Corruption Networks and the Balance of Power in Egypt's Arab Spring

Daron Acemoglu
MIT, NBER and CEPR

Tarek A. Hassan
University of Chicago, NBER and CEPR

Ahmed Tahoun
London Business School

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Motivation

- Political rent-seeking is regarded as a major obstacle to political and economic development.
- Two key questions for the success of Egypt's Arab Spring:

1. Did the fall of Mubarak also uproot the "rent-seeking coalition" of NDP members and military officers that supported him?
2. If so, does a new rent-seeking coalition emerge to replace the old one?

- Address these questions using event-studies in the Egyptian stock market.

Main Findings

1. Many firms on the Egyptian stock market were **politically connected to Hosni Mubarak**'s regime, either through the National Democratic Party (**NDP**) or through members of the **military**.
2. The loss of political connections after Mubarak's fall **reduced the market value of firms connected via the NDP by 16.7%** or $4.19bn, while it had **no significant effect on the value of firms connected through the military**.
3. Mohammed **Mursi**'s accession to power on June 24, 2012 **increased the market value** of firms operating according to **islamic principles**.

→ Findings are consistent with the view that part of the rent-seeking coalition associated with Mubarak collapsed, while the military succeeded in protecting its economic interests. In addition, investors may expect an increase in future political rents accruing to islamic firms.

Timeline

since 1952	Continuous power struggle between Muslim Brotherhood on the one side and ruling alliance of NDP and military leadership.
1981	Mubarak takes power after the assassination of Anwar Sadat.
12/18/10	Unrest begins in Tunisia.
01/25/11	50,000 turn out to first large demonstration in Tahrir. Use as event time 0.
01/27/11	Egyptian stock exchange (EGX) ceases trading amid unrest.
02/11/11	**Hosni Mubarak resigns, military (SCAF) takes power.**
03/23/11	EGX resumes trading.
04/17/11	**NDP dissolved.**
05/28/12	**Shafik and Mursi win 1st round of presidential elections.**
06/24/12	**Mohammed Mursi wins presidential elections (2nd round).**
08/12/12	**Mursi sacks top generals of the SCAF.**

Data

- Stock return and accounting data Jan2010- Dec2012 from *Zawya*, a business intelligence firm. All 177 firms traded on the EGX exchanges in Alexandria & Cairo.
- Hand-collected board structure from *quarterly disclosure reports* posted on EGX website since Jan 2011.
- Classify firms as **NDP connected** if the name of at least one member of the board in Jan 2011 appears on the *Feloul List*, a list of the 6,000 leading NDP members compiled by activists.
- Classify firms as **Military connected** if at least one board member
  - is listed with the title of a military general
  - or we find a direct biographical connection between a board member and one of 4 high-ranking generals in the *Boardex* database. Refer to this sub-group as **Military x General connected.**
- Use firms classified as operating by **Islamic** principles according to *Zawya* and *Morgan Stanley*.

Outline

Summary Statistics

Firm Characteristics by Network

	N	Share Market Cap	Mean Size	Leverage	β^{World}	β^{Egypt}
NDP	17	.31	2,800.3	0.7	0.4	0.7
Military	15	.29	304.6	0.4	0.5	0.9
Generals x Mil.	(5)	(.25)	2,185.3	0.3	0.9	1.1
Islamic	13	(.17)	2,482.0	0.5	0.7	0.7
Unconnected	127	.40	358.3	0.3	0.4	0.8

Notes: Firms classified as connected to "Generals" are included in the "Military" total.
Size is in millions of EGP.

Sectoral Composition of Corruption Networks

Firms in Corruption Networks by Sector

Sector	NDP	Military	Generals	Islamic	Unconnected
Agriculture	0	1	0	0	7
Construction	3	0	1	0	6
Consumer Goods	0	0	0	0	4
Education	0	0	0	0	2
Financial Services	3	1	1	5	21
Food and Beverages	1	3	0	1	15
Health Care	1	0	0	0	10
Industrial Manuf.	3	4	3	1	26
Leisure & Tourism	1	1	0	0	7
Media	0	1	0	0	0
Mining and Metals	2	0	0	0	5
Oil and Gas	0	0	0	0	4
Real Estate	1	1	0	4	17
Services	0	0	0	0	1
Telecom.	1	0	0	2	0
Transport	1	3	0	0	2
Total	17	15	5	13	127

Notes: Firms classified as connected to “Generals” are included in the “Military” total.

NDP – A Prominent Example

Ahmed Ezz

- On the board and partial owner of three NDP connected firms (steel, porcelain).
- Member of Parliament for the NDP 2000-2011, Chairman of the Planning and Budget Committee.
- Confidant of Gamal Mubarak, Hosni Mubarak's would-be heir.
- Accused of money-laundering and running a government sanctioned steel monopoly.
- Arrested in Feb 2011 convicted to 7 years in prison and a fine of $3bn.

Outline

Definitions & Strategy

- Estimate world market betas, β^{World}, and egyptian market betas β^{Egypt} for each stock using MSCI indices in pre-period (2010 data).
- Define cumulative returns $CR[n,m]_i = \sum_{t=n}^{n} R_{it}$ and run

$$CR[n,m] = \delta + N_i'\gamma + X_i'\nu + \epsilon_i,$$

  where N_i is the vector of dummies reflecting the affiliation to corruption networks and X_i is a vector of controls that contains β_i^{World}, β_i^{Egypt}, a full set of (16) sector fixed effects and controls for size and leverage.
- In some specifications also hard-wire an "Egyptian CAPM" by using $CAR[n,m]_i = \sum_{t=n}^{n} R_{it} - \left(\alpha_i - \beta_i^{Egypt} R_{mt}\right)$ as dependent variable.

Mubarak's Fall

	(1)	(2)	(3)	(4)	(5)	(6)
	CR[3,59]				CAR[3,59]	
NDP	-0.075**	-0.075**	-0.066**	-0.070**	-0.087**	-0.094**
	(0.020)	(0.021)	(0.022)	(0.023)	(0.025)	(0.026)
Military	0.010	0.010	0.010	0.010	0.005	0.002
	(0.023)	(0.023)	(0.024)	(0.025)	(0.025)	(0.027)
Mil. x Generals	-0.003	0.001	0.011	-0.011	0.044	0.025
	(0.036)	(0.034)	(0.036)	(0.035)	(0.044)	(0.041)
Islamic	-0.009	-0.006	-0.001	0.009	-0.001	-0.000
	(0.024)	(0.024)	(0.025)	(0.027)	(0.034)	(0.036)
β^{World}		-0.014**	-0.015**	-0.025**	0.001	-0.011
		(0.006)	(0.006)	(0.006)	(0.029)	(0.029)
β^{Egypt}		-0.001	-0.004	0.004		
		(0.014)	(0.014)	(0.016)		
Size			-0.004	-0.002	-0.010**	-0.010*
			(0.004)	(0.005)	(0.005)	(0.006)
Leverage			0.001	0.004	0.006	0.008
			(0.009)	(0.013)	(0.012)	(0.017)
R^2	0.096	0.093	0.085	0.155	0.154	0.175
N	139	139	137	137	137	137
Sector F.E.	no	no	no	yes	no	yes

Notes: Robust s.e. in parentheses. CR=cumulated return; CAR=cumulative abnormal return relative to MSCI egypt total market index. Cumulative returns between the last trading day before closing of the exchange and the second day of trading after re-opening.

Mubarak's Fall - Alternative Event Windows

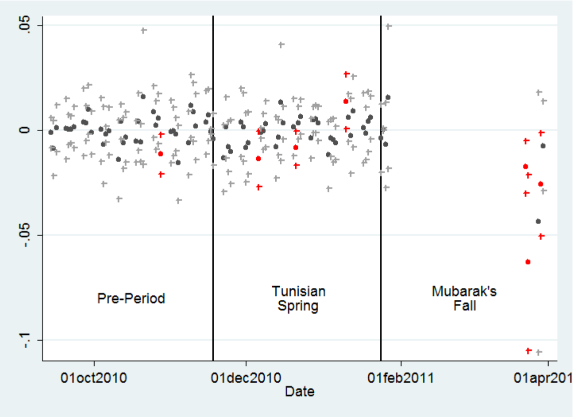
	(1)	(2)	(3)	(4)	(5)
	CR[0,59]	CR[0,62]	CR[0,63]	CR[0,64]	CR[0,65]
NDP	-0.103**	-0.149**	-0.143**	-0.160**	-0.167**
	(0.035)	(0.043)	(0.045)	(0.051)	(0.055)
Military	-0.043	-0.040	-0.013	-0.014	-0.006
	(0.034)	(0.041)	(0.032)	(0.034)	(0.034)
Mil. x Generals	0.038	0.091*	0.061	0.063	0.068
	(0.039)	(0.054)	(0.061)	(0.056)	(0.052)
Islamic	-0.054	-0.074	-0.077	-0.087	-0.084
	(0.062)	(0.062)	(0.053)	(0.054)	(0.058)
R^2	0.095	0.129	0.130	0.166	0.175
N	137	148	148	148	144
Sector F.E.	yes	yes	yes	yes	yes
Std. Controls	yes	yes	yes	yes	yes

Notes: Robust s.e. in parentheses. CR=cumulated return; CAR=cumulative abnormal return relative to MSCI egypt total market index. Cumulative returns between the last trading day before closing of the exchange and the second day of trading after re-opening.

Mubarak's Fall - Size of Effect

- NDP connected firms lose 30.6% of their value in 65 days.
- 16.7 percentage points of this loss or $4.19bn attributable to the lost value of their political connections.
- This politically induced loss is equivalent to a loss of 5% of the total market cap of the Egyptian market.
- Compare this to estimates of politically induced destruction of market cap in previous studies
  - 0.71% Germany 1933 (60 days)
  - 6.3% Malysia 1997-1993 (13 months)
  - 0.78% US 2001 (7 days)

Mubarak's Fall - Pre-Period



Notes: Coefficients on the interaction of time and NDP from a pooled regression of daily returns on a full set of time fixe effects and the interactions of time and and all standard controls. 95% CI constructed using White standard errors.

Outline

April 16, 2011: Dissolution of the NDP

- Higher administrative court dissolves NDP on charges of corruption.
- All assets seized by the government.

	(1)	(2)
	Mubarak falls	NDP dissolved
	CR[0,63]	CR[83,83]
NDP	-0.121**	-0.018**
	(0.040)	(0.008)
Military	-0.007	-0.002
	(0.032)	(0.006)
Mil. x Generals	-0.051	-0.006
	(0.065)	(0.015)
Islamic	-0.049	-0.022**
	(0.044)	(0.008)
R^2	0.268	0.197
N	148	147
Sector F.E.	yes	yes
Std. Controls	yes	yes

May 28, 2012: Mursi and Shafiq in Runoff

- Former General Ahmed Shafiq and Muslim Brother Mohammed Mursi win 1st round with both around 25% of the vote.
- Polls had favored leading NDP member Amr Moussa and moderate islamist Mabout Fotouh.

	(1)	(2)	(3)
	Mubarak falls	NDP dissolved	Presidential Elections 1st round
	CR[0,63]	CR[83,83]	CR[490,491]
NDP	-0.121**	-0.018**	-0.017*
	(0.040)	(0.008)	(0.010)
Military	-0.007	-0.002	-0.013
	(0.032)	(0.006)	(0.009)
Mil. x Generals	-0.051	-0.006	0.025*
	(0.065)	(0.015)	(0.013)
Islamic	-0.049	-0.022**	0.008
	(0.044)	(0.008)	(0.008)
R^2	0.268	0.197	0.085
N	148	147	126
Sector F.E.	yes	yes	yes
Std. Controls	yes	yes	yes

June 24, 2012: Mursi President

- Official results released. Mursi beats Shafik with 51.7% vs. 48.3% of the vote

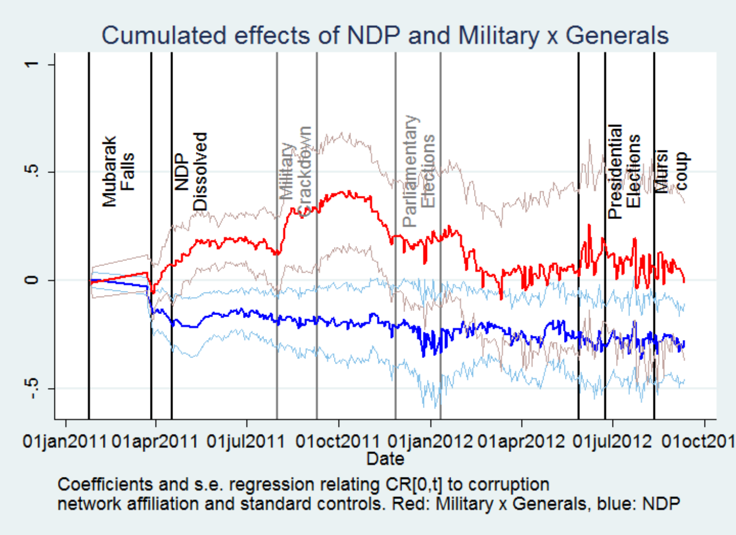
	(1)	(2)	(3)	(4)
	Mubarak falls	NDP dissolved	Presidential Elections 1st round	2nd round
	CR[0,63]	CR[83,83]	CR[490,491]	CR[517,518]
NDP	-0.121**	-0.018**	-0.017*	0.019**
	(0.040)	(0.008)	(0.010)	(0.009)
Military	-0.007	-0.002	-0.013	0.022**
	(0.032)	(0.006)	(0.009)	(0.011)
Mil. x Generals	-0.051	-0.006	0.025*	-0.031**
	(0.065)	(0.015)	(0.013)	(0.014)
Islamic	-0.049	-0.022**	0.008	0.023*
	(0.044)	(0.008)	(0.008)	(0.012)
R^2	0.268	0.197	0.085	0.305
N	148	147	126	137
Sector F.E.	yes	yes	yes	yes
Std. Controls	yes	yes	yes	yes

August 12, 2012: Mursi fires Tantawi

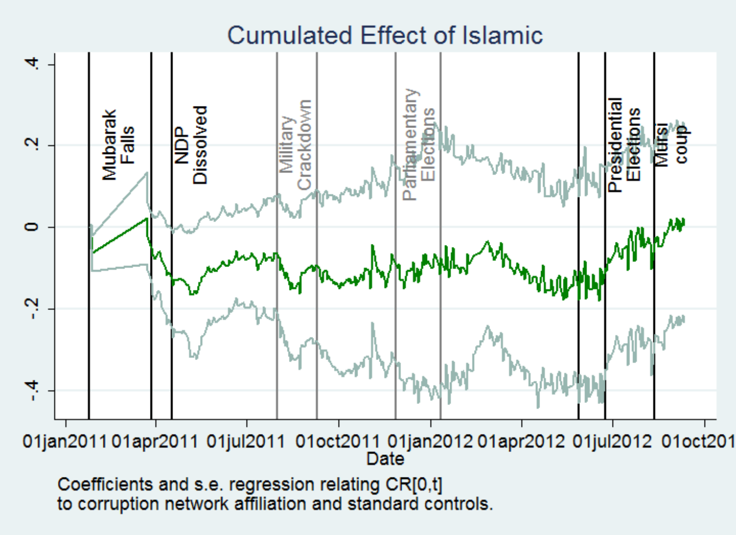
- Mursi fires the head of the SCAF (Mohammed Tantawi) and sidelines a large number of other high-ranking military officials.
- Rescinds declarations of the SCAF that limit presidential powers.
- Assumes interim legislative control.

	(1)	(2)	(3)	(4)	(5)
	Mubarak falls	NDP dissolved	Presidential Elections 1st round	2nd round	Mursi's Coup
	CR[0,63]	CR[83,83]	CR[490,491]	CR[517,518]	CR[566,567]
NDP	-0.121**	-0.018**	-0.017*	0.019**	0.001
	(0.040)	(0.008)	(0.010)	(0.009)	(0.006)
Military	-0.007	-0.002	-0.013	0.022**	-0.001
	(0.032)	(0.006)	(0.009)	(0.011)	(0.010)
Mil. x Generals	-0.051	-0.006	0.025*	-0.031**	-0.006
	(0.065)	(0.015)	(0.013)	(0.014)	(0.010)
Islamic	-0.049	-0.022**	0.008	0.023*	0.014**
	(0.044)	(0.008)	(0.008)	(0.012)	(0.006)
R^2	0.268	0.197	0.085	0.305	0.039
N	148	147	126	137	121
Sector F.E.	yes	yes	yes	yes	yes
Std. Controls	yes	yes	yes	yes	yes

Cumulated Effects



Cumulated Effects



Other Interesting Facts

Network affiliation appears to be persistent. Since fall of Mubarak...

- only 1 firm shed an NDP board member.
- 3 previously unconnected firms hired a general.

Insiders appear to be leaving the sinking ship. They...

- divest heavily from NDP connected firms.
- tend to double-down on military connected firms.

Conclusion

1. Loss of political connections **reduced the market value of firms connected via the NDP by 16.7%** or \$4.19bn, while it had **no significant effect on the value of firms connected through the military**.
2. **Mursi**'s accession to power **increased the market value** of firms operating according to **islamic principles**.

Findings consistent with view that

→ **part of the rent-seeking coalition associated with Mubarak collapsed, while the military succeeded in protecting its economic interests**.

→ **investors may expect an increase in future political rents accruing to islamic firms.**