Violent Protests and Transitional Regimes: Empirical Evidence from Arab Spring

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Introduction

In December 2010, a wave of protests and uprisings, popularly referred as 'Arab Spring', spread throughout the MENA counties. It first started in Tunisia after Mohamed Bouazizi, an unemployed 26-year-old Tunisian citizen, protested government corruption by setting fire to himself on December 17 2010. Soon the protests and uprisings spread to other countries of the region like Egypt Libya, Syria, Bahrain and Yemen. In Tunisia and Egypt the protests resulted in the toppling of earlier authoritarian regimes and establishment of new democratic governments. In other cases like Libya and Syria, the uprisings led to civil wars and huge casualties and destructions. However, Bahrain and Yemen experienced waves of protests as well, but in both cases the protests were dismissed peacefully by political settlement. Apart from the above cases of Arab spring, no serious uprising or revolution happened in other countries of the region. Hence, the first question that comes to mind is what are the factors which caused public uprisings and revolutions in some countries but not in others?

However, It is not so obvious from the socio-economic conditions of the MENA region whether it was socio-economic distresses which caused Arab Spring events or a desire for more political rights and civil liberties. It is to be noted that in the 2000s, many developing countries in MENA region did well in terms of poverty statistics and human development indicators. The region had notable achievements in terms of Millennium Development Goals related to poverty, access to infrastructure services, sanitation, internet connectivity, reducing hunger, child and maternal mortality, and increasing school enrollment (Iqbal and Kindrebeogo, 2015). This apparently opposing relationship between socio-economic conditions in the decade prior to Arab

spring and the onset of Arab spring protests, calls for a deeper and more careful empirical study between the political structure and type of regimes common to the MENA region and onset of the protests. One cause for the onset of uprisings and instability in developing countries is the so called 'intermediate/transitional regimes' thesis which postulates that regimes with intermediate levels of political rights and democratization are more prone to destabilization, than consolidated dictatorships or democracies (Gates, et al., 2000; Goldstone et al., 2010; Korotayev, et al., 2018).

Objectives

The purpose of this study is to empirically investigate the relationship between the so called intermediate/transitional regimes and violent protests during Arab spring event.

Methodology

The data of 14 MENA countries over the period 2006-2017 were used in this study. Dependent variable data of Arab spring protests was extracted from 'Global Dataset on Events, Location, and Tone' (GDELT) data base. 'Political Rights' variable used as intermediate regimes which were collected from 'Freedom House' data base. Socio-economic variables employed as other explanatory variables were extracted from the World Bank data base. We also used other political variables from Polity IV and other data bases. Following some of the existing studies, we construct the regression model below to estimate the parameters:

$$Dem_V = \beta_0 + \beta_1 DemV_{EgpSyr} + \beta_2 PR1 + \beta_3 PR1_{sqr} + \beta_4 logGDPpc + \beta_5 GDPpcg + \beta_6 CPI + \beta_7 HDI_{EduHealth} + \beta_8 Domgovhealthexp + \beta_9 Foodprodu + \beta_{10} FoodImport + \beta_{11} Mobile + \beta_{12} Oil_{Rents} + \beta_{13} Unemp_{total} + \beta_{14} Unemp_{Youth} + \beta_{15} CL1 + \beta_{16} PTS_S + \beta_{17} xrcomp + \beta_{18} xropen + \beta_{19} exconst$$

We run a Fixed Effects model to investigate the socio-economic and political determinants of the Arab Spring violent uprisings. We run a number of tests for choosing the final appropriate model and the results suggest that a Fixed Effects model with robust standard errors is the appropriate model to use for our dataset. In order to choose between Random Effects and the pooled OLS model, we run a Breusch-Pagan Lagrange multiplier (LM) test. Our results

show that the pooled-OLS is a more appropriate model to use than the RE model. Next, in order to choose between pooled-OLS and fixed effects models, we test the null hypothesis that the country dummies are jointly statistically different from zero. Our results reject this Null hypothesis with very high statistical significance, which implies a FE model is the appropriate model to use compared to pooled-OLS model. We also run a test for choosing between FE and RE models. However, before that, we also test for the existence of heteroskedasticity in the data, from which we are able to reject the Null hypothesis of 'no heteroskedasticity' in the data. The presence of heteroskedasticity implies that the normal standard errors will be biased and we cannot use a standard Hausman test. Hence, instead, we use the Mundlak (1978) test for choosing between FE and RE, where the standard errors are robust to heteroskedasticity. Our Mundlak (1978) test results show that we are able to reject the Null hypothesis of 'no correlation between the time-invariant unobservables and the regressors', and, hence, the FE model is the appropriate model to use.

Results and Discussion

Table1: Results of Fixed Effects Model

Variables	Dem_Voil		Variables	Dem_Voil	
DemV_EgpSyr	0.0779*	(0.037)	Mobile	-0.00344	(0.014)
PR1	-3.688**	(1.545)	Oil_Rents	-0.113*	(0.056)
PR1_sq	0.776**	(0.318)	Unemp_total	-0.165	(0.555)
logGDPpc	-2.135	(3.730)	Unemp_Youth	0.247	(0.175)
logGDPpcg	-0.169	(0.128)	CL1	-1.210	(1.456)
CPI	0.0147	(0.039)	PTS_S	-0.0914	(0.258)
HDI_EduHealth	10.67	(16.34)	xrcomp	-4.490	(5.845)
Domgovhealthexp	-0.330	(0.524)	xropen	-0.310	(1.920)
Foodprodu	-0.0201	(0.017)	exconst	-1.150	(0.671)
Foodimports	0.151	(0.161)	Constant	24.79	(31.94)
	Observations	= 110			
	R-squared	= 0.677			
	# of Countries	= 14			
	Year FE	= YES			

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

Due to space constraints, we skip reporting the tables and figures of intermediate tests in this paper. So we directly report the results from the Fixed Effects model in the table below:

As is evident from the fixed effects model in Table 1, we have controlled for a set of socio-economic and political variables, along with our Political Rights variable (PR1) to capture the notion of intermediate regimes. As the intermediate regime hypothesis postulates that instability and revolutions are more frequent in societies in which democracy and political rights level is in intermediate levels, one would expect a nonlinear relationship between political rights and number of protests. To capture this nonlinearity we have added the quadratic term for political rights variable, as well. As results in Table 1 show, both PR1 and PR1_sqr variables are statistically significant and the sign for PR1 is negative while it is positive for PR1_sqr. This implies that the relationship between 'political rights' and protests is nonlinear and U-shaped. This means that in very strict dictatorships (i.e. left-hand side of the U-shape), any small increase in the level of political rights reduces people's inclinations to protest; while on the right-hand side of the U-shape, any small and marginal increase in political rights increases citizens' inclinations for protest and regime change. The logic behind this result would be that, in very strict authoritarian regimes any increase in political rights (up to a threshold) would reduce people's grievances associated with the lack of freedoms, and would make them protest less. But when political rights increase beyond a threshold, people would have higher preferences for real democratic regimes, and also would have more opportunities to organize themselves for protests and change of regime. This explains the logic behind why, beyond a threshold, increases in political rights and freedoms leads to more protests (right-hand side of the U-shape).

It seems that this result does not reflect the 'inverted U-shape' relationship in intermediate/transitional regime hypothesis. Furthermore, there are other papers in the literature which also find results that do not completely reflect the inverted U-shape of intermediate regimes. Daniel Stockemer (2010) finds that the occurrence of minor intrastate wars and major civil wars does not differ between hybrid (intermediate) regimes and autocracies, and only democracies have a significantly lower probability of experiencing intrastate fighting and warfare. Similarly, Slinko et al (2017) suggest that the inverted

U-shaped relationship between regime types and sociopolitical destabilization is typically characterized by an asymmetry, with consolidated authoritarian regimes being generally less stable than consolidated democracies. However, it should be to noted that, as there are no real functioning democratic regimes in the MENA region (our dataset), in our study the right hand side region of the U-shape graph could be considered as the region coinciding with the intermediate regimes in the MENA region, which represents the relatively less authoritarian regimes. Therefore, it would be plausible to suggest that the U-shape relationship in our study, in a sense, would reflect the intermediate/transitional regimes hypothesis as well: as we do not have real democratic regimes in our dataset to capture the declining right-hand side of the 'inverted U-shape', the increasing right-hand side of our U-shape relationship would reflect the increasing part of the 'inverted U-shape' in the original intermediate regimes thesis. However, we should mention that further research is needed in this area. Further research can look at this in more detail.

Furthermore, we also find support for the positive spatial spillover effects from Egypt and Syria, the two countries that experienced the highest number of protests. This confirms the positive spatial spill-overs from these two high experiencers of Arab spring to other neighboring countries. Our regression results also show a negative and significant coefficient for Oil-rents (% of GDP) variable, which implies that countries will higher oil rents experienced lesser protests. The reason for this could be that these regimes had more rents and resource to provide higher distributions or services to their citizens, or might have had more resources to buy-off the protesters. This finding further might support the 'authoritarian bargain' hypothesis in MENA region, in which an authoritarian regime buys-off political legitimacy against better economic services and distributions to its citizens.

However, we do not find any empirical support for other socio-demographic factors like level of GDP per capita, GDP growth, CPI, HDI, youth unemployment, or developments in cellphone use and social media communications. Similarly, our results do not support other political variables such as civil liberties (CL1), or other democratic measure from Polity IV index such as 'constraints on chief executives recruitment'

(exconst), or chief executives recruitment openness/competitiveness (exopen/excomp).

We should, however, point out that the results from this exercise are limited to only a specific set of events in MENA region. We might require a wider set of econometric studies to investigate the extent to which these results can be generalized to other countries or other regions. In addition, we should also note that certain structural factors, such as external influences, which were not part of this study might have played a role in determining the protests. Similarly, the dynamic interaction between the regime and the protesters might have also influenced the evolution of the extent and mode of protests. In this sense, this study should be looked upon as a preliminary empirical investigation into certain important determinants of protests in MENA countries during Arab Spring. We feel that in this limited sense, this study contributes to the literature.

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