on a country's ability to adopt technology. Hence, when a country is not able to adopt the leading countries' technologies, it cannot use its potential. Then, the gap between the poor countries and highly developed countries might even widen. In this case, divergence instead of convergence is observed.

<sup>&</sup>lt;sup>4</sup> See, for example, Barro & Sala-i-Martin (1992); Baumol (1986); Ben-David (2000); Caselli, Esquivel & Lefort (1996); de la Fuente (2002); Islam (2003); Mankiw, Romer & Weil (1992); Quah (1996); Sala-i-Martin (1996); Temple (1999).

Hence, certain factors must determine an economy's ability to adopt technologies. Abramovitz introduced the term 'social capability', which is the decisive determinant of a country to catch up or fall behind. Social capability incorporates growth-relevant factors that are not included in a usual production function. Thus, apart from capital and labor, a country's growth performance might also depend on the historical, cultural, religious, political, and legal particularities that influence economic variables and a country's ability to adopt technologies. For example, certain religious or moral convictions might inhibit technological progress, human capital accumulation, and restrict the labor force. Certain norms might exclude particular parts of the population from the labor market or restrict research and development and education from applying certain methods, assumptions, theories, and so on. Social capability also influences the form of society, for example whether it is patriarchic and conservative or individualistic and modern.<sup>5</sup> Furthermore political, bureaucratic, financial, and legal structures are incorporated. Therefore, social capability is a so-called catch-all variable that cannot be clearly defined. It includes all the factors considered growth relevant but which are not directly included in the neoclassical production function. This broad definition makes it difficult to incorporate social capability in scientific work, whether theoretical or empirical.

#### Institutions

The concept of social capability is close to the concept of institutions. Institutions are rules that regulate human interactions. These rules can be informal and solely exist in human minds, for example certain codes of behavior. However, the rules can also be formally written down, for example laws and regulations. In any case, they regulate social interaction. This is possible since institutions allow the individual to establish expectations regarding other individuals' behaviors. Hence, people of the same culture act according to the same codes of conduct and, therefore, all individuals of the observed population know how the others will react. Similarly, people being subordinated to the same jurisdiction will behave accordingly; therefore, they can predict others' behaviors.

Institutions can be examined on a micro- or macro-level. In the micro view, the single individual's actions are of interest and it is investigated why an agent acts in a certain way. Since institutions regulate human behavior, they must play a role regarding the determination of an agent's actions.

However, institutions are also decisive from a macro point of view. Since a society's morals, values, norms, and so on are considered to influence societal

<sup>&</sup>lt;sup>5</sup> See, for example, Adelman & Taft Morris (1967); Hall & Jones (1999); Temple & Johnson (1998).

organization, these factors are suspected of influencing economic development. The same holds for formal rules such as the political or legal system. Countries realizing significant differences in economic development often differ regarding their societal, political, and legal structures, too. Therefore, these 'macro' institutions, which are also rules regulating human interactions, might impact economic development.

Hence, institutions are obtained on a micro-level where they determine individuals' behaviors, but they also exist on a macro-level where their influence on economic growth becomes apparent. Therefore, comprehensive institutional analysis has to incorporate the micro view and thereby the single individual as well as the macro view, which analyzes the impact of institutional systems on economic development.

#### **History matters**

History plays a decisive role in questioning the emergence and development of institutions themselves (Lipsey, Carlaw & Bekar, 2005; North, 1990; North 2005; North & Thomas, 1973). A country's development path can suddenly change direction due to a historical accident. However, historical changes can also pass subliminally and not become obvious until a certain period of time. Nevertheless, historical accidents cause institutions to adapt and they result in an irrevocable alteration of an economy's development path. Hence, institutions clearly are path-dependent and usually neither their emergence nor later changes can be ascribed to conscious decisions. Once the path-dependent institutions resulting from historical accidents become 'locked in' change is almost impossible.

The importance of history in institutional development makes institutional analysis difficult. History is not a tangible variable that can be incorporated in theoretical and empirical models. The necessity to include history as a determining factor creates the need to deviate from standard economic analysis based on certain mathematical and empirical models. As good as these models are to examine particular issues they cannot incorporate historical incidents that accidentally appeared in a certain place at a certain point in time. Therefore, institutional analysis necessitates a *comparative institutional analysis* (Aoki, 2001). That is to say, institutional analysis must always be accompanied by historical research on the particular region. Otherwise the decisive institutional incidents cannot be detected.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup> See, for example, Aoki (2001); Greif (1994); Hedlund (2001, 2005); Lipsey, Carlaw & Bekar (2005).

#### **Culture matters**

Closely linked to history but less acknowledged as a growth-relevant factor is culture. However, culture in economic analysis seems to be gaining a growing audience even though its role is critically discussed.<sup>7</sup> In particular, mainstream economics that emanate from the assumption of the pure homo economicus do not ascribe a crucial role to culture. This is the case since humans are supposed to be rational and react to material incentives that ultimately overlie all other stimuli. Hence, even non-Western, non-individualistic, and maybe less materially focused societies pursue the same goal and realize the same utility functions. That is to say, despite different histories, beliefs, worldviews, morals, and thereby cultures all people are supposed to rationally maximize their material incomes. This argumentation is right from a pure theoretical viewpoint. That is to say, according to the assumptions the particular models make, they are right. Therefore, the application of these models is justified for the examination of certain economic issues. In any case, models that exclude cultural components might not be useful to explain long-term growth differences. It cannot be denied that in certain cases differences in economic growth performances correspond to cultural borders (Landes, 1998; Lipsey, Carlaw & Bekar, 2005; Olson, 1982; Pomeranz, 2001).

However, cultural determinism is not helpful either. Differences in development levels cannot be solely traced back to different cultures. They are rather initiated by a mixture of factors that varies from region to region. Nevertheless, culture is one component that needs to be taken seriously. This is the case since culture is highly correlated with history, which definitely is a determining force of economic development. Furthermore, culture determines human behavior. Since human behavior is what determines the economy, culture should affect economic outcomes.

However, to detect whether culture is a growth-relevant factor or not a more precise definition is necessary. The fact that culture is often not further defined is one reason why some mainstream economists dismiss culture and why cultural economists cannot bring out their arguments. Culture indeed is a broad concept that can incorporate quite different subjects. In economics, culture is usually defined as beliefs and preferences that differ between societies and, therefore, allow a differentiation between groups (Fernández, 2008). In institutional economics, culture can be used as a synonym for informal institutions. Therefore, culture has to be defined as beliefs, morals, norms, habits, conventions, codes of conduct, and so forth. That is to say, culture consists of rules that regulate human interactions on an informal level. With this definition we assume

<sup>&</sup>lt;sup>7</sup> See, for example, De Jong (2009); Guiso, Sapienza & Zingales (2006); Harrison & Huntington (2000).

that beliefs, morals, norms, and so on – that is to say culture – determine the rules implemented by human beings and which might affect economic development. Whether culture affects economic growth is analyzed within this work.

#### The MENA region

To find out whether institutions influence economic development a theoretical analysis on the micro- or macro-level is necessary. However, since institutions are path-dependent and, therefore, dependent on historical accidents every single cause has to be examined itself. That is to say, the theory demonstrates how and why institutions in general influence economic development. But the theory will not tell us why a certain country realizes low levels of economic development. Therefore, empirical and especially historical investigation is necessary.

The MENA region is one of the world regions that cannot close the gap of living standards between itself and highly developed countries. On the contrary, the divergence of income levels and growth rates between MENA and highly industrialized countries can be observed. Hence, developments in the MENA region cannot be explained by the neoclassical model or the mainstream endogenous growth models.

However, differences between the Arab region and the economically successful countries of the Western hemisphere also exist on non-economic levels. The MENA countries differ regarding their political and legal structures and thereby their bureaucracies and regulations. Furthermore, cultures, religions, and histories differ widely between MENA and the Western world. Hence, the rules that regulate human interactions – the institutions – differ. Since discrepancies exist on the institutional level and regarding growth performances, one could assume that both are correlated, namely that the institutional environment of the MENA region is less growth supportive than the institutional environment of Western states.

That institutions do differ is demonstrated in chapter four via some descriptive statistics on formal and informal institutional indicators. Accordingly, current cultural, political, legal, and economic structures differ widely between Arab countries and highly industrialized states.

However, to explain these differences a historical comparative analysis is necessary. Such an analysis must highlight the developments and historical accidents responsible for the formation of the current institutional system in the corresponding region. Since institutions are path-dependent and since at least some of them are slow moving, the case study must start at an early point in time. Regarding institutional development in the MENA region, the analysis begins in the seventh century with the process of state building. Already at this point in time institutional developments differed widely between the Arab and Western (European) regions and had large impacts on the upcoming events. For the MENA region we can at least state that the phase of state building that began during Muhammad's lifetime (570–632) already demonstrated an institutional lock-in. This holds for political institutions and the relationship between the sacred and the secular. Incidents at this early point in time shaped the institutional structure of the Arab world sustainably.

However, from the phase of state building onwards several historical accidents and institutional developments had long-lasting effects on the institutional structure and the development path in general. Of course not all determining events can be listed since there are too many of them, several of which are unknown and will probably never be examined. Therefore, the current analysis does not claim completeness but wants to depict some decisive institutional developments that differed from those in Western Europe.

After this historical analysis it should be clear why the Arab region and highly industrialized Western states realize different economic performances and why the gap in living standards has widened.

#### Structure of the work

This dissertation project is differentiated into two parts. The first is a general section on institutions that incorporates a theoretical and an empirical analysis and examines whether institutions influence economic growth. The theoretical chapter deals with the definition of institutions and with equilibrium considerations. Hence, the observed economies develop equilibrium strategies and institutions according to their particular histories and environments. Although the economic and societal outcomes might differ, each society might be situated in an optimal state and realize optimal strategies regarding the prevalent conditions and thereby the specific histories of the countries. The empirical analysis deals with institutional data and measurement. A regression analysis demonstrates that informal and formal institutions have a significant impact on GDP per capita. Furthermore, a society's religious background seems to influence institutional development.

The second part of the dissertation project deals with the MENA region and its institutional development. The current institutional differences between the MENA countries and some highly developed economies are depicted. Within this analysis it becomes clear that institutions differ widely between the Arab region and Western hemisphere. That institutions have a significant influence on economic development is demonstrated in the general empirical analysis. We can conclude that the different institutional environments of the MENA region and the West continue to lead to varying growth performances. However, why institutions in the Arab region developed in their way and not in another is shown in the historical analysis. Here, the development path is partly reconstructed; emphasis, however, is placed on the very early phase of institution building. That is to say, we mainly concentrate on medieval times. It is argued that these early centuries were decisive for the institutional lock-in. Hence, the direction of the development path was determined during that time.

It should be noted that this study does not deal with the general economic history of the MENA region. Furthermore, it is not concerned with the Ottoman Empire, colonization, and the politically and economically crucial events of the 20th century. Emphasis is placed on current institutional differences as well as on selected events of the medieval period. This is the case since the study wants to demonstrate that early, seemingly unimportant incidents can have long-lasting effects on institutional and economic development. Later occurrences of course were also of crucial importance. However, they are not the content of this work.

This dissertation project demonstrates the importance of institutions regarding the analysis of economic growth and economic development. The MENA countries were chosen since at least in the past two decades (but also earlier) the region played a major role in public perception. Many of the region's conflicts, whether internal or external, can be traced back to the stagnating low living standards. High population growth rates and a high percentage of people under 25 years of age put pressure on the region's labor markets. To ensure employment for the growing part of the working age population, MENA's economic performance must improve significantly (Dyer & Yousef, 2007; Sala-i-Martin & Artadi, 2003; Yousef, 2004). However, if it is true that economic development depends on the institutional environment, then economic change would require institutional change. But the path-dependent nature of institutions inhibits fast change.

Although this might seem to be a depressing result for the Arab countries, this dissertation project nevertheless demonstrates that the particular institutional development in the MENA region is the decisive component for its economic performance. Since institutions are complex and complementary entities their development paths cannot be prophesied. Therefore, the MENA region might develop a solution strategy and improve its economic situation in a way that is yet unknown. Hence, since institutional development is unpredictable, the future Arab economic development can hold positive or negative surprises. However, this study demonstrates that the efficiency and optimality of institutions cannot be measured in economic successes and high living standards. A society's history and its institutional environment might result in low living standards and low growth rates. Nevertheless, regarding the prevailing conditions, the particular society might realize an optimal outcome.