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Development and Political Institutions in the Middle East and North Africa

An inquiry into the political origins of economic development in the Middle East and North
Africa

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ABSTRACT

The uprisings in the Middle East and North Africa have questioned the political institutions throughout this region. This thesis examines the effect of political institutions on economic development in that region using a panel dataset consisting of 63 countries over the period 1975 to 2008. No evidence is found to prove an effect of democracy on economic development. Also, the effect of the duration a high-quality government is in power does not differ significantly from the duration a low-quality government is in power. Furthermore, oil rents do not help governments in that region to stay in power. Evidence is found that a presidential system and the quality of the regime in a country have an effect on economic development in the Middle East and North Africa.

JEL classification: H11, O43, O57

Keywords: economic development, political institutions, Middle East and North Africa

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CHAPTER 1 Introduction

The peaceful protests that unfolded in the Arab world in the spring of 2011 has left the Middle East in chaos five years later. Except for Tunisia, which has been the only country able to establish democracy after all, most Arab countries turned down the uprisings and remain autocratic (e.g. Egypt) or are still in civil war (e.g. Syria).¹ Other examples of conflicts in the Middle East include the religious segregation between Shias and Kurds in Iraq and the on-going Israel-Palestine conflict. As political institutions are being questioned in most of the Middle East, the Gulf States and countries such as Morocco and Jordan seem to prosper under autocracy, although the production of oil might affect this.¹ Five countries in the top 10 of the 2014 gross domestic product per capita ranking are deemed as autocratic by the World Bank, among which Qatar, that even leads this list.^{2, 3} At first sight, it is not obvious that being an autocratic country is an obstacle for enhanced economic development. Still, many countries in the Middle East fail to perform economically well.

The standard literature already acknowledges the importance of economic institutions for economic development (Rodrik, Subramanian, & Trebbi, 2004). Acemoglu and Robinson (2006) argue that economic institutions are endogenous. Economic institutions have an important role in the distribution of resources in a country. Resources are, as a consequence, not equally divided among the population due to pre-existing conditions and allocation. Economic institutions thus lead to conflicting interests of individuals. Groups or individuals that exert some political power might be able to design the economic institutions to match their preferences and as such benefit from them (Acemoglu, 2003).

Pereira and Teles (2009) argue that economic institutions are explained by political institutions. The political institutions determine constraints within which groups or individuals can exercise political power. Politicians need to credibly commit to these institutions and the political institutions themselves need to give incentives to politicians to obey them. Pereira and Teles found evidence that political institutions are determinants of economic development. However, they argue that the importance varies largely with the level of democratization.

¹ The Arab winter. (2016, January 09). *The Economist*. Retrieved March 3, 2016, from <http://www.economist.com/news/middle-east-and-africa/21685503-five-years-after-wave-uprisings-arab-world-worse-ever>

² World Development Indicators. *The World Bank*. Retrieved March 3, 2016, from http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?order=wbapi_data_value_2014+wbapi_data_value+wbapi_data_value-last&sort=desc

³ Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh, 2001. "New tools in comparative political economy: The Database of Political Institutions." 15:1, 165-176 (September), *World Bank Economic Review*

Rodrik et al. (2004) develop a model that examines the deep determinants of economic development. They use variables that proxy the geography, trade openness and economic institutions (property rights and rule of law) for the explanation of economic growth of a country. Their findings suggest that the quality of economic institutions explains economic growth very well. When they control for these institutions, geographical and trade openness variables do not have a distinct effect on economic growth. As property rights prove to be an important determinant of economic growth, the question is which political regime preserves property rights better (Przeworski & Limongi, 1993). They argue against democracy that it pressures immediate consumption which lowers savings and thus investment. However, autocracy's leaders might not have an incentive to maximize output.

This thesis examines the effect of political institutions on economic development for countries in the Middle East. It will do so following Pereira and Teles (2009) by adding variables that proxy institutions such as the level of democracy or autocracy, form of government and type of election system to an economic growth model. Whereas Pereira and Teles (2009) follow a Solow growth model that incorporates capital and human capital accumulation, this thesis will use a growth determinants model, like the models from Acemoglu et al (2001) and Rodrik et al. (2004), by performing an OLS estimation to determine the effect of political institutions on economic growth. Data on political institutions is primarily retrieved from the Database for Political Institutions composed by Beck et al. (2001) and updated in 2012.

The contribution of this thesis to the current literature is that it examines the effect of political institutions on economic development in the Middle East, a region in conflict that is currently largely highlighted. It will argue that a certain level of political institutions is necessary to ensure the persistence of economic institutions such as rule of law and property rights. Also, this thesis contributes to the field of economic development and political economy in practice. Governments could use the results to attain a higher level of economic development by reforming political institutions.

This thesis will be organized as follows. Chapter 2 will provide an overview of the existing literature on the topic of political institutions and economic development. Subsequently, chapter 3 contains the description of the data and methodology used to examine the effect of political institutions on economic development and chapter 4 gives the empirical results. Then, chapter 5 will discuss the results of the estimation in relation to the current literature and chapter 6 will summarize the results and provide limitations and topics for further research.

CHAPTER 2 Literature review

2.1 Political regimes and economic development

Throughout history states developed several forms of political regimes. As far back as ancient Greece, Aristotle argued that a wealthy society could sustain a situation in which the population could participate in politics; thus sustaining either a direct democracy like in ancient Greek cities or the modern-day representative democracy. If a population is divided in a poor mass and a very small, rich elite the state will tend to be oligarch or communist (Lipset, 1959). Historical examples of oligarch states are Spain and Portugal and an example of a communist state is the former Soviet Union. However, most European countries faced democratization in the 20th century. Many scholars associate the level of economic development with the ability a state has to sustain a certain political regime (Przeworski & Limongi, 1993). This thesis follows the definition of a democracy that is developed by Schumpeter (1942) and commonly used in the literature, e.g. as defined in Przeworski (2004): “A democracy is a political regime in which rulers are selected through free and contested elections.” This means that rulers leave office if they lose elections. Autocracies are defined as regimes that do not fit the definition for democracy.

There exist several schools of thought that assess the relationship between democracy and economic development. The first school states that democracy is negatively related to economic growth (Sirowy & Inkeles, 1990). Sirowy and Inkeles claim that democracies have dysfunctional consequences hindering growth and that democracies lack the ability to implement necessary policies in order to support economic growth. Furthermore, the school argues that a nation needs autocratic control to economically develop. Reduced freedom and a strong, centralized government are associated with growth.⁴ The second school argues that democracy in fact enhances economic development (Feng, 1997). Proponents of this school claim that the existence of civil and political rights and democratic processes serve as the basis for the conditions that are necessary for a society to attain higher levels of economic development. The property rights and competition that follow from the economic and political freedoms enhance investment and thus economic growth.⁵ Following the last school, there is no systematic relationship between democracy and economic growth (Feng, 1997). Proponents of this school suggest that democracy alone is not a driver of economic growth. Some institutions are more important than the fact that a nation is democratic, e.g. political structure

⁴ Mainly Latin American scholars favor this theory, see Y. Cohen (1994).

⁵ Proponents of this school are for example A. Smith (1937) and S.M. Lipset (1959).

and economic development policies. Following this argument, different regimes that adopt the same economic policy can attain the same level of economic development.

Additively to the above discussion, there is not much consensus in the empirical literature that is developed on this subject, about whether the political regime is a determinant for economic growth or economic growth is a determinant for the political regime. Both directions of the relationship have been examined in various studies starting in the '90s, although some authors developed theories earlier (e.g. Lipset, 1959; Moore, 1966). Two opposing theories have been developed; the Modernization theory argues that the causation runs from economic development to the political regime, claiming that when a country becomes richer, it should also democratize (Lipset, 1959), and the critical junctures hypothesis argues that political and economic development both follow from initial characteristics that vary across countries (Moore, 1966; Acemoglu & Robinson, 2006). However, there are also scholars that claim that the causality runs in both directions (Larsson Seim & Parente, 2013) and scholars that argue that a political regime is a determinant for economic development through the level of property rights (North & Weingast, 1989) or that political institutions are beneficial for economic development (Pereira & Teles, 2009).

In their study on the economic development of European cities before the industrial revolution, De Long and Shleifer (1993) use city population growth as a proxy for economic growth. They categorize political regimes in absolutist and non-absolutist cities and examine the effect of both types on economic development. The results give that absolutist cities face negative population growth, suggesting that an absolutist ruler constrains commerce in his city which hinders economic development.

Pereira and Teles (2009) examine the impact of several political institutions on economic growth by using an augmented Solow growth model, thus incorporating political variables to a growth model with capital and human capital as the main explanators. They add a variable for the different political institutions to the model and run regressions in which they include their political variables of interest one-by-one. Their basic regression results suggest that the coefficients of all political variables are significant, however some results are intuitively contradictory. A parliamentary system is more positively associated with growth than a presidential system and the number of years the executive party is in power is positively related as well. The electoral system negatively affects economic development if the electoral rules give party leaders incentives to improve their personal reputation rather than the party's. Pereira and Teles (2009) then add a dummy for the political regime (being a democracy or an autocracy) and interact it with the political variables to examine the different effects under the two regimes.

The results show that for most political variables the difference is significant, but it is not necessarily the case that an autocratic regime negatively impacts growth.

Given the result that an autocratic regime can be beneficial for the economic development of a nation and the fact that most developed countries established democracy at some point, one could argue that countries need to attain some threshold level of economic development in order to reach a transition to democracy. This characterizes the endogeneity of the relationship between the political regime of a country and its economic development. An autocratic regime can lead to higher economic growth, depending on the incentives of the leader. The literature attributes this economic growth to the level of protection of property rights, which will be explained below. Whenever a country reaches a certain level of prosperity, it can become a democracy (Feng & Zak, 1999), and democracy in turn can lead to higher economic growth.

2.2 Economic institutions under different regimes

Whether the level of economic performance differs under democracy or autocracy is difficult to assess, since incentives and constraints for the decision makers can vary largely within the two types of regimes (Clague et al, 1996). This subject has already been examined by Montesquieu (1748), who observed that property was better secured in republics than in monarchies. Smith (1776) concluded the same: if property is sufficiently secured, owners of capital should invest all of their possessions in order to acquire more wealth. Both authors found that this was less the case under absolutist monarchies than under republican states where the merchant elite was in power.

Clague et al. (1996) argue that the timespan an autocrat rules a nation is important for the incentives he has. An autocrat that is benevolent to its subjects might use markets to attain economic growth. However, assuming rational subjects implies a rational autocrat. Hence, the autocrat will have a large self-interest, therefore grasping taxes from his subjects and increasing inflation. Contrarily, an autocrat that wishes to rule for a longer time might protect property rights, thus supporting investment (Clague et al, 1996). By recognizing property rights and ensuring them for a long period the autocrat can obtain a reputation which increases the security of investments of the autocrat's subjects (Barro, 2013). This shows the importance of time horizons for determining the impact of an autocrat on a nation, but also the role property rights play.

The same authors show with a comparable argument that different forms of democracy can lead to different outcomes for ensuring property rights and, hence, economic growth as well (Clague et al., 1996). The first election in a country in transition does not guarantee that a sufficiently rigorous legal system is enforced. It is not certain whether a winner of an election in a beginning democracy does not use its power to the benefit of its own interests. Such a leader of an incipient democracy can for example use its power to confiscate assets of political opponents or critical media, so property rights could not be secure right away. On the other hand, a lasting democracy which has proven to exercise the rule of law by its courts, necessarily has elections following the (constitutional) law. Under these conditions, and if opponents of the reigning government also have economic rights, the rest of the population should have them as well.

2.3 Political institutions

In order to sustain well secured property rights under either regime, a nation needs to have some political institutions to ensure the stability of the regime. As discussed above both an autocracy and a democracy can promote economic growth, but it seems that the durability and stability of a regime are important. Both the durability and stability of the government can depend on the incentives for government leaders that follow from the way checks and balances are organized, the way electoral rules affect the government and the level of power of the opposition and electorate. This section examines how regimes are endowed with institutions and how these institutions are related to economic development. Following the current literature, the electoral system, a parliamentary or presidential system and the stability of a regime are considered. Most of these institutions are more likely to exist under a democracy.

2.3.1 Electoral rules

In the literature the effect of the electoral system is commonly assessed by focusing on the incentives that electoral rules provide to politicians to serve special interests (Pereira & Teles, 2009). Some sets of electoral rules can lead to corruption in a country; leaders may be rent-seeking or enrich proponents of the government. The political science literature defines three stylized categories of electoral rules: plurality or majoritarian voting, open list proportional representation and closed list proportional representation (Kunicova & Rose-Ackerman, 2005). Under all types of rules incumbent politicians face the trade-off between re-election and self-enrichment. If an incumbent chooses to misuse his election for his own benefit he will not be

re-elected. In the light of the above discussion about the number of years a government is ruling, this should negatively affect economic development, apart from the negative effects of corruption following from the misuse of power. If a politician cares more about re-election, he should adopt policies that are beneficial for society and promote economic development and welfare.

2.3.2 Presidential and parliamentary systems

The possible rent-seeking behavior for politicians differs under presidential and parliamentary systems. Centralized control over a government can lead to corrupt behavior of party leaders (Kunicova & Rose-Ackerman, 2005). For example, if the executive power is controlled by the president, then he will have incentives to use this control, creating opportunities that yield personal gain. Party leaders have less opportunities to behave in this way in a presidential system than in a parliamentary system, since they need to negotiate with a president to pass acts. Possible rent-seeking could have an effect on the stability of a government. A core assumption is that a parliamentary system in which there is a majority control in both the executive and legislature is more stable than a presidential system (Pereira & Teles, 2009). However, this is not always the case; around 20% of stable parliamentary systems have minority governments (Cheibub & Limongi, 2000). Whether a parliamentary system or presidential system is more stable thus differs per country. This will be taken into consideration in combination with political constraints that indicate the credibility of the system.

2.3.3 Regime stability

Chen and Feng (1996) developed a theoretical model that emphasizes the decision of consumers to invest earnings under an uncertain environment. The uncertainty follows from the government that could be replaced during the time period considered. If the government is replaced, the regime could either be more or less repressive than in the former situation with equal probabilities. The model captures the change in repression by a change in social costs on capital that is imposed by the new government. The uncertainty that is involved by a regime change is translated to delays in investment due to market uncertainty. Economic growth is predicted to be negatively affected by the delay and uncertainty. Empirical findings of Chen and Feng (1996) confirm their theoretical predictions. Regime instability has a negative effect on economic growth, as well as political polarization and government repression.

The findings are in line with Alesina et al. (1996) who examine regime changes as being constitutional or unconstitutional changes. Large political instability implies policy uncertainty which in turn negatively affects savings and investment. This changes the decision making process for both investors at home and foreign investors. Alesina et al. (1996) also point out the endogenous nature of political instability and economic growth in the form of reverse causality. Whereas a regime change leads to less investment and economic growth, the government can be held responsible for bad economic outcomes as well. This may cause public unrest and could lead to government collapse. The results of empirical testing show that political instability has a negative effect on economic growth, particularly if a regime change is unconstitutional (Alesina et al., 1996).

2.4 Political institutions in the Middle East and North Africa

Over the last century, countries in the Middle East and North Africa have showed to be resistant towards democratization (Bellin, 2004). In comparison to four decades ago, little has changed in the region; only two countries are qualified as democratic, whereas 15 out of 21 countries are deemed not free (see Table 1). A comparison of the level of political rights in 1973 and 2016 shows that the conditions to participate in politics did not improve in most countries and sometimes even worsened. One exemption is Tunisia that successfully introduced democratic institutions after the Arab spring that also started in Tunisia in 2010, and evolved to a free country in 2016. Some countries struggle to shape new institutions that meet the expectations of the people. Most countries, however, remain as autocratic as they were before the revolution in 2011 but “the nature of the political game has changed” (Cammett & Diwan, 2015).

The persistence of the authoritarianism in the Middle East and North Africa is unique in the world. No other region in the world showed a longer period without attempts or revolutions to implement democracy (Bellin, 2004). Bellin (2004) provides a number of reasons as to why authoritarianism is much more persistent than elsewhere. An important characteristic is the coercion that governments in the region exercise against political opponents and the population in general. Governments are able to sustain the level of coercion due to rents flowing from oil and gas production, but also due to monetary support from Western countries concerned about the security in the region. Bellin (2004) argues that, together with patrimonialism and low popular mobilization, these characteristics prevent democratization in the region.

Many authors have linked the most important religion in the Middle East and North Africa to the incapability to implement and sustain a democratic society. The Islam religion is historically related to politics in the region as being a religion that consists of laws with regard to society and individual morality (Tessler, 2002). Democracy seems incompatible with Islam due to intellectual conformity and acceptance of authority, whereas competition and tolerance of diversity are needed to successfully engage in democracy. The culture of the religion is found in almost every part of society; in the beginning of this century many Muslim associations and financial institutions were established and public prayers increased (Tessler, 2002).

Table 1. Freedom House Rankings of Middle Eastern and North African countries

Indication of freedom status and political rights in the Middle East and North Africa.

Country	Freedom Status		Political Rights	
	1973	2016	1973	2016
Algeria	Not free	Not free	6	6
Egypt	Not free	Not free	6	6
Iran	Not free	Not free	5	6
Iraq	Not free	Not free	7	5
Israel	Free	Free	2	1
Jordan	Not free	Not free	6	6
Kuwait	Partly free	Partly free	4	5
Lebanon	Free	Partly free	2	5
Libya	Not free	Not free	7	6
Morocco	Partly free	Partly free	5	5
Oman	Not free	Not free	7	6
Qatar	Not free	Not free	6	6
Saudi Arabia	Not free	Not free	6	7
Syria	Not free	Not free	7	7
Tunisia	Not free	Free	6	1
United Arab Emirates	Not free	Not free	7	6
Yemen	-	Not free	-	7
Yemen (North)	Partly free	-	4	-
Yemen (South)	Not free	-	7	-

Source: Freedom House, www.freedomhouse.org

Note: North and South Yemen united in 1990. Data for the Palestine territories not available. Political Rights rating is "Free" between 1-2.5, "Partly free" between 3-5.5 and "Not free" between 5.5-7.

2.5 Hypotheses

To examine the relationship between political institutions and economic development in the Middle East and North Africa a number of hypotheses are developed. The first hypothesis is based on the discussion in Clague et al. (1996) which political regime better secures property rights and thus is better for economic development:

H1: A democratic political system is a better promoter for economic development than an autocratic political system.

This implies that property rights would be better secured under a democratic system, especially in an old democracy where law and order are well established (Clague et al., 1996). Although it is expected that democracy has a larger effect on economic development, this proposition does not mean that autocratic regimes necessarily negatively affect growth. Autocratic leaders can build up some reputation over the years through providing certainty on property. This would lead to a good environment for investment as well. This argument is related to the next hypotheses. Alesina et al. (1996) point out that a stable regime is necessary for investment. The quality of the regime then determines how attractive it is to invest. This leads to the following hypothesis:

H2: The effect of the number of years a high-quality government is in power on economic development differs significantly from the effect of the number of years a low-quality government is in power.

Political stability is important for economic development. A stable government means a stable economic policy and creates safe investment opportunities as long as property rights are recognized. Furthermore, the government can execute long term policies that promote long run economic development. However, if a government cannot commit to long run policies, this might lower the effect.

The last hypothesis relates to the region this thesis focusses on. A result from Bellin (2004) is that oil rent can be a means for a government to support their ways to oppress political opponents or the people. Countries in the Middle East and North Africa are well endowed with oil and the rents that flow from the production of it could be used by the governments to keep autocratic control of the countries. It is hypothesized that these oil rents support the political institutions in the Middle East and North Africa.

H3: Oil rents help governments in the Middle East and North Africa to stay in power.

CHAPTER 3 Data & Methodology

This chapter describes the data and methodology that is used to examine the main question and hypotheses developed above. The first section contains descriptions of the key variables for this thesis and the second part will elaborate on the specification used in order to provide an answer to the main questions in this thesis.

3.1 Sample and descriptive statistics

The sample consists of 16 countries in the Middle East and North Africa and the data ranges from 1975 to 2008. The Palestine territories are left out of the analysis because most data for the country are missing. Furthermore, the sample contains a control group consisting of European, Asian and (Latin) American countries. This group contains all OECD countries combined with countries in Eastern Europe, Latin America and Asia that faced a transition or are still autocratic. African countries are left out because of missing data on the political constraint. A total of 63 countries that are either democratic or autocratic over the complete time period, or faced a transition to democracy, is included. The sample is mainly restricted by the lack of data availability outside the years 1975 to 2008, hence this range is chosen. The data is obtained from publicly available sources, such as the Maddison Table and the Database for Political Institutions. The total number of observations in the sample is 2,090.

This thesis examines the effect of political institutions on economic development in countries in the Middle East and North Africa. For the various regressions that are performed to find an answer, a dependent variable, various independent variables and several control variables are used. The remainder of this section gives a description of the various variables in each category. For a complete overview of the variables and sources Appendix 1 can be consulted.

3.1.1 Variable description

For the complete sample, gross domestic product (*GDP*) per capita is used as the dependent variable. This particular measure of economic development is commonly used in the literature on this subject and other subjects that concern economic development. The data is retrieved from the Maddison Table (Maddison, 2003), which was updated in 2014 (Bolt & van Zanden, 2014). In this study the log of GDP per capita (y) will be used because this is the usual measure in studies in economic development.

The variables of interest in this thesis are the measure of political regimes, the number of years that the executive party is in power, a measure of political constraints and oil rents. The measure of political regimes, which is the polity index (*POLIND*), is retrieved from the Polity IV Project and is among the most commonly used indices of regimes. The polity index is constructed as the difference of two variables that classify the level of democracy and autocracy, respectively. It takes a value between -10 and 10, where -10 is the value for a completely autocratic nation and 10 is the value for a completely democratic nation (Marshall, Jaggers, & Gurr, 2011). In periods of interregnum the polity index is by assumption 0. During transitions, the difference between the index before and after the transition is divided by the number of years it took and spread over those years. In case of foreign interruption, the polity index is coded as missing. Missing polity indices are left out of the analysis, periods of interregnum and transitions are included. The number of years that the executive party is in power (*YRSOFFC*) is a variable that proxies the stability of the government. The variable is obtained from the Database of Political Institutions and it counts the years one party is in power (Beck et al., 2001). When another party is elected, or has taken control, the variable restarts counting. Given the different policies parties pursue, this variable gives a reasonable measure of the stability of nations' governments (Pereira & Teles, 2009). The political constraints variable (*POLCON*) is a way to measure to what extent politicians in the executive can credibly commit to their policies and to what extent they have a choice in their future policies (Henisz, 2000). The variable ranges from 0 to 1. The more the value approaches 1, the more a politician can commit to his policy. Of further interest to the political constraint is the country's system (*SYSTEM*). This variable contains three categories: presidential (1), assembly-elected president (2) and parliamentary (3). Note that a dictator in an autocratic country is coded the same (1) as a democratically chosen president, such as the American or French. Present differences between regimes that are coded the same are showed by interacting the system variable with the political constraints index. Interacting the political constraint index with the system in a country indicates the quality of the system because the political constraint shows the credibility of current policies in a country. This interaction term, quality of regime ($QUALITY = POLCON \times SYSTEM$), then tells whether the political leader in a system adds to the quality of the regime. In this way it is possible to differentiate countries that have the same political system. The variable that measures the oil rents (*RENT*) is obtained from the World Development Indicators database from the World Bank. It is constructed as the rent from the production of oil as a percentage of GDP.

Furthermore, other variables might exist that affect the dependent variable in this analysis. These effects could bias the coefficient of interest to this study. Therefore, some control variables will be added to limit these effects. Control variables that will be used originate from various studies that examined the determinants of economic development before. Examples are geography variables⁶ and human capital in the form of education⁷. Sources of all control variables can be consulted in Appendix 1.

3.1.2 Descriptive statistics

Table 2 depicts the descriptive statistics of the most important variables that are used to examine the relationship between political institutions in the Middle East and North Africa. The different number of observations of the Polity index variable is due to the variable coding. Countries that experienced foreign interruption are coded as “system missing”. This is the case for Iraq and Afghanistan during several periods in the time span concerned in this thesis.

Table 3 shows the same descriptive statistics, but only for countries in the sample that are Middle Eastern or North African (ME&NA). The mean GDP per capita in the Middle East and North Africa differs significantly from the mean GDP per capita in the rest of the countries in the sample (see Appendix 2 for all mean comparisons). In relative terms, ME&NA mean GDP per capita is almost 40% lower. The polity index has a negative mean whereas the rest of

Table 2. Descriptive statistics of key variables for full sample

	GDP per capita	Polity index	System	Political constraint	Years in Office
Mean	9,749.56	2.32	2.00	0.44	7.65
Std. Dev.	7,029.60	8.05	0.92	0.35	8.50
Minimum	426.07	-10	1	0	0
Maximum	34,611.32	10	3	0.89	46
Observations	2,090	2,050	2,090	2,090	2,090

the sample has a positive polity index mean that differs significantly. ME&NA has a mean system close to 0 meaning that most countries are presidential. The combination with a very low index for the political constraint means that it is hard for leaders in these presidential systems to commit to their policies. Both the mean for the system and political constraint in ME&NA differs significantly from the rest of the sample. Lastly, the average number of years a leader in ME&NA lasts in office is around 13.5 which is about 8 years higher than in the rest

⁶ Center for International Development, Harvard. www.cid.harvard.edu/economic.htm.
⁷ Barro & Lee (2016). www.barrolee.com.

of the sample. This indicates a high level of stability, but the question remains whether this is a positive or negative characteristic.

Table 3. Descriptive statistics of key variables for Middle East and North Africa

	GDP per capita	Polity index	System	Political constraint	Years in Office
Mean	6,439.28	-6.13	1.21	0.15	13.51
Std. Dev.	5,187.76	4.41	0.52	0.25	10.56
Minimum	944.63	-10	1	0	0
Maximum	34,611.32	9	3	0.79	46
Observations	612	590	612	612	612

3.2 Methodology

The basic specification for testing the first hypothesis is:

$$y_{it} = \beta_1 POLIND_{it} + \beta_2 X_{it} + \delta_i + u_{it} \quad (1)$$

where y_{it} is the log GDP per capita of country i in period t . The main variable for this thesis is $POLIND_{it}$, the polity index. The parameter β_1 captures the relationship between the political regime and economic development. The vector X_{it} includes the other variables that are of importance for the effect of political institutions and all control variables that might have an effect on economic development. The δ_i 's denote a set of country dummies. It captures shocks to the trend of economic development of all countries. Lastly, u_{it} is the error term with $E(u_{it}) = 0$ and $E(u_{it}|POLIND_{it}) = 0$. The error term captures all omitted effects to economic development.

The basic specification for testing the second hypothesis is:

$$y_{it} = \beta_1 YRSOFFC_{it} + \beta_2 SYSTEM_{it} + \beta_3 POLCON_{it} + \beta_4 QUALITY_{it} + \beta_5 YRSOFFC_{it} * QUALITY_{it} + \beta_6 X_{it} + \delta_i + u_{it} \quad (2)$$

where y_{it} is again the log GDP per capita of country i in period t . The right hand side of the equation now contains $YRSOFFC_{it}$, the number of years a government in country i in period t is in office, $QUALITY_{it}$, a term that defines the quality of a regime and $YRSOFFC_{it} * QUALITY_{it}$, an interaction term of the number of years in office and term that indicates the quality of the regime.

The basic specification for testing the third hypothesis is:

$$YRSOFFC_{it} = \beta_1 YRSOFFC_{it-1} + \beta_2 RENT_{it} + \beta_3 X_{it} + \delta_i + u_{it} \quad (3)$$

where $YRSOFFC_{it}$ is the number of years a government in country i in period t is in office. A lagged term of $YRSOFFC_{it}$ is added to control for the continuity and desirability of stable regimes. Furthermore, $RENT_{it}$ is the rent earned with the production of oil. Like the other specifications, X_{it} is again a vector of control variables, δ_i is a set of country dummies and u_{it} is the error term.

It is likely that the above specifications suffer from various forms of endogeneity. If this is the case, the OLS estimation of the effect of the political institutions is not unbiased anymore. The most important threat to the unbiased estimation is reverse causality, that is, it is possible that the causality runs from economic development to political institutions instead of the other way around. Other possible threats are omitted variables and the possibly incorrect measurement of the variables that are included. A solution to all forms of endogeneity that is used in the current literature is two-stage least squares estimation, i.e. using a suitable instrument in a first stage regression to filter out all effects that bias the coefficient of interest. Using an instrumental variable approach will solve the reverse causality, omitted variable bias and measurement error. However, it is hard to find a suitable instrument that meets the exclusion restriction and for this thesis such an instrument is not found.

Another solution to reverse causality is including lagged terms of the variable of interest in the regression, so the reverse effect of the dependent variable is excluded. This means that the independent variables will enter the regression at period $t - 1$ instead of period t . Although this could lead to a better understanding of the true effect of the variables of interest on economic development, there are still concerns about reverse causality. If the population could fairly accurately predict the level of economic development in period t , the coefficients of the variables of interest are still biased. Despite this downside, lagged terms will be considered to check if the coefficients change in the right direction. However, the omitted variable bias and measurement error cannot be fixed using the lagged terms in the regression. To address these problems control variables are added and reliable data are used.

The sample period is 1975-2008. The correlation matrix of the key variables shows no signs of multicollinearity (see Appendix 3). The coefficients of the variables in the specification will be estimated using the ordinary least squares method. To correct for possible heteroscedasticity and autocorrelation in the sample, cluster robust standard errors will be used to estimate the regressions. The standard errors are clustered by country.

CHAPTER 4 Empirical results

In this chapter the results of the OLS regressions are given. For both the complete sample and a subsample of the Middle East and North Africa the results of testing equation 1 and 2 will be shown. Finally, the results of testing hypothesis 3 are given. All results will be discussed in the next chapter.

4.1 Political regimes and economic development

The OLS results of testing equation (1) are presented in table 4. Columns (1) to (5) in table 4 show the results of the effect of the polity index on economic development for the complete sample. In every regression more control variables are added. Finally, column (6) shows the results of the estimation of the preferred regression (5) for the Middle East and North Africa.

Column (1) shows the basic correlation between the polity index and economic development, which is positive with a coefficient of 0.017 and significant at the 1 percent level. This estimation will most likely suffer from reverse causality and omitted variable bias. To solve for the latter, the next estimations contain various control variables. In column (2) other political institutions that may affect economic development as well as the polity index, are added. The system variable enters the regression negatively and is significant at the 10 percent level, the coefficients of the years in office and the political constraint variable are both not significant and the coefficient of the interaction term of the system variable and the political constraint variable, labeled as quality of regime, is insignificant as well. Adding these variables results in a slightly lower, still positive, coefficient for the polity index. The polity index also remains significant. Adding the country fixed effects in column (3) slightly changes the coefficients compared to those in column (2). The coefficient of the polity index loses its significance and the coefficient of the system remains more or less the same.

In column (4) the variable that controls for oil rent is added. The coefficient of this variable is positive and significant, at the 10 percent level. Controlling for this variable increases the coefficient of the polity index, and alters the significance. The coefficient of years in office remains insignificant. The coefficient of the quality of the regime is now positive and significant at the 1 percent level. Lastly, education and population growth variables are added in column (5). Both variables have coefficients that are positive and significant. The coefficient of the polity index is insignificant after adding these variables.

Table 4. Effect of political regime on economic development (1975-2008)

This table shows the OLS results for estimating equation (1). Dependent variable is log GDP per capita.

	(1)	(2)	(3)	(4)	(5)	(6)
Polity index	0.017*** (0.006)	0.011* (0.007)	0.011 (0.007)	0.021** (0.008)	0.004 (0.007)	0.002 (0.015)
System		-0.128* (0.076)	-0.140* (0.076)	-0.221** (0.088)	-0.115 (0.072)	-0.271** (0.107)
Years in Office		-0.000 (0.003)	-0.001 (0.003)	0.003 (0.003)	0.000 (0.002)	-0.002 (0.002)
Political constraint		-0.082 (0.200)	-0.086 (0.205)	-0.276 (0.192)	-0.156 (0.166)	-0.254 (0.257)
Quality		0.165 (0.115)	0.154 (0.115)	0.311*** (0.112)	0.157* (0.091)	0.338** (0.144)
Oil rent				0.007* (0.004)	0.011*** (0.004)	0.010*** (0.003)
Education					0.137*** (0.025)	0.026 (0.035)
Population growth					0.031** (0.012)	0.020*** (0.005)
Country fixed effects	No	No	Yes	Yes	Yes	Yes
Middle East and North Africa sample	No	No	No	No	No	Yes
Observations	2,050	2,050	2,050	1,876	1,830	479

Robust standard errors are in parentheses. ***p<0.01, **p<0.05, *p<0.10.

In column (6) the regression of column (5) is used to estimate the coefficients for a subsample of Middle Eastern and North African countries. The results show an insignificant coefficient for the polity index. Variables that have significant coefficients are system and quality of regime. The coefficient of the system has a negative sign whereas the quality of regime has a positive sign. Furthermore, the coefficients of the controls oil rent and population growth are significant and positive.

Subsequently, the results for estimating equation (1) using lagged terms of the variables for the political institutions to address possible reversed causality are shown in table 5. In the estimation for the complete sample (column (1)), the coefficient for the polity index is not significantly different from zero like in column (5) in table 4. In the estimation for the subsample with Middle Eastern and North African countries (column (2)), the coefficient for the polity index is insignificant as well. The coefficient of the lagged term of system is negative and significant at the 5 percent level.

Table 5. Effect of political regime on economic development (1975-2008)

This table shows the OLS results for estimating equation (1) using a lagged term of polity index. Dependent variable is log GDP per capita.

	(1)	(2)
Lagged Polity index	0.003 (0.006)	0.001 (0.011)
Lagged System	-0.046 (0.058)	-0.195** (0.091)
Lagged Years in Office	-0.000 (0.002)	-0.003 (0.002)
Lagged Political constraint	-0.061 (0.150)	-0.138 (0.205)
Lagged Quality	0.081 (0.076)	0.217 (0.139)
Oil rent	0.011*** (0.004)	0.011*** (0.003)
Education	0.139*** (0.024)	0.032 (0.033)
Population growth	0.030** (0.012)	0.022*** (0.007)
Country fixed effects	Yes	Yes
Middle East and North Africa sample	No	Yes
Observations	1,830	479

Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.10.

4.2 Quality of regime, years in office and economic development

Table 6 presents the results of estimating equation (2). Column (1) gives the basic correlations between the years in office, quality variable and the interaction term of both and economic development. In column (2)-(4) control variables are added and finally column (5) presents the results of estimating the regression of column (4) for the Middle East and North Africa.

Column (1) shows that the basic correlation of the variable of interest, the interaction term of the years in office and quality of regime, is insignificant. Since the regression likely suffers from omitted variable bias, the next columns show added control variables.

Table 6. Effect of years in office of high and low-quality regimes on economic development (1975-2008)

This table shows the OLS results of testing equation (2). Dependent variable is log GDP per capita.

	(1)	(2)	(3)	(4)	(5)
Years in Office	-0.002 (0.004)	-0.002 (0.004)	0.003 (0.003)	0.000 (0.003)	-0.001 (0.003)
Political constraint	0.102 (0.218)	-0.110 (0.203)	-0.289 (0.191)	-0.155 (0.164)	0.194 (0.271)
System	-0.115 (0.065)	-0.143* (0.076)	-0.223** (0.089)	-0.115 (0.072)	-0.259** (0.107)
Quality	0.138 (0.106)	0.145 (0.116)	0.307*** (0.112)	0.157* (0.091)	0.341** (0.141)
Years in Office × Quality	0.004 (0.004)	0.004 (0.004)	0.002 (0.003)	-0.000 (0.003)	-0.005 (0.006)
Polity index		0.011 (0.007)	0.020** (0.008)	0.004 (0.007)	0.001 (0.015)
Oil rent			0.007* (0.004)	0.011*** (0.004)	0.010** (0.003)
Education				0.137*** (0.025)	0.027 (0.035)
Population growth				0.031** (0.012)	0.020*** (0.006)
Country fixed effects	No	Yes	Yes	Yes	Yes
Middle East and North Africa sample	No	No	No	No	Yes
Observations	2,090	2,050	1,876	1,830	479

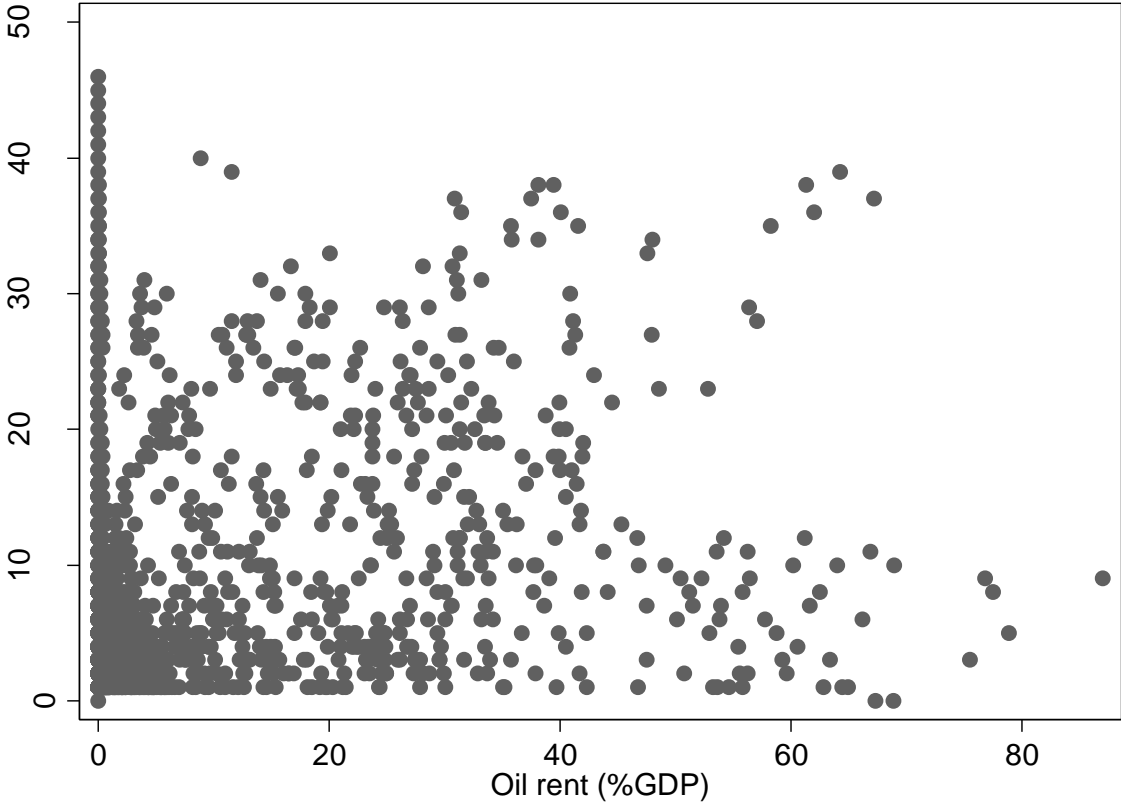
Robust standard errors are in parentheses. ***p<0.01, **p<0.05, *p<0.10

Adding the polity index and country fixed effects in column (2) does not change the coefficients, except the coefficient of the system variable is now significant. The interaction term remains insignificant. The inclusion of the oil rent does not change the significance of the coefficient of the interaction term as well. Finally, controlling for education and population growth also gives an insignificant coefficient of the interaction term. Using the regression of column (4) for the Middle East and North Africa region also does not show any correlation between the interaction term and economic development. All other coefficients remain more or less the same, except the coefficient for the quality of the regime which doubles, and the coefficient for population growth drops slightly compared to column (4). Appendix 4 shows the results for regressing economic development on lagged terms of the independent variables to address the reverse causality, but these results do not show evidence of any correlation of the interaction term with economic development.

4.3 Oil rent and sustaining political power

This section presents the results of testing equation (3). In table 7 column (1) to (4) show the results for the effect of oil rent on the number of years a government is in office for the complete sample. Column (5) presents the results for a subsample of countries that are or have been autocratic during the considered period in the full sample. Column (6) then shows the results for the Middle Eastern and North African subsample and lastly, column (7) gives the results for countries in the Middle East and North Africa that are or have been autocratic during the sample period. Figure 1 depicts a scatterplot of the basic relationship between the number of years in office and the corresponding oil rent. The scatterplot does not show a clear relationship between oil rent and the number of years in office.

Figure 1. Scatterplot number of years in office and oil rent



The basic correlation between oil rent and the years in office is shown in column (1) of table 7, and is insignificant. Adding a lagged term for the dependent variable in column (2) gives a positive coefficient of oil rent of 0.033, significant at the 5 percent level. The lagged term of the number of years in office is positive and highly significant. In column (3) the polity index is added to the estimation, which results in a coefficient for oil rent that has lost its

significance. The polity index has a negative, significant effect on the number of years in office. The inclusion of fixed effects in column (4) does not change anything to the coefficients, but the coefficients of the lagged term of years in office and the polity index slightly decrease. In column (5) an estimation of the effect of oil rent on the years in office for all autocratic countries in the sample is shown. This effect is now negative and significant and the coefficients for the lagged term of the dependent variable and the polity index keep the same sign, although the coefficient of the polity index is less significant.

The results for the subsample of the Middle East and North Africa is shown in columns (6) and (7). The coefficients are comparable to those in the former columns. The effect of oil rent on the durability of reigning a country is zero for the complete set of Middle Eastern and North African countries. The lagged term of the years in office and the polity index keep their importance for the number of years in office. A closer look on the (former) autocratic countries in the region in column (7) gives a negative relationship between the oil rent and the number of years in office, which is significant at the five percent level. Appendix 5 shows the results of estimating equation 3 with a lagged term of oil rent. The results show a negative relationship between the lagged oil rent variable and the number of years in office in the complete sample with all controls in column (5) and an insignificant coefficient for the oil rent for the Middle East and North Africa.

Table 7. Effect of oil rent on number of years in office (1975-2008)

This table shows the OLS results of estimating equation (3). Dependent variable is the number of years in office.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Oil rent	-0.028 (0.060)	0.033** (0.012)	-0.002 (0.016)	-0.031 (0.025)	-0.034* (0.019)	-0.023 (0.020)	-0.036** (0.016)
Lagged years in office		0.841*** (0.029)	0.796*** (0.031)	0.707*** (0.033)	0.773*** (0.036)	0.817*** (0.025)	0.812*** (0.032)
Polity index			-0.151*** (0.027)	-0.237*** (0.044)	-0.479* (0.137)	-0.344** (0.161)	-0.593* (0.287)
Country fixed effects	No	No	No	Yes	Yes	Yes	Yes
Middle East and North Africa sample	No	No	No	No	No	Yes	Yes
Autocratic sample	No	No	No	No	Yes	No	Yes
Observations	1,908	1,907	1,875	1,875	689	523	470

Robust standard errors are in parentheses. ***p<0.01, **p<0.05, *p<0.10.

CHAPTER 5 Discussion of Results

5.1 The positive effect of democracy on economic development

The insignificant coefficient of the polity index shown in the first column of table 4 is not in line with the results that Clague et al. (1996) obtained, after all control variables have been added. Evidence from the regression shows a loss of the significance of the coefficient after adding the education and population growth variables.

In the regressions the coefficient of the polity index gives no relationship with economic development. After including the oil rent and fixed effects it is significant, but the education and population growth variable take its place for explaining economic development. Generally, the coefficient is not significantly different from zero which is a different result as in the empirical studies in the existing literature (Clague et al, 1996; Pereira & Teles, 2008). Other political institutions in the regression show some contradictory results. The coefficient of the regime quality is positive and significant, which indicates that the political system scaled by the political constraint is positively correlated with economic development. It makes sense that a high regime quality is positively associated with economic development, since economic agents then should have more trust in a government and invest and consume more. Furthermore, oil rent, population growth and education affect economic development as expected. The rents of oil could be used to finance government policies and it has a large value added, both positively affecting economic development. The positive effects of population growth and education on economic development are in line with Solow growth models.

The results for the Middle East and North Africa confirm the non-existent effect of the polity index on economic development. The system variable has a negative effect on economic development, indicating that it pays out for countries in that region to have a single leader rather than a parliamentary system. This confirms the characteristic of the Islamic religion that the people tend to easily accept authority and the individual moral in the religion (Tessler, 2002). Furthermore, the coefficient for the oil rent is positive and highly significant, although this is also the case for the complete sample. The coefficient of quality of the regime is twice as large as in column (5). This probably follows from the low political constraint that is typical for the region and is associated with low economic development. This is in line with the argumentation in Bellin (2004), who points out that the persisting authoritarianism is due to coercion.

Reverse causality is biasing the coefficients, although it is ambiguous if the coefficients are under- or overestimated. High economic development could mean a country is sufficiently developed to sustain a working democracy, which would lead to an overestimation of the

coefficient for the polity index due to the positive effect of economic development on democracy. However, high economic development could mean that an autocratic government has sufficient funds to remain in office and oppress any opponents of the regime. In this case, there would be an underestimation of the coefficient of the polity index. The regression results in table 5 show that the coefficient of the lagged polity index is insignificant as well for both the complete sample and the Middle East and North Africa region. However, using a lagged term of a variable is unfortunately not a perfect solution to the problem of reverse causality and in this study it does not prove to be a good solution as well.

The first hypothesis that a democratic political system is a better promoter for economic development than an autocratic system is rejected, since the coefficient of the polity index is not significant. Moreover, using a lagged term of the polity index to address the reverse causality does not give significant results as well. This indicates that the effect of the polity index on economic development is non-existent.

5.2 Quality of regime, years in office and economic development

The coefficient of the interaction term of the quality of regime and years in office variables is not significant in the first column of table 6. Moreover, the coefficient does not appear to change after the inclusion of control variables to cope with the omitted variable bias. Given the fact that the coefficient is insignificant in all cases the results should be interpreted carefully as the effect is zero following the results. The quality of the regime has a positive effect and the political system has a negative effect on economic development like in the results for equation (1). The oil rent, education and population growth variables have significant effects on economic development. Oil rent flows into the economy in various ways, such as the value added by oil companies as well as via the government budget. The positive effects of education and population growth are again in line with Solow growth models.

The results for the Middle East and North Africa also suggest that there is no difference between the effect of high-quality and low-quality governments on economic development considering the years in office. An explanation could be a situation such as Qatar, where the current government is in office for 13 years and the value for the political constraint is zero. However, economic development is among the highest in the world. Apart from large oil rents, gross capital formation is 38.8 percent of GDP in 2015, indicating a safe investment

environment.⁸ That safe investment environment could be the reason for high economic development. The second hypothesis that the effect of the number of years a high-quality government is in power on economic development differs from the effect for a low-quality government is thus rejected since the results suggest that there is no difference between the effects of the two types of government.

5.3 The negative effect of oil rent on the number of years in office

Estimating equation (3) gives the results in table 7. The result is that oil rent has no effect on the number of years a government is office, which is not surprising given the ambiguous scatterplot in figure 1. This is the case for the complete sample and the Middle East and North Africa region sample. This contradicts the argumentation of Bellin (2004) that oil money funds coercive policies of autocratic governments to suppress opponents of the regime, since the results in table 7 suggest no effect. Given the insignificant coefficient, earning oil rent should have no effect on the reigning term for a government. Omitting a number of democracies in the sample where governments constitutionally change within four years, alters the significance of the coefficient and gives a negative relationship between oil rent and the number of years in office of autocratic regimes in the Middle East and North Africa, considered separately.

For the Middle East and North Africa region the coefficient of oil rent does not differ from the coefficient in the complete sample. This indicates that the abundance of oil in the region does not seem to have a supporting role for the number of years the governments of Middle Eastern and North African country are in power. This could be due to the fact that opponents of the regime earn a share of the oil rent to fund their programs. Another reason could be that rebels take control of or destroy pipelines, so oil is lost and rents are less. However, it could be the case that it takes a year for the oil rent to have an effect on the government budget. But it follows from the results in Appendix 5 that a lagged term of the oil rent gives an insignificant coefficient (see estimation (4) and (7)). This also opposes the study of Bellin (2004), still suggesting that the oil rent has no effect when a period of a year is considered for the oil rent to affect the number of years.

Also, the polity index is an important indicator of the number of years a government is in office as all regressions show in table 7 and in Appendix 5. In every case the polity index has a negative effect meaning that the less democratic, or the more autocratic, a country is, the larger

⁸ World Development Indicators. *The World Bank*. Retrieved August 17, 2016, from <http://databank.worldbank.org/data/reports.aspx?source=2&series=NE.GDI.TOTL.ZS&country=>

is the reigning period of a government. This probably follows from electoral rules that apply in democracies, limiting the governing period to a specific number of years before new elections take place.

Given the insignificant coefficient for the oil rent in the regression regarding the Middle Eastern and North African countries, the third hypothesis that oil rent helps governments in this region to stay in power is rejected. Since it is unlikely that the number of years in office has any effect on the oil rent that is yielded, reverse causality is a less severe problem here. This means that it is likely that the effect of oil rent on the number of years in office is indeed not present.

CHAPTER 6 Conclusion

The uprisings throughout the Middle East and North Africa led to diverse outcomes in the countries where they emerged. An example of a country in the region that successfully introduced democracy is Tunisia, whereas countries such as Egypt and Syria have been in the news ever since due to political turmoil or civil war. Goal of the uprisings was to force governments to improve standards of living for the people and introduce political institutions like democracy. Other countries in the region seem to do well under autocracies, given high income per capita. These different combinations of political institutions and economic development raised the main question of this thesis: what is the effect of political institutions on economic development in the Middle East and North Africa?

A panel dataset consisting of 63 countries over the period 1975 to 2008 is considered to examine three hypotheses regarding political institutions and the persistence of them. The first specification regresses economic development on the polity index, the political system, the number of years a government is in office, the political constraint and the quality of the regime to examine whether a democratic political system is better for economic development than an autocratic system. The second specification checks whether the effect of the number of years a high-quality government is in office differs from the effect of a low-quality government. Finally, the third specification examines whether oil rent helps governments to stay in power for a longer period. All regression are performed using OLS estimation. To solve for reverse causality, regressions with a lagged term of the variables are estimated.

Firstly, the empirical results do not show any evidence that a democratic system is a better promotor for economic development than an autocratic system. However, the quality of the regime positively affects economic development. This positive effect on economic

development could follow from a larger confidence of people in the government which leads to more investment and consumption. Secondly, the results also do not show evidence that the longer a high-quality government is in power has a different effect on economic development than a low-quality government. The political system of Middle Eastern and North African countries matters for their economic development; a presidential system promotes economic development. Thirdly, the oil rent does not help governments in the Middle East and North Africa to stay in power. There is even a negative correlation between oil rent and the number of years a government is in power. Using lagged terms of independent variables does not give different results.

This thesis shows that most political institutions are not important for economic development in the Middle East and North Africa. However, some characteristics affect the income per capita. The quality of regimes and having a presidential system benefit the economic environment in this region. The importance of a presidential system may be a result of the Islamic religion, which values authority and individuality.

Finally, there are some limitations and recommendations for further research that should be pointed out. Like in much of the research in the field of economic development, the estimations in this thesis also suffer from forms of endogeneity. It turned out to be very difficult to find a suitable instrument which could be used for an instrumental variable approach to solve for the problem of endogeneity. Therefore lagged terms of the variables have been used to solve for part of the problem, but an instrumental variable approach would still be better. Also, foreign interventions in the Middle East resulted in some missing values for the polity index. This could have biased the results for the Middle East and North Africa region. Further research could be done to make progress in finding a suitable instrument for a two-stage least squares approach to find effects of political institutions. More research could also provide insights into the causation and correlation between different kinds of political institutions.

References

- Acemoglu, D. (2003). Why Not a Political Coase Theorem? Social Conflict, Commitment, and Politics. *Journal of Comparative Economics*, 31(4), 620-652.
- Acemoglu, D., & Robinson, J. A. (2006). Persistence of Power, Elites and Institutions. *NBER Working Paper No. 12108*.
- Acemoglu, D., Johnson, S., & Robinson, J. A. (2001, December). The Colonial Origins of Comparative Development: An Empirical Investigation. *The American Economic Review*, 91(5), 1369-1401.
- Alesina, A., Özler, S., Roubini, N., & Swagel, P. (1996). Political Instability and Economic Growth. *Journal of Economic Growth*, 1(2), 189-211.
- Barro, R. J. (2013). Democracy, Law and Order, and Economic Growth. *2013 Index of Economic Freedom*, 41-58.
- Beck, T., Clarke, G., Groff, A., Keefer, P., & Walsh, P. (2001). New tools in comparative political economy: The Database of Political Institutions. *World Bank Economic Review*, 15(1), 165-176.
- Bellin, E. (2004, January). The Robustness of Authoritarianism in the Middle East: Exceptionalism in Comparative Perspective. *Comparative Politics*, 36(2), 139-157.
- Bolt, J., & van Zanden, J. L. (2014). The Maddison Project: collaborative research on historical national accounts. *The Economic History Review*, 67(3), 627-651.
- Cammett, M., & Diwan, I. (2015). Conclusion: The Political Economy of the Arab Uprisings. In A. Richards, & J. Waterbury, *A Political Economy of the Middle East* (pp. 407-436). Westview Press.
- Cheibub, J. A., & Limongi, F. (2000). Where is the difference? Parliamentary and presidential democracy reconsidered. *Paper presented at IPSA, Quebec City, Canada*.
- Chen, B., & Feng, Y. (1996). Some political determinants of economic growth: Theory and empirical implications. *European Journal of Political Economy*, 12(4), 609-627.
- Clague, C., Keefer, P., Knack, S., & Olson, M. (1996, June). Property and Contract Rights in Autocracies and Democracies. *Journal of Economic Growth*, 1, 243-276.
- De Long, J. B., & Shleifer, A. (1993, October). Princes and Merchants: European City Growth before the Industrial Revolution. *Journal of Law and Economics*, 36, 671-703.
- Feng, Y. (1997). Democracy, Political Stability and Economic Growth. *British Journal of Political Science*, 27(3), 391-418.
- Feng, Y., & Zak, P. J. (1999). The Determinants of Democratic Transitions. *Journal of Conflict Resolution*(43), 162-177.
- Gandhi, J., & Przeworski, A. (2007, November). Authoritarian Institutions and the Survival of Autocrats. *Comparative Political Studies*, 40(11), 1279-1301.
- Henisz, W. J. (2000). The Institutional Environment for Economic Growth. *Economics and Politics*, 12(1), 1-31.
- Kunicova, J., & Rose-Ackerman, S. (2005, October). Electoral Rules and Constitutional Structures as Constraints on Corruption. *British Journal of Political Science*, 35(4), 573-606.
- Larsson Seim, A., & Parente, S. L. (2013). Democracy as a middle ground: A unified theory of development and political regimes. *European Economic Review*(64), 35-56.
- Lipset, S. M. (1959, March). Some Social Requisites of Democracy: Economic Development and Political Legitimacy. *The American Political Science Review*, 53(1), 69-105.
- Maddison, A. (2003). *The World Economy: Historical Statistics*. Paris: Development Centre of the Organisation for Economic Cooperation and Development.
- Marshall, M. G., Jagers, K., & Gurr, T. R. (2011). *Polity IV Project*. Center for Systemic Peace.
- Montesquieu. (1748). *The Spirit of the Laws*. Paris.
- Moore Jr, B. (1966). *Social Origins of Dictatorships and Democracy*. New York: Beacon Press.
- North, D. C., & Weingast, B. R. (1989, December). Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England. *The Journal of Economic History*, 49(4), 803-832.

- Pereira, C., & Teles, V. K. (2009). Political institutions as substitute for democracy: a political economy analysis of economic growth. *Escola de Economia de São Paulo Textos para Discussão 196*.
- Persson, T., & Tabellini, G. (2006). Democracy and Development: the Devil in the Details. *NBER Working Paper 11993*.
- Przeworski, A. (2004). Democracy and economic development. In E. D. Mansfield, & R. Sisson, *The Evolution of Political Knowledge: Democracy, Autonomy, and Conflict in Comparative and International Politics* (pp. 300-324).
- Przeworski, A., & Limongi, F. (1993). Political Regimes and Economic Growth. *Journal of Economic Perspectives*, 7(3), 51-69.
- Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development. *Journal of Economic Growth*, 131-165.
- Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. London: George Allen & Unwin.
- Sirowy, L., & Inkeles, A. (1990). The Effects of Democracy on Economic Growth and Inequality: A Review. *Studies in Comparative International Development*, 25, 126-157.
- Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. London.
- Tessler, M. (2002). Islam and Democracy in the Middle East: The Impact of Religious Orientations on Attitudes toward Democracy in Four Arab Countries. *Comparative Politics*, 34(3), 337-354.

Appendix

Appendix 1. Variable description and sources

Variable	Description	Source
GDP	Level of gross domestic product per capita in constant 1990 dollars.	The Maddison-Project, http://www.ggd.net/maddison/maddison-project/home.htm , 2013 version.
Polity index	Measure of the level of democracy/autocracy. Ranging from -10 to 10, with -10 being completely autocratic and 10 being completely democratic.	Polity IV Project, Political Regime Characteristics and Transitions, 1800-2015, Integrated Network for Societal Conflict Research. http://www.systemicpeace.org/inscrdata.html
System	Nation's current political system being Parliamentary [=3], Assembly-Elected President [=2] or Presidential [=1].	Database of Political Institutions. http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html
Years in office	The number of years the executive party is in power, following Pereira and Teles (2009).	Database of Political Institutions. http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html
Political constraint	Index of credible commitment. Measures political constraints of executive parties.	Henisz, 2000. https://mgmt.wharton.upenn.edu/profile/1327
ME&NA	Dummy variable indicating if a country is situated in the Middle East & North Africa region.	
Europe	Dummy variable indicating if a country is situated in Europe.	
America	Dummy variable indicating if a country is situated in North America.	
LAmerica	Dummy variable indicating if a country is situated in Latin America.	
Asia	Dummy variable indicating if a country is situated in Asia.	
Australia	Dummy variable indicating if a country is situated in the Australian region.	
Oil rent	The rent that is yielded from the production of oil as a % of GDP.	World Bank, World Development Indicators. http://databank.worldbank.org/

Latitude	Geographical position of country in the world.	data/reports.aspx?source=2&series=NY.GDP.PETR.RT.ZS&country=# Center for International Development, Harvard. www.cid.harvard.edu/economic.htm
Longitude	Geographical position of country in the world.	Center for International Development, Harvard. www.cid.harvard.edu/economic.htm
Rule of law	A variable that measures to what extent rule of law exists in a country.	World Bank. Worldwide Governance Indicators.
Education	Average years of total schooling of the population aged over 15.	Barro and Lee, 2016. http://www.barrolee.com/
Population growth	Growth of the population by year.	World Bank, World Development Indicators. http://databank.worldbank.org/

Appendix 2. Comparison of means of key variables for ME&NA and rest of sample

	ME&NA		Rest of sample		t-test
	Mean	Std. Dev.	Mean	Std. Dev.	
GDP per capita	6439.28	5187.76	11120.26	7234.42	14.53***
Polity index	-6.13	4.41	5.74	6.52	40.64***
System	0.21	0.52	2.33	0.85	30.35***
Years in Office	13.51	10.56	5.22	5.99	-22.67***
Political constraint	0.15	0.25	0.55	0.32	28.08***

***p<0.01

Appendix 3. Correlation matrix of key variables

	log GDP per capita	Polity index	System	Years in Office	Political constraint
log GDP per capita	1.000				
Polity index	0.5405	1.000			
System	0.4352	0.6457	1.000		
Years in Office	-0.2501	-0.5710	-0.3584	1.000	
Political constraint	0.6312	0.8731	0.5921	-0.4820	1.000

Appendix 4. Effect of quality of regime and years in office on economic development (1975-2008)

This table shows the OLS results of testing equation (2). Dependent variable is log GDP per capita.

	(1)	(2)	(3)	(4)	(5)
Lagged Years in Office	-0.002 (0.003)	-0.002 (0.003)	0.002 (0.003)	-0.000 (0.002)	-0.001 (0.003)
Lagged Political constraint	0.199 (0.212)	0.016 (0.183)	-0.109 (0.171)	-0.039 (0.142)	-0.060 (0.206)
Lagged System	-0.048 (0.056)	-0.051 (0.059)	-0.102 (0.068)	-0.043 (0.050)	-0.186* (0.091)
Lagged Quality of regime	0.053 (0.093)	0.060 (0.097)	0.177* (0.091)	0.090 (0.074)	0.237 (0.141)
Lagged Years in Office*quality	0.003 (0.003)	0.003 (0.003)	0.001 (0.003)	-0.001 (0.002)	-0.009 (0.006)
Polity index		0.011** (0.006)	0.020*** (0.007)	0.002 (0.006)	0.002 (0.014)
Oil rent			0.007* (0.004)	0.011*** (0.004)	0.010** (0.003)
Education				0.140*** (0.025)	0.033 (0.035)
Population growth				0.030** (0.012)	0.019*** (0.006)
Country fixed effects	No	Yes	Yes	Yes	Yes
Middle East and North Africa sample	No	No	No	No	Yes
Observations	2,089	2,049	1,875	1,829	479

Robust standard errors are in parentheses. ***p<0.01, **p<0.05, *p<0.10

Appendix 5. Effect of oil rent on number of years in office (1975-2008)

This table shows the OLS results of testing equation (3). Dependent variable is log GDP per capita.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lagged Oil rent	-0.011 (0.044)	0.018* (0.010)	-0.024 (0.028)	-0.070** (0.028)	-0.070** (0.031)	-0.042 (0.026)	-0.051* (0.029)
Lagged years in office		0.868*** (0.026)	0.803*** (0.032)	0.707*** (0.034)	0.771*** (0.038)	0.827*** (0.027)	0.824*** (0.033)
Polity index			-0.169*** (0.063)	-0.261*** (0.063)	-0.489* (0.267)	-0.343** (0.162)	-0.583* (0.294)
Country fixed effects	No	No	No	Yes	Yes	No	No
Middle East and North Africa sample	No	No	No	No	No	Yes	Yes
Autocratic sample	No	No	No	No	Yes	No	Yes
Observations	1,907	1,907	1,876	1,876	693	524	471

Robust standard errors are in parentheses. ***p<0.01, **p<0.05, *p<0.10.