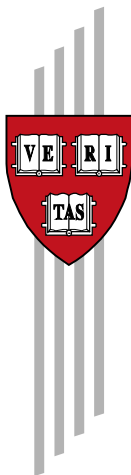


Crony Capitalism in Egypt

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Crony Capitalism in Egypt

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Abstract: The paper studies the nature and extent of Egyptian “crony” capitalism by comparing the corporate performance and the stock market valuation of politically connected and unconnected firms, before and after the 2011 popular uprising that led to the end of President Mubarak 30 years rule. First, we identify politically connected firms and conduct an event study around the events of 2011, as well as around previous events related to rumors about Mubarak’s health. We estimate the market valuation of political connections to be 20% to 23% of the value of connected firms. Second, we explore the mechanisms used for granting these privileges by looking at corporate behavior before 2011. It appears that these advantages allowed connected firms to increase their market size and power and their borrowings. We finally compare the performance of firms and find that the rate of return on assets of connected firms was lower than that of non-connected firms by nearly 3 percentage points. We argue that this indicates that the granting of privileges was not part of a successful industrial policy but instead, that it led to a large misallocation of capital towards less efficient firms, which together with reduced competition, led to lower economic growth.

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Egypt Crony Capitalism in Egypt

1. Introduction

Popular perceptions of business elites have become quite negative in the Middle East. For example, the Pew survey reveals that in 2010, corruption was the top concern of Egyptians with 46% listing it as their main concern, ahead of lack of democracy and poor economic conditions (Pew 2011). This is confirmed by the Transparency International ratings – Egypt moved from a rank of 70/158 in 2005 to 115/180 in 2008. This perceived “corruption” of the political and business elites was a key driving force of popular discontent (Malik and Awadallah 2013, Cammett and Diwan 2013). We now know that this was not just about perceptions. The ongoing trials of leading businessmen and politicians are starting to shed light on the ways in which power and money interacted in the past.¹ Ongoing court cases cover issues related to land appropriation at unfair prices, financial fraud, unfair competition, unfair borrowing from state banks, unfair access to subsidized energy, unfair access to state procurement, conflict of interest and receipt of bribes, illegal funding of political campaigns, and the manipulation of the financial markets for the benefits of insiders (Ahram Online, various issues).

Two iconic cases illustrate the nature the cronyism of the past. The first concerns Ahmad Ezz, a Steel magnate and former member of Parliament, whose companies dominated the steel industry after 2000, controlling at some stage 65% of the local market, and who is accused of having improperly acquired the largest public steel corporation at an artificially low price, used market power to generate excess profits, and lobbied to raise external tariffs to gain protection from foreign competition and for Parliament to pass watered down anti-monopoly legislation. Ezz was a prominent member of the National Democratic Party (NDP), the dominant party in Egypt – a member of its influential Policy Committee, and the chair of Mubarak’s election campaign in 2005 and of the NDP for the Parliamentary elections of 2010. In Parliament, he was the Chair of the Budget Committee, which among other functions oversaw the work of the Competition Commission (Werker et al, 2012). A second example, also the focus of a current court case, is that of Palm Hill Corporation, the second largest real estate developer in Egypt. The main owner of Palm Hill, Ahmed El-Maghrabi, was Minister of Housing and has been accused of exploiting his ministerial position to

¹ In addition to Mubarak and his two sons, and about 20 very prominent businessmen, many members of Mubarak’s last cabinet, including the former Prime Minister and Ministers of Oil, Tourism, Interior, Finance, and Housing are being investigated on various charges of corruption and embezzlement of public funds.

sell his company as well as others individuals connected to the NPD large tracts of land in various parts of the country at exceptionally cheap prices.²

What makes the issue of corruption such a hot issue in Egypt and the Middle East is the popular frustration over relatively modest economic growth and job creation in the face of a large demographic youth bulge. A central question is whether the Arab region economic under-performance can be related to the type of state-business relations that have developed during the period of liberal reforms which started in most countries in the 1980s. Some authors have argued that the reforms have not gone far enough (Noland and Pack 2007). But most of the regional literature has focused on the rise of “networks of privilege” and “crony capitalists” with myopic short term interests as the central reason for low economic growth (Heydemann 2004, Sadowski 1991, Owen 2004, Henry and Springborg 2010). A recent study on corporate performance in the Middle East (World Bank 2009) summarizes the economic arguments quite well: it shows that while economic reforms in the Middle Eastern look impeccable on paper, a differentiated application has led to a rising difference between de jure and de facto rules. The report relates the weak supply response from the private sector to the granting of privileges to a select few, which has reduced the competitiveness and dynamism of the economy.³

The political science literature on the region has gone further, making “cronyism” the central mechanism that resolved the *contradictions* created by the gradual liberalization of the region’s economies in environments where political power remained highly autocratic. For these authors, an imperfect economic liberalization allowed weakening regimes, coming out of the crisis of state-led growth during the 1950s-70s, to redefine the rules of the game by building alliances with the business elite in ways to dominate the business sector and use it as a source of patronage. This was achieved by erecting barriers to entry that excluded opponents and provided privileges to a small coterie of friendly capitalists. Henry and Springborg (2010) writing on Egypt, put the “political management of capital by all means, including using intimidation and managed predation” at the center of the “active efforts by political elites to strongly discourage potential manifestations of political behavior by business elites”. In this context, “support for the opposition was a red line punishable by closure and expropriation”. Similarly, Owen (2004) describes the economic regime that has emerged after the economy was liberalized in the following way: “Instead of encouraging a

² Similar stories about favoritism and insiders abound in Tunisia, Syria, Libya, Yemen, and Algeria, where political cronies seem to control large chunks of the private sector (Beauge 2011; Alley 2010; Haddad 2012; Tlemcani 1999).

³ There are two aspects to this: private investments rates in the Middle East are among the lowest in the world, and the efficiency of this investment is also low reflecting low levels of innovation (World Bank 2009, Noland and Pack 2007).

more plural political system .. the Arab regimes produced .. an Egyptian, or Tunisian, or Jordanian version of “crony capitalism” in which competition was stifled and entrepreneurs with close connections with the regime were able to obtain most of the major contracts, as well as to bend or break planning laws and other legal constraints when it suited them. What they had to put up with, in turn, is a great deal of bullying from the regime itself, which showed no compunction in forcing each country’s leading businessmen to invest in its favorite business or welfare project as a quid pro quo“ (p.234).

While the Middle East literature on Arab capitalism is rich in its analysis of how the opening up of the economy has facilitated the exercise of power by autocrats, it has remained largely impressionistic when describing the linkages between politics and economic matters. Some work analyzes state-business relations in Egypt (Kienle 2001, Skafianakis 2004, Roll 2010), Morocco (Cammett 2007; Catusse 2008, Henry 1997), Tunisia (Bellin 2002, Hibou 2006, Chekir and Menard, 2012), Algeria (Dillman, 2000), and the Gulf (Hanieh 2011, Hertog 2011, Moore 2004), as well as the region as a whole (Heydemann 2004, Schlumberger 2008, King 2011). But none of these analyses include direct measurements of the extent of favoritism, or attempts to statistically evaluate the economic impact of cronyism.

As a result, it is difficult to accept at face value the claims that “cronyism” led by itself to slow economic growth. After all, it may or may not be true that close state-business relations were by themselves bad for growth – there were other region-specific factors that must have slowed growth such as Dutch disease effects, regional insecurity, political risk, and the rise of Asian competition in manufacturing. Conceptually, there is nothing intrinsically bad about close state-business relations. The case of South Korean Chaebols illustrates how industrial policy can foster accumulation and the development of new sectors, even when state-business relations are characterized by cronyism (Kang 2002; Khan 2010). To the extent that they provide the right incentives to perform, close state-business relations can form the basis for dynamic capitalism. Under different circumstances, tight state-business relations can also become sources of undue influence, corruption and other forms of rent-seeking that distort economic and political incentives. Evaluating system performance, relative to a difficult to define counterfactual is by no means an easy task. But at a minimum, one should be able to describe more objectively and quantitatively some of the mechanisms used to provide privileges, measure the magnitude of privileges in some fashion, and assess empirically the impact of favoritism on the economy. In this paper, we make a first attempt to achieve such aims by focusing on state business relations in Egypt during the past decade. As such, our discussion is at the intersection of two literatures – the political science work

on state-business relations in autocratic regimes, and the corporate finance literature on the impact of privileges on firm performance on minority shareholders. We focus on three layers of issues.

First, is there any evidence that politically connected firms received valuable privileges? Rather than look for direct evidence, we seek to measure whether the market believed that privileges existed by conducting an event study of the Egyptian stock market around to the 2011 revolution. The events of January 2011 were largely unexpected. When the stock market re-opened again in February 2011, with Mubarak out of power, the stocks of “crony” firms must have been re-priced based on a value for political connections at near zero. Thus, to the extent that it is possible to pinpoint which firms were “connected”, this event presents a unique opportunity to learn from the market how it estimates the value of these “connections”.

Second, we try to identify the mechanisms used to provide advantages to politically connected firms. Using publicly available corporate data on traded firms, we do so by comparing financial characteristics of connected and unconnected firms – in particular, how many taxes they pay, how much debt they take, and how large a market share they control.

Third, we compare the profitability of connected and unconnected firms and ask whether the type of state-business relations that were practiced in the recent past in Egypt can best be viewed as a successful form of industrial policy meant to improve the national economy, or as the system of costly gift exchange between firms and politicians which has been described by the political scientists.

The paper addresses these three sets of issues sequentially in sections 2, 3 and 4. In the last section 5, we conclude with a summary and a discussion about the macro effect of cronyism.

2. Stock market reactions to Mubarak’s demise

The goal of this section is to use stock market information to evaluate the “value of connections” among the large politically connected firms that are traded on the Egyptian stock market. The celebrated Fisman study (2001) provided the first such attempt, and it measured the value of political connections in Indonesia by looking at the relation between reports on Suharto’s health and the value of firms that had special connections to the regime. Fisman found a significant negative correlation. Other studies at the country level have tended to look at the evolution of corporate boards and executives in terms of their members who are also part of government, and they too tend to find significant benefits to connections – see for example Roberts (1990) and Goldman et al (2008) for the US, Ramalho (2003) for Brazil, and Ferguson and Voth (2008) for Nazi

Germany. In a recent paper, Boubakri et al (2008) conduct a simulated event study in a global panel study of 243 firms by looking at the impact of entering into a political connections on firms value before and after connections are established. They show that firms increase their value *after* establishing connections.

The advent of the stock market is relatively recent in Egypt. The market took off in the last decade of Mubarak's 33 years reign, when his son Gamal Mubarak, working closely with a group of economic experts and ambitious businessmen after 2004, started to redefine the political and economic programs of the aging ruling party. After the socialism of Nasser (1956-68), the first opening of Sadat in the mid-1970s, and a long transition with stabilization efforts and timid reforms of the liberal type under Mubarak's first period up to the early 2000s, a new effort was under way to modernize Egypt's private sector – or so did the official narrative go. This effort included a push to create an internationally competitive corporate sector, in the midst of a renewed effort at privatization and of financial sector and trade reforms.

While Sadat's first *Opening* ("Infitah") involved a handful of crony allies, it is under Mubarak in the 1990s that a larger new class of capitalists connected to the state grew very rich (Skafianakis 2004). In the early-2000s, the connected business elite evolved further -- well established insider firms were joined by new rising stars more closely connected with the President's son (Henry and Springborg 2010, Osman 2010, King 2011). These firms took on the modernization of the economy, spearheading the development of new sectors and the expansion of old ones, backed by state favors and international and Arab finance. Over the decade ending with the 2011 events, the Sinai became an international tourist spot, the oil and gas sector started to attract huge FDI, the banking sector flourished, telephony took off, consumers products went large scale, national distribution was reorganized and rationalized within larger corporate structures, and massive housing projects were developed backed by a much expanded construction sector. The rising businessmen were not only well connected, but they also occupied important post in Government, the ruling party, Parliament, and various influential boards and Committees.

In this context, going public was encouraged by generous tax advantages.⁴ The stock market was both a way for successful businessmen to exit and move profits to more diversified vehicles, or to raise funds in addition to what could be obtained from banks, which was necessary for expanding firms because of the strict way in which banking regulation evolved after the sector

⁴ Fiscal reforms in the 1990s removed taxes on capital gains and dividend income for listed companies. In addition, investment by individuals in stocks, as well as the interest paid on borrowings to finance this investment, can be fully deducted from taxable income (Kienle 2004).

was reformed and recapitalized.⁵ Market capitalization grew from US\$ 28 billion in 2002 (29% of GDP) to US\$ 82 billion in 2010 (40% of GDP). The real value traded also increased significantly from 2002 to 2007 with a turnover ratio that reached 50% in 2007.⁶ The market exhibited very strong growth from 2002 to 2007, partly as the result of the entry of foreign investors into the market, reaching an all time high capitalization of 107 percent of GDP in 2007. The bubble crashed in 2008, first as a reaction to policy change (energy tariffs were raised, new taxes instituted, and public sector salaries increased by 30%), and then more deeply, in reaction to the 2008 global crisis – by the end of 2008, the market had fallen by more than 50% relative to its peak in 2007. The second crash due to the 2011 revolution, of about 40%, coming on the heels of the first crash, marked a very low point for the stock market. Some of the large firms, including the most connected, fell by as much as 80%.

In event studies, the main challenge is to find ways to determine which firms are politically connected in order to be able to measure precisely the value of connections. Unlike the case in other event studies, especially those in OECD countries, we have found that the composition of EGX firms boards and the names of their executives are not too informative about their political connections, which may be due to the fact that Egyptian networks of influence are more concentrated at the top of the economic and political elite than in OECD countries.⁷ We have chosen to rely on what appears to be extensive market knowledge in Egypt of the inner working of connected firms. In separate interviews, we asked the three leading stock-brokers in Cairo to indicate which of the top firms traded on the EGX were receiving special state favors in the past. Twenty two firms were on each of the lists, and we took those as the set of connected firms for this study (thereafter CFs, the balance being the non-connected firms or NCF). Indeed, the names of the main politically connected individuals, who own large skunks of these firms, is “common knowledge” in Egypt. These men were prominent businessmen who were also affiliated with the ruling party and in some cases and close to the president and his family. Their business dealings were well covered by the Egyptian press before and especially after the 2011 uprisings. Most of the main owners of the firms that we classify as CFs are currently in court on corruption charges. Our data comes from the Orbis database and includes more than financial 200 variables providing financial and ownership information on 225 public companies in the case of Egypt. Stock price markets information comes from Bloomberg and DataStream. In the end, 116 companies matched both databases.

⁵ In particular, a binding constraint to growth for ambitious firms was the 5% limit on bank equity per firm.

⁶ But the market remained concentrated among some big players – for example, the capitalization of the ten largest companies was about 50% of the total market capitalization in 2010 (Feyen 2010).

⁷ Wurzel (2004) quotes an influential businessman on this issue: “If there is a problem, it is better to do directly to the government, to one minister, or to the prime minister. He is accessible, so there is no need for organizational interference”.

Relying on common knowledge makes eminent sense in the Egyptian case, since it is also this knowledge that drives the stock market. There are however possible drawbacks with this approach that we need to keep in mind as we interpret the results of the analysis. It seems likely that what we are capturing are the most salient connections. One implication is that we are unable to estimate the *total* value of connections -- but this is an impossible goal anyway given that listed stocks are only one component of the Egyptian economy.⁸ Even a partial set would give indications on how connections are valued *relative* to the size of firms, and how CFs behave. A more problematic implication relates to selection bias. It is probable that firms with connections who exhibit superior performance end up being classified as connected, whereas less successful ones are not. But in this case, the control group of NCFs would suffer from an attenuation bias, being polluted by the inclusion of firms which enjoyed connections but are not identified as connected. Thus, it is not possible to identify the sign of possible biases a priori.

CFs are present in construction, services, textile, and metals, which are mainly (except textile), protected sectors serving internal demand rather than exports. NCFs are also in these sectors but with firms of smaller size (see Table 1). The stock market value of these 116 largest firms on the EGX fluctuated during 2008-11 between \$42 and 64 billion (at market exchange rate) - the value of our group of CFs fluctuated between \$16 and \$30 billion, representing 47% of the total at the highest time, and 38% at the lowest. Table 2 shows that this was largely explained by the phenomenal growth in the size of CFs – in 2003, the median CF was only 10% larger than the median NCF; by 2010, the asset size differential grew to seven times. As a result, the group of CFs came to be significantly represented in the Core 30 firms (the 30 largest firms on the EGX) – 10 of our 22 CFs were in this group in 2010.

Our main focus is the popular uprising that started on January 15, 2011. The market closed between January 27 and March 23, 2011. We focus on a tight window around the main event starting 5 days before the market closed and lasting until 5 days after it re-opened. We also look at two other well documented events related to rumors about the health of President Mubarak.⁹ These are:

- August 29, 2007. Mubarak gave an interview to the Ahram on August 31st calling on the public to ignore rumors in the media about his deteriorating health.

⁸ Egypt has a large informal sector and an “army” economy which are poorly connected to the formal corporate sector. The army firms are thought to be large (estimates go from 10 to 30% of the economy and it is connected to international and Arab capital, but it remains secretive and unwilling to follow the capital market requirements about financial transparency.

⁹ We also looked at the behavior of stock prices around the elections of 2012, which were hotly contested between supporters and opponents of the old regime, with the opposition (in the person of Mohamed Morsi of the Muslim Brotherhood) winning by a small margin.

- June 17, 2004. Mubarak appeared on TV to contradict rumors about his death following the cancellation of a scheduled meeting with the Palestinian Prime Minister.

In each of the three events, the market fell as a whole, indicating that the event had economy-wide implications (see Table 3). The market lost a whopping 20.2% (cumulative) during the first quarter after the 2011 Revolution (the long Arab Spring event window). The other events related to Mubarak’s health were relatively minor in comparison – the market falling by 2.4% in August 2007, and 4.2% in June 2004. In all cases, the CFs, as a group, lost a larger part of their value than NCFs. On average, connected firms lost 31% during the first quarter of the Arab Spring, while NCFs lost only 16.3%.

The market equity price indexes are depicted in Figure 1. It is interesting to observe that the market early losses in the month after the Uprisings in the beginning of 2011 are not recovered by the end of 2012, suggesting that the market did not over-react initially and/or that the new information that came out after the first quarter did not affect the initial valuation of connections.

But the differences in the averages price movements among CFs and NCFs reviewed so far do not necessarily reflect only differences in their levels of connections. They can also reflect differential firm or sector specific sensitivities to market or to revolution risks. We thus make three corrections to account for such differences, one related to the sensitivity of firms to the aggregate shock experienced by the economy, one to firm characteristics that may affect their specific exposure to the revolution, and one to sector specific risk connected to the revolution.¹⁰

The large market decline indicates that the sudden departure of Mubarak was expected to lead to period of uncertainly and instability, with possible risks of dramatic shifts in power within society, and thus, possible large changes in economic policy. The question here is how each stock would be expected to react to market movement. To answer this, we start by estimating a simple market model to factor out price changes that are directly related to the movement of the market index as follows:

$$(1) \text{ CAR}(i) = R(i) - \text{beta}(i) * R_m + e(i)$$

where R_m denotes the market return. The estimated betas (not reported) tend to be highly significant, and more than half of them are above 1.5 or below 0.5, indicating that the structure of abnormal returns deviates a lot from the uncontrolled returns. The calculated “abnormal returns”,

¹⁰ To the extent that connected firms are losing advantages in ways that can be expected to benefit their competitors (who could receive more credit in the future, or be able to compete more fairly for a larger market share), we can also expect those to gain some value in parallel.

which are in excess of what the return predicted by the market model, are also shown in Table 3. The CARs are deviations from the market trend – they can be positive or negative and the overall effect is near zero.¹¹

But in response to a shock with such multi-dimensional implications, it is likely that a single risk dimension (market risk) is insufficient to capture all the risks -- for example that there is a likelihood that alcohol would be prohibited in the future if the new regime becomes more conservative religiously (the two beverage related stocks did collapse), or that labor strikes will become more prevalent during the transition thus affecting performance in all labor intensive sectors, or that sectors connected to land will suffer as a result of the controversies over the acquisition of Government land by firms in sectors that use land more intensively. We therefore control in the regressions below for sector fixed effects. We also ran a regression that controls for firms characteristics – their size, market share in their industry, and debt to equity ratio. The resultant coefficients will be taken to be *conditional* on firms' characteristics, recognizing that this entails a selection bias, since CFs could have acquired more favorable levels for these variables *because* of their connectedness.

We use median regressions because corporate data is noisy, and so averages can be quite misleading and medians are a better measure of central tendencies. The interpretations of the coefficients are similar, except the result of a median regression represents the expected value for the median firm, instead of the average firm in a standard OLS. We estimate regressions for each of the events separately of the type:

$$(2) \text{ CAR } (i,j) = a + b \text{ CF } (i) + c (\text{Firms controls } i) + d \text{ SEC } j + x (i,j)$$

where CAR (i,j) is the excess return of firm i in sector j, and CF is a dummy that takes the value of zero for NCFs and 1 for CFs). Firm Controls include size of firm (measured by the size of their total assets), whether it belongs to the top 30 firms on the EGX, the debt to equity ratio, and the market share within the industry (as a share of the firm's assets in total assets in its sector). SEC is a vector of sector dummy variables, and x is the error term.

The results are in Tables 4. The coefficient b is significant in the 2011 and 2007 events, but not in the 2004 event. During the Arab Spring in 2011, the stocks of the CFs fell on average by 20.5% points (unconditionally), and by 23.4% points (conditional on firm characteristics) *on*

¹¹ We will see below that CFs have high leverage, and on this score, they would be expected to react strongly to the market decline. This high riskiness should in theory be reflected in higher betas relative to the market return. It is the case? We checked by running regressions of the type $b_i = f(\text{CF}, \text{case30}, \text{sector})$ – we found that being connected adds 0.32 to betas in 2010, and 0.2 in 2009, both effects being significant at 5%.

account of connections, in addition to firm specific and sector effects experienced by firms. The 2007 event was also important – CFs lost between 6.8% (unconditionally) and 8.8% (conditionally) on account of their connections.

Some of the firms' characteristics also have significant effects. In particular, the values of large firms fell by *less* in 2011 (as measured by firm size) and in 2007 (as measured by being part of the case30 group). This shows that unlike the CFs, *large firms* were at an advantage during these politically fragile moments. On the other hand, firms with larger *market shares* lost more value in 2011 (controlling for their level of connections) – possibly, the market expected that anti-monopoly laws would be applied better after Mubarak's demise.

After the 2011 event, the probability that Mubarak will survive as a head of state was close to zero. Even though the probability that connections will persist was not likely to be as low (and indeed, a candidate close to Mubarak was a close second at the subsequent presidential election of 2012), the about 23% discount on CFs, while an under-estimate for the total value of connections, must have been quite close to the full value. To give a sense of magnitude, since the market value of the connected stocks was about \$30 billion in 2010, the valuation by the market of the total benefit of the political connections of these 22 firms was about \$7 billion.¹²

We can also compare what we learn from the two significant events and speculate about "amplification" effects. The overall market fell by 1.8% and 18% respectively in the 2007 and 2011 events. Assuming that the probability of Mubarak demise in 2011 was 100%, we can estimate linearly that the market must have expected the probability of Mubarak's demise in 2007 to be around 10%. If we applied these probabilities to the total value of connections (taken to be the losses of the CFs in 2011, which are about 20% of their value), then we can compute that the CFs should have fallen by 2% in 2007. In reality, we have estimated that the value of the CFs fell by 6.8% in 2007. Since we have a strong indication that the market did not perceive this group of firms to be connected in 2004, we are led to believe that the market over-reacted to its discovery of connectedness risk in 2007, re-pricing the future expected returns of CFs in a more risk averse way. This possibility is also reflected in Figure 1. Before the 2007 event, the CFs stocks sold at a premium over the NCFs, but this premium disappeared during the event as compared to the 2002 base year pricing.

¹² In the day of the presidential election of 2012, the whole market went up after the results were declared, and the prices of the CFs went up by an additional 2.7 percent relative to the NCFs. This seems to suggest that the market was expecting, with some probability, that the elections would lead to chaos which would be especially hurtful to the CFs, but that their successful conclusion were met with a positive market adjustment that benefitted the CFs more.

In sum, we find that the group of CFs that we identified was perceived by the market to be connected politically in 2007, but not in 2004, indicating that as a group, their connectedness is a recent phenomenon. During the Arab Spring of 2011, they lost on average 23% of their value. This means that the value of connectedness that we estimate is very large – much larger than found in other studies which tend to be in the range of 3 to 8% (Boubakri et al 2008). This indicates that “cronyism” must have been much deeper in Egypt than in the countries studied by the corporate literature so far.

3. Corporate Performance of Connected and Non-connected firms

In this section, we investigate some of the mechanisms through which advantages and privileges were provided to the connected firms. A large global literature has looked at how firms may gain from political connections, with most studies finding strong debt effects, and to a lesser extent, tax, market power, bail-out, and state favor effects. Studies that show the connections allow for larger debt include Cull and Xu (2005) for China, Johnson and Mitton (2003) for Malaysia, Khwaja and Mian (2005) for Pakistan, and Leuz and Oberholzer-Gee (2006) for Indonesia. Some of these studies also find higher default rates and higher occurrences of bailout. In their panel event study, Boubakri et al (2008) shows that firms increase their indebtedness after establishing connections. Other studies show other effects such as more government contracts (Goldman et al, 2008), and more regulatory protection (Kroznor and Statman 1998).

Faccio (2010) is an especially rich study because it focuses on a global panel of several thousand firms in 47 countries. It finds that CFs have higher leverage, pay lower taxes, have stronger market power, are bailed out more often and that the magnitude of privileges is larger in more corrupt and in poorer countries. One limitation of her, and similar work, is that because they do not study changes through time, it becomes impossible to establish causality – Faccio recognizes that while connections may explain these differences, it is also possible that this type of firms is more likely to establish connections. The findings of Faccio’s paper also provide us with a set of comparators against which it will be useful to assess our Egypt results. In particular, she finds a significant leverage advantage of 3 to 7 points (depending of strength of connection) for CFs (and at up to 17 points for Thailand and 10 for Russia and Malaysia, the countries were the effect largest in her sample). She also finds a sizable but generally not significant tax effect, and a significant extra market share secured by CFs of about 4 percentage points. In her sample, CFs are on average 3 times larger than NCFs.

Given data limitations, we are able to investigate here three possible types of privileges: access to debt, payment of taxes, and market power.¹³ Looking first at the raw data, the simple averages reported in Table 2 suggest that CFs have higher levels of debt relative to the size of their equity compared to NCFs, and more market power, but seem to pay broadly similar taxes. But again, these apparent differences may be due to fact that CFs tend to be large and that large firms enjoy special treatment by the credit market, or that they are over-represented in sectors that use up a lot of debt. To control for these factors, and learn from the variation we have in the sample where many of the large firms are not connected, we run the following median regressions:

$$(3) \text{ LHS} = f(\text{connectedness, size, market share, case 30, year, sectors, error})$$

where the LHS dependant variables are in turn the firms' debt to equity ratio (total debt to shareholder equity), market share (measured in terms of size of firm's total income or assets relative to the total of all the firms in the firm's sector), size of assets, and tax payments (over income). We run both panel regressions over 2003-2010 as well as year by year regressions. We now discuss in turn the results relating to tax, debt, and market power (see Tables 5a for the panel regressions, and 5b for the results of the year by year regressions).

Tax effect: there is no evidence that CFs paid fewer taxes than NCFs. The CF coefficient is not significantly different from zero in all regressions. This seems to tell us that some institutions were not biased towards the CF and presumably functioned well even under Mubarak's reign. Note that on average, firms in Egypt paid about 17% of their net income in taxes (but the coefficient is not significant, indicating a lot of variability around this average). This is a low rate by international standards, and is a measure of how pro-capital fiscal policy was in the late Mubarak period. For example, in Faccio's (2010) international sample, firms pay between 29.7 % (for CFs) and 32.7% of their income (for NCFs).

Debt. First, we look at the unconditional effect of connectedness, controlling only for whether the firm is part of the top 30 firms on the EGX. We find that more connected firms borrow more -- the CF's coefficient is positive, very large, and highly significant, and it indicates that CFs have a debt to equity (thereafter, D/E) ratio of about 110 points more than NCFs, given their sector of activity. This is an extremely large advantage, larger advantage than the highest performer in Faccio's (2010) sample.

¹³ This means in particular that we will not be able to assess directly the gains CFs may have made from cheap privatizations or land sales. However, we will be able to capture the indirect effects if such privileges allowed them to gain additional market share.

We also have information on time variation, which can help in assessing causality. The time dummies in the panel regressions reveal that the D/E ratio of the average firm went down a lot over time – by 2010 for example, the D/E ratios are lower than those in 2002 (the base for the time dummy) by 97 points.¹⁴ In addition, the year by year regressions reveal that the debt advantage enjoyed by CFs has fluctuated over time at relatively high levels, between 70 and 130 points. So the D/E ratio of CFs and NCFs have diverged over time. Table 2, which reports the median values for both groups, shows that from about equal D/E ratios in 2004 at about 100%, the median D/E ratio of the CFs rose by 2010 to 143 points, while that of the NCFs declined to 55 points. In terms of overall lending, of the nearly \$24 billion increase in total corporate debt in our sample between 2003 and 2010, a whopping \$21 billion went to CFs alone! By 2010, Table 2 indicates that the 22 CFs were receiving an extraordinary 74% of the debt going to the 116 firms of our sample. So it is quite clear that being connected led to much larger borrowing over time, and not the other way around.

We are not suggesting causality here. Indeed, it would be surprising that deregulated banks, especially those in the private sector, could be influenced directly by politicians to lend more to CFs. Instead, banks must have found it more profitable to lend to CFs. Credit was highly constrained in Egypt during much of the period -- we see signs of credit rationing in the low interest rates charged (see Table 2), and more generally, in the low variability in interest rates across all firms that borrow. In order to understand which firm characteristics lead to more lending, we re-run the D/E regression, controlling for possible determinants of this lending – firm size, and firm market share (in its sector of activity). Both effects turn out to be positive and significant (see Table 5a). That lending (as a share of equity) tends to be higher for larger firms suggests that private banks are maximizing their profits by rationing in this particular way, which minimizes their transaction costs but leads to a more concentrated and thus risky loan portfolio with a low number of high value clients.¹⁵ This type of behavior is well known for analysts of Egyptian banking, and has formed the core of a recurrent criticism of private banking in Egypt (and elsewhere in the Middle East).¹⁶ That the market share effect is also significant is an equally revealing regularity. It suggests that banks were focusing their loans not just on large firms, but on the firms that had the higher market shares, i.e the more dominant firms, which suggests that they believed that these firms would be more profitable (we do uncover such a relation below). Controlling for these two factors reduces the size

¹⁴ This reflects a shrinking of lending by banks to the private sector as banking regulations became tighter, and also, as fiscal deficits rose and the government started to take a larger share of the credit available (World bank, 2009).

¹⁵ On the other hand, firms that are part of the Case 30 borrow less – they seem to have a larger equity base on this particular account.

¹⁶ For example, see Owen, p130, on banking concentration, and World Bank 2009 on the very small share of credit received by SMEs. Another argument made in the context of Egypt is that some of the main new private banks became partly owned by connected businessmen (Skafianakis 2004).

of the CF effect but does not eliminate it, suggesting that connections also matter through other channels (however, the evidence we find below does not support the view that the market expected that these privileges would result in state direct bail-out when CFs fail).

Market share: Larger firms do not necessarily have larger market shares - -they could simply be operating in larger sectors. But do firms with connection tend to enjoy larger market shares? The results in Table 5a clearly indicate that CFs enjoyed extra market power relative to NCFs on account of their connectedness, controlling for size and for being in the case³⁰. CFs tend to have an extra market share of 8.3 percentage points -- in *addition* to a positive size effect and to varying sector effects. The size of the CF effect is more than double that found by Facio(2010), indicating again that the extent of privileges seems extremely high in Egypt relative to comparators.

Moreover, inspection of the time dummies in the panel regression, and the coefficient of the year-by-year regressions, indicate that while average market concentration fell over time, the CF premium remained at around 7-8%, and as a result, the difference between the market shares of the CFs and the NCFs grew over time. This is also evident when eyeballing the median values for the two types of firms in table 2. Thus, it is quite clear that, here too, CFs became more dominant over time, and not the other way around.

Here too, we hesitate to claim that connections caused the market share of CFs to rise, because we do not have direct evidence of the mechanisms used, but the case is stronger than for borrowing. It is not possible to disentangle the effects of market size and borrowing, one supports the other, and indeed, both must have operated in parallel to some extent given that public banks remained important players even after the sector was reformed. Nevertheless, the evidence is broadly consistent with a story where the main privileges were those that allowed certain firms to increase their market share, and that in turn, this allowed them to get larger loans from the banking sector, in large part on voluntary terms – they were simply perceived by private banks to be among the best customers. In contrast, the cronyism of the 1990s was much more centrally connected with credit. Back then, banking was dominated by the state. The 1990s was a period of opening up of the economy and of privatizations, much of them financed through state banks. By the end of the decade, very large NPLs were accumulated in these banks (about 35%), necessitating a very costly bank recapitalization in 2004 (Osman, p138). In this context, several banks were privatized, and the share of private credit grew to over 50% of total credit. In the mid-2000s, several well connected firms were allowed to fail, and were not bailed out. Indeed, it is likely that “cronyism” had to adapt, shifting privileges from the capital markets to other areas that more directly strengthened the market power of CFs and increased state predation on NCFs, such as the granting of scarce land

(especially in the housing and tourism sector), the way regulations are applied (for example investment licenses), policy advantages such as trade protection and relaxed application of competition rules (especially in cement), and more generally, getting closer to political elites and benefitting from access to information and to problem solving when needed.

4. Successful Industrial Policy or Inefficient Cronyism?

In this section, we try to measure the performance of the system of privileges that we have uncovered in the previous two sections. State support to the CFs in Egypt could have been a successful tool for industrial policy. Successful industrial policy manages to align rewards with corporate performance. But equally, CFs may have underperformed, for various reasons. Shleifer and Vishny (1994) argue that politicians try to influence firms through subsidies and firms try to influence politicians through bribes. More generally, we can conceptualize state-business relations as an exchange of gifts between firms and politicians. In this relation, CFs obtain many advantages and this should increase their value. However, because politicians may care more about other skills than management skills (for example loyalty), these firms may end up badly managed. They may also have to return politicians' favors, for example by financing political patronage and political campaigns, and this would reduce their values. It is also possible that politicians are unable to discipline connected businessmen who could become very rich and increase conspicuous consumption and capital flight rather than investment.

Most country studies show that the benefits of connections tend to be greater than their costs – for example, Roberts (1990) and Goldman et al (2009) in the US, Ramalho (2003) for Brazil, and Ferguson and Voth (2008) for Nazi Germany. Similarly, Boubakri et al (2008) find that firms increase their financial performance after establishing connections. However, Faccio (2010, 2006) finds that in spite of the advantages they have, connected firms have a poorer performance in her panel (not an event study), with a lower RoA of about 2.4%. She speculates that those firms' values must have been low when firms became connected. But she also finds that the value of connections is country specific –the magnitude of the net benefits decline in poorer and more corrupt countries. At the limit then, it is possible that connections may destroy value in environments where political concerns dwarf economic considerations. One of the very few papers to uncover such a case is Bertrand et al (2007), who find that firms managed by connected CEOs in France create more jobs and pay higher wages than NCFs, but that as a result, they end up with less value than NCFs.

In the case of Egypt, a quick look at the data suggests that the close state-business relations that we have studied above may have been part of a successful Industrial Policy. CFs invested more than unconnected ones and they grew very much faster. Up to the revolution, many authors described the benefits of connections positively as “problem solving” in an environment that was naturally predatory and risky – the usual corruption as “oil in the wheel” thesis. To look more deeply into the issue of the effectiveness of policies, we need to compare the efficiency of investment in the connected and unconnected sectors.

In our data-set, we can only examine two (related) measures of profitability: the return on assets (RoA) and the return on equity (RoE). Both are book value measures – the RoA is given by net income before financing costs, divided by the total capital stock of the firm; the RoE is the net profit that accrues to the equity holders after financing costs are paid, divided by the book value of the equity (total assets minus debt). The median values of the RoAs and RoEs from 2003 to 2012 are in Table 2. They reveal important trends. First, the RoAs of CFs seem to decline relative to the NCFs over time. This is surprising given that these firms benefited from important privileges -- that their RoAs falls after the 2011 revolution makes more sense since they then lose their privileges. Second, unlike RoAs, the RoEs of CFs and NCFs were broadly similar throughout the period, and in some years, were higher among CFs. But as in the preceding section however, we need to look more carefully at the behavior of the RoAs and RoEs, controlling for firm, sector, and time effects, in order to extract a more precise measure of the effect of connectedness on profitability.

The main piece of evidence that needs to be looked at is the profitability of the CFs versus NCFs. The regressions that we run are similar to equation 3, with the ROA and the ROE on the LHS. The results are shown in tables 6a (panel) and 6b (year-by-year regressions). We find that CFs have a lower RoA with the effect at -1.6 percentage point (in the unconditional regression) to -2.8 points (in the regression conditional on firm characteristics), and both highly significant. This effect is large, given that the median RoA in our sample was within the range of [3.7%, 4.6%] during 2009-10. This is about the same size effect measured by Faccio (2010) in her international sample, but in our case, we had uncovered much more valuable privileges which would have suggested a smaller discount, if not a premium. On the other hand, there is no significant RoE advantage to CFs.

This important result is thus a priori quite puzzling, and it raise four key questions: (i) can it be explained by a size effect, since the CFs are larger firms, and thus may be simply experiencing decreasing return to scale? (ii) If not, could it be that CFs became connected because they were underperforming, or can we establish that political connections led to this difference? (iii) Why are there no differences among the RoEs? And finally, (iv) how do we reconcile the low ROAs of CFs

with the evidence we uncovered in section 2 that CFs lost value after the 2011 revolution? Let us take each of these questions in turn.

Are CFs' ROAs low because of a size effect? The “size effect” possibility is a positive state-business relation story, and is related to the “oil in the wheel” view about corruption as a second best solution that allow firms to get things done in inefficient bureaucratic environment (see Meon and Sekkat, 2005, for a review of this literature). Abdel-Latif and Schmitz (2010), make this case for Egypt, arguing that tight state business relations should be seen as “growth alliances” between businesses and policy-makers, which can help to solve particular problems related to the high cost of doing business environment, and that as a result, they end up enhancing investment and growth. In this narrative, Egypt's was in a messy state in the early 2000s, struggling to escape the weight of its past, and its leaders were trying hard to get the country to grow out of its weaknesses. A predatory bureaucracy and high levels of political risk kept investors away – they required high rates of return to invest in Egypt. Thanks to the state protection they enjoyed, a few dynamic entrepreneurs lowered their perceptions of risk and became willing to invest more. In this story, the 23% of equity value that was lost by CFs after the revolution reflects the fact that their assets became valued at the higher risky rate of return, given that these firms would now be subject to as much predation as the rest of the market. The story is also, at face value, consistent with observed corporate behavior: firms that are privileged by getting protection from predation would expand their operations, reach declining to scale levels of production, and accept lower returns.¹⁷

The simple way of testing this hypothesis is to control for firm size and market share in the RoA regression. As apparent in Table 6a, we find that larger firms tend to have lower RoAs and thus, firms do face decreasing returns, and so the lower ROAs observed among the CFs are explained in part by the fact that these firms grew larger. However, the CF effect persists (and even increases in size) after taking size into account (this is similar the results in Faccio, who also controls for size).¹⁸ More damning, we also find that a larger market share increases both the RoA and the RoE, i.e, that CFs take advantage of market size to develop market power, leading to higher profits. This is an important finding –political scientists working on Egypt often argued that privileges led to high profits through monopoly power (see in particular Sadowski, 1991, who studies the micro foundations of several markets, using ethnographic methods, to prove this point). The effect is also large for CFs: their RoAs increase on average by 1.5 percentage points on this account (19.5×0.06 , the MS median for CFs). This finding highlights that CFs under-performed *in*

¹⁷ In this narrative, access to credit does not have value per se as it is in excess supply – the constraints to growth are on the demand-side and are related to the high costs of doing business due to high predatory and political risks.

¹⁸ Related, there is also a premium for the top 30 firms, i.e, an effect that goes the other way – it thus seems that the top firms, as opposed to large firms, are at an advantage, perhaps because top firms are better managed.

spite of the fact that they tend to have market power which by itself increases profitability. So size actually helps CFs, and resorting to an argument about a “size effect” cannot explain why they end up with lower profitability overall.

Can we establish causality between connectedness and low ROAs? The second question is whether these firms were underperforming already when they became connected but improved their performance over time (which is the result found in Boubakri et al, 2008, in their international sub-sample of politically connected firms whose connection date could be identified), or whether their return fell *after* they became connected. Inspection of the time dummies in the panel regression reveals that for the sample as a whole, RoAs rose early on, but then fell declined after 2007. The yearly regressions show that the RoAs of CFs declined relative to those of the NCFs over time, and especially after 2007. Thus there is a clear trend of RoAs diverging over time, which can also be observed, but in less marked ways, from the uncontrolled median values in Table 2. This evidence then strongly suggests that profitability declined over time after connections were established -- we know these were established after 2004 and certainly by 2007 for this group of CFs).¹⁹ While this sequence of events suggests that causality is a possibility, we cannot establish clear causality again, as we are unable to observe the underlying mechanisms that lowered ROAs because our data does not include information about corporate expenses such as campaign contributions. In future work, an important hypothesis to explore should be that the electoral campaigns of 2005 and 2010, which were highly contested, imposed high costs on the CFs.²⁰

Why are the ROEs of CFs and NFs similar? That the ROEs on the other hand are similar between NCFs and CFs adds an interesting twist to the emerging story. RoEs can in theory get larger just by increasing leverage, as long as investments yield a return larger than the interest rate on loans, which is quite a likely scenario for most CFs given the low interest rates they faced (see Table 2). The interesting question in our context is why is it that we end up with ROEs *just equal* to those of the NCFs? One daring way to interpret this regularity is that CFs’s “declared profits” were *managed* by the CEOs of CFs in ways to keep minority shareholders indifferent between holding CFs or NCFs. The “excess” profits were tunneled out of these firms in various ways, including to campaign contributions as suggested above. That some of the head of crony firms grew immensely rich also bolster this hypothesis.

¹⁹ There is another, more circumstantial story, which could explain these movements. The year 2009 corresponds to a recession year in Egypt, due to the global financial crisis. It may be that the CFs were simply not lucky, instead of being badly run, having expanded heavily just before the global crisis hit. But close inspection of the macro data reveal that this is not a convincing explanation for the under-performance of the CFs: Egypt’s growth fell from 7.3% in 2008 to 4.7 in 2009 before bouncing back in 2010. Moreover, the value of the stock market indices rose after 2009 (see Figure 1).

²⁰ Ahmad Ezz for example was accused by the opposition of contributing massively to both campaigns, which he managed (Werker et al, 2012).

Why then do CFs lose value in the 2011 event? After all, if their return on asset rises when they free themselves of political connections, one could expect their value to actually rise when this connection is severed. But clearly, this cannot be always true. For example, CFs can get stuck with bad managers, even if they would save on political bribes in the future. There can also be hysteresis in the advantages that they got in the past – for example, they are unlikely to lose market shares easily once they are established, and they cannot be expected to repay a large fraction of their high debts to their bankers even if they become less profitable. A more convincing reason that we need to explore is that they may have been priced at a premium relative to NCFs in the past, in ways that reflected large future growth opportunities and the possibility of future bail-outs, and that it is the loss of this pricing premium which explains much of the price decline in the 2011 event. The way the market “prices” earnings is captured by the price to earning ratio (PER). Inspection of Table 2 reveals that median PERs were much higher for the CFs than for NCFs.²¹

But were PERs really different among the two categories of firms once firm, sector, and time effects are controlled for? In order to answer this, we ran regressions similar to (3) for PERs. Formally, the PER is defined as the market value of the firm (which we evaluate at the average quarterly price), divided by total earning. The results of the PER regressions are in tables 6a and 6b. In the panel regression, we find that the CFs traded at a premium PER of 7.7 points during the period 2007-10 (Table 6a), when controlling for size and market share.²² These results then suggest that much of the value that was lost in the 2011 event was the pricing premium enjoyed by the CFs until that date, a reflection not of higher earnings, but rather, of expectations of higher earnings in the future (relative to NCFs), probably because of faster expected growth.²³

These four points taken together paint a coherent picture of low performance for CFs, but one that is consistent with the loss of market value when connections are lost, both because of possible hysteresis in some of the privileges, and the loss of the more generous market pricing in the past. Can we learn more from the market reaction in 2011 about how these factors influenced the market reaction? In other words, is there sufficient variability among our 22 CFs to learn about the extent to which their price decline was associated by the market with their D/E ratio, market share, and PER?

²¹ Also, rising PERs over time would benefit minority shareholders – especially if they held the stocks over long periods over which the PERs were rising. As can be seen in Figure 1, holding a weighted portfolio of CFs and NCFs produce similar returns until the 2011 event.

²² The yearly regressions show that the PER premia were high in 2007 and especially 2008. We do not have stock prices before 2007, and so cannot extend this analysis for the more distant past.

²³ Note that we find that the PER decreases in the market share variable. This suggests that the market does not expect a “too large to fail” bail-out advantage to dominant firms. Instead, firms with larger market share seem to be perceived as more risky, perhaps because of the monopoly status that they enjoy.

We therefore re-ran the 2011 event study by including multiplicative terms for the main corporate variables with the connectedness dummy, in the following form:

$$(4) \text{ CAR } (i,j) = a + b \text{ CF}(i) * D/E + c \text{ CF } (i)*\text{MS} + + d \text{ CF } (i)*\text{PER} + e \text{ SEC } j + x (i,j)$$

The results are shown in table 7. They are surprisingly rich and they both confirm and enrich some of our key finding above. They reveal that prices fell more for firms that had higher market shares and higher PER, and so suggest that for the market, these values were driven by the loss of CFs of their monopoly power on the one hand, and favorable pricing on the other. When valued at the median CFs, the loss on these two accounts adds up to a decline in the value of these stocks of about 30% (- 0.605 * 8.5+0.02*1).

But on the other hand, the market prices were *boosted* for firms that had higher debt. This suggests that the market believed that higher debts give these firms a bargaining advantage over their banks, a too large to fail effect. This is moreover a large effect, which adds up to 19.3 percentage points at the CF's median (0.141*137%). Recent developments confirm that the market was right. While there has been some extent of deleveraging after the 2011 event, highly indebted firms did relatively well and became even more leveraged, even though their profitability collapsed (see table 3).

In sum, it is apparent that the return on assets of CFs declined after political connections became tight, which for this group, must have happened with the Nazif cabinet of 2004, which included many of the top businessmen as ministers. The RoAs of the CFs were smaller than those of the NCFs, especially after 2007, in spite of their profitable market power, but they were nonetheless positive. This indicates that CFs were either mismanaged, or that part of their earnings were tunneled out. In the big picture, capital was being misallocated in the sense that it would have produced higher economic returns if it went instead to the non-connected sector. But minority shareholders were not expropriated as they benefitted from higher leverage and a premium on the pricing of these earnings. When the market fell in early 2011, it was mainly this premium that disappeared, plus part of the value of these firms related to their market power, which the market seems to believe will be lost. However, their large borrowings seem to be shielding them from quick deleveraging, at least so far.

5. Concluding Remarks

The paper has focused on a set of large corporations in Egypt and has studied empirically the magnitude, mechanisms, and effectiveness of political connections. It clearly shows that CFs had access to valuable privileges, yet they did not perform as well as the NCFs. Our results corroborate the view in political science that the main constraint to economic growth in the Middle East has been political rather than economic per se. This view suggests that the Arab revolutions, by shifting the political constraint, can end up having enormous impact on growth and development. The hope is that more open political systems would eliminate the need for the systematic granting of privileges to business insiders and foster more competition and efficiency, and thus to generate more jobs and growth.

We used a publicly available data-base of publicly traded Egyptian firms, and so some of our results could have been found before the 2011 revolution. But it is the event study that allows us to verify, with some degree of confidence that our information on the nature of connections bear some resemblance to reality, based on information revealed by the market. While the identity of the closely connected businessmen in Egypt was well known to the Egyptian public and to financial markets before the revolution, it the ongoing trials, and the fall in their market values, that makes the claims about unfair treatment more credible. Market information has also allowed us to triangulate and confirm for example the important of market power of the cronies. In this sense, our approach is not easily replicable elsewhere.

We have focused on only one element of the growth story, that of the efficiency of investment. If credit has gone instead to the NCFs, it would have yielded an additional 2.8% return per year, and thus should have created more jobs. Clearly, while this is not insignificant, the effect is small relative to the economy and is a level effect only.

But there may have also been more dynamic effects at play that magnify the cost of the political constraint on growth, and these should be investigated more carefully in future research. First, exclusionary mechanisms must have reduced entry, and privileges must have reduced creative destruction. Indeed in our sample, the NCFs essentially do not grow in the last decade. The connected firms had an advantage of 20% – we can think about it as a subsidy of 1/5th of capital, and this serves to exclude others. With fewer threats from frontier entrants, incumbents have fewer incentives to invest in innovation and push the efficiency frontier (Agion et al, 2009). We do not have sufficient detailed information about our firms to look at productivity gains – our sense is that these must have been low among CFs, since their profitability is low in spite of privileges. But more direct tests, using existing enterprise surveys would be very helpful to understand better the

dynamic impact of cronyism, both on incumbent and their competitors. One could look at variations among sectors using a cronyism index that could be constructed from the type of data we made use of. Additionally, comparative case studies could be useful -- for example, it seems that cement was a competitive sector in Egypt, unlike steel. Since both industries serve the same construction sector, and both are capital intensive, an evaluation of their differential dynamism can reveal much about the cost of political connections.

Second, industrial policies which are seen by many analysts as an essential part of a successful development drive in the Middle East, in parts to offset the over-valuation of the exchange rates introduced by oil and remittances revenues, cannot work effectively in environments dominated by rent-seeking. This too can explain why growth has remained low in the past.

Third, the political costs imposed by cronyism are likely to have been huge. Extreme patronage went hand in hand with the repression of opposition, and this mix of sticks and carrots allowed the autocratic regimes to survive much longer than they would have otherwise. Here too, future research will be important in documenting better the types of repayments of favors that crony firms engaged into, and how this affected politics.

Fourth, the unwillingness of autocrats to liberalize polity and take political risks ended up generating enormous social discontent, and thus subjecting the connected corporate sector to larger political risk *ex ante*. That private investment in Egypt has struggled to stay above 10% GDP, and that capital flight has been estimated at over \$5 billion/year (Dev and Corso, 2011) is a testimony that risks was perceived to be high.

On all these fronts, further research would be needed. Besides clearer macroeconomic accounts, much can be done on the political side to trace the networks of influence, and on the economic side, to look more carefully at enterprise surveys. In some surveys, firms reveal what their main constraints to growth are, and it can be possible to use these revealed preferences to guess the closeness of firms to the state. This would then allow looking at the differential behavior of firms, including testing whether crony behavior in particular sectors taxes the dynamism of this sector.

Figure 1. Evolution of valuation (indices) for market for CF and NCF 2009-2012

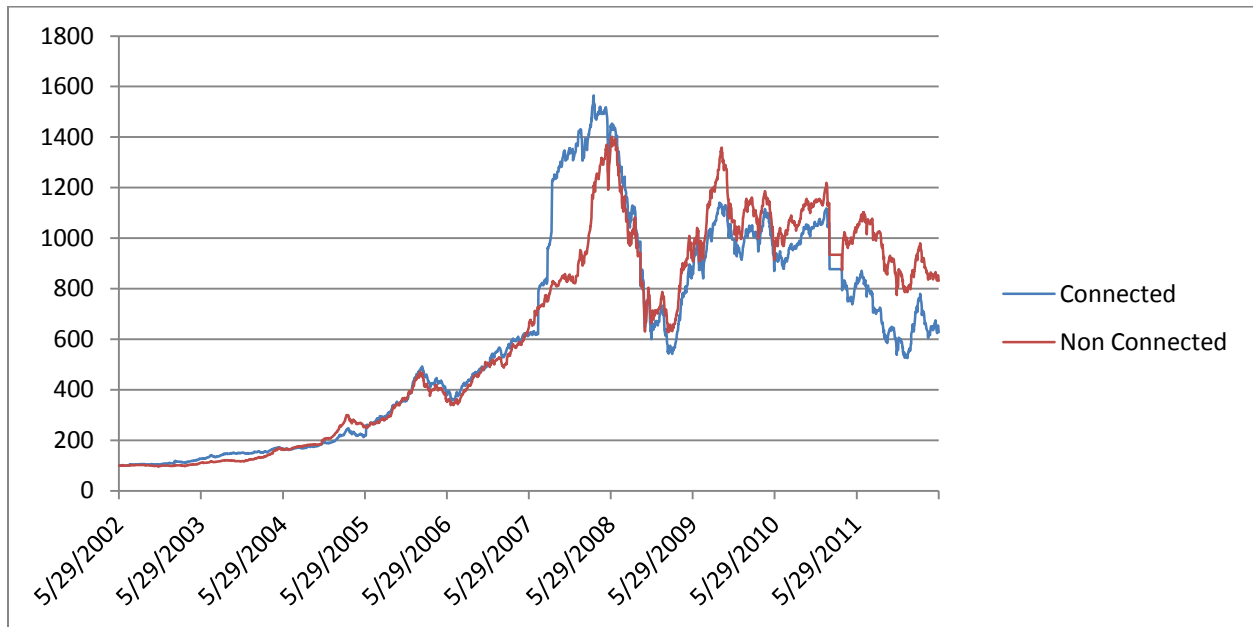


Table 1. Sector characteristic of Connected Firms and Non Connected Firms (# firms)

Sector	Services	Metals	Primary	Wholesale	Construction	Chemicals	Textile	
NCF	19	7	5	2	25	4	13	
CF	6	2	0	0	6	0	3	
Sector	Food	Banks	Hotels	Transportation	Machinery	Publishing	Insurance	Total
NCF	8	4	3	1	1	1	1	94
CF	3	0	1	1	0	0	0	22

Table 2. Evolution of the median of main corporate ratios, percentage points and \$ billion

	2004	2005	2006	2007	2008	2009	2010	2011	2012
%Total debt									
CF	47.88%	53.23%	62.13%	68.72%	70.74%	73.39%	73.78%	72.95%	62.43%
NCF	52.12%	46.77%	37.87%	31.28%	29.26%	26.61%	26.22%	27.05%	37.57%
Market share									
CF	7.74%	5.77%	4.63%	4.82%	6.45%	7.41%	8.52%	8.96%	8.68%
NCF	5.36%	5.80%	4.49%	2.92%	3.46%	3.09%	3.19%	3.55%	4.39%
Int. rate									
CF	4.65%	5.15%	3.31%	4.18%	4.19%	3.25%	2.76%	2.51%	2.58%
NCF	4.20%	4.21%	3.93%	4.03%	2.40%	2.71%	2.56%	1.56%	1.48%
RoE									
CF	20.95%	24.20%	24.80%	20.03%	22.76%	13.37%	12.47%	9.04%	8.86%
NCF	19.66%	22.41%	21.35%	20.03%	22.76%	14.89%	14.42%	9.74%	9.09%
RoA									
CF	8.64%	9.55%	8.61%	11.63%	6.25%	3.67%	4.06%	2.79%	2.62%
NCF	8.45%	9.47%	8.48%	11.63%	6.91%	4.01%	4.57%	3.52%	3.28%
PER									
CF	.	.	.	10.14%	17.20%	13.43%	13.07%	15.01%	12.05%
NCF	.	.	.	10.05%	11.67%	10.01%	10.44%	9.85%	9.16%
D/E ratio									
CF	91%	121%	92%	99%	124%	116%	137%	143%	163%
NCF	100%	91%	78%	69%	60%	50%	55%	49%	49%
Assets (\$Bil)									
CF		0.10	0.10	0.11	0.13	0.13	0.14		
NCF		0.11	0.28	0.44	0.82	0.91	1.00		

Table 3 Cumulative and abnormal cumulative returns for CFs and non-CFs, various event windows

		Elections 2012	AS long	AS short	Aug 2007	July 2004
All (non weighted)	CR	4.38%	-20.20%	-15.00%	-2.40%	-4.20%
	CAR	0.75%	12.50%	3.70%	-1.40%	-2.10%
All **	CR	2.78%	-26.00%	-17.90%	-1.80%	-3.40%
	CAR	-	-0.50%	-0.40%	-0.20%	-1.50%
Connected **	CR	6.11%	-31.00%	-23.00%	-3.50%	-3.50%
	CAR	0.51%	-5.70%	-7.70%	-8.50%	-5.10%
Non connected**	CR	3.82%	-16.30%	-11.00%	-1.70%	-3.10%
	CAR	0.83%	16.70%	6.50%	0.10%	-1.80%

Note: Event windows start 5 days before event and close 5 days after event. AS long is one quarter after the event.

** = weighted.

Table 4. Event analysis: explaining CAR, with Fixed Effects for sectors

	Spring, 2011	Spring, 2011	Aug 2007	Aug 2007	2004	2004
CF	-0.204***	-0.234***	-0.0683*	-0.0876*	-0.0252	-0.0130
	(0.0599)	(0.0747)	(0.0399)	(0.0454)	(0.0220)	(0.0302)
Case30		0.0214		0.100**		-0.00249
		(0.0725)		(0.0468)		(0.00458)
Market share		-0.664**		-0.102		0.0255
		(0.296)		(0.133)		(0.0290)
Size		8.2e-08*		0.004		-3.8e-08
		(4.4e-08)		(0.0112)		(3.6e-08)
D/E ratio		0.0275		0.00162		-0.0130
		(0.0227)		(0.00949)		(0.0302)
Constant	0.125	0.179	-0.194	-0.195	-0.0904	-0.0646
	(0.168)	(0.235)	(0.134)	(0.157)	(0.0701)	(0.0914)
FE	sectors	sectors	sectors	sectors	sectors	sectors
Observations	108	94	90	74	83	69
Rsquared	0.217	0.311	0.161	0.272	0.204	0.174

*** p<.01, ** p<.05, * p<.1

Notes (apply to next tables as well): D/E is Shareholder equity (book) minus intangible assets over total liabilities; market share is share of total income of a firm over the total income of all firms in the industry; Tax ratio is tax over net income; Case 30 indicates that firm belong to the top 30 largest firms on the STX; Ln(assets) is the log of the total assets.

Table 5a. Panel regression for corporate behavior (wt Fixed Effects for sectors and years)

	DE	DE	MS	MS	Tax ratio	Tax ratio	L(assets)
CF	1.083***	0.911***	0.0833***	0.0627***	-0.0323	-0.0326	0.550***
	(0.167)	(0.174)	(0.0129)	(0.0121)	(0.0393)	(0.0436)	(0.175)
Ln(assets)		0.135***		0.0407***		0.00227	
		(0.0509)		(0.00279)		(0.00835)	
Market share		0.834*				0.0288	
		(0.452)				(0.0539)	
Case30	-0.51***	-0.766***	0.0650***	0.00344	0.0358	0.0193	1.809***
	(0.169)	(0.188)	(0.0131)	(0.0129)	(0.0401)	(0.0466)	(0.179)
Constant	1.677***	-0.468	0.640***	0.132***	-0.131	-0.176	11.25***
	(0.497)	(0.735)	(0.0376)	(0.0494)	(0.116)	(0.157)	(0.526)
2003	-0.121	-0.0489	0	0.0118	-0.0128	-0.0123	-0.531*
	(0.294)	(0.299)	(0.0216)	(0.0209)	(0.0749)	(0.0951)	(0.290)
2004	-0.0769	-0.0171	-0.00460	0.00535	-0.0283	-0.0142	-0.478
	(0.294)	(0.297)	(0.0214)	(0.0208)	(0.0733)	(0.0907)	(0.291)
2005	-0.270	-0.208	-0.00552	-0.00265	-0.0308	0.0151	-0.442
	(0.293)	(0.296)	(0.0213)	(0.0207)	(0.0696)	(0.0865)	(0.289)
2006	-0.500*	-0.459	-0.0108	-0.0142	-0.0227	-0.0180	-0.180
	(0.290)	(0.292)	(0.0210)	(0.0204)	(0.0690)	(0.0858)	(0.287)
2007	-0.644**	-0.631**	-0.0186	-0.0292	-0.0403	-0.0301	0.0122
	(0.286)	(0.289)	(0.0208)	(0.0202)	(0.0678)	(0.0839)	(0.282)
2008	-0.640**	-0.659**	-0.0216	-0.0408**	-0.0413	-0.0285	0.219
	(0.284)	(0.288)	(0.0207)	(0.0200)	(0.0676)	(0.0834)	(0.280)
2009	-0.89***	-0.907***	-0.0363*	-0.0584***	-0.118*	-0.106	0.406
	(0.283)	(0.288)	(0.0206)	(0.0199)	(0.0673)	(0.0826)	(0.279)
2010	-0.97***	-0.979***	-0.0368*	-0.0608***	-0.0378	-0.0249	0.441
	(0.283)	(0.290)	(0.0205)	(0.0201)	(0.0675)	(0.0830)	(0.279)
FE	Sectors, years	Sectors, years	Sectors, years	Sectors, years	Sectors, years	Sectors, years	Sectors, years
Observations	981	943	1,067	1,014	810	716	898
R square	0.123	0.144	0.706	0.758	0.033	0.040	0.289

*** p<.01, ** p<.05, * p<.1

Table 5b. Yearly regressions for corporate behavior (wt Fixed Effects for sectors)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
DE										
CF	1.290	1.350*	1.036	0.734	1.021*	0.963	0.741*	1.010***	0.872**	0.602
	(0.798)	(0.796)	(0.806)	(0.677)	(0.544)	(0.695)	(0.383)	(0.281)	(0.372)	(0.446)
RSq	0.314	0.217	0.163	0.143	0.224	0.128	0.253	0.365	0.274	0.248
MS										
CF	0.0601	0.078*	0.077*	0.0412	0.063*	0.08**	0.07**	0.0727*	0.078**	0.0629
	(0.04)	(0.044)	(0.041)	(0.03)	(0.034)	(0.037)	(0.035)	(0.038)	(0.038)	(0.03)
RSq	0.849	0.830	0.838	0.844	0.811	0.808	0.784	0.771	0.777	0.810
Tax										
CF				-0.072*	0.0480	-0.049	-0.145	0.0237	-0.089	
				(0.041)	(0.03)	(0.03)	(0.29)	(0.050)	(0.057)	
RSq				0.242	0.139	0.258	0.193	0.208	0.233	
Size										
CF				0.157	0.459	0.981*	1.098**	1.232**	1.181**	1.271*
				(0.571)	(0.551)	(0.545)	(0.524)	(0.530)	(0.549)	(0.721)
RSq				0.333	0.332	0.348	0.324	0.332	0.339	0.226

*** p<.01, ** p<.05, * p<.1

Table 6a. Profitability – panel regressions, wt Fixed Effects for sectors and years

	RoA	RoA	RoE	RoE	PER	PER
CF	-1.614*	-2.842***	1.681	-1.516	2.858	7.772**
	(0.838)	(0.842)	(2.206)	(2.242)	(2.259)	(3.868)
Ln(assets)		-0.893***		-0.646		-0.326
		(0.210)		(0.559)		(1.016)
Market share		19.46***		42.17***		-17.28*
		(2.179)		(5.818)		(10.35)
Case30	2.349***	2.493***	2.620	0.907	-3.504	0.976
	(0.838)	(0.880)	(2.198)	(2.343)	(2.199)	(3.963)
Cst	1.261	-0.0405	-0.962	-19.51**	15.18***	22.59
	(2.542)	(3.394)	(6.658)	(9.029)	(5.659)	(14.39)
2003	0.850	0.639	6.328*	6.704*		
	(1.442)	(1.430)	(3.786)	(3.805)		
2004	1.133	0.886	9.243**	9.265**		
	(1.446)	(1.422)	(3.796)	(3.782)		
2005	3.556**	3.527**	13.78***	14.20***		
	(1.438)	(1.417)	(3.776)	(3.770)		
2006	3.718***	3.780***	12.23***	12.71***		
	(1.422)	(1.397)	(3.741)	(3.724)		
2007	6.148***	6.778***	16.90***	18.21***		
	(1.397)	(1.381)	(3.668)	(3.671)		
2008	4.758***	5.579***	14.23***	15.67***	6.945***	19.18***
	(1.389)	(1.374)	(3.646)	(3.654)	(2.489)	(4.368)
2009	3.183**	4.248***	10.29***	12.12***	4.800**	6.094
	(1.379)	(1.370)	(3.619)	(3.643)	(2.442)	(4.410)
2010	2.788**	4.124***	7.443**	9.783***	1.810	5.492
	(1.379)	(1.382)	(3.611)	(3.667)	(2.443)	(4.440)
FE	Sectors, years	Sectors, years	Sectors, years	Sectors, years	Sectors, years	Sectors, years
Obs	1,049	1,013	1,041	1,005	427	493
Rsqr	0.160	0.225	0.088	0.140	0.133	0.126

*** p<.01, ** p<.05, * p<.1

Table 6b. Yearly regressions for Profitability variables (wt Fixed Effects for sectors)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
RoA										
Cf	0.582	0.118	0.104	1.160	-0.711	-3.497	-5.48**	-8.72***	-8.0***	-6.17**
	(2.829)	(3.374)	(3.296)	(3.413)	(3.074)	(2.599)	(2.385)	(2.630)	(2.582)	(2.490)
RSq	0.185	0.207	0.318	0.284	0.422	0.421	0.346	0.359	0.307	0.316
RoE										
Cf	0.686	-0.0621	3.991	3.839	1.769	-1.317	-4.944	-11.05*	-9.391*	-8.70*
	(7.352)	(6.880)	(7.296)	(7.309)	(5.448)	(6.986)	(4.724)	(5.643)	(4.985)	(5.029)
RSq	0.219	0.252	0.310	0.205	0.343	0.258	0.234	0.285	0.293	0.269
PER										
Cf					9.610**	33.66***	-3.707	-0.799	5.298	1.059
					(4.424)	(12.55)	(9.275)	(9.321)	(3.779)	(11.52)
RSq					0.342	0.462	0.076	0.123	0.205	0.083

*** p<.01, ** p<.05, * p<.1

Table 7. Decomposing the market reaction of CF (wt Fixed Effects for sectors)

	Spring
CF*DE	0.141***
	(0.0429)
CF*MS	-0.605***
	(0.197)
Cf*PER	-0.0204***
	(0.00493)
Constant	0.438***
	(0.149)
FE	sectors
Observations	76
R square	0.521

*** p<.01, ** p<.05, * p<.1

References

- Abdel-Latif, Abla, and Hubert Schmitz. "Growth Alliances: Insights from Egypt." *Business and Politics* 12.4 (2010).
- Aghion, P., Blundell, R., Griffith, R., Howitt, P., & Prantl, S. (2009). The effects of entry on incumbent innovation and productivity. *The Review of Economics and Statistics*, 91(1), 20-32.
- Ahram Online. Various issues
- Alley, April Longley. 2010. The Rules of the Game: Unpacking Patronage Politics in Yemen. *Middle East Journal* 64 (3):385-409.
- Beaugé, Florence. 2011. Orange Tunisie Passe sous la Tutelle de l'État Tunisien *Le Monde*, March 30, 18.
- Bellin, Eva. 2002. *Stalled Democracy: Capital, Labor, and the Paradox of State-Sponsored Development*. Ithaca, NY: Cornell University Press.
- Benchems, Ahmed. 2012. Morocco: Outfoxing the Opposition. *Journal of Democracy* 23 (1):57-69.
- Boubakri, N., Cosset, J.C., Saffar, W., 2008. "Politically connected firms: an international event study." Unpublished working paper. HEC Montreal.
- Bertrand, M., Kramaraz, F., Schoar, A., Thesmar, D., 2007. "Politicians, firms and the political business cycle: evidence from France." Unpublished working paper, University of Chicago.
- Cammett, Melani Claire. 2007. *Globalization and Business Politics in Arab North Africa: A Comparative Perspective*. Cambridge, U.K.: Cambridge University Press.
- Cammett, Melani Claire, and Ishac Diwan. *The Political Economy of the Arab Uprisings*. Perseus Books Group, 2013.
- Catusse, Myriam. 2008. *Le Temps des Entrepreneurs? Politique et Transformations du Capitalisme au Maroc*. Paris: Maisonneuve & Larose.
- Chekir Hamouda and Claude Menard. Barriers to Private Firm Dynamism in Tunisia: a Qualitative Approach. World Bank mimeo, 2012.
- Cull, Robert, and Lixin Colin Xu. "Institutions, ownership, and finance: the determinants of profit reinvestment among Chinese firms." *Journal of Financial Economics* 77.1 (2005): 117-146.
- Dillman, Bradford. 2000. *State and Private Sector in Algeria: The Politics Of Rent-Seeking And Failed Development*. Boulder, CO: Westview.
- El-Mahdi, R., Marfleet, P., editors. "Egypt: The Moment of Change." New York: Zed Books, 2009.
- Faccio, M., 2010. "Differences between Politically Connected and Nonconnected Firms: A Cross-Country Analysis." *Financial Management* 39, 905-928.

- Faccio, Mara. "Differences between Politically Connected and Non-connected Firms: A Cross-Country Analysis." *Financial Management* 39.3 (2010): 905-928.
- Faccio, M., 2006. "Politically-connected firms." *American Economic Review* 96, 369-386.
- Faccio, M., Masulis, R., McConnell, J.J., 2006. "Political connections and corporate bailouts." *Journal of Finance* 61, 2597-2635.
- Ferguson, T. and H.-J. Voth, 2008. "Betting on Hitler—The Value of Political Connections in Nazi Germany." *Quarterly Journal of Economics* 123, 101-137.
- Feyen, S., 2008. "Finances of Egyptian Listed Firms and the Performance of the Egyptian Stock Exchange." Unpublished working paper, The World Bank.
- Fisman, R., 2001. "Estimating the Value of Political Connections." *American Economic Review* 91, 1095-1102.
- Goldman, E., J. Rocholl, and J. So, 2008. "Political Connections and the Allocation of Procurement Contracts." Indiana University Working Paper.
- Haddad, Bassam. 2012. *Business Networks in Syria: The Political Economy of Authoritarian Resilience*. Stanford, CA: Stanford University Press.
- Hanieh, Adam. *Capitalism and class in the Gulf Arab states*. New York, NY: Palgrave Macmillan, 2011.
- Henry, Clement. 1996. *The Mediterranean debt crescent: Money and power in Algeria, Egypt, Morocco, Tunisia, and Turkey*. Gainesville, FL: University Press of Florida.
- Henry, Clement Moore, and Robert Springborg. *Globalization and the Politics of Development in the Middle East*. Vol. 1. Cambridge University Press, 2010
- Hertog, Steffen. 2010. *Princes, Brokers, and Bureaucrats: Oil and the State in Saudi Arabia*. Ithaca: Cornell University Press.
- Heydemann, Steven, ed. 2004. *Networks of Privilege in the Middle East: The Politics of Economic Reform Revisited*. New York: Palgrave Macmillan.
- Hibou, Beatrice. 2006. *La Force de L'Obeissance: Economic Politique de la Repression en Tunisie*. Paris: Editions de la Decouverte.
- Imam, Patrick A., and Davina F. Jacobs. 2007. Effect of Corruption on Tax Revenues in the Middle East. In *IMF Working Paper*. Washington, D.C.: International Monetary Fund.
- Johnson, S., Mitton, T., 2003. "Cronyism and capital controls: evidence from Malaysia." *Journal of Financial Economics* 67, 351-382.
- Kang, David. 2002. *Crony Capitalism: Corruption and Development in South Korea and the Philippines*. Cambridge: Cambridge University Press.
- Kar, Dev, and Karly Curcio. 2011. *Illicit Financial Flows from Developing Countries: 2000-2009 - Update with a Focus on Asia*. Washington, D.C.: Global Financial Integrity.

- Khan, Mushtaq H. 2010. *Political Settlements and the Governance of Growth-Enhancing Institutions*. London: School of Oriental and African Studies (SOAS).
- Kienle, Eberhard. 2001. *A Grand Delusion: Democracy and Economic Reform in Egypt*. London: I.B. Tauris.
- Kienle, Eberhard. "Reconciling Privilege and Reform." *Heydemann, Steven (ed) (2004)*: 281-96.
- Khwaja, A.I., Mian, A., 2005. "Do lenders favor politically connected firms? Rent provision in an emerging financial market." *Quarterly Journal of Economics* 120, 1371-1411.
- King, Stephen Juan. *The new authoritarianism in the Middle East and North Africa*. Indiana University Press, 2009.
- Kroszner, R.S. and T. Stratmann, 1998. "Interest Group Competition and the Organization of Congress: Theory and Evidence from Financial Services' Political Action Committees." *American Economic Review* 88, 1163-1188.
- Leuz, C., Oberholzer-Gee, F., 2006. "Political relationships, global financing, and corporate transparency: evidence from Indonesia." *Journal of Financial Economics* 81, 411-439.
- Malik, Adeel, and Bassem Awadallah. "The economics of the Arab Spring." *World Development* (2013).
- Moore, Pete. 2004. *Doing Business in the Middle East: Politics and Economic Crisis in Jordan and Kuwait*. Cambridge, UK: Cambridge University Press.
- Méon P. G. and Sekkat K. Does corruption grease or sand the wheels of growth? 2005; *Public Choice*; 122(1-2); 69-97.
- Noland, Marcus, and Howard Pack. 2007. *The Arab Economies in a Changing World*. Washington, D.C.: Peterson Institute for International Economics.
- Osman, Tarek. "Egypt on the Brink: From Nasser to Mubarak." New York: Yale University Press, 2010.
- Owen, Roger. *State, power and politics in the making of the modern Middle East*. Routledge, 2004.
- Posusney, Marsha Pripstein, and Michele Penner Angrist. 2005. *Authoritarianism in the Middle East: Regimes and Resistance*. Boulder, CO: Lynne Rienner Publishers.
- Ramalho, R., 2003. "The Effects of Anti-Corruption Campaign: Evidence from the 1992 Presidential Impeachment in Brazil." M.I.T. Working Paper.
- Richards, Alan, and John Waterbury. *A political economy of the Middle East: State, class, and economic development*. Westview Press, 2006
- Roberts, B.E., 1990. "A Dead Senator Tells No Lies: Seniority and the Distribution of Federal Benefits." *American Journal of Political Science* 34, 31-58.

Roll, Steven. 2010. Finance Matters! The Influence of Financial Sector Reforms on the Development of the Entrepreneurial Elite in Egypt. *Mediterranean Politics* 15:349-370.

Sadowski, Yahya M. 1991. *Political vegetables? Businessmen and bureaucrat in the development of Egyptian agriculture*. Washington, D.C.: Brookings.

Schlumberger, Oliver, ed. 2007. *Debating Arab Authoritarianism: Dynamics and Durability in Nondemocratic Regimes*. Stanford: Stanford University Press.

Sfakianakis, John. 2004. The Whales of the Nile: Networks, Businessmen and Bureaucrats during the Era of Privatization in Egypt. In *Networks of Privilege: Rethinking the Politics of Economic Reform in the Middle East*, edited by S. Heydemann. New York: Palgrave Macmillan.

Shleifer, A., Vishny, R.W., 1994. "Politicians and firms." *Quarterly Journal of Economics* 46, 995-1025.

Soliman, Samer. "The Autumn of Dictatorship: Fiscal Crisis and Political Change in Egypt Under Mubarak (trans. Peter Daniel)." (2012).

Tlemcani, Rachid. 1999. *Etat, Bazar, et Globalisation: L'Aventure de l'Infitah en Algerie*. Algiers: Les Editions El Hikma.

Werker Eric, Gaafar Mennatallah, Said Francis, Bassem Salama, and Noura Selim. "Ahmed Ezz: The Rise and Fall of an Egyptian Steel Magnate". Harvard Business School mimeo. December 2012.

World Bank. 2009. *From Privilege to Competition: Unlocking Private-Led Growth in the Middle East and North Africa* Washington, D.C.: World Bank.

World Bank, 2009. *Transforming Egypt: A Development Policy Review*.

Wurzel, Ulrich. "Patterns of Resistance: Economic Actors and Fiscal Policy Reform in Egypt in the 1990s." *Heydemann, Steven (ed)* (2004): 101-31.