AMERICAN UNIVERSITY OF BEIRUT

EDUCATION AND DEMOCRATIZATION EVIDENCE FROM THE JASMINE REVOLUTION

by RASHA WISSAM FATTOUH

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts to the Department of Economics of the Faculty of Arts and Sciences at the American University of Beirut

> Beirut, Lebanon June 2020

AMERICAN UNIVERSITY OF BEIRUT

EDUCATION AND DEMOCRATIZATION EVIDENCE FROM THE JASMINE REVOLUTION

by RASHA WISSAM FATTOUH

Approved By:

Suma Güler Altug [Signature] indu

Dr. Sumru Altug, Chairperson Economics

SAMIR

[Signature]

Mgnatur

Member of Committee

Dr. Samir Makdisi, Professor Economics

Mohemal Husseir Mansur

Member of Committee

Dr. Mohamad Hussein Mansour, Adjunct Professor Political Science and Public Administration

Date of Thesis Defense: June 17th, 2020

Advisor

AMERICAN UNIVERSITY OF BEIRUT

THESIS, DISSERTATION, PROJECT RELEASE FORM

Ct. I No	Fattouh	Rasha	Wissam	
Student Name: _	Last	First	Middle	
X Master's T	hesis	Master's Project	Doctoral Dissertation	

X I authorize the American University of Beirut to: (a) reproduce hard or electronic copies of my thesis, dissertation, or project; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes.

I authorize the American University of Beirut, to: (a) reproduce hard or electronic copies of it; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes

after : One ---- year from the date of submission of my thesis, dissertation, or project. Two ---- years from the date of submission of my thesis, dissertation, or project.

Three ---- years from the date of submission of my thesis, dissertation, or project.

June 7^{th} , 2020

Signature

Date

ACKNOWLEDGMENTS

First, I would like to thank my committee members: Dr. Samir Makdisi, Dr. Mohamad Hussein Mansour and Dr. Sumru Altug.

I had the pleasure and honor of working as Dr.Makdisi's research assistant for a full academic year, and it was an exceptional experience for me to learn from him. I chose to tackle this topic because it is his area of expertise, so he was my inspiration. Also, the amount of help and support he granted throughout my research was amazing. I am eternally grateful for him.

I would also like to express my gratitude for Dr. Mansour. He was there for me in every step of the way, for any question that I had. I could have not completed my work without his guidance. Also, to Dr. Sumru, as she was incredibly supportive to expand on my research and possibly enhance my work.

To my Father and role model, Wissam, thank you for always being an idol and inspiration for me. Seeing you succeed and thrive at what you do serves as a constant encouragement for me to excel at my work. I am beyond thankful to be your daughter.

To my brother, Rami, thank you always for being there for me for every step of the way. You supported me in any possible way you could. I am so blessed to have you in my life.

To my late mother, Rima, everything I do, is to make you proud.

AN ABSTRACT OF THE THESIS OF

Rasha Wissam Fattouh for

<u>Master of Arts</u> Major: <u>Economics</u>

Title: Education and Democratization evidence from the Jasmine revolution

This thesis attempts to evaluate the relation between education and democracy with a focus on post-Arab Spring years. A dynamic panel study of 18 Arab countries between the years of 2010-2018 shows that education is a key determinant of democracy endurance, while controlling for other democracy determinants.

The results clearly point out that education was a main determinant of the Arab uprisings and reason for its persistence and success.

The thesis also suggests some policy recommendations on how to improve expenditure and equal access to education, while opening a window for further research of how education can influence democracy through other channels.

CONTENTS

ACKNOWLEDGEMENTS	i
ABSTRACT	.ii
LIST OF ILLUSTRATIONS	.iv
LIST OF TABLES	.v

Chapter

1.	INTR	ODUCTION ERROR! BOOKMARK NOT DEF	INED.
2.	BACH	KGROUND	3
	2.1 2.2	What is democracy Defining the Arab Spring	3
3.	LITE	RATURE REVIEW	5
	3.1 3.2 3.3 3.4 3.5 3.6	Education GDP per capita Corruption Foreign Direct Investment Oil Rents Unemployment.	6 7 7 8
4.	EMPI 4.1 4.2	RICAL ANALYSIS Data Statistical Overview	9
	4.3	Econometric Methodology4.3.1Model Specification4.3.2Variables	13
5.	EMPI	RICAL RESULTS	15

6.	ROB	JSTNESS CHECK	
7.	TUNI	SIA'S SUCCESSFUL TRANSITION	20
	7.1	The Spark of the Jasmine Revolution	20
	7.2	Political Transition	21
	7.3	Tunisia Todays: Elections of 2019	23
	7.4	The Other Side of Democratizations: Demands Still Unfulfilled	
		7.4.1 Economic Analysis of Tunisia Since the Revolution	25
	7.5	Democratization Through Education	26
8.	POLI	CY RECOMMENDATIONS	27
9.	CON	CLUSION	
RE	EFERE	NCES	
AF	PEND	IX	34

ILLUSTRATIONS

Figure		Page
1.	Democracy Index for Selective Arab Countries	
		11
2.	Employment Index for Selective Arab Countries	11
3.	Unemployment Index for Selective Arab Countries	18
4.	Unemployment in Tunisia between 2010-2019	25

TABLES

Table		Page
1	Statistical results with ranges of significance	
2	Estimation Results with Robustness Check	15
2	Estimation Results with Robustiless Check	18
A.1	Data description and sources	34
A.2	Full Estimation Results	35
A.3	Correlation Matrix	36
A.4	Summary Statistics	37

INTRODUCTION

It was Marc Lynch, the American political scientist, who was the first to use the term "Arab Spring" in his article published by the United States political academic journal "Foreign Policy". The term was used to describe the uprisings that were taking place across the Arab world back in 2011(Afzal, 2011). The uprisings engendered various work on their causes and implication to the countries concerned as well as the wide Arab region Certain authors referred to them as a "late awakening" (Elbadawi & Makdisi, 2013), others as fourth wave of democratization (Hussain & Howard, 2012). The Arab Spring paved the way for a new window of transition to democracy across the Arab world. Yet, the majority of the Arab uprisings did not succeed to "blossom fully into a Democratic Spring". Not only did regimes resist, but also violent clashes and conflicts erupted and made the democratic future seem so far out of reach. Egypt, for example, witnessed a sign of a reverse wave by overthrowing the post-revolution elected president by the army (Salemey, 2015). However, one country has come to be known as the only Arab Spring successful uprising and has been the center of attention for many economic and political analysts: Tunisia. So, why did the revolution succeed for Tunisia and not-elsewhere? If the indicators of success could be identified, can they also be replicated?

Fueled with hope and prosperity for the future, many have claimed that Tunisia can serve as a model of a successful transition for the rest of the Arab countries (Masri, Can Tunisia Serve as a Model?, 2017). Hence, a close look at Tunisia, and evaluating Tunisian political and economic developments is important to understand the success of the transition; but is not enough to comprehend what are the main factors of sustainable democracy. While the underlying elements that led to the uprising are supposedly clear by now, this research attempts to focus on the post-revolution years and evaluate the factors that enable the sustenance of democracy. Of note is the role of education in the uprisings and upheavals in that educated youth were in the vanguard of those who chose to protest against desperate economic conditions. In the case of Tunisia, we will see that every time they were unsatisfied with their government, protestors roamed the streets to object on their current situation. This thesis argues that rising education levels is essential to the endurance of democracy.

Of course, education alone is not sufficient. The thesis explores as well other control variables that eased the democratic transition process such as low levels of corruption and high economic development. By applying a dated dynamic panel of a sample of 18 Arab countries over the years of 2010-2018, the thesis focuses on the post-revolution phase and the main macroeconomic factors that sustain democracy. This study is motivated by the fact that most quantitative literature has focused on the factors that led to the uprising, before 2011. There have been few empirical studies about democratic transitions that tackle the issue of the conditions that govern the endurance of democracy.

The rest of the thesis is organized as follows. The first section includes background information about democracy and the Arab spring. The second section presents my empirical model while explaining the statistical overview and the methodology. Third section explains the results and the robustness check. The fourth section tackles the Tunisian case study. Finally, the last section suggests policy recommendations and concludes.

2

BACKGROUND

2.1 What is Democracy?

An attempt to define democracy would seem a rather simple task. But in fact, up to date there is no precise and agreed definition. Some might refer to its etymological translation which means literally "rule by the people". Others refer to it as a form of justice developing a belief of freedom and equality that are intrinsically good. However, the bottom line of the concept of democracy can be summarized as follows: people have the right to choose who governs them and those elected will be held responsible for their decisions and actions. This includes political decisions that are required to create an atmosphere that encourage freedom of expression and equality of practices but also social, economic, cultural decisions (Campbell, 2008). The United Nations considers democracy to entail the approval of intellectual and political pluralism within groups, and the opportunity for each individual to establish their own cultural identity (Hassouna, 2001). Through different waves of democratization, democracy has proven its capability to travel to different regions of the world (Magen, 2012).

We now live at a time where democracy is the only acceptable form of government, though it does not prevail in much of the Arab world. So, what about Arab democracy? While the Arab-democratization process has been slow since liberation from colonial rule , the 2011 Arab uprisings have generated hopes that it is a matter of time before it takes roots in the region, with Tunisia taking the lead since then and before it we have the Lebanese experience with its convocational democracy.

But what type of democracy will the Arab world strive to achieve. Certain survey studies indicated that the Arab people tend to equate democracy with a thriving economy. If it is not

accompanied with better living conditions, they might be dissatisfied with future democratic transitions (de Regt, 2013). However, the successful case of Tunisia, which we later discuss, along with Lebanon's experience indicate that freedom along with significantly improved living conditions are what the people strive to have.

This is the challenge that the countries transiting to democracy face as we will show in our analysis of the Tunisian case.

2.2 Defining the Arab Spring

Stated in the simplest way, the Arab Spring is a series of uprisings that occurred back in 2011 in the MENA region in a group of countries: Tunisia, Egypt, Yemen, Libya, and Syria. Each country had its own specific causes that led to the uprising, yet there are main economic, social and political factors that are common across the countries. They include high unemployment rates, poverty, lack of freedom of speech etc. (Abd El-Hafez, 2015). Some referred to the Arab Spring as "Freedom's March: The Fourth Wave of Democratization", arguing that it is a delayed arrival of democracy. These uprisings marked an important milestone in recent Arab history, and surely gave hope for the MENA region (Magen, 2012).

There are two main political regimes that define the Arab world: monarchies and republics. The republics are Libya, Syria, Sudan, Egypt, Algeria, Iraq, Tunisia, Yemen and Lebanon. The monarchies can be further organized into three subcategories: absolute (Qatar, Saudi Arabia and Oman), mixed (Kuwait, United Arab Emirates and Bahrain), and constitutional (Morocco and Jordan). Monarchies and republics have survived for a very long time until the Arab Spring came along, marking a new phase in political history. The fourth wave of democratization led to the overthrow of three dictators in the region: Hosni Mubarak who ruled Egypt for almost 30 years, Muammar Gaddafi in Libya after more than 40 years of being in power, stepped down and finally Zine El Abidine Ben Ali, who was ousted after being in power in Tunisia for 23 years (Bougharriou, Benayed, & Gabsi, 2019).

LITERATURE REVIEW

While literature on the conditions that led to the uprising are rather extensive, the literature on post-uprising outcome is relatively limited since it would a long time to be able to properly understand the transformation and democratization process that each country is passing through, and its overall effect on the MENA region. Nevertheless, this has not prevented many academics from attempting to analyze the main factors of democracy with a focus on the Arab world. Unfortunately, there has been only a few papers that have chosen to conduct a quantitative analysis on the democratization process in the post-Arab spring phase. Although this thesis focuses on education as a main indicator of democracy, it does control for several variables that also explain the persistence of democracy, and this literature review covers them all.

3.1 Education

Much of earlier literature has focused on education as one of the reasons that led to the Arab Spring. Research has shown that educated youth has led to an increase in the unemployment rate, and therefore, sparked the quest of a regime change (Campante & Chor, 2012).Given limited work opportunities for the educated youth, unemployment tends to rise with education and hence increase the discomfort and dissatisfaction of unemployed educated youth. Also, in a lot of cases, even if those educated youth were employed, they would often be underpaid, and encouraged to revolt (Ghanem, 2015). Sanborne and Thyne (2014) did an interesting study on the different levels of educations: primary, secondary and tertiary, and their relation to democracy. It turns out that higher education attributes to the development of

6

required knowledge and sophistication among the individuals and leads to sustainable democracy (Sanborn & Thyne, 2014). Recent academics have also shed the light on the relationship between different measures of education and democracy: in their paper Bougharriou et. al constructed a dynamic panel study of a sample of 15 Arab countries over the period of 1990-2013 using five different measures of education. The results show education enhances the emergence of democracy (Bougharriou, Benayed, & Badr Gabsi, 2019) In the case of Tunisia, the youth played the primary role in the revolution. Theoretical researches' attempt to show that the youth's sense of identity, and their ability to adapt to the new unstable political environment, while Tunisia undergoes the democratic transition, highlights one of the main problems of the post Arab Spring challenges (Gabsi, 2019).

3.2 GDP per Capita

A recent study, on 16 Arab countries during the period of 2002-2013 have focused on mainly two ways in which democracy is enhanced through economic growth: basically through FDI's and public consumption expenditure (Boughariou et. al, 2019). Results show that there is no proper relationship between democracy and economic growth in the Arab world, contradicting the modernization hypothesis and agreeing with others. Academics like Houssam Rachidi and Hisham Saidi in their paper " Democracy and Economic Growth: Evidence in MENA Countries" utilize two econometric models: RE/FE OLS and GMM to study the relationship between democracy and growth. Both models yield the same result: there exists a negative relationship (Rachidi & Saidi, 2015), thus development does not necessarily lead to democracy. Another study conducted by Suzanna-Maria Paleologou (2015) estimated the relationship using count data models, which are non-linear by using also two types of models: Fixed Effects NB model and a two-step GMM IV Poisson model. Despite the positive relationship being attained, the coefficient was too small with also no evidence of causality (Paleologou, 2015). On the other hand, a recent sensitivity analysis on the determinants of democracy persistence rather than democratization have found income to be one of the key determinants for democracy prevalence similar to Prezeworski's model (Geelmuyden Rød, Knutsen, & Hegre, 2019).

3.3 Corruption

Corruption has been long been closely associated with both political and economic development (Teti, et al., 2017). Research has also proven that the persistence of democracy is highly related to low levels of corruption of institutions of the country. This implies a negative correlation between democracy and corruption. And although corruption is said to be "pervasive" in the Arab world, empirical literature has not been definite on the nature of the relationship between corruption and the type of governing regime. The reason is perhaps that only a few studies have focused on the nature of political regime (democracy vs. autocracy) and corruption. Historical research has also come up with the obvious conclusion that corruption is found in less democratic countries (Ehrlich & Francis, 1999). Another way to address corruption's indirect effect on democracy is through its effect on economic growth. Ghoneim and Ezzat (2015) have concluded in their study using random effects model on a panel data of 15 Arab countries that there is not a clear relationship between corruption and growth, and in fact might be incorporated in other macroeconomic variables (F. Ghoneim & M. Ezzat, 2016).

3.4 Foreign Direct Investment (FDI)

With corruption also comes the study of foreign direct investment (FDI's) and how it is related to democracy in the MENA region. A rather recent research using panel VAR model on 19 MENA countries by employing the difference in differences framework have tried to analyze the FDI inflows pre and post-Arab Spring, up to 2015. The results showed that FDI's do not respond well to political shocks, and in fact they have declined post-Arab Spring (Abdel-Latif & Ouattara, 2016). This contradicts with the findings of Bougharriou et. al (2019) who came up with the conclusion that democracy stimulates FDI inflows significantly (Bougharriou, Benayed, & Badr, The democracy and economic growth nexus: Do FDI and government spending matter? Evidence from the Arab World, 2019).

3.5 Oil Rents

Research has identified three causal mechanisms that may explain the supposed link between oil exports and autocratic regimes: "a modernization effect", "a repression effect", and "a rentier effect". First, the modernization effect, claims that democracy is the result of both cultural and social changes, that are also driven by economic development. However, economic development due to natural wealth, does not necessarily lead to this case. As for the repression effect, it comes through a different area. The flow of rent from oil aids in financing "repression" which leads to minimization the people's ability to enforce changes to autocratic regimes. Usually, a rich authoritarian government focuses on enhancing its security mechanism, in addition to its military unit, to be able to stand up and oppress any popular uprising (Ross M. , 2011). The last mechanism, the rentier effect, is also known as "rentier states" gain most of their revenues from external rent. Countries that have large oil exports, depend mostly on their finances from oil rent (Luciani, 2013). There oil revenues are used to counter any social pressure that could eventually cause requests for a more liable government. Basically, rentier states are considered independent of society, as they do not depend on collected taxes. Hence, people are less likely to call for proper representation in the government. Also, oil wealth permits extra spending on patronage, and this consequently assists in delaying an hidden requests for democratization (Norton, 2013).

3.6 Unemployment

Little empirical work has associated low unemployment levels with higher levels of democracy. Rather it is used to show it is-one of the driving forces behind the eruption of the Arab Spring. More specifically, the Arab Spring is taken to center around youth unemployment, and their incapability to find jobs that match their skills (Mushtaq & Afzal, 2017, Elbadawi & Makdisi,2017). In their paper, Hoffman and Jamal describe the Arab Spring as a youth rebellion fueled by objection about unemployment and existing regimes (Hoffman & Jamal, 2012). Also, youth unemployment as been regarded as a game changer for the future of the MENA region. If addressed properly, it can actually spur economic development across the Arab world. otherwise, it can turn into a "demographic bomb" if the labor market fails to absorb the young educated job-seekers (Gaub & Laban, 2015).

EMPIRICAL ANALYSIS

4.1 Data

In this thesis, the model used includes 18 Arab countries¹ covering the period of 2010-2018 (see Appendix for country list). Two different variables are chosen to represent democracy: the main one is the Polilty2 index from the Polity IV database. The Polity2 index ranges from -10 to 10, with higher values representing higher levels of democracy. This index defines democracy by the set of rules, regulations and procedures that guarantee fair electoral participation and basic political power transfer. It also codes "democratic and autocratic patterns of authority" and regime changes (Center for Systematic peace, 2018).

To assess the robustness of our results, the Freedom House index, the other variable, for democracy is chosen .It is composed of two indices: the civil liberties index which includes a group of significant freedoms and rights and mainly highlights the freedom of expression, rule of law and both individual and associational rights. The second index is the political rights index which captures how free and fair the electoral elections are held. It is calculated by summing up the sub-indices of political rights and civil liberties, then taking the average. It is measured on a scale of 1-7, 1 being the most democratic and 7 being the least. This is first inverted in a way that the higher values represent a higher level of democracy. Both data sets, the Freedom House and Polity IV index are normalized between zero and 1².

4.2 Statistical Overview

¹ There was no preference while choosing the Arab countries. It was merely based on data availability.

It is rational to assume that education is a determinant of democracy. By helping achieve a greater prosperity it promotes democratic development (Acemoglu , Johnson, Robinson, & Yared, 2005). Education has played a critical role in the Arab Spring especially that it unified educated youth around a culture of rights thereby helping undermine autocratic regimes (Salemey, 2015). While education is examined as one of the factors for the Arab Spring, this thesis attempts to study its influence in the post-revolution phase.

Figure 1 represents the democratic levels of six selective Arab countries: Tunisia, Libya, Egypt, Yemen, Bahrain and Lebanon from 2010 up to 2018. Figure 2 represents the education levels for the same countries over the same period.

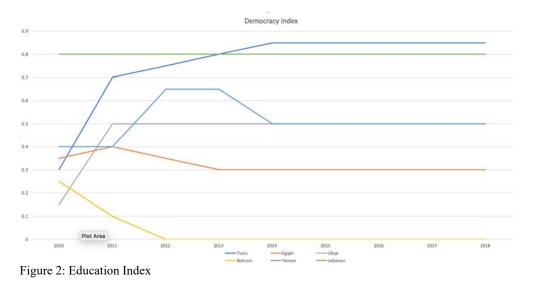
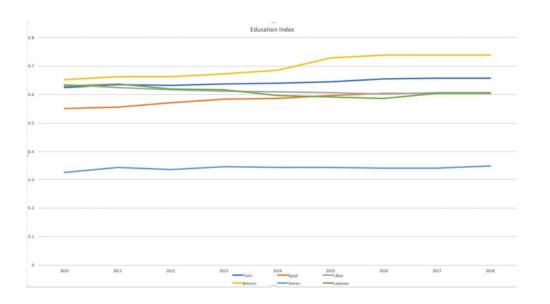


Figure 1: Democracy Index

12



Although there has been doubts about the educational system in the Arab countries, Figures 1 and 2 show that with higher education, comes higher rates of democracy. This allows us to expect that education and democracy are positively correlated. However, there is one exception to this relation when we look at Bahrain. Bahrain is one of the GCC countries, well known for its wealth in oil. Furthermore, most autocratic regimes in the Arab world are known for their wealth in oil revenues. Thus, in our model, we take into consideration this aspect by controlling for oil wealth: whether its an oil exporting country or not. Similar for the rest of autocratic regimes, Bahrain might seem as an exception to many of the predicted correlations. Looking at unemployment for example, for very low levels of democracy, Bahrain seems to have a very low unemployment rate (see Figure 3), but this does not imply that democracy and unemployment are positively correlated. In fact, unemployment was one of main drivers of the Arab Spring; the inability for people to get employed unless they had the right connections, not only raised unemployment levels, and fed anger against the regimes (The World bank, 2015). Thus, with a regime change, better economic policies, unemployment rates are expected to decrease. Tunisia, for example, has recorded lower unemployment rates as the transition took place. This opposing correlation is also displayed in the correlation matrix in the appendix.

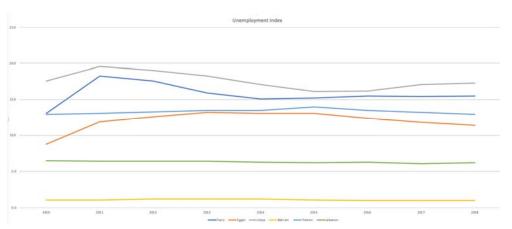


Figure 3: Unemployment Index

4.3 Econometric methodology

This thesis attempts to study select economic and social factors leading to democracy in the Arab countries. The economic factors include : gross domestic product (GDP), inflation and foreign direct investment (FDI). The social indicators are captured by democracy in the previous year, education, corruption, corruption; additionally we use a binary variable to indicate whether it is an oil exporting country or not.

The model below is employed to test their significance as explanatory factors.

4.3.1 Model Specification

The equation of the model is the following:

$$\begin{split} democracy_{it} &= \beta_0 + \beta_1 lg dp_{it-1} + \beta_2 education_{it-1} + \beta_3 oil_exporting_{it} \\ &+ \beta_4 corruption_{it} + \beta_5 unemployment_{it} + \beta_6 f di_{it-1} + \varepsilon_{it} \end{split}$$

The explanatory variables were inspired by the "modernization hypothesis" which stipulates that democratization is positively correlated to income per capita as well as by a set of other socioeconomic variables (Lipset, 1959). Nevertheless, it has been argued that this effect is overshadowed through oil wealth (Ross M. L., 2001), which in this model is captured by the binary variable.

4.3.2 Variables

Before going into the details of each variable, it is important to point out the main econometric problem that we face in estimating this model, i.e. the endogeneity of the explanatory variables. This endogeneity bias³ arises mainly due to the reverse causality that exists between development and democracy. We attempt to get rid of this problem by taking specific variables at time t-1, to focus on one direction of causality, which in our model is sustained democracy.

The main explanatory variable, the education index, along with the unemployment rate is extracted from UNDP data. The education index is calculated using mean years of schooling and expected years of schooling. It has been argued that better education can inspire the democratic process and encourage towards electoral and political participation (Faour, 2011). We take the education index at *t*-*1*, to attempt to remove the problem of endogeneity, and conclude that the level of a democracy at a specific year is a result of

³ This problem can also arise due to omitted variable bias and measurement errors.

previous years of education -As for the unemployment data, it is simply the percentage of the labor force for the age of 15 and older that is unemployed. We control for economic development by taking the logarithm of real per capita GDP (constant U.S. 2010) that is taken at *t-1* to attempt to prove the persistence in economic growth leads to a more democratic country, which is in harmony with the modernization hypothesis. Moreover, corruption is captured by the Corruption Perception Index from Transparency International that classifies countries based on how corrupt the country's public sector is judged to be by experts (Transparency International, 2019). It ranges from 0 to 10 with higher scores reflecting a more corrupted country. It is also computed yearly as the average of other indices. Democracy and CPI are expected to be negatively correlated. Lower corruption levels has been proven to be associated with better institutions and better governance (F. Ghoneim & M. Ezzat, 2016). The foreign direct investment data is extracted from the World Development Indicators (WDI).

The Appendix provides further description and data, as well as summary statistics of the main variables that are used in this model.

EMPIRICAL RESULTS

Table 1: Statistical results with ranges of significance

	Democracy
Variables	PolityIV
LGDP	-0.257527***
	(0.036741)
Education	0.725076***
	(0.01687)
Oil_Exporting	-0.211446***
	(0.0346)
Corruption	-0.100926***
	(0.015899)
Unemployment	-0.009597**
	(0.003881)
FDI	-0.009620**
	(0.004097)
Observations	162
Number of Countries	18
F-stat(p-value)	0
Adjusted R ²	59.8%

Notes: Standard errors are in parenthesis. Adjusted R squared indicates how well our variables fit the model. *,**,*** denote significance at 10%, 5% and 1% respectively.

The results show that per capita income is negatively and significantly associated with democracy, which is contrary to Lipset's (1959) modernization hypothesis. Although most literature has agreed with the explanation that high levels of income enhance democratization (Inglehart & Welzel, 2005), this relationship has been challenged by Prezworkski et. al who argue that higher levels of income are associated with democratic stability rather than democratic transition. In our model, the negative relationship between per capita income and democracy is a very interesting result. This can be attributed to the different components of GDP: the resource and non-resource component, while taking into consideration the dynamic

cross-country variation and its short term responses to income shocks (Fayad, Bates, & Hoeffler, 2011). This negative relationship can be related to the dominance of the countries in our sample that rely on oil rents as a major part of their economic growth. New research has found that GDP tends to fall after democratization due to political instability (Acemoglu, Naidu, Robinson, & Restre, 2018).

The binary variable, as expected, is significantly negatively correlated with democracy. This suggests that if the country is exporting oil, it is less likely to sustain democracy. The result is not surprising. In fact, other findings have revealed a negative and significant effect between natural resources and democracy (Makdisi, 2011& Bougharriou, Benayed, & Badr, 2019). While oil has enriched several Arab countries, and allowed financial resources to become-more available for investment and spending on education and health, and even benefited much of the non-oil Arab countries by providing them with job opportunities, there still remains is tradeoff between economic welfare and political freedom (Makdisi, 2011). This agrees with several other research that suggests that oil hinders democracy through a "rentier effect" and "repression effect", as previously discussed (Ross M. , 2011), and for the Arab world, what has come to be known as the "oil curse" (Makdisi, 2018). It is also important to note that once the rise in income is achieved through oil revenues, its effect on income basically disappears (Ross M. , 2011), meaning that is not taken into account.

With regard to the FDI it seems to be negatively related to democracy. Western countries do invest in non-democratic countries though they declare they don't support nondemocratic regimes. This suggests that in practice they are also supporting already nondemocratic regimes. Moreover, this is consistent with the research that claims that foreign direct investors are less concerned with political freedom and more concerned with economic freedom (Mathur & Singh, 2011). As for corruption, it is significantly negatively correlated with democracy. More democratic regimes are associated with less degree of corruption in their institutions. Corruption is one of the main factors that led people to protest in 2011 against their regimes (Muasher, 2014).

In line with expectations, our primary indicator, education, is significantly positively correlated with democracy, while unemployment is significantly negatively correlated with democracy. The uprisings they may not have yet led to a regime change in most of the countries where they have taken place. However, with rising levels of education across the Arab world prospects for democratic change increase (Chaney 2012). Also, with regard to unemployment, as it was one of the main causes of the uprisings of the youth demanding democratic change, one would expect that providing better job opportunities for the educated youth would be an important concern of the Arab countries in the post 2011 phase. Unfortunately, in reality the levels of unemployment have not changed significantly after the uprisings. And while the Arab countries have certainly increased their investment in education a visible regime change is yet to take place (Bougharriou, Benayed, & Gabsi, 2019). We will discuss this aspect further under policy recommendations below.

It is interesting to point out that, once education is regressed on democracy, without controlling for oil or the other indicators, it initially indicated a negative correlation. Once the binary variable was included, it became positively and significantly correlated with democracy. This proves the theory of oil wealth effects. Most Arab countries are able to maintain their authoritarian rule through their oil wealth. They maintain a healthy and thriving economy, with high levels of education, while preserving their authoritarian regime. The full table is found in the Appendix.

ROBUSTNESS CHECK

Table 2: Estimation Results with Robustness Check				
Democracy				
PolityIV	Civil Liberties	Political Rights		
-0.257527***	-0.112146***	-0.175253***		
(0.036741)	(0.026412)	(0.149284)		
0.725076***	0.375190**	0.5926904**		
(0.01687)	(0.121280)	(0.036554)		
-0.211446***	-0.215349***	-0.244330***		
(0.0346)	(0.024932)	(0.034507)		
-0.100926***	0.017702	0.0001798		
(0.015899)	(0.01429)	(0.0158)		
-0.009597**	-0.007292**	-0.007404		
(0.003881)	(0.002790)	(0.003862)		
-0.009620**	-0.005253	-0.015958***		
(0.004097)	(0.002946)	(0.004077)		
162	162	162		
18	18	18		
0	0	0		
59.8%	36.34%	34.49%		
	PolityIV -0.257527*** (0.036741) 0.725076*** (0.01687) -0.211446*** (0.0346) -0.100926*** (0.015899) -0.009597** (0.003881) -0.009620** (0.004097) 162 18 0	DemocracyPolityIVCivil Liberties-0.257527***-0.112146***(0.036741)(0.026412)0.725076***0.375190**(0.01687)(0.121280)-0.211446***-0.215349***(0.0346)(0.024932)-0.100926***0.017702(0.015899)(0.01429)-0.009597**-0.007292**(0.003881)(0.002790)-0.009620**-0.005253(0.004097)(0.002946)162162181800		

 Table 2: Estimation Results with Robustness Check

Notes: Standard errors are in parenthesis. Adjusted R squared indicates how well our variables fit the model. *,**,*** denote significance at 10%, 5% and 1% respectively.

To check for the robustness of our results, we employ alternative measures of democracy from the Freedom House Index: Civil Liberties and Political Rights. As seen from the table above, our core results are not affected by the measurement of democracy: education is still positively and significantly associated with democracy. Similarly, the effect of unemployment and our binary variable is still significant, and the estimated coefficients have the signs that were initially obtained. It is also evident that most of the results for the rest our control variables remain unchanged. However, corruption became insignificant with both measures of democracy. Also, unemployment became insignificant when regressed on political rights, and foreign direct investment became insignificant when regressed on civil liberties. The insignificant relationship between corruption and democracy is intriguing but not new. This finding is in line with Fisman and Gatti (2002) who did not find any proper relationship between the two variables (Fisman & Gatti, 2002). Also, when put together, one overpowers the other, it is expected to become insignificant. As for the relationship between FDI and the new proxies of democracy: research has proved that FDI tends to increase in countries with increased political rights rather than civil liberties (Adam & Filippaios , 2007). The main empirical results may be summarized as follows:

- 1. Better education leads to a more sustained democracy
- If the country's wealth depends mostly on oil, it is mostly likely to hinder democratization
- 3. FDI's are attracted to non-democratic regimes

TUNISIA'S SUCCESSFUL TRANSITION

7.1 The Spark of the Jasmine Revolution

How the Tunisian revolution began, and what later became to be known as the spark of the Arab spring, has been an interesting story throughout the years. Almost 10 years ago, on December 17th, 2010 a young fruit vendor named Mohamed Bouazizi set himself on fire outside a local government building. This act of protests against constant harassment by police and local officials gave rise to other protests that spread rapidly across the country. This led the dictator that has been ruling the country for 23 years, President Zine el-Abidine Ben Ali, to flee the country providing an opportunity for Tunisian to move along a democratic path (Yerkes S. E., 2019). It was a very unexpected and fast finish to his government and the initiation of a very lengthy and risky period of transition (Elbadawi & Makdisi, Democratic Transition in the Arab World, 2017).

Nonetheless Tunisia succeeded in moving forward whereas the other Arab countries that witnessed uprisings failed to do so. It has been able to draft an enlightened constitution (Yerkes S. E., 2019), and hold free parliamentary and presidential elections the first democratic transition the the country has witnessed (Elbadawi & Makdisi, 2017).

Almost ten years after the revolution, of course the risk of falling back to autocracy is not the same as it was in the early years following the uprising. It would therefore be interesting to shed the light on the different-political transition stages Tunisia has undergone. The risks however, cannot be eliminated, for the mere fact that the revolution was not led by a consolidated leadership, the transition did not have a well-defined clear plan, and the political parties emerging after the fall of Ben Ali were, and still are rather not well organized. The process of reconstructing institutions has been a very lengthy and challenging one..

7.2 Political Transition

The Jasmine revolution led to the birth of the first transitional democratic body that came to be known as the National Constitute Assembly (NCA) that was responsible for drafting the new constitution and laying down the basic groundwork for Tunisia's democratic system (Muasher & Bentivoglio, Tunisian Parliamentary Elections: Lessons for the Arab World, 2014). The first elections occurred in December 2011, and the results led to a government coalition with Ennahda, a popular Islamist movement that emerged back in 1980s, received the most votes of any party (Yerkes S. E., 2019). An alliance was formed with two rather smaller secular parties, Ettakatol and the Congress for the Republic (CPR), proving Ennahda's will to cooperate and operate across democratic lines. This coalition came to be known as the "Troika" (Muasher & Bentivoglio, Tunisian Parliamentary Elections: Lessons for the Arab World, 2014). However, several critics emerged, since instability prevailed, and many were worried that Ennahda's Islamist agenda would pave the way as a return to authoritarianism. An event that sparked disturbance was the assassination of the prominent leftist opposition leader, Chokri Belaid, and then later Mohamed Brahmi, and protests again spread across the country (Yerkes S. E., 2019). So, in between the years of 2011-2013, the government coalition was unable to meet the expectations of the youth, and it was a very critical time, that could have ruined the whole transition process (Elbadawi & Makdisi,

Democratic Transition in the Arab World, 2017). It is then that Ennahda decided to prioritize Tunisia's critical transition over its personal party's interest and decided to resign and hand over the power to a caretaker government just until the end of parliamentary and presidential elections (Muasher & Bentivoglio, Tunisian Parliamentary Elections: Lessons for the Arab World, 2014).

What later came to be known as The National Dialogue Quartet, was the reason the setback did not occur despite the disturbance in 2013. It became to be known as one of the successes of the Jasmine Revolution, as it received a Nobel Peace Prize later on in 2015 (M'Barek, 2017).

It was the appropriate government coalition, representing different views and interests of the public, demanding an entire governmental and electoral change. Furthermore, a lot of discussions encouraged Ennahda to resign and make room for a new technocratic government to take power (Yerkes S. E., 2019).

After standing on a crossroad, torn between democracy and violence, Tunisia managed to witness its first ever free presidential and parliamentary elections in 2013. This showed promise, since it was based on the foundations that led to the vote for the National Constitute Assembly (NCA). Despite its dispersion after 2011, it was reconstituted to organize the 2014 elections, as a more indefinite institution. The NCA invested in a lot of effort to organize a three date election – the legislative vote, the first round presidential election, and a run-off election (Final Report on the 2014 Legislative and Presidential Elections in Tunisia, 2015). Nevertheless, it marked another moment were the democratization process was dangling on a thin line. Considering the significance of the event, the turnout of voters was low, implying that probably Tunisia was not ready for the transition (Yerkes S. E., 2019). Some might associate the reason for the lack of election administration to provide proper voter education and public outreach. Also, registration to vote on the same day was not an option, leading also to decrease the number of eligible voters. Turnout among youth was also oddly low, which made it a target to address for future elections (Final Report on the 2014 Legislative and Presidential Elections in Tunisia, 2015).

Further complications were also highlighted in 2015 by terrorist attacks, further harming Tunisia's economy, since it hit the Tunisian tourism industry, which constituted the most significant part of GDP (Yerkes S. E., 2019). Thus, on the outside, Tunisia portrayed this fairy tale image of Islamists working together with secularists (M'Barek, 2017), but in reality, Tunisia was not undergoing proper change living up to the standards that the government has set, and up to the expectations of the youth. So, the Tunisian government had to earn the trust and faith of their people.

7.3 Tunisia Today: Elections of 2019

For the second time in history, Tunisians had the privilege of voting for a president in a democratic election. This time, there were above seven million registered voters, which is a massive increase since the local elections that occurred in May 2018. Since Tunisia is still consolidating its democratic system, the electoral process is still "fluid" (Carnegie , 2019). As for the voter turnout, the increase definitely shows a sign of political awareness, still Tunisians preferred to voice their opinion on the streets rather than ballots (Yerkes S. E., 2019). Protests were still occurring, sending a clear message namely that the government must be responsive to the people's demands and work to stimulate the stagnated economy (Carnegie , 2019).

What Tunisia experienced in its 2019 election marks another "first" for the Arab world. Ennahda finally learned to embrace these electoral elections and look at them as "Tunisia's democratic graduation". Regardless of the results of the 2019 elections, combined with the ones that happened back in 2014, it is clear that Tunisia has gained the ability to conduct free elections as a sort of infrastructure for constitutional, peaceful and rule-based alternation of power. What is impressive is not the fact that new Tunisian politicians displayed the capability of abiding by the democratic rules but rather that older ones did as well. (Sadiki, 2019).

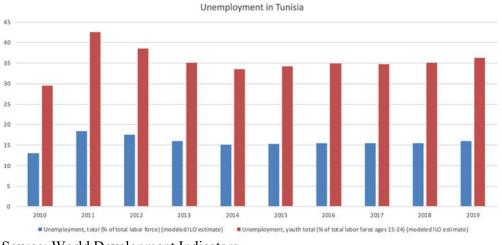
7.4 The other side of democratization: Demands still unfulfilled

Nine years since the revolution, and the protestors' economic demands are yet to be fulfilled, i.e the national economy is yet to be regain its robustness. Tunisia seems to have focused more on political progress neglecting the economic side. The ever-lasting problem remains which is the discrepancy between the available qualified job openings, and Tunisia's educated labor force. It was estimated in 2015 that it takes graduates an average of six years to find a stable well payed job. So, in a failed effort to address this problem, the government has increased public sector hiring and wages. At present, public sector salaries in Tunisia accounts for about 14% of GDP and it is the among the highest in the world (Yerkes & Ben Yahmed, 2018).

7.4.1 Economic Analysis of Tunisia Since the Revolution

Although the economy was witnessing an increase in growth before the uprising (Taylor & Miller, 2018), a number of macroeconomic indicators showed deterioration following the revolution. In 2011, Tunisia fell into a recession, with real GDP decreasing by 2 percent. Also, despite unemployment being one of the main reasons for the uprising, especially youth unemployment, this condition only got worse. The unemployment rate had increased to 19 percent, and youth unemployment reached a shocking 44 percent in 2011 and has continued at high levels since though declining a little (see Figure 4 below) Also, tourism which at a certain point of time represented around 6.5% of Tunisia's GDP, crashed drastically as a result of political instability and multiple terrorist attacks such as the 2015 Sousse attacks. Another instant consequence of the revolution was that foreign investors pulled out funds outside the country leading the foreign direct investment (FDI) to drop by 20 percent. Despite the ability of the Tunisia's government to maintain its democratic principles, it has not succeeded in tackling the twin problem of on and high unemployment especially that it has been divided over the economic policies to be undertaken (Tran, 2018).

Figure 4: Unemployment in Tunisia between 2010-2019



Source: World Development Indicators

During the transition, especially after the fall elections of 2014, Tunisia underwent a certain economic recovery, but it remains uncertain. For 2018, GDP growth decreased to 2.4%, ,inflation recorded a very high level of 7%; also, unemployment increased again to 15.5% with unemployment of youth reaching 36% and as result migration, specifically young educated males increased (Tran, 2018). Nonetheless despite deteriorating economic conditions , democracy in Tunisia has been sustained.

7.5 Democratization Through Education

In contrast with the post 2011 period, the economic situation in Tunisia prior to the uprising was on the upturn; but also the levels of education were rising. In between 1990-2010, Tunisia recorded very high levels of education, especially women's access to education. Specific policies were already being implemented to allow better and more equal access to higher levels of education, especially among women (Chambers & Cummings, 2014). Historic authoritarian leaders have also understood the importance of education despite the fact that it might lead to political instability. Habib Bourguiba, the country's first authoritarian leader ever since its independence, implemented liberal policies that involved general public education and better equity for women. He wanted his population to become more literate in hope to support a modern state and make it much more attractive for economic development and foreign investors. Bourguiba did understand the potential consequences of his decision, educating the population enough to demand democracy, but the benefits of social solidarity and economic growth, simply overcame the potential costs (Sanborn & Thyne, 2014).

Unluckily for Ben Ali, the strong educational system built the basics for the revolution before he took office. The strict measures he took that robbed the people of their freedoms served as an extra motivation (Sanborn & Thyne, 2014).

The Jasmine Revolution was the result of several economic disparities, empowered by the significant role that education played. The public education system of Tunisia, ever since it has been established, has produced a generation of educated thinkers with the ability to question the regime. Because of their liberated ideology granted through higher levels of education, they were able to object and criticize the dominating and authoritative laws of the regime. Not only did education secure a propensity towards democracy, but it acted as the foundation that prompted the Tunisians to face their oppressor and to solidify the gains of the uprising (Masri, 2017).

CHAPTER 8

POLICY RECOMMENDATIONS

In view of our results, and theoretical analysis, it is important to shed some light on the idea of reinforcing the role of education in promoting democracy in the Arab world. While considering why did the transition succeed in Tunisia yet somewhat failed in Egypt, and erupted a clash in Yemen, it can be traced back to the base of their educational system. First and foremost, democracy is with no doubt associated with greater investment in education, thus in order to better promote democratic principles into the Arab world, international actors like the IMF and the World Bank can allocate more funds to schooling. Nonetheless, these education expenditures should be allocated wisely and made sure that they are evenly distributed among citizens. Increasing inequality between access to education will more likely to diminish democracy. Also, it is very important to shed the light on the significance of enhancing access to education for females in the promotion of democracy. Though not addressed in detail in this paper, educated females, and lessening the gender discrimination, is very important in the enhancement of democracy. Second, it is crucial to comprehend that with higher levels of education comes greater understanding of the pillars of democracy, and greater ability for students to understand policy making and becoming future leaders. Thus, more focus should be put on enhancing higher levels of education. Specifically, tertiary levels of educations.

In the case were Arab governments have already specialized in their investment in educations, and their efforts were not reflected in democratic improvement, rather one might observe that autocracy is still deeply entrenched, this might mean that education affected democracy through indirect mediums.

CHAPTER 9

CONCLUSION

The Arab Uprisings marked a new milestone in the history of the Middle East that has been known for the dominance of autocratic regimes. While most of these uprisings have not led to democracy, at least not yet, and others have suffered from years of conflict and clashes, Tunisia is an example of a success story. The common identity amongst these uprising is the fact that they were led by educated youth who were fed up with their undermining economic conditions.

This thesis focused specifically on the post-uprising years, 2010-2018 [??] Testing a model of the determinants of democracy by taking a dynamic panel data of 18 Arab countries, education comes out at the heart of democratization. Looking specifically at the Tunisian transition, it seems to confirm that education is a vital factor in leading to sustaining democracy.

James A. Baldwin once postulated, "The paradox of education is precisely this – that as one begins to become conscious, one begins to examine the society in which he is being educated." The purpose of education in the Arab world was definitely not to encourage the awakening of this conscious, but this will yet be the ultimate result beyond the exceptional experience of Tunisia. (Masri, The Education Paradox, 2017).

32

BIBLIOGRAPHY

- Abd El-Hafez, M. (2015). Lessons from the Arab Spring: Pathways to Democracy after the Revolution in Tunisia, Egypt and Libya. New York: City University of New York Academic Works.
- Abdel-Latif, H., & Ouattara, B. (2016). FDI response to political shocks: What can the Arab Spring tell us? 1-17.
- Acemoglu, D., Johnson, S., Robinson, J., & Yared, P. (2005). From Education to Democracy? 95(2), 44-49.
- Acemoglu, D., Naidu, S., Robinson, J., & Restre, P. (2018, February 6). *Democracy and Economic Growth: New Evidence*. Retrieved from ChicagoBooth, Stigler Center, for the Study of the Economy and the State: <u>https://promarket.org/2018/02/06/democracy-</u> economic-growth-new-evidence/
- Adam, A., & Filippaios, F. (2007). Foreign Direct Investment and Civil Liberties: A New Perspective. 1-31.
- Bougharriou, N., Benayed, W., & Badr, F. (2019). The democracy and economic growth nexus: Do FDI and government spending matter? Evidence from the Arab World. *Economics: The Open Access, Open Assessment E-Journal, 13*, 1-29.
- Bougharriou, N., Benayed, W., & Badr Gabsi, F. (2019). Education and democracy in the Arab world. *Economic Change Restruct*, *52*, 139-155.
- Campante, F., & Chor, D. (2012). Why was the Arab World Poised for Revolution? Schooling, Economic Opportunities, and the Arab Spring[†]. *Journal of Economic Perspectives*, 26(2), 167–188.
- Campbell, D. (2008). *Democracy RankingL The Basic Concept for the Democracy Ranking of the Quality of Democracy*. Vienna: Democracy Ranking Association.
- Carnegie . (2019, December). *Carnegie Endowment for International Peace* . Retrieved from https://carnegieendowment.org/publications/interactive/tunisian-elections-2019
- Chaney, E. (2012). *Democratic Change in the Arab World, Past and Present*. Brookings Papers on Economic Activity, The Brookings Institution.
- Center for Systematic peace. (2018). Retrieved from https://www.systemicpeace.org/inscrdata.html

- de Regt, S. (2013). Arabs Want Democracy, but What Kind? *Advances in Applied Sociology*, 3(1), 37-46.
- Ehrlich, I., & Francis, T. (1999, December). Bureaucratic Corruption and Endogenous Economic Growth. *Political Economics*, S270-S293.
- Elbadawi, I., & Makdisi, S. (2013). Understanding Democratic Tranistions in the Arab World. Economic Research Forum.
- Elbadawi, I., & Makdisi, S. (2017). *Democratic Transition in the Arab World*. United Kingdom: Cambridge University Press .
- F. Ghoneim, A., & M. Ezzat, A. (2016). Growth and corruption in Arab countries: What type of relationship connects them? *Journal of Economics and International Finance*, 8(5).
- Faour, M. (2011, December 01). *The Importance of Education in the Arab World*. Retrieved from Carnegie Middle East Center: <u>https://carnegie-mec.org/2011/12/01/importance-of-education-in-arab-world-pub-46067#3</u>
- Fayad, G., Bates, R., & Hoeffler, A. (2011). Income and Democracy: Lipset's Law Inverted. University of Oxford, Centre for the Study of African Economies, Department of Economics.
- Fisman, R., & Gatti, R. (2002). Decentralisation and corruption: evidence across countries. *Journal of Public Economics*, 325-345.
- Gabsi, Z. (2019). Tunisia's youth: awakened identity and challenges post-Arab Spring. British Journal of Middle Eastern Studies, 46(1), 68-87.
- Gaub, F., & Laban, A. (2015). Arab futures: Three scenarios for 2025. Euripean Unoin Institute for Security Studies (EUISS).
- Geelmuyden Rød, E., Knutsen, C., & Hegre, H. (2019). The determinants of democracy: a sensitivity analysis. 1-25.
- Ghanem, H. (2015). The Arab Spring, Five Years Later. In H. Ghanem, *Roots of the Arab Spring* (pp. 38-64). Brookings Institution Press.
- Hassouna, H. (2001). Arab Democracy: The Hope. World Policy Journal, 18(3), 49-52.
- Hoffman, M., & Jamal, A. (2012). The Youth and the Arab Spring: Cohort Differences and Similarities. *Middle East Law and Governance*, 4(1), 168-188.
- Hussain, M., & Howard, P. (2012). Democracy's Fourth Wave? Information Technologies and the Fuzzy Causes of the Arab Spring. *International Studies Association April 1-4*, 2012, San Diego, (pp. 1-20). San Diego.

- Inglehart, R., & Welzel, C. (2005). *Modernization, cultural change and democracy–The human development sequence.* Cambridge: Cambridge University Press.
- Khan, M., & Mezran, K. (2015). *The Last Arab Spring Country*. Atlantic Council: Rafik Hariri Center for Middle East.
- Leipziger, L. (2015). Does Oil Sustain Authoritariansm in the Middle East? *International Relations in the Middle East*, 1-6.
- Lipset, S. M. (1959). Some social requisites of democracy: economic development and political legitimacy. *American Political Science Review*, 53(1), 69-105.
- Luciani, G. (2013). Oil and Political Economy in the International Relations of the Middle East . *International Relations of the Middle East*, 103-126.
- M'Barek, M. (2017, June 13). *Tunisia*. Retrieved from Middle East Eye: <u>https://www.middleeasteye.net/opinion/tunisias-revolution-endures-behind-facade-success</u>
- Magen, A. (2012). On Political Order and the "Arab Spring" . International Institute for Counter-Terrorism (ICT), 1-21.
- Makdisi, S. (2011). *Remarks on Autocracies, Democratization and Development in the Arab Region.* Institute of Financial Economics, American University of Beirut.
- Makdisi, S. (2018). On Prevailing Economic and Political Disparities and the Prospects for Close Integration of a Euro-Arab Med Region. Institute of Financial Economics, American University of Beirut.
- Makdisi, S. (2015). On Transition, Democracy, and Socio-Economic Justice in the Arab World. Institute of Financial Economics, American University of Beirut.
- Masri, S. (2017). Can Tunisia Serve as a Model? In *Tunisia: An Arab Anomaly* (pp. 5-21). Columbia University Press.
- Masri, S. (2017). The Education Paradox. In *Tunisia: An Arab Anomaly*. Columbia University Press.
- Mathur, A., & Singh, K. (2011). Foreign Direct Investment, Corruption, and Democracy. *Applied Economics*, 45(8), 1-13.
- Muasher, M. (2014). Redefining Arab Moderation. In *The Second Arab Awakening: And the Battle for Pluralism* (pp. 28-41). Yale University Press.

- Muasher, M., & Bentivoglio, K. (2014, October 28). *Tunisian Parliamentary Elections:* Lessons for the Arab World. Retrieved from Carnegie Middle East Center: <u>https://carnegie-mec.org/diwan/57049</u>
- Mukabana, S. (2019, January 15). Tunisia's revolution anniversary triggers tensions of unfulfilled promises.
- Mushtaq, A., & Afzal, M. (2017). Arab Spring: Its Causes And Consequences. JPUHS, 30(1).
- Norton, A. (2013). Oil and Political Economy in the International Relations of the Middle East . *International Relations of the Middle East* , 103-126.
- Paleologou, S.-M. (2015). Income and democracy: the modernization hypoethesis re-visited via alternative non-linear models. *Empirical economics*, 48, 909-921.

Przworksi, A., Alvarez, M., Cheibub, J., & Limongi, F. (2000). *Democracy and Development: Political Institutions and Well-Being in the World, 2950-1990* (Cambridge Studies in the Theory of Democracy). Cambridge: Cambridge University Press.

- Rachidi, H., & Saidi, H. (2015). Democracy and Economic Growth: Evidence in MENA countries. *Social and Behavioral Sciences*, 191, 616-621.
- Ross, M. L. (2001). Does oil hinder democracy? World Politics, 53(3), 325-361.
- Sadiki, L. (2019). Tunisia's Sustainable Democratization: Between New and Anti-Politics in the 2019 Presidential Election. AlJazeera Centre for Studies.
- Salemey, I. (2015). Post-Arab Spring: changes and challenges. *Third World Quarterly*, *36*(1), 111-129.
- Sanborn, H., & Thyne, C. (2014). Learning Democracy: Education and the Fall of Authoritarian Regimes. *British Journal of Political Science*, 44(04), 773-797.
- Taylor, A., & Miller, E. (2018, January 14). What's next? Seven years after Tunisia's spring . Retrieved from Atlantic Council: <u>https://www.atlanticcouncil.org/blogs/menasource/what-s-next-seven-years-after-tunisia-s-spring/</u>
- Teti, A., Xypolia, I., Sarnelli, V., Tsourapas, G., Lomazzi, V., & Abbott, P. (2017). *Political* and Social Transformations in Egypt. Arab Transformations Project.
- The World Bank. (2014, 05 24). *The Unfinished Revolution: Bringing Opportunity, Good jobs and Greater Wealth to all Tunisians*. Retrieved from The World Bank: https://www.worldbank.org/en/country/tunisia/publication/unfinished-revolution
- The World bank. (2015). *Inequality, Uprising and Conflict in the Arab World*. The World Bank, MENA Economic Monitor.

The Union of Arab Banks, (2015, August). Economic Assessment Report of the Arab Region

- Tran, E. (2018, September 28). *Tunisian Success: An Economic Analysis*. Retrieved from International Review : <u>https://international-review.org/tunisian-success-an-economic-analysis/</u>
- Transparency International. (2019). *Corruption Perception Index*. Retrieved from https://www.transparency.org/en/cpi
- Yerkes, S. E. (2019, November/December). *Foreign Affairs*. Retrieved from https://www.foreignaffairs.com/articles/tunisia/2019-10-15/tunisia-model
- Yerkes, S., & Ben Yahmed, Z. (2018, December 6). Tunisians' Revolutionary Goals Remain Unfulfilled. Retrieved from Carnegie Endowment For International Peace: <u>https://carnegieendowment.org/2018/12/06/tunisians-revolutionary-goals-remain-unfulfilled-pub-77894</u>
- (2015). *Final Report on the 2014 Legislative and Presidential Elections in Tunisia*. National Democratic Institute.

APPENDIX

Country List (18 Arab Countries)

Algeria, Bahrain, Comoros, Egypt, Iraq, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Tunisia, United Arab Emirates, Yemen

<u>Variables</u>	Description	Resources Polity IV		
PolityIV	The Polity2 index ranges from -10 to 10. The index is normalized between zero and one with higher values indicating a higher level of democracy			
Civil Liberties & Political Rights	The index is measures on a 1-7 scale, with higher values representing least democratic. The scale was first inverted, then normalized between 0 & 1, with higher values indicating a higher level of democracy	Freedom House		
Education	Mean years of schooling and expected years of schooling	UNDP data		
GDP per Capita	Real GDP per capita (constant 2010 U.S. \$)	World Development indicators		
Unemployment	Percentage of the labor force ages 15 and above that are unemployed	UNDP Data		
СРІ	Corruption Perception index ranges from 0 to 10 with higher values reflecting a more corrupted country	Transparency International		
FDI	Foreign direct investment, net inflows (% GDP)	World Development Indicators		
Oil Exporting	Binary Variable: 1 if the country exports oil and 0 otherwise			

Table A.1: Data description and sources

VARIABLES	PolityIV (Normalized)	Polity IV (Normalized)	PolityIV (Normalized)	Polity IV (polity2 index)
LGDP		-0.216759*** (0.038754)	-0.257527*** (0.036741)	- 5.150534*** (0.734816)
EDUCATION	-0.849792*** (0.164138)	0.646798** (0.169274)	0.725076*** (0.01687)	14.50152*** (3.374179)
OIL_EXPORTING		-0.165606*** (0.033310)	-0.211446*** (0.0346)	- 4.228917*** (0.693653)
CORRUPTION		-0.093118*** (0.014261)	-0.100926*** (0.015899)	- 2.018525*** (0.317976)
UNEMPLOYMENT			-0.009597** (0.003881)	-0.191939** (0.077629)
FDI			-0.009620** (0.004097)	-0.192405** (0.081948)

*polity2 index is used before normalization of the data

Variable	es	Mea	n	Std.	Dev	Mi	nimum	Μ	aximum
Unemp	0.424840	0.001188	0.133178	-0.357672	-0.548618	0.081134	-0.591264	-0.381968	1.00000
Oil Exportin g	-0.432607	-0.472059	-0.413455	0.392231	0.308592	-0.267099	0.278273	1.00000	
Corrupti on	-0.622036	0.097492	-0.121198	0.693076	0.594532	0.129620	1.00000		
FDI	-0.076799	0.082297	-0.110051	-0.020910	-0.097727	1.00000			
LGDP	-0.637435	-0.170529	-0.307856	0.515888	1.0000				
Educatio LGDP n	-0.378799	0.055993	-0.054878	1.00000					
Political Rights	0.649424	0.743402	1.00000						
PolityIV Civil Liberties	0.487722	1.00000							
PolityIV	1.00000								
	PolityIV	CL	Π	Edu	LGDP	FDI	Corrupti on	Oil	unemp

Table A.3 Correlation Matrix

Polity IV	0.382407	0.292848	0.000000	0.950000	Table A.4
Civil Liberties	0.296296	0.167183	0.000000	0.666667	Summary
Political Rights	0.223251	0.223810	-0.16667	1.000000	<i>Statistics</i>
LGDP	3.946698	0.537462	2.846955	4.843102	
Education	0.575123	0.130539	0.301000	0.794000	
Unemployment	8.294444	5.213233	0.100000	19.60000	
Corruption	3.672222	1.594176	1.100000	7.700000	
FDI	2.694358	3.874562	-4.33687	26.49649	
Oil Exporting	0.555556	0.498445	0.000000	1.000000	