

Cronyism as an Outcome of Institutional Settings: The Case of pre-2011 Egypt

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Abstract

Why are State Business Relations in Egypt characterized by widely acknowledged high levels of cronyism? This paper is investigating the institutional factors explaining this research question with a focus on pre-2011 Egypt. Based on a general theoretical discussion, certain institutions were proposed as being responsible. A game theoretical model was then introduced explaining why cronyism was the best strategy for various business players in contrast to aggregating and lobbying their efforts to obtain government available resources, whether these resources are energy subsidies, public banks' credit or regulations. Choosing cronyism was attributed to the presence of a weak and dependent private sector, where businesspeople are unable to aggregate their power; a relatively stronger government; poor governance performance; higher levels of regime legitimization practices, such as providing generous consumer subsidies; and economic growth caused by an increase in resources rather than by governance institutional improvement. A discussion of the the available literature and empirical data on pre-2011 Egypt, going over the various proposed institutional factors, helped to support these arguments. The paper concludes by briefly pointing out the possible effects of the post-2011 political-economic developments on the prospects of cronyism in Egypt. The conclusion also discusses the relevance of the introduced model to many world countries, including the MENA region.

I- Introduction

In January 2011, in the iconic Tahrir Square, hundreds of thousands of Egyptians were chanting their calls for the fall of the regime. Among the calls roaring high were furious ones against the infamous web of state-business networks involving key state officials and influential business persons. In fact, the Egyptian January 2011 Revolution had revealed the black side of close state business relations in a developing country where high observed levels of cronyism had played a big role in fomenting public anger, providing one of the major causes of the 2011 Revolution. Hosny Mubarak's sons Gamal and Alaa, and a number of cabinet ministers and figures from the leading ruling party, the National Democratic Party (NDP), are cliché figures for those who manipulated social and political connections within the government to master a business empire.

Abdel Latif and Schmitz (2010) believed close State Business Relations (SBR) witnessed in the period preceding the Revolution led to a "growth alliance" positively affecting industrial performance. But this perspective was challenged by works attributing growth to other rentier economic activities (Loewe 2013, 1), raising concerns on manufacturing competitiveness (Adly 2013, 71-72), and pointing to unsatisfactory developmental performance (Loewe 2013, 1 and Diwan 2012, 14). More remarkable, however, was the deep-rooted crony relations that resulted from SBR in Egypt in the decade preceding the Revolution.

Cronyism can be defined as preferential treatment offered by officials to old friends, associates, or politically connected few businesspersons, regardless of their qualifications, facilitating their generation of extraordinary returns (Begley et al. 2010; and Mazumdar, 2008). As confirmed by worldwide indicators on corruption, in the first decade of the millennium, Egypt witnessed steady increase in corrupt activities and cronyism (see Tables 4 and 5). The Egyptian government allocated crony privileges to politically connected businesspersons regarding it as a strategy for the regimes' survival. Among crony benefits to the connected businesspersons were access to public banks credit (even with insufficient collateral); land and natural resources; selling public enterprises with favorable prices during the privatization process; forcing foreign investors to assign around 20% stock for a domestic business partner in start-up ventures; strict regulations to save the interests of the connected (e.g. the iron and steel and cement sectors); and refraining from providing adequate regulations in fields like competition law, protection of private property and rule of law (Adly 2009 and Puddephatt 2012, 12-14). Empirical evidence in Diwan et al. (2014) showed how politically connected firms in Egypt received energy subsidies, discriminately regulatory enforcement, trade protection and other benefits

Yet, why did state business relations lead to widespread cronyism in Egypt before 2011? Are high levels of cronyism an ultimate outcome of close SBR? As argued in Sabry (2013), the level of cronyism is likely the result of the types of state business networks and connections forming SBR, but also the effect of the institutional settings in which they are operating. This paper tries to identify the major causes of the witnessed high levels of cronyism in Egypt before 2011, specifically studying the period between years 2000 and 2010. It argues that the institutional settings in Egypt at this time are responsible for this outcome. To identify which among various institutions are the ones responsible, it starts with a theoretical discussion on SBR, institutions and cronyism. This discussion helps then in formulating a game theoretical model to address the issue. The suggestions of the model are then tested on the pre-2011 Egypt case study. A conclusion then is reached, where insights on the present political economic developments with regard to SBR and cronyism are accounted for.

II- Theoretical discussion

A- State Business Connections, Cronyism and Lobbying

Continuous interactions between government officials and businesspeople in market transactions are inevitable, opening the way for state-business cooperation and, consequently, various forms of state-business relations (SBR). At the heart of these relations, and because of repeated countless interactions and transactions between both parties, connections and networks are expected to evolve among their various players.

Both parties are expected to benefit from these relations. Depending on the Neo-Utilitarian perspective on the state (which is based on the Public Choice theory), state officials could be regarded as “rational maximizers” who need political supporters to stay in power. To build this support they use the resources under their disposal. Either they do this by distributing them directly to their supporters in the form of subsidies, contracts or cheap loans, or they use laws and regulations to create rents from restricting certain markets, imposing import restrictions or enforcing licensing requirements (Evans 1989, 564). On the other hand, businesspeople could help by stabilizing the system and enriching officials. In a democracy, for instance, they could support the reelection of incumbents, either directly by financing election campaigns or indirectly by fostering better economic conditions. They could also contribute to officials’ enrichment, either legally through tax revenues or illegally through corrupt payments (Sabry 2013, 3).

Frequent interactions between individuals linked to each other by various connections create a richly connected network in which interests and beliefs converge (Moon and Prasad 1994, 371). In the case of state business networks (SBN), the connections binding state officials and businesspersons could be informal ones, resting on social (e.g.: common familial or ethnic background) or political connections (e.g.: common party membership). Institutionalized formal connections, on the other hand, could refer to Public Private Dialogues (PPD) or joint economic councils bringing together government officials and businesspeople to discuss, formulate, and/or monitor policies (Sabry 2013).

Based on the type of connections binding state officials and businesspersons, two main strategies available for businesspersons to gain access to government resources can be identified. The first is lobbying through business associations and PPD, whenever they exist. The second is using informal connections in gaining privileged access to government resources through cronyism. Agreeing with this perspective, in the literature corruption (generally) and lobbying are regarded often as substitutes (Giovannoni 2011). By pursuing one of these two strategies, businesspersons are seeking getting access to government resources, which include: credit allocations from public banks, subsidies, legislations and regulations. Connected businesspersons could additionally opt through cronyism to have privileged market positions, import licenses, government contracts, and favorable taxation conditions.

B- Which institutions could lead to more cronyism?

As could be inferred from the stated above definition for cronyism, high levels of cronyism presuppose the presence of informal connections. For instance, the literature on politically connected firms (e.g. Johnson and Mitton 2003, Faccio 2006 and Faccio 2010), suggests crony relations result from these connections. On the other hand, PPD when broad-based and highly representative of business people, help in exposing corruption by allowing the private sector to

monitor the performance of the government (Herzberg and Wright 2005). While broad-based business associations can lobby and pressure politicians (through PPD or other means) to get better policies that benefit the majority of businesspeople, the few informally-connected businesspersons are more likely to resort to crony deals. The success of lobbying rests, however, on the ability of businesspeople to aggregate their power. Jenkins et al. (2006) finds that the mobilization of business interests and business' capability of uniting push the executive to adopt policies that favor these interests, such as providing subsidies, entrepreneurial policies and introducing regulations supporting businesspeople in front of other interest groups (e.g. workers). Failing to aggregate power would arguably leave cronyism as the only available alternative.

On the other hand, a powerful state in relation to businesspeople would more arguably have an upper hand in SBR, be less likely to submit to lobbying, and have a freer hand to engage in crony allocations to connected businesspersons. Cronyism, in contrast to state capture,ⁱ necessitate the presence of an autonomous state, where state officials consolidate their political power by providing privileges for politically affiliated businesspersons (Adly 2009). Such a position for the state vis a vis businesspeople could result from different factors. Ayubi (2001, pp. 13) suggested that countries gaining independence after the Second World War and the subsequent "consolidation of a global economy" developed capitalist classes that were "generally subservient" to the state, since they were dependent on its protection, subsidies and other services.

Another possible factor could arguably be the socialist legacy. In the heyday of the Cold War and decolonization, many developing countries adopted Socialism, which practically meant a great expansion of state power and diminishment of private control over factors of production. The major global changes of the early 1990s witnessed the wide adoption of economic liberalization and privatization in former socialist countries. Yet, the process of (in many cases rapid) privatization in an environment where other good governance institutions (transparency, rule of law...etc...) were not firmly established, offered valuable chances for state officials to allocate former public firms as privileges to connected businesspersons. This was highlighted in the literature on transition economies, for instance, Kaufmann and Siegelbaum (1997). The socialist legacy alone by itself, however, doesn't explain government's power vis a vis businesspeople, and thus cronyism. A clear example in this regard is Russia, as evident from the Slinko et al (2005) study on state capture of the biggest heir of the late Soviet Union. Yet, Russia seems to be exceptional, and even there, roles were soon switched in the first years of the Millennium (Yakovlev 2006, 1035-1048).

Access to natural resources is another source of governmental power. Ross (2001) argued that "positive economic shocks" resulting from resource-based exports would develop rent-seizing opportunities for officials, inducing them to adopt harmful institutional changes. Rising cronyism could be thought of as a possible development. Karl (1997) stated that around 65 to 75 % of the GDP of post 1974 oil exporting countries has mainly targeted subsidies for governments' political supporters and connected social groups (as well as offering contracts on non-market basis).

Moreover, cronyism arguably benefits from inadequate governance settings. Among governance-related institutions of relevance to this discussion are: Rule of law, voice and accountability, and regulatory environment. Weak rule of law, as reflected in low levels of property rights' protection, is suggested by Sonin (2003) (and supported empirically by Bai et al., 2006) to encourage economic agents to rely on political connections with the government as an alternative strategy to secure their property, and ultimately hinder any reform. Lobbying, to the contrary,

would be encouraged by the presence of a more effective legal system. Access to courts is suggested by Dür (2005) to be among the factors explaining the relative strength of interest groups vis a vis the government (Mahoney, 2007, pp.36). Concerning voice and accountability, Campos and Giovannoni (2008) suggests that lobbying is more common than corruption in democratic settings, when executive's veto power is less. Mahoney (2007, pp. 38) points out that in a democratic system, policymaking is more responsive to interest groups and their lobbying than in systems which are "not electorally accountable". Supporting these claims, a big body of literature assumes a negative relation between democracy and corruption (e.g. Persson et al. 1997, and Lederman et al. 2001) (Hallagan 2010), between long-established and uninterrupted democracy and corruption (Pellegrini and Gerlagh 2008 and Treisman 2007), and a positive relation between undemocratic rule and cronyism (Mazumdar 2008 and Faccio 2002). Similarly, freedom of media has a negative effect on corruption (Brunetti and Weder 2003 and Treisman 2007) and cronyism (Desai 2007). Freedom of the media, through fostering transparency, is likely to exert pressure on the process of allocating privileges for businesspersons based on informal connections rather than efficiency concerns.

Regulatory quality is also detrimental for cronyism. Stricter regulations of entry, for instance, can help connected businesspersons in controlling markets and avoiding competition. Treisman (2007), Djankov et al. (2002) and Desai (2007) all suggest a positive relation between strict regulations from one side and cronyism or corruption from the other. Dür (2005) argues that open markets reinforce the power of interest groups in front of the state (Mahoney, 2007, pp.36), which suggests that lobbying would be more likely then. Moreover, harder access to credit can arguably compel businesspersons to rely on their connections with officials to facilitate obtaining credit, placing other non-connected at a disadvantage. The same is also true for government permits in construction, trading...etc.

III- The Model

The following game theoretical model depends on the previous theoretical discussion. For simplicity, the game considered here is a static one, where the considered variables, payoffs and strategies are being decided at each period independent from previous periods.

The model rests on the idea that businesspersons are considering choosing one of two strategies, cronyism or lobbying, to acquire various government resources. Government resources here include, besides government fiscal budget, the following:

- natural resources (gas, oil, minerals...etc.) whenever the government controls their extraction and production;
- land (e.g. desert lands);
- legislations and regulations;
- credit from public-controlled financial institutions;
- import licenses; and government contracts (infrastructural Public Private Partnerships).

These financial and non-financial resources could be used in many activities; but for the sake of simplicity, let's assume that there are mainly four uses for these resources: Consumers' subsidies; crony allocations and crony-supporting legislations; predation by senior officials; and market-benefiting public expenditure and legislations. In other words:

$$R= S+C+D+M$$

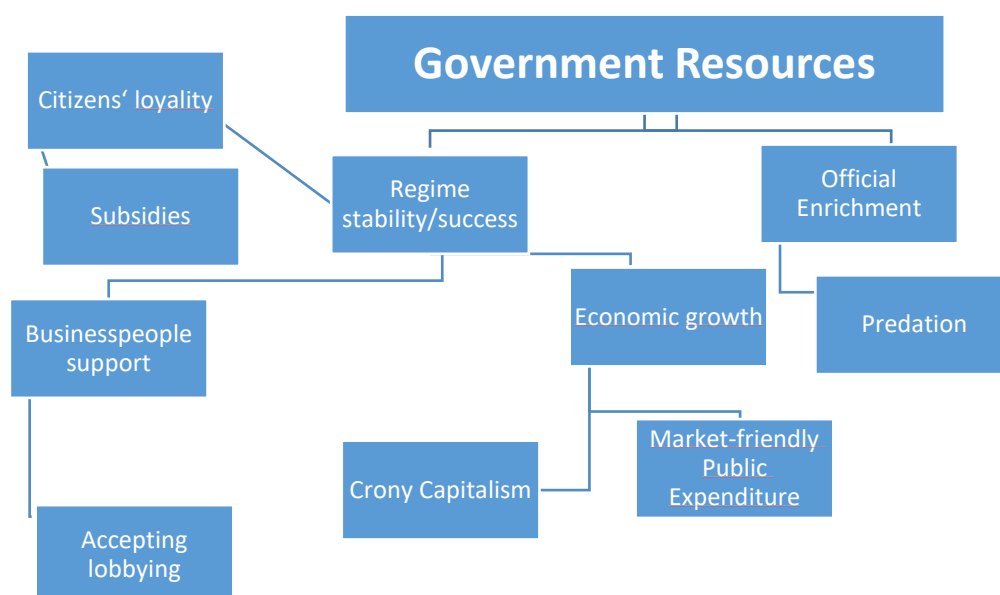
...(1)

Where R, S, C, D and M stand for resources, subsidies, crony allocations, predation and market-friendly public expenditure allocations respectively.

Since it is assumed here that the government has the upper hand over SBR, it is logical to think that the government is likely first maximizing its utility function given the existing constraints, and then businesspeople have to choose their strategy accordingly. If the game is about the distribution of resources, the previous idea could be translated into: first the government chooses its predation payoffs given constraints and then business players choose what gives them more payoffs among two strategies, lobbying or cronyism. It is logical then to start with considering the government maximization of its utility function given constraints.

The government utility function is that of its officials. Figure 1 shows part of the components of this utility function. It is arguably dependent on the payoffs those officials would receive, but also on the probability of them staying in power, in other words, the probability of their survival. Payoffs could be either material or social. In the first category belong acquiring higher salaries. But since these are not sufficient to construct wealth, it is possible that senior officials would be interested in using government resources for their own benefit, in other words, predation. With predation state officials enrich themselves by their control on physical resources such as lands or factories at the expense of society. As Evans (2012, pp. 12) and (1989, pp. 563) elaborated, predation involves actions whereby state officials extract for themselves extensive share of resources and provide little for society; in other words, the incumbents' individual maximization rather than collective goals is being pursued. Social payoffs, on the other hand, could be having a higher social status.

Fig. 1: Government Resources and Its Uses



On the other hand, the probability of survival depends on many factors. Based again on the Neo-Utilitarian perspective, a resourceful government would try to use its resources in fostering the regime's stability and success, since its ultimate goal is to remain in power. One of the ways to accomplish this is through trying to gain citizen's consent; and this could be achieved by providing consumer food and energy subsidies. An alternative could be ensuring the support of businesspeople. If businesspeople could lobby their interests and the government accepts their demands on some of its resources, this would be an additional boost for the regime's survival. A third option would be through using resources in targeting economic growth, where growth would create more jobs, bring more prosperity and by this help in stabilizing the regime. Targeting economic growth could be sought by public expenditure in infrastructure, human capital development...etc.

As for devoting resources to cronyism, I would argue here that this shouldn't necessarily increase chances of regime survival. It is true that crony allocations buy off the support of an influential segment of businesspeople; but on the other hand, deep-entrenched cronyism alienates the rest of businesspeople and antagonizes the public. That justifies not placing crony allocations among the factors directly increasing or decreasing the probability of regime survival. Cronyism could however influence regime survival by fostering economic growth, as was the case arguably in the crony capitalist experiences of East Asia. Cronyism could also affect the probability of business lobbying through the effect of governance institutions (e.g.: control of corruption) on this probability. The government can find in different corrupt practices such as cronyism and accepting bribery, a way to induce businesspersons to revoke lobbying. Weakening chances of lobbying through mal-governance would help the government in rejecting lobbying demands, since rejecting lobbying would be then less costly on the probability of government survival.

There are also certainly other factors for reinforcing government survival. Examples would be the regime's nationalist rhetoric or its legitimacy (whether hereditary succession or democratic-based legitimacy). Mathematically, government utility function could be accordingly represented as follows:

$$U_G = p(\text{Survival}). \text{ Payoffs} = p(\text{Survival}). (\text{Predation}, \text{Social Status})$$

Or more elaborately:

$$U_G = [\alpha S + \beta g + \gamma p(\ell)A + \eta \Lambda] * [\sigma D + \tau \theta] \quad \dots(2)$$

Where U_G is government utility, S is subsidy, g is economic growth, $p(\ell)$ is probability of Lobbying, Λ is legitimacy, D is predation, θ is social status and $\alpha, \beta, \gamma, \eta, \sigma$ and τ are weights. (A) is the degree of government acceptance of lobbying and submitting to business demands, where:

$$A = \begin{cases} 1 \geq A > 0 & \text{accepting} \\ 0 > A \geq -1 & \text{not accepting} \\ A = 0 & \text{irrelevant gov. decision} \end{cases}$$

Equation (2) could be rewritten as follows:

$$U_G = [\alpha \sigma D S + \beta \sigma D g + \gamma \sigma D P(\ell)A] + \mu_1 \quad \dots(3)$$

$$\text{Where: } \mu_1 = \eta \sigma D \Lambda + \tau \theta [\alpha S + \beta g + \gamma P(\ell)A + \eta \Lambda]$$

μ_1 represents the part of the equation which is not going to be explained by the model (legitimacy and social status). The same logic is followed whenever a μ is introduced. This procedure is important in order to keep the model concise. The government utility function is constrained by the resources available for the government. For simplicity, let's focus on three uses for government resources: Predation, cronyism and subsidies. So the government objective function given constraint could be written as:

$$\begin{aligned} \text{Max } U_G &= \alpha\sigma DS + \beta\sigma Dg + \gamma\sigma DP(\ell)A + \mu_1 \\ \text{s.t.: } R &\geq S + C + D \end{aligned} \quad \dots(4)$$

The following should be noted. Many of the above presented independent variables are functions of resources, governance institutions or both. Predation, crony allocations and consumer subsidies are certainly functions of resources. The more resources available for the government, the more it could devote to any of these activities. Economic growth also is dependent on resources, especially if the government devote its available resources in market-friendly allocations and legislations. Governance institutions, on the other hand, are arguably affecting levels of predation and cronyism. A higher performance in control of corruption and rule of law, for instance, should cut both activities. Governance institutions are also arguably affecting economic growth, with a big body of literature supporting this claim (see, for instance, Shirley, 2005; Keefer, 2007). As discussed before, governance institutions, and especially voice and accountability, should also affect levels of business lobbying. Similarly, the more abiding to law and the more effective property rights are safeguarded, the more likely that businesspeople can resort to legal and sanctioned lobbying activities rather than using their crony connections. Moreover, governance institutions should also affect the probability of government acceptance to business lobbying demands, since higher levels of voice and accountability means that governments are more receptive to these activities. It could also be added that an additional variable affecting probability of lobbying is the relative power of business associations. The presence of a history of cooperation between business partners, as would be the case with the presence of powerful business associations, increases trust among the partners. Accordingly, if "I" stands for governance institutions, and "B" for business associations power, the following relations could then be introduced:

$$\begin{aligned} D &= f(I, R) ; S = f(R) ; g = f(I, R) ; p(\ell) = f(I, B) ; A = f(I) ; C = f(I, R) \\ \text{Also: } U_G &= f(I, R) \end{aligned} \quad \dots(5)$$

Introducing the Lagrangian function gives us the following equation:

$$L = \alpha\sigma DS + \beta\sigma Dg + \gamma\sigma DP(\ell)A + \mu_1 + \lambda(R - S - C - D) \quad \dots(6)$$

Taking the first order conditions with respect to resources and institutions respectively gives us:

$$\frac{\partial L}{\partial R} = 0 = \alpha\sigma[D(\frac{\partial S}{\partial R}) + S(\frac{\partial D}{\partial R})] + \beta\sigma[D(\frac{\partial g}{\partial R}) + g(\frac{\partial D}{\partial R})] + \gamma\sigma p(\ell)A(\frac{\partial D}{\partial R}) + \mu_2 + \lambda[1 - (\frac{\partial S}{\partial R}) - (\frac{\partial C}{\partial R}) - (\frac{\partial D}{\partial R})]$$

$$\frac{\partial L}{\partial I} = 0 = \alpha\sigma S(\frac{\partial D}{\partial I}) + \beta\sigma g(\frac{\partial D}{\partial I}) + \gamma\sigma[Dp(\ell)(\frac{\partial A}{\partial I}) + DA(\frac{\partial p(\ell)}{\partial I}) + p(\ell)A(\frac{\partial D}{\partial I})] + \mu_3 - \lambda[(\frac{\partial C}{\partial I}) + (\frac{\partial D}{\partial I})]$$

Note that $\mu_2 = (\partial\mu_1/\partial R)$ and $\mu_3 = (\partial\mu_1/\partial I)$

Reshuffling both equations and equating to λ :

$$\lambda = \frac{\alpha\sigma[D(\partial S/\partial R) + S(\partial D/\partial R)] + \beta\sigma[D(\partial g/\partial R) + g(\partial D/\partial R)] + \gamma\sigma p(\ell)A(\partial D/\partial R) + \mu_2}{[(\partial S/\partial R) + (\partial C/\partial R) + (\partial D/\partial R) - 1]} = \frac{\alpha\sigma S(\partial D/\partial I) + \beta\sigma g(\partial D/\partial I) + \gamma\sigma [Dp(\ell)(\partial A/\partial I) + DA(\partial p(\ell)/\partial I) + p(\ell)A(\partial D/\partial I)] + \mu_3}{[(\partial C/\partial I) + (\partial D/\partial I)]}$$

Solving for D^* that maximizes the government utility function under constraint, and putting:

$$e = 1 - (\partial S/\partial R) - (\partial C/\partial R) - (\partial D/\partial R)$$

$$f = (\partial C/\partial I) + (\partial D/\partial I)$$

$$\mu_4 = \frac{\mu_2 f + \mu_3 e}{-\beta\sigma\left[\left(\frac{\partial g}{\partial I}\right)e + \left(\frac{\partial g}{\partial R}\right)f\right] - \gamma\sigma e\left[\left(\frac{\partial A}{\partial I}\right)p(\ell) + \left(\frac{\partial p(\ell)}{\partial I}\right)A\right] - \alpha\sigma f \frac{\partial S}{\partial R}}$$

Then:

$$D^* = \frac{[\alpha\sigma S + \beta\sigma g + \gamma\sigma p(\ell)A]\left[\frac{\partial D}{\partial R}f + \frac{\partial D}{\partial I}e\right]}{-\beta\sigma\left[\left(\frac{\partial g}{\partial I}\right)e + \left(\frac{\partial g}{\partial R}\right)f\right] - \gamma\sigma e\left[\left(\frac{\partial A}{\partial I}\right)p(\ell) + \left(\frac{\partial p(\ell)}{\partial I}\right)A\right] - \alpha\sigma f \frac{\partial S}{\partial R}} + \mu_4 \quad \dots(7)$$

Note that “e” represents, for every additional unit of resources, the change in the part not going to cronyism, predation or subsidies. This part could be thought of as change in market-friendly government expenditure for every unit change in government resources. On the other hand, “f” represents the change in crony and predation practices for every unit change in Governance institutions. Having solved for D^* that maximizes the government utility function given constraint, now it is time to consider businesspeople strategies.

Now, let’s assume that there are three business players. Each of them is seeking access to government resources (R). Each of the three players is considering two strategies (ST): Lobbying (L); or Cronyism- acquiring resources through crony relations (C). The three business players are different, and accordingly are facing different strategies. Players 1 and 2 are assumed to be large firms that have access to crony relations with and privileges flowing from the government. Player 3, on the contrary, is a small and medium enterprise (SME) that has no access to government connections and crony benefits. Given these settings, it could be argued that while player 1 and player 2 could use either strategies, cronyism or lobbying, player 3 has nothing but to opt for lobbying. The players are playing simultaneously. So, each player is considering the following options:

$$ST_1 = \{\ell; C\}; ST_2 = \{\ell; C\}; ST_3 = \{\ell\}$$

It is clear here that players 1 and 2 are the deciders of the outcome of this game. Since the government has an upper hand on state-business relations, business players 1 and 2 have to put government predation that maximizes government utility (D^*) into consideration, especially if they decided to engage in cronyism and not lobby in front of the government. The expected share of resources $E[Y_1]$ of player 1 is modeled as a function of these strategies, $E[Y_1(ST_1, ST_2, ST_3)]$ and the probability that the other players would lobby $p(\ell_{2,3})$ or not lobby $[1-p(\ell_{2,3})]$. For player 2, the probabilities would be $p(\ell_{1,3})$ and $[1-p(\ell_{1,3})]$; and for player 3 it would be $p(\ell_{1,2})$ and $[1-p(\ell_{1,2})]$.

When calculating the expected payoffs of the various players from each strategy, we should put into consideration that if a player decided to choose lobbying while the other two players decided to engage themselves in crony activities, this player would end up having none of the available resources. This is very likely given that the state would penalize him. On the other hand, if a player decided to engage in cronyism while the other two players decided to lobby, this player would get all resources through cronyism after subtracting what the government would leave for society as subsidies (S) and what it appropriate as predation (D). In other words, lobbying is only beneficial if the three players are engaged in it; otherwise lobbying would be harshly penalized by the government. However, whenever successful, lobbying firms would be able to pressure the government and acquire most of the resources, leaving marginal or none of the resources to either predation or subsidies. Given these assumptions, each of players 1 and 2 would have the same payoffs out of following each of the two strategies. This would be:

- Expected payoff of Lobbying Strategy for player 1:
 $E(Y_{L1}) = p(\ell_{2,3}) (1/3)R + [1-p(\ell_{2,3})] * 0 = (1/3)p(\ell_{2,3}) * R$
- Expected payoff of crony strategy for player 1:
 $E(Y_{C1}) = p(\ell_{2,3}) (R-D-S) + [1-p(\ell_{2,3})] [(1/3) (R-D-S)]$

Players 1 and 2 would choose a strategy whose expected payoff would be higher than the other's. Thus, player 1 would choose cronyism if:

$$E(Y_{L1}) < E(Y_{C1})$$

Or:

$$(1/3)p(\ell_{2,3})R < p(\ell_{2,3}) (R-D-S) + [1-p(\ell_{2,3})] [(1/3)(R-D-S)]$$

Simplifying and reshuffling gives us the following relation:

$$\frac{R[-1-p(\ell_{2,3})]}{2p(\ell_{2,3})+1} + S - D > 0$$

Plugging D^* into the equation, then:

$$\frac{R[-1-p(\ell)]}{2p(\ell)+1} + S - \frac{[\alpha\sigma S + \beta\sigma g + \gamma\sigma p(\ell)A][\frac{\partial D}{\partial R}f + \frac{\partial D}{\partial I}e]}{-\beta\sigma[(\frac{\partial g}{\partial I})e + (\frac{\partial g}{\partial R})f] - \gamma\sigma e[(\frac{\partial A}{\partial I})p(\ell) + (\frac{\partial p(\ell)}{\partial I})A] - \alpha\sigma f \frac{\partial S}{\partial R}} + \mu_4 > 0$$

$$\text{Or: } \frac{R[-1-p(\ell)]}{2p(\ell)+1} + S + \frac{[\alpha\sigma S + \beta\sigma g + \gamma\sigma p(\ell)A][\frac{\partial D}{\partial R}f + \frac{\partial D}{\partial I}e]}{\beta\sigma[(\frac{\partial g}{\partial I})e + (\frac{\partial g}{\partial R})f] + \gamma\sigma e[(\frac{\partial A}{\partial I})p(\ell) + (\frac{\partial p(\ell)}{\partial I})A] + \alpha\sigma f \frac{\partial S}{\partial R}} + \mu_4 > 0 \quad \dots(8)$$

This is the condition that makes cronyism more favorable to lobbying for business players 1 and 2. What could this equation tell us?

The first necessary step is to place assumptions based on the theoretical discussion of the previous section. These Assumptions are:

- $e = 1 - (\partial S / \partial R) - (\partial C / \partial R) - (\partial D / \partial R) \geq 0$
 This assumes that additional unit of resources is either exhausted in cronyism, predation and subsidies or a part is still left for other uses such as market-friendly public spending or legislations. Yet, it is not the case that the three first uses surpass the unit increase in resources; that is to say an additional unit of resources is not likely to induce diminishing resources devoted to market-friendly public spending.
- $\partial C / \partial I \leq 0$; $\partial D / \partial I \leq 0$; and $f = (\partial C / \partial I) + (\partial D / \partial I) \leq 0$

An improvement in governance institutions is more likely to induce a decrease in predation and/or cronyism, or at least cause no change; but it is never the case that governance institutional improvement causes an increase in predation and/or cronyism.

- $(\partial p(\ell)/\partial I) \geq 0$; and $1 \geq p(\ell) \geq 0$

Governance institutional improvement (e.g. improvement in voice and accountability and rule of law) should increase chances of lobbying or at least cause no change, but shouldn't decrease probability of lobbying. Also, as any probability, the probability of lobbying ranges from 0 to 1.

- $(\partial A/\partial I) \geq 0$

Governance institutional improvement (e.g. in voice and accountability) should increase or at least not change the probability that the government accepts business lobbying demands.

Given equation (8) and the above assumptions, the effect of a change in the following variables on cronyism likelihood could be estimated. These suggested results are summarized in Table 1:

- $(\partial D/\partial R) \geq 0$

Since f is expected to be negative, a positive $(\partial D/\partial R)$ would lead the term $[f(\partial D/\partial R)]$ to cause a decrease in the left hand side of equation (8) and thus decrease the likelihood of choosing cronyism. This indicates that governance institutional improvement, which should fight cronyism and predation (f), would make increasing predation accompanying an increase of one unit of resources $(\partial D/\partial R)$ decrease chances for choosing cronyism. This suggests that society under these conditions wouldn't tolerate both increasing cronyism and predation.

- $S \uparrow$

This will increase the left hand side of the equation and the likelihood of choosing cronyism. More subsidies would stabilize the regime and make cronyism non-harming to its survival.

- $(\partial S/\partial R) \geq 0$

The term $(\alpha \sigma f \frac{\partial S}{\partial R})$ in the denominator is negative because of f , which makes a positive $\partial S/\partial R$ which increases the left hand side of the equation and the likelihood of choosing cronyism. This suggests that despite of institutional improvement that should fight cronyism and predation (f), an increase in subsidies resulting from a unit increase in resources $(\partial S/\partial R)$ would encourage cronyism.

- $p(\ell) \uparrow$

If $A \geq 0$, increasing the probability of lobbying will decrease the term on the left hand side and the likelihood of choosing cronyism. Note that $[\gamma \sigma p(\ell) A] [\frac{\partial D}{\partial R} f + \frac{\partial D}{\partial I} e]$ is likely negative because of f and $\frac{\partial D}{\partial I}$, provided that $\frac{\partial D}{\partial R}$ is positive or zero. Other terms in which $p(\ell)$ exists are either negative in the nominator or positive in the denominator, making the left hand side of the equation decrease and with it the likelihood of choosing cronyism.

If $A < 0$, the effect of an increase in the probability of lobbying on choosing cronyism is unclear, since $[\gamma \sigma p(\ell) A] [\frac{\partial D}{\partial R} f + \frac{\partial D}{\partial I} e]$ would be now positive (would increase left hand side of the equation), while the other terms in which $p(\ell)$ exists would still decrease the left hand side of the equation.

- $(\partial p(\ell)/\partial I) \geq 0$

If $A > 0$, cronyism likelihood would fall

If $A < 0$, cronyism likelihood would increase

If $A = 0$, no effect on cronyism

Since $(\partial p(\ell)/\partial I)$ appears only in the term $\left(\frac{\partial p(\ell)}{\partial I}\right)A$ in the denominator, its effect on the likelihood of cronyism depends on A . Having a positive A would increase the denominator and decrease the left hand side of the equation and the likelihood of cronyism, and vice versa. This suggests that the effect of an increase in lobbying probability because of governance institutional improvement would only diminish the probability of cronyism when the government is more likely to accept lobbying demands. If the government won't, lobbying would be less attractive and cronyism would be more likely.

- $(\partial A/\partial I) \geq 0$

It is part of the term $\left(\frac{\partial A}{\partial I}\right)p(\ell)$ in the denominator. Since $1 \geq p(\ell) \geq 0$, a positive $(\partial A/\partial I)$ would increase the denominator, decrease the left hand side of the equation and consequently the likelihood of cronyism would fall (unless either of $\left(\frac{\partial A}{\partial I}\right)p(\ell)$ is zero then no change would happen). Thus, an institutional improvement causing an increase in government acceptance to lobbying would diminish the likelihood to choose cronyism.

- $(\partial g/\partial I) \geq 0$

It is part of the term $\beta\sigma \left[\left(\frac{\partial g}{\partial I}\right)e + \left(\frac{\partial g}{\partial R}\right)f \right]$ in the denominator. Since $e \geq 0$, $(\partial g/\partial I) \geq 0$ would increase the denominator and decrease the left hand side of the equation and the likelihood of cronyism. In other words, an increase in economic growth resulting from a unit improvement in governance institutions would decrease cronyism. With the magnitude of the effect of this term being linked to e , this implies that the effect of an increase in institutional-caused economic growth is magnified when the share of additional resources goes to market-friendly public expenditure (not going to predation, cronyism or subsidies).

- $(\partial g/\partial R) \geq 0$

It is part of the term $\beta\sigma \left[\left(\frac{\partial g}{\partial I}\right)e + \left(\frac{\partial g}{\partial R}\right)f \right]$ in the denominator. Since $f \leq 0$, $(\partial g/\partial R) \geq 0$ would decrease the denominator and increase the left hand side of the equation and the likelihood of cronyism. Hence, an increase in economic growth resulting from a unit increase in resources would increase cronyism. The magnitude of the effect of $\partial g/\partial R$ on cronyism is linked to f . That is to say, despite of institutional improvement causing a decrease in predation and cronyism (f), economic growth caused by a unit increase in resources ($\partial g/\partial R$) would increase chances of choosing cronyism.

To sum up, the model thus suggests that cronyism would increase with the following: weak business lobbying probability; a powerful state vis a vis businesspeople; higher subsidies, lower predation; lower governance-caused economic growth, and higher resources-caused economic growth. In the following section, each of these factors is going to be examined with regard to the pre-2011 Egypt case study.

IV- Discussion: The Egyptian Case

A- Overview: State-Business Relations and Cronyism in Egypt

Before investigating the effect of the highlighted factors on cronyism in pre-2011 Egypt, a quick overview on the political economic background of the Egyptian case is worthwhile.

It is often suggested that the decade that preceded the Revolution witnessed an intensification of SBR and cronyism. The return of Gamal Mubarak to Egypt at the end of the 20th century was a significant event in this regard. Gamal eventually evolved into the assistant secretary general and head of the policies committee in the ruling National Democratic Party (NDP), while a group of his business friends became members of the party's General Secretariat. In a remarkable unprecedented development since 1952, the Egyptian cabinet appointed in 2004 had many businesspersons (many of whom were Gamal's friends) as ministers. Businesspersons were tied to the ruling regime also through the ruling NDP and membership in the Parliament, which was strongly dominated by the NDP. The percentage of businesspersons in the Egyptian Parliament almost doubled between 1995 and 2005, from 12% to 22% (Adly 2013, 162-163). If this is added to the business empire of Mubarak's family, the explosive dimension of close SBR based on personal connections in pre-Revolution Egypt could be realized.

Connections with the state proved to be very beneficial to connected businesspersons. As mentioned in the introduction, connected businesspersons acquired various benefits including: access to public banks credit, land, natural resources and public enterprises (during the privatization process); favorable regulations enabling their control over bigger market shares (Adly 2009 and Puddephatt 2012, 12-14); and energy subsidies (Diwan et al. 2014). Many international indicators reflect the presence of high levels of and constant increase in corruption (including cronyism) throughout the first decade of the Millennium. Table 3 shows how the governance indicator of "control of corruption" started out negative in 2000 and kept decreasing further reaching -0.55 in 2010. Another more precise indicator of cronyism is the "favoritism in decisions of government officials" provided by the Global Competitiveness Indicators' (GCI) (The World Economic Forum 2015). Recalculated to reflect a higher score for higher cronyism, Table 4 shows how cronyism increased remarkably between 2007 and 2010, and how in the latter year it significantly surpassed the international average.

As suggested by the model introduced earlier, there were reasons that fostered the growth of cronyism, these are examined below.

B- A Powerful State

The introduced model suggested that cronyism is encouraged by the presence of an upper hand for the state within SBR, something that enables it to maximize its utility function (survival, predation, social prestige...etc.) before businesspersons decide which strategy to take to access state resources. Did the pre-2011 Egyptian state have such an upper hand? And why?

Ayubi (2001, pp.12-13) (depending on the arguments of Alavi, 1979), pointed to how the bureaucracy of many countries of the Middle East were created by foreign colonial powers rather than being developed from their national bourgeoisie. Colonial authorities had an interest in over-inflating the size of these bureaucracies, in a way independent from their societies' "national interests". This fostered the growth of a state with "relative autonomy vis a vis the native economy and social forces". This was then inherited by the "military-bureaucratic oligarchy" dominating many MENA countries (including Egypt) after independence.

The Nasserist legacy is arguably a further factor that fostered the Egyptian state relative power vis a vis businesspeople. In the early 1960s, President Gamal Abdel Nasser, as part of the "socialist" transformation, started a wave of major nationalizations that swelled the public sector

and accordingly diminished the private sector. The government nationalized all banks and insurance companies, foreign trade, strategic and big industries, utilities, and others (Waterbury 1993, p. 62). The private sector was left to dominate only minor industries (Abdel Fadel 1980, p. 101). Membership in the Arab Socialist Union (ASU), the only political organization allowed to exist, was almost a prerequisite for appointment or election to any cooperative board, local, regional, or national assembly, or board of any union or professional association (Waterbury 1983, p.314-315). Political liberalization under Sadat and Mubarak loosened the grip of the state on societal forces. Nevertheless, many aspects of the Nasserist legacy survived, this time through the National Democratic Party (NDP). The private sector also expanded in major waves under Sadat, then with the privatization of the 1990s and then the first decade of the millennium leading to the 2011 Revolution. Yet, the state has managed to wield cliental networks under its control in all these waves.

Moreover, the state maintained a strong control on access to credit (see Table 2). Even after the major privatization wave of the millennium, the government still owned a major part of the banking sector. Schlumberger (2008, p.631) argues that the state considered this a mean of controlling the rising private sector and rewarding its business allies. According to Roll (2010), the financial reform conducted in Egypt in the first decade of the millennium haven't altered the benefits obtained by connected big business entrepreneurs from public banks. This is despite of tremendously increasing private banks' share of assets and deposits to more than 50% by the year 2008. On the other hand, small businesses (expectedly less connected) faced difficulties in accessing financing opportunities (Nabli 2007A, p.96), something that weakened their chances to enter "protected markets".

Moreover, the Egyptian government had detrimental access to important natural resources, since it controlled over 85% of the country's oil production. The Egyptian government relied heavily on exporting oil and natural gas which both represented around 50% of total Egyptian exports between 1990 and 2008 (Adly 2013, p.170). More importantly, oil and natural gas resources provided the state with considerable power in its relation to businesspeople thanks to energy subsidization. This was especially the case in industries which can be categorized as energy intensive such as cement, iron and steel and aluminum; the cost of energy in these industries represented more than a third of their total cost. Industry used more than half of the total oil subsidy provided by the state, and between one fifth and one fourth of the total energy subsidy in 2005-2006 (Adly 2013, p.110-111).

C- Businesspeople's Weakened Organized and Lobbying Capacity

In front of this state strengthened by institutional and historical legacies, businesspeople hardly had any balancing sources of power. Historically, the business class that developed since the implementation of the Open Door policy of the 1970s under Sadat, was very linked and dependent on the state. According to Amin (1997p.76, new business class groups emerged with their wealth attributed to intermediating activities such as contracting, speculation, commission taking activities, and sub-contracting with foreign firms. In the settings of the post 1960s Egypt, intermediating activities and trade necessitated strong relations with the bureaucracy for the sake of obtaining approvals and licenses. Businesspersons found it extremely important to establish connections with state officials. Many businesspersons resorted to hiring some former officials as consultants or in

other high positions so as to facilitate communication with the bureaucracy and help in acquiring various needed approvals or resources (Youssef 1994, p.372). The implementation of the Structural Adjustment Program (ERSAP) starting from the early 1990s and the process of privatization opened a gate for the expansion of the private sector, but also for providing favors to businesspersons connected to the state. Generally speaking, such developments meant that a big part of the business entrepreneurial class, especially large firms, gained their wealth and business successes thanks to close relations with state officials.

Moreover, as a lobbying group, the private sector and especially the manufacturing sector in Egypt, as in the MENA region generally, was very weak. Only the "large-scale private sector" was, however, "manipulating government policy for their own gain" (Nabli 2007A, p.95). But this was done through connections where large and medium enterprises enjoyed more connectivity in Egypt in comparison to small and micro-enterprises. Many business associations did exist, but they had their flaws. Adly (2009) pointed to how Egyptian business associations such as the "American Chamber of Commerce" and "Egyptian Businessmen Association" were confined to few big businesspersons without having even a sectorial focus, and how business power was fragmented by the creation of many business associations since the 1990s. Moreover, these business associations were not given adequate attention by the government which didn't develop with them an institutionalized consultation mechanism.

Generally speaking, the disorganized Egyptian businesspeople had thus to rely on connections and the cliental networks controlled by government officials, rather than organizing and aggregating their power in order to force their agenda. In Egypt, informal relations dominated SBR, with almost complete marginalization of formal PPD. This was partly due to the above-discussed historical developments, and the emergence of a dependent business class. Another reason is the authoritarian state's deliberate strategy to prevent organized societal forces from challenging its power. This should have influenced how the state handled PPD and relied on informal networks and connections instead.

Consequently, and according to Youssef (1994, p.372), the government refrained from institutionalizing (i.e. by creating joint committees, holding annual meetings...etc.) the process of consultation with business associations concerning policies. Almost all of the then existing PPD in Egypt had only advisory roles and they neglected SMEs. Many of these PPD had low autonomy and were rather extensions of informal connections (Adly, 2013, p.91-108). As argued by the OECD (2013), such informal consultation mechanisms limit accountability and transparency since interest groups' access to consultation channels is subject to governmental discretion.

The combination of the presence of a powerful and resourceful state on one hand, and a dependent, weak and disorganized private sector on the other, led to a relation that could be termed "neo-patrimonialism". According to Koehler (2008, p.976), in such a relation no autonomous social interests should be organized outside state control. Power is monopolized under the head of the state, and proximity to him is what defines power allocation. It is thus logical in such context to assume that the state won't accept lobbying demands (in terms of the model $A < 0$), but also that the probability of lobbying is too low to cause much concern for regime survival (when denying these demands). Cronyism is then ultimately the more plausible strategy to be pursued by businesspersons with access to connections with state officials.

D- Governance

Governance institutional reform was suggested by the model to lead to less cronyism, directly through fighting various forms of corruption including cronyism, and indirectly through increasing the probability of lobbying and governmental acceptance of lobbying.

In the studied period, Egypt suffered from poor performance in various governance indicators of relevance. As shown in Table 3, the country's scores in the selected governance indicators were almost all with negative values in the considered years (2000, 2005 and 2010). The following discussion elaborates how such performance in the institutions of voice and accountability, rule of law, and regulatory quality had made cronyism an inescapable outcome of SBR in Egypt.

Among the three governance indicators of concern (four if control of corruption as an indicator for cronyism is accounted for), Egypt's score in voice and accountability was the worst ever. As shown in Table 3, the score deteriorated over time from a low -0.79 to an even lower -1.15 (worst possible score is -2.5) between 2000 and 2010. In comparison to the world, Egypt went from the 24.52 percentile to 13.74. Besides its renowned authoritarianism, Egypt lacked a law for freedom of information and the availability of accurate data (Puddephatt 2012, 13-14, p.18). As pointed out by Nabli (2007A, p.96), the low level of freedom of press, added to lack of information provided by the government and freedom of association restrictions, denied the private sector from strengthening its lobbying capabilities. This should have arguably posed cronyism as a better strategy for connected businesspersons.

Yet, more could be said on Mubarak's authoritarian political system and how it was a major contributor to the spread of cronyism. The inadequate political reform and window dressing democracy left Mubarak's regime in full control of the parliament whose elections, though relatively competitive, guaranteed the overwhelming majority for the ruling party and those connected to it. The parliament itself was marginal in formulating policies or legislations, despite of the constitution empowering it to do so (Koehler 2008, p.977). Competitive elections were rather used, as argued by Blaydes (2008), as a mechanism by which the regime selected, among connected businesspersons, the most efficient in terms of attracting popular support, in a process that could be referred to as 'elite management'. The winners would be then rewarded by crony benefits, making the parliamentary elections a process of competition for rent extraction.

This competition was not always administered by the party; rather winning parliament membership was the gate of being recruited to the party and through it to state's networks. Businesspersons could enter the elections as independents, and once they won, they would be tempted to join the NDP. With this system the party secured an overwhelming majority in the parliament, while businessperson's gain was to become an active member in SBN and gaining access to state resources. The competition on parliament membership within the NDP, and between it and other potential candidates for the cliental networks, was fierce. In 2000 those competing were 444 official NDP candidates and 3,000 NDP independents; in 2005 the numbers were 2,700 and 4,300 respectively (Koehler 2008, p.984).

Manipulated voters' behavior further cemented governmental control and its constructed cliental web. According to Koehler (2008, p.979-980), voters regarded the task of parliament members whom they elected as being one of channeling state resources to them. In other words, parliamentarians were nothing more than mediators between the people and the state and its

agencies, or simply "petitioners asking for services" on behalf of the voters. The state made sure that voting for opposition would be disadvantageous, and induced voters to elect those who are connected to it. Opposition parliamentarians were less able to get access to state resources. In practice, the government often neglected the electoral constituency where an opposition parliamentary won the elections with regard to infrastructural and other public investments. Voters on their turn were more likely to vote for a candidate when they believed that he could and was willing to provide services (Lust 2009, p.128). The implemented system was thus continuously recruiting elites to the web of state cliental networks and punishing deserters, in a process where the consent of the voters was also present.

Freedom of the press witnessed major improvements under Mubarak, especially in the first decade of the millennium. More privately owned newspapers obtained the license around mid-2000s. Many of these were owned by major investors, and businesspersons affiliated to the regime. A more liberal atmosphere evolved, and legal punishment was also relaxed. Yet, journalists still faced legal harassments and arrests, especially during the 2010 elections. There were always still red lines (Sternfeld 2014, p.78-83). Furthermore, since a big part of the ownership of private newspapers fell in the hands of connected businesspersons who benefited from its crony networks, they expectedly had an interest in keeping the system running and in taming journalists' eagerness to expose crony practices.

Among the considered governance indicators, Egypt did fairly good in "Rule of Law". Starting from a negative score of -0.01 in 2000, a remarkable improvement was witnessed with Egyptian score reaching 0.03 in 2005. However, Egypt's score relapsed to -0.12 in 2010, which was around the 51.2 percentile worldwide. The weak rule of law in Egypt is attributed to a number of factors. First, Egypt suffered from an inefficient judicial system. More specifically, it is generally acknowledged that the Egyptian judicial system was not well prepared to deal with private commercial disputes. Its procedures were expensive and slow. The commercial judicial system lacked "efficient property rights and contract enforcement mechanisms", inducing companies to refrain from using the judicial system to settle their issues (Belev 2000, p.71-72). This was reflected well in Egypt's poor ranking in the enforcing contracts criterion of the Doing Business Report, which was the 148th worldwide in 2010 (and 154 the year before), with an average number of days of 1010 and 42 procedures to receive payment after filing a lawsuit. In comparison to Egypt, the needed time in the MENA region was less by 70% on average (World Bank 2009, p.40-41). As discussed in the theoretical part, such poor performance induces businesspeople to rely on their informal connections with government officials.

Second, high officials enjoyed immunity against prosecution. The President's immunity could only be lifted if one third of parliament members voted in consent. For ministers and any of the parliament members, lifting immunity necessitated the consent of two thirds of the members. Judges were also immune. In practice, in very exceptional cases were ministers, provincial governors, and parliament members brought to court for corruption allegations, and not a single judge was convicted in a criminal court (MENA-OECD 2009, p.6, 19). This clearly freed the hands of government officials, encouraging them to engage in crony practices without fearing from prosecution.

Concerning "regulatory quality", a sort of overall improvement was witnessed between 2000 and 2010 in this indicator, where the score increased from -0.35 to -0.16, placing Egypt in the 46.89 percentile instead of the initial 35.78 percentile. The figure was, however, still negative.

The complexity of laws and regulations in Egypt had serious implications on its business climate. This was especially the case before the 2004 ministerial change. Businesspersons suffered from unclear laws, unexpected changes because of change in officials responsible for decision making, and the fragmentation of the decision making process itself. This on its turn opened the way for arbitrary implementation of decisions. In practice, regulations didn't apply to everyone. The big and connected businesspersons used the situation to their advantage, while small businesspersons were discriminated against (Yousfi 2008, 11-15).

As late as 2005, starting a business in Egypt was a very hard task. Great reform efforts were done henceforth, and in the Doing Business Report 2010 Egypt was listed among the ten most reforming countries in the preceding 4 years. Yet, Egypt still ranked 106 worldwide, showing that windows for cronyism through regulations were still existing. Another regulatory institutional deficiency that facilitated cronyism was competition law. The government was discouraged from enacting competition law by connected businesspersons' pressure, according to Ghoneim (2003). By blocking competition regulations, these politically connected businesspersons (many were members in the parliament) succeeded in defending their privileged market shares, reaping crony benefits at the expense of the non-connected.

E- Predation and Subsidies

The model suggested that subsidies and crony benefits tend to be complementary uses of resources, increasing or decreasing with each other, while predation and cronyism are rival uses moving in different directions. Was this the case in pre-2011 Egypt?

While engaging in crony practices, the pre-2011 Egyptian government was still engaged in heavy subsidization of basic food and energy products. According to Ghoneim (2012, p.254), subsidies constituted more than 20% of overall government spending in the decade preceding the 2011 Revolution. Food subsidies were less (in fiscal terms) relative to fuel subsidies, but were still constituting a substantial part of the provided subsidies. It was a regime's strategy for survival, especially with the memories of the January 1977 Food Riots which were triggered by partial lifting of food subsidies. It was also, as pointed by Gutner (2002, p. 457), a part of the Nasserist social contract providing the regime with legitimacy even when public participation and civil liberties were missing.

On the other hand, predation was not uncommon and in fact as wide spread phenomenon as cronyism. The cases brought to court in the aftermath of the 2011 Revolution show how considerable wealth accumulated in the coffers of key official figures including Mubarak, his two sons and ministers. But arguably another source of predatory activities came from a major establishment in Egypt since 1952, the army. Before 2011, the military establishment had already a big economic empire owning a great share of the economy with factories producing consumer goods and durables, hotels and resorts, restaurants, construction service companies and others. Its control on most of the country's lands justified by claimed security concerns allowed it to accumulate considerable wealth.ⁱⁱ The use of largely underpaid cheap labor- represented by conscripted soldiers under the disposal of the military-, control on lands and other advantages, imposes unequal competition conditions with the private sector. This places the military's economic concerns in a clear advantageous position regardless to efficiency, pointing to possible predatory practice. Assessing this claim is, however, beyond the scope of this paper.

If the statistics show that the share of food subsidies in government spending was largely falling in comparison to when Mubarak started his reign (Gutner 2002, p. 457), yet rising world energy prices during much of the first decade of the Millennium should have meant an increase in consumers' energy subsidy. The burden of energy subsidies increased dramatically as the Egyptian production of oil decreased, local consumption increased, and the international price of oil, which was now imported by increasing volumes, soured in mid 2000s (Adly 2013, p.110-111). Data from the World Bank "World Development Indicators", represented in Table 4, shows that subsidies (and other transfers) as percentage of expense grew from 23.75% in 2002 to 41.57% in 2010, surpassing the world average in the latter year. The same data source shows that the average of the five years before the Revolution (2006-2010) was 42.8%.

The above discussion reveals that predation also likely surged. This suggests that while increasing subsidies freed the government's hand in providing crony privileges, governmental official predation was competing with cronyism on the available resources. One could wonder if this would possibly explain part of the rivalry between the military establishment and Gamal Mubarak's connected businesspersons?

F- Economic Growth

Egypt witnessed high economic growth in much of the decade preceding 2011, but in the light of the model, it is important to ask whether it was caused by governance institutional improvement or by increases in resources? The former would have curbed cronyism, the later would have been responsible for the opposite.

The previous discussion on governance indicators suggests that economic growth wasn't likely caused by governance institutional improvement. In fact, informal SBR, which were likely channels of crony allocations, were regarded by some scholars as being responsible for much of the economic growth in that period. For instance, Abdel Latif and Schmitz (2010) regarded close SBR in Mubarak Egypt to have led to a "growth alliance" positively affecting industrial performance. The authors assumed that these relations helped investors getting over institutional barriers and assisted both parties in cooperating for establishing specific rules for new sectors and reaching a better regulatory framework. As discussed before, regulatory quality did improve, but other relevant governance indicators deteriorated, placing doubts that growth was caused by institutional improvement.

In fact, much of the witnessed growth of this period was attributed to extractive resources (e.g. petroleum) experiencing a surge in international prices, Suez Canal and Tourism (Lowe 2013, 1). The growth of the manufacturing sector was rather more inward oriented (Adly 2013, 71-72), raising questions on international competitiveness. The industrial policy of the government then didn't considerably improve the technological capacity of the country. This was reflected in Egyptian exports, their technological content and firms' technological absorption and business sophistication; but also government's efforts to upgrade the existing level of innovation and applied research were not much significant (Lowe 2013, p.2). Moreover, Small and Medium Enterprises (SMEs), with their great innovation and productivity potential,ⁱⁱⁱ suffered from discrimination. They had limited access to formal financial resources (e.g.: bank credit), and they were largely excluded from discussing Egypt's economic reform strategy, inducing many of them to stay informal (Belev 2000, 76-78; IBRD 2011, 31 and OECD 2013). In short, this was hardly an economic growth

mainly caused by institutional improvement (better regulations fostering innovation and investment, accounting for societal interest groups including SMEs...etc.)

Conclusion

This paper has argued that the high levels of cronyism witnessed in pre-2011 Egypt was the outcome of institutional settings shaping SBR in Egypt. Namely these were the presence of a powerful state and a weak and dependent private sector unable to aggregate its power and lobby; the low performance in major governance indicators especially voice and accountability, rule of law and regulatory quality; a high level of consumer subsidies; and economic growth caused by an increase in government resources rather than governance institutional improvement. The Egyptian case study provided evidence for the theoretical analysis presented earlier in the paper, including the game theoretical model. Given Egypt's institutional settings, the probability of lobbying should be expected to have been very low and cronyism seemed to be the best strategy for any businessperson having informal connections with officials. Those unconnected, on the other hand, were denied from having an adequate share of valuable resources, whether subsidies, credit or regulations boosting their competitiveness.

It is reasonable to think that this outcome would be experienced in other developing societies having similar institutional settings to the case study of this paper. This can explain, for instance, why high levels of cronyism are witnessed in the MENA region. The region sharing common cultural heritage with Egypt, share other institutional factors as well. As in Egypt, governments in the MENA region have various sources of power with regard to their dependent private sectors. This includes abundance of petro resources and/or statist economic legacies, either because of socialist legacies inspired by the Egyptian Nasserist example (e.g. Syria, Iraq, Algeria, Libya) or because of autocratic monarchist regimes (e.g. Gulf States). This led to the practice highlighted in Nabli (2007b) where patronage, exercised by the states of the region, allocated public services and opportunities based on state's discretion. The resulting private sectors in the region were ones which lived on their respective government resources. Added to this is the general poor performance in various governance indicators in the region. When ethnic and sectarian fractionalization in many of the countries of the region (e.g. Syria, Iraq) is accounted for, one can realize how the region was prone for untamed crony practices with deep strong roots. Understanding this puts our hands on one of the factors explaining why the Arab Spring propagated all over the region.

Has the situation differed or is expected to differ in post-2011 Egypt? Although this question necessitates further research to investigate it adequately, stating a few words on the matter and opening it to future research trials is worthwhile. None of the stated factors have much changed for the better; in fact, a great deterioration is witnessed in some governance aspects after 2013. The failed democratic experience has opened the way for a new authoritarian rule that transcended the (decorative) limits the Mubarak regime was keen on preserving in search for a better international image. Transparency, freedom of expression, freedom of the media and democratic elections all relapsed to even lower levels. The executive's control over the judiciary, and the compliance of the judges with the ruling regime have gone wide further than before. The way is wide open for the government to engage in whatever practices it sees appropriate. In such circumstances cronyism should be expected to reach even higher levels.

Another dimension to account for is also the growing role of the military establishment in the Egyptian economy. After the Revolution, the army's business empire has further expanded entering in unfair competition with existing businesspeople. In such conditions, the disadvantage of those unconnected, or not adequately connected with the (relatively) new absolute masters of the scene, the army generals, is aggravated. As long as these conditions prevail, one should expect high levels of cronyism. Yet, it could also mean skyrocketing levels of predation instead of cronyism. As the discussion in this paper showed, both cronyism and predation are rival uses of resources. The crush of many of Mubarak's crony networks, despite assimilating some of them by the new regime, and the expanding empire of the military business suggest that cronyism could have retreated, but only because of increasing predation. This might explain how (using the same method to calculate cronyism using the pointed-to GCI indicator), Cronyism fell from 5.09 in 2010 to 4.27 in 2015 (in a scale ranging between 1 and 7). On the other hand, since the resources under the government disposal has diminished, this all seems to be at the expense of subsidies, which have been considerably cut in the last few years. Whether the present strategies are adequate for the regime's survival is an open question for further research.

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Table 1: Relation between Society Share of Resources and Lobbying Probability

Condition	Likelihood of cronyism	Interpretation
$p(\ell) \uparrow$	If $A \geq 0$, $C \downarrow$ If $A < 0$, $C \uparrow$	Increasing probability of lobbying and government acceptance of it would make cronyism less likely, but government non-acceptance would make cronyism more likely
$(\partial p(\ell)/\partial I) \geq 0$	If $A > 0$, $C \downarrow$ If $A < 0$, $C \uparrow$ If $A = 0$, C no effect	The effect of an increase in lobbying probability, because of governance institutional improvement, would only diminish the probability of cronyism when the government is more likely to accept lobbying demands. If the government won't, lobbying would be less attractive and cronyism would be more likely.
$(\partial A/\partial I) \geq 0$	\downarrow	An institutional improvement causing an increase in government acceptance of lobbying would diminish likelihood of cronyism.
$(\partial D/\partial R) \geq 0$	\downarrow	Governance institutional improvement would make society not tolerate both increasing cronyism and predation
$S \uparrow$	\uparrow	More subsidies would stabilize the regime and make cronyism non-harming to its survival
$(\partial S/\partial R) \geq 0$	\uparrow	Subsidies increase caused by increase in resources would encourage cronyism.
$(\partial g/\partial I) \geq 0$	\downarrow	An increase in economic growth resulting from a unit improvement in governance institutions would decrease cronyism.
$(\partial g/\partial R) \geq 0$	\uparrow	An increase in economic growth resulting from a unit increase in resources would increase cronyism.

Table 2: Government Resources at year 2005.

	Egypt	World Average	World Maximum	World Minimum
"Fraction of the banking system's assets in banks that are 50% or more government owned" (2005) ^{iv}	66.7%	15%	91%	0%
Fuel Exports (% of merchandise exports) ^v	51.3%	13.4%	98%	0%

Source: World Bank (2012). Bank Regulation and Supervision Dataset, and World Development Indicators

Table 3: Relevant Governance Indicators of Egypt

Indicator	Score 2000	Percentile Rank 2000 (0 to 100)	Score 2005	Percentile Rank 2005 (0 to 100)	Score 2010	Percentile Rank 2010 (0 to 100)
Voice and Accountability	-0.79	24.52	-0.95	22.12	-1.15	13.74
Rule of law	-0.01	51.20	0.03	54.07	-0.12	51.18
Regulatory Quality	-0.35	35.78	-0.41	40.20	-0.16	46.89
Control of corruption	-0.39	43.90	-0.52	38.05	-0.55	34.29

Source: The World Bank Governance Indicators

Table 4: Subsidies and Cronyism Levels

Indicator	Year 2002		Year 2007		Year 2010	
	Egypt	World	Egypt	World	Egypt	World
Subsidies and other transfers (% of expense)	23.75	36.55	39.42	36.42	41.57	38.98
Cronyism (1 for low- 7 for high)	4.66	4.78	5.09	4.7

Source: World Development Indicators (for subsidies) and self-calculation using the Global Competitiveness Indicator of “favoritism in decisions of government officials” (for cronyism)

ⁱ State capture happens when favored business groups shape regulations and laws to match their interests through their influence over various institutions (Desai 2007). In state capture, powerful private firms dominate SBR, while in cronyism the opposite is true (Adly 2009)

ⁱⁱ On more details of the economic privileges entertained by the Egyptian military see Hashim (2011, p. 109) and El-Tarouty (2015, p. 51)

ⁱⁱⁱ See Beck and Demircuc-Kunt (2005)

^{iv} World Bank (2012). Bank Regulation and Supervision Dataset.

^v World Development Indicators.