The Political Economy of Energy Subsidies in North Africa:
The Untold Story
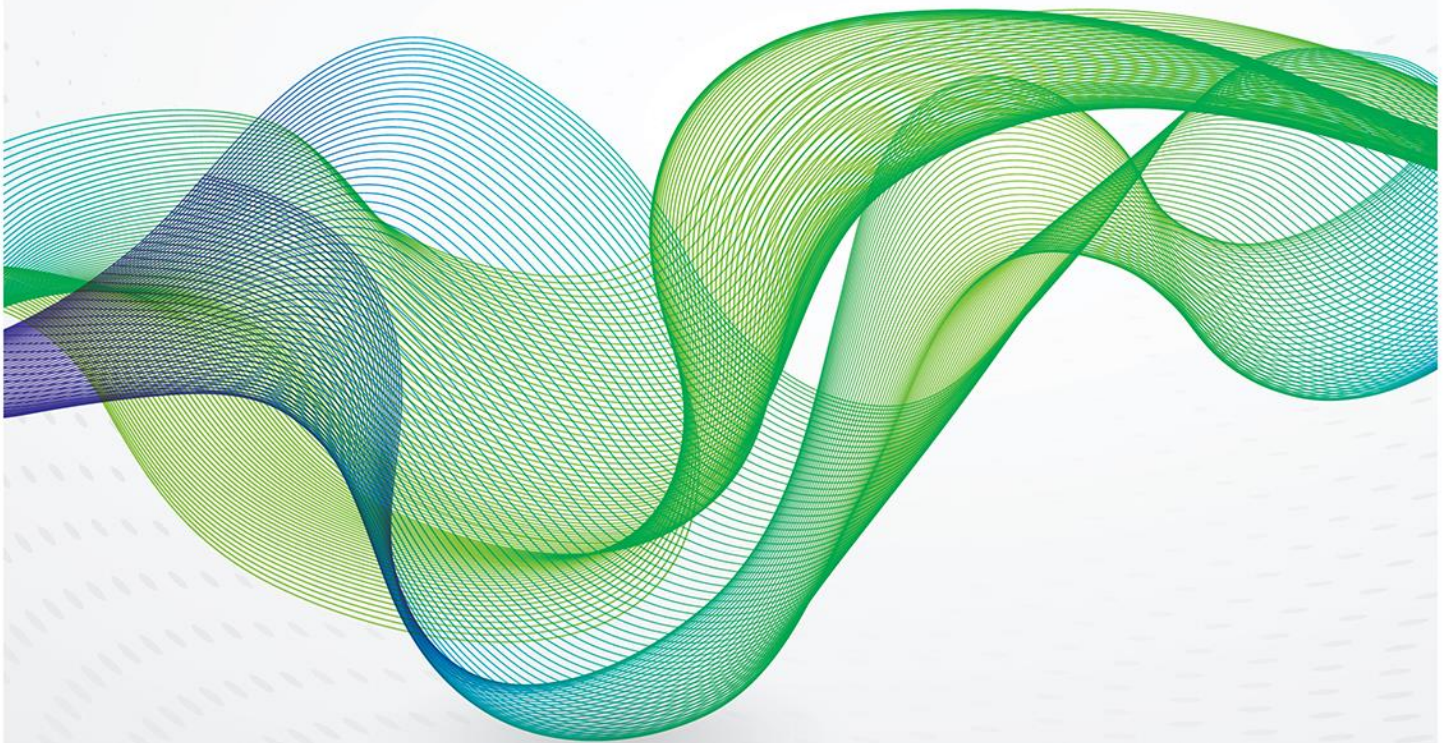
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Abstract

Energy subsidies have been described as socially inequitable and fiscally draining for economies in the Middle East and North Africa (MENA). This is particularly true for resource-scarce, labour-abundant economies such as Tunisia and Egypt who cannot rely on ample resource rents to finance energy subsidies. Despite these shortcomings, governments have struggled to reform subsidies and attempted reforms have frequently been characterised by 'backsliding', that is, a partial or complete rollback of previous reforms. While the dominant political economy explanation underlines governments' fear of popular unrest as the main factor in decelerating or reversing reform, this paper shifts the focus toward another key constituency lobbying against reform: politically connected businessmen (PCBs). Comparing the role of PCBs in the context of energy subsidies in Tunisia and Egypt, the paper provides preliminary evidence that PCBs in Egypt benefit more from energy subsidies and hence attribute greater importance to their maintenance compared to their Tunisian counterparts. In sum, this study highlights the importance of taking into account the political economy of energy intensive industries and not just households when analysing subsidy reforms and that resulting industrialist lobbying activity can seriously disrupt, decelerate, or even derail reform.

1. Introduction

For decades, the subsidisation of energy has been a pervasive feature of economies across the Middle East and North Africa (MENA) (Fattouh and El-Katiri, 2012). By supplying electricity, gas, and petrol to households and companies at prices well below the world market average, MENA energy importers and exporters alike have made energy subsidies a hallmark of their industrial policy and a key pillar of their social contract (Hertog, 2016). Though the goals of this policy – facilitating industrialisation and attenuating social inequalities (Fattouh and El-Katiri, 2012, 7) – may be commendable, energy subsidies have come at a huge price for MENA economies. The estimated cost of pre-tax energy subsidies in MENA amounts to about 8.5 percent of regional GDP or 22 percent of government revenues (IMF, 2014). As a whole, the region accounts for half of global energy subsidies (IMF, 2014). The fiscal burden of this policy has been particularly heavy for relatively resource-scarce and labour-abundant countries in the region, such as Tunisia and Egypt, which by the early 2010s both turned into net energy importers and have thus seen their budgets put under strain, in particular during periods of high oil prices.

Evidence pointing out the manifold distortions of energy subsidies in MENA has not been in short supply. Alongside financial concerns, existing studies have particularly highlighted deleterious effects on the environment, the undue reliance on energy-intensive industries, and the generally regressive distributional consequences of energy subsidies (Bank, 2012; IMF, 2014). The latter point is particularly damning as in most countries subsidies are an important, if not the only, pillar of otherwise underdeveloped social safety nets and often dwarf other welfare expenditures, such as health and education (Bank, 2012).

Given the manifest shortcomings of subsidised energy and the persistent advice on the part of international financial institutions (IFIs) to reform, the absence of a meaningful overhaul of the status quo is indeed striking. While some of the difficulties to reform might lie with limited institutional capacity and problems of implementation, most explanations have underlined the importance of the political economy of energy subsidies to explain the persistence of the status quo.[1] By far the most widespread argument in this context is the alleged fear of governments of a popular backlash and attendant unrest in response to subsidy reductions (Harik, 1992; IMF, 2014 c; Kim and Urpelainen, 2016).

Although in the light of the Arab Spring this argument seems pertinent, it is incomplete and overlooks obstacles to reform stemming from unintended, yet powerful and politically connected beneficiaries of energy subsidies in the industrial sector. Networks of unintended beneficiaries are relatively inconspicuous and, as a result, their influence on the politics of subsidies is often ignored (Blatter and Buzzell, 2013). However, their discrete nature should not deceive us over their political influence. Especially when regime insiders – that is, actors with a privileged access to the centre of political decision-making – are able to tap into policy rents, they can become major veto players able to fend off attempts to change the status quo. Egypt and Tunisia offer an interesting comparison in this respect. In Egypt, the reform of energy subsidies has been characterised by numerous incidents of 'backsliding', that is, the attenuation, dilution, or even rescinding of price reform measures in response to industrial lobbying. This occurred, for example, in the wake of the financial crisis in 2008 and more recently in 2013 (for cement), 2014 (for glass), and 2016 (for steel). In Tunisia, with the exception of the indexation mechanism of local petrol prices which was suspended between 2011 and 2014, price reforms have been slow but generally free of major reversals as demonstrated by the relatively seamless fading out of energy subsidies for one of the biggest industrial consumers – cement – in 2014.

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[1] For an alternative economic explanation, see Poudineh (2017).

This paper argues that the frequency of backsliding in Egypt and its relative absence in Tunisia can be partly explained by the varying importance of energy subsidies for politically connected crony entrepreneurs in both countries. More specifically, based on novel data on crony activity in both countries since the mid-1990s, I demonstrate that Egyptian cronies are more concentrated in energy-intensive industries than their Tunisian counterparts, and that their entry into sectors appears indeed driven by their concern to capture lucrative rents from energy subsidies. I complement this quantitative analysis by qualitative, anecdotal evidence of industrial lobbying in Egypt. In conjunction, the assembled evidence highlights the importance of connected businessmen and lobbying for the political economy of energy subsidies in the MENA region. More broadly, the paper seeks to enrich the debate about subsidy reform by shifting the analytical focus from households to industrial lobby groups.

The paper proceeds as follows: Section 2 provides a brief description of the system of energy subsidies in Tunisia and Egypt, including the most recent attempt at reform. Section 3 briefly summarises the 'standard' political economy explanation for failed subsidy reform. Section 4 uses descriptive and inferential statistics to highlight the varying importance of energy subsidies for politically connected businessmen in both countries. The section also presents anecdotal evidence of business lobbying against price increases in Egypt. Section 5 concludes.

2. Energy subsidies in Tunisia and Egypt

2.1 Tunisia

Tunisia has established a system of extensive energy subsidies in the form of cheap electricity, gas, and petrol. Since the state has acted as a quasi-monopolist in the production and provision of energy, energy subsidies take the form of monopolist price setting by the state, with prices generously below the level of the world market. As shown in Figure 1, the lion's share of energy subsidies is spent on electricity (51%), followed by liquefied petroleum gas (LPG, 15%) and petrol (6%).

Figure 1: Distribution of energy subsidies in Tunisia in 2013

a) Energy subsidies by product

(b) Electricity consumption by final consumer

(c) Natural gas consumption by final consumer

(d) Energy consumption by industrial sector
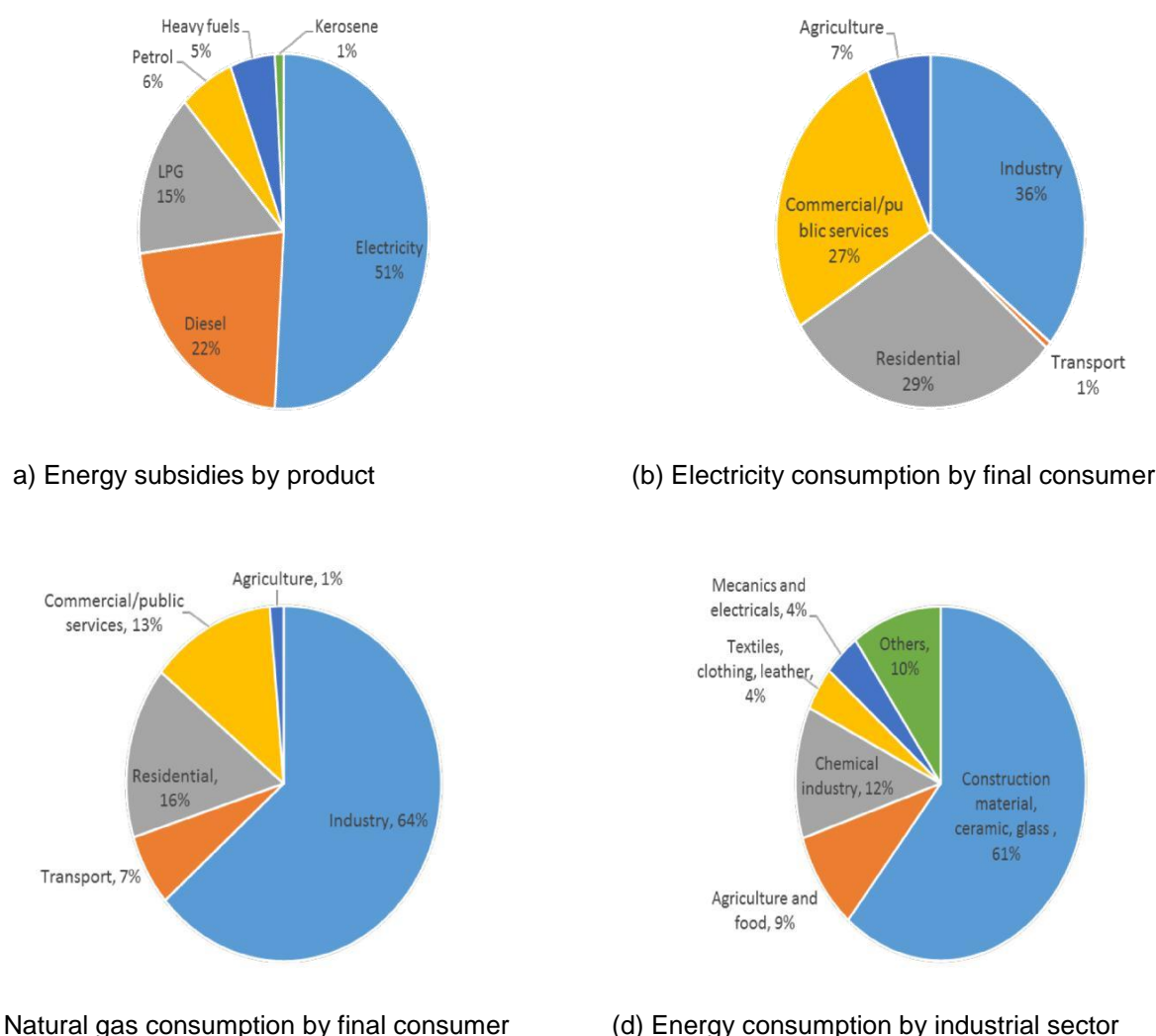
Source: World Bank (2013a).

In terms of sectoral distribution, businesses reap a substantial share of all energy subsidies: industrial electricity consumption amounts to 36% while only 29% are consumed by households (Figure 1b), 64% of natural gas – a major energy input for a number of manufacturing sectors – is consumed by industry (Figure 1c). Within the industrial sector, the distribution of energy subsidies is highly skewed as 61% of all energy is consumed by three broadly defined sectors, i.e., construction material (mainly

cement), ceramic, and glass. The chemical industry reaps another 12%. In light of these data, it becomes clear that businesses have been the major beneficiary of energy subsidies in Tunisia.

Regarding the cost of energy subsidies, Tunisia was a net energy exporter from the early 1970s until the late 1990s and was able to provide cheap energy from its own domestic resources in this period. With falling production levels and increasing consumption, the country has turned into a net importer of energy in the late 1990s, having to import nearly 30 percent of its energy needs by 2015 (Bank, 2016). As energy is supplied at below world market prices, the resulting deficit of Tunisia's two main energy providers (*Société tunisienne des industries de raffinage* (STIR) for oil; *Société tunisienne de l'électricité et du gaz* (STEG) for gas and electricity) is covered by transfers from the state budget. With the rapid rise of oil prices during the most recent oil boom (2003-2014), the costs of subsidised energy quadrupled from their 2005 levels (see Figure 2a), hovering between 4 and 6% of GDP and amounting to an average of 13% of total government expenditures for the period from 2006 to 2016. This makes energy subsidies the most costly component of Tunisia's subsidy system. In relation to other items in the state budget (Figure 2b), energy subsidies are more than double the health budget and ten times the budget of social assistance. Only the education budget surpasses the cost of energy subsidies in volume.

Figure 2: Cost of energy subsidies in Tunisia
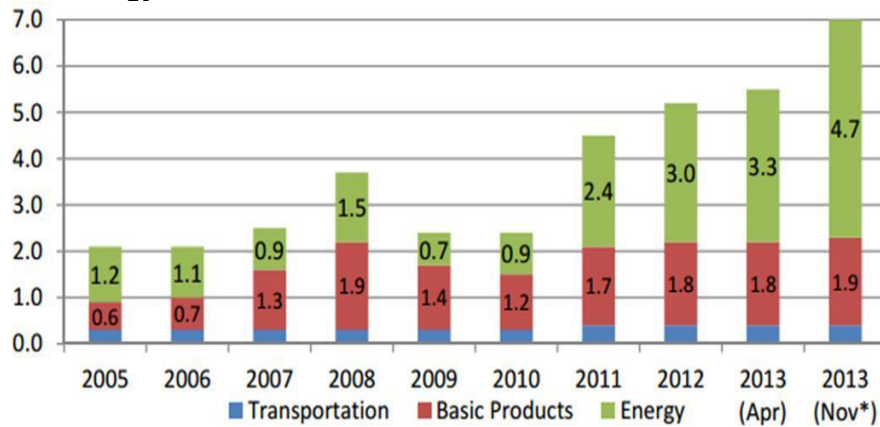
(a) Subsidies as % of GDP
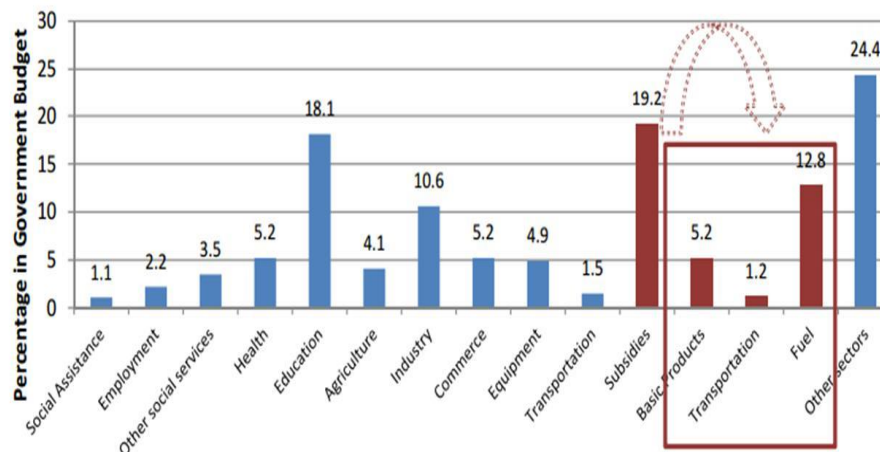
(b) Energy subsidies as % of government expenditures in 2013

Source: Cuesta, El-Lahga and Lara Ibarra (2015).

To alleviate this fiscal burden, the authorities introduced an automatic indexing mechanism of local petrol prices on the world market price in 2009, which was repealed shortly after the uprisings in 2011 (Fattouh and El-Katiri, 2012). In the wake of the ouster of President Ben Ali and under the aegis of an IMF-led stabilisation programme, the Tunisian government increased the price of fuel by 7% in 2012 and 2013, and also hiked up electricity and gas prices for medium-voltage consumers by 20% in 2014. The authorities also reintroduced the automatic indexing mechanism for petrol and began the gradual fading out of energy subsidies for a few energy-intensive industries, such cement, textiles, ceramics, and food processing.

So far, these reforms have been carried out without major incidences of backsliding. This is particularly remarkable in the case of the cement industry for which energy subsidies were faded out completely between 2014 and 2015, despite the fact that cement, together with glass and ceramics, is among the most energy-intensive sectors in Tunisia. Given the salience of energy prices for this sector, political opposition could have been expected but did not materialise.[2] Its absence has certainly to do with the propitious window of opportunity for reform in post-Ben Ali Tunisia coupled with fiscal constraints and firm international pressure on the part of the IMF (Hanieh, 2015). That said, in similar circumstances subsidy reform in Egypt was much less smooth. As this paper argues, one plausible explanation for this difference lies in the varying importance of energy subsidies for politically connected entrepreneurs.

2.2 Egypt

Egypt has also maintained an extensive system of energy subsidies, which offers energy products, such as petrol, gas, and electricity, at favourable rates below the world market price. In contrast to Tunisia, the distribution of energy subsidies is not concentrated in electricity, which represents a mere 8% of total energy subsidies (Figure 3a). Rather, most energy subsidies go toward diesel (40%), followed by LPG (23%), and petrol (gasoline) (19%). Industrial energy consumers mostly rely on natural gas (44%) and electricity (32%) (UNIDO, 2014) and therefore benefit less from direct energy subsidies than their Tunisian counterparts. That said, given that about 20% of subsidised petroleum products are used for the production of electricity, and industrial users consume nearly 28% of electricity and 40% of all energy (Energypedia, 2017),[3] indirect subsidisation of industrial energy inputs is considerable. Within industrial sectors, the benefits from energy subsidies are distributed very unequally, similar to Tunisia. Nearly half of all natural gas is consumed by a single sector – fertilisers – while steel and cement production consume 19% and 17% respectively. All other industries together amount to 19% (Figure 3c).[4]

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[2] It is important to acknowledge that issue salience in itself does not automatically trigger collective action in the form of lobbying (e.g. Mahoney, 2007). In fact, it could be that Tunisian energy-intensive industries have comfortably high profit margins, successfully improved their productivity, and/or increased their energy efficiency to compensate for the loss from reduced energy subsidies. Given the recent introduction of reforms, there is as yet very few systematic data to evaluate their impact on productivity and energy efficiency.

[3] About two thirds of Egypt's power generation comes from natural gas.

[4] Comparable data for electricity consumption are unfortunately not available. That said, electricity and natural gas consumption in the industrial sector tend to be strongly correlated (Khattab, 2007).

Figure 3: Distribution of energy subsidies in Egypt
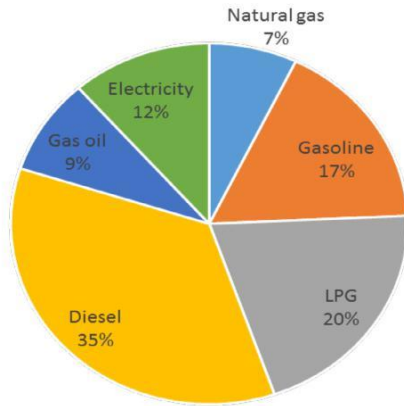
(a) Egyptian energy subsidies by product
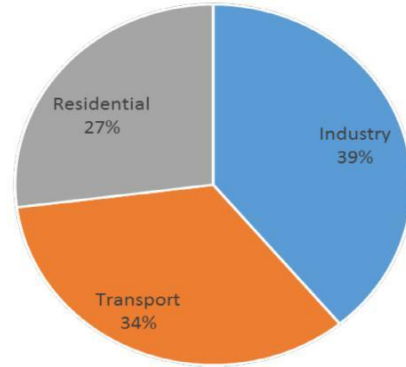
(b) Energy consumption by final consumer
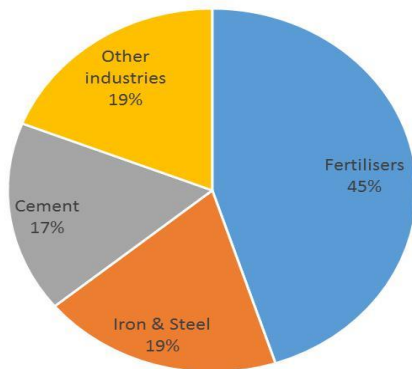
(c) Natural gas consumption by industrial sector

Source: UNIDO (2014).

As long as Egypt was a net energy exporter, the extensive costs of energy subsidies were somewhat masked by the income generated from its booming gas exports. As Egypt transitioned from a net exporter to a net importer of energy in the wake of the 2011 uprising, the fiscal burden of the subsidy bill became fully visible. Fiscal constraints were compounded by the rise of oil prices as a result of political turmoil in MENA. As shown in Figure 4a, the cost of energy subsidies covered directly by the state budget increased by 39% from 4.9 to 6.8% of GDP between 2011 and 2013. The total cost of energy subsidies is estimated to be even higher if subsidies are calculated on a post-tax basis, that is, taking into account the lost revenue from the non-taxation of energy products.[5] On this basis, the IMF estimates the energy subsidy bill at an average of about 11% of GDP (see Figure 4b). For the years 2013 and 2015, energy subsidies amounted to nearly 16 and 10% of GDP respectively. Relative to other items in the budget, energy subsidies consume up to 3.6 times the education and 6 times the health budget (see Figure 4b).

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[5] The IMF uses the price gap methodology to measure the level of subsidies. In this framework, pre-tax subsidies designate the difference between the local price and a benchmark price. Post-tax subsidies add to this the loss occurred as a result of no or low taxation of energy consumption. For more details, see IMF (2014, 4-5).

Figure 4: Cost of energy subsidies in Egypt
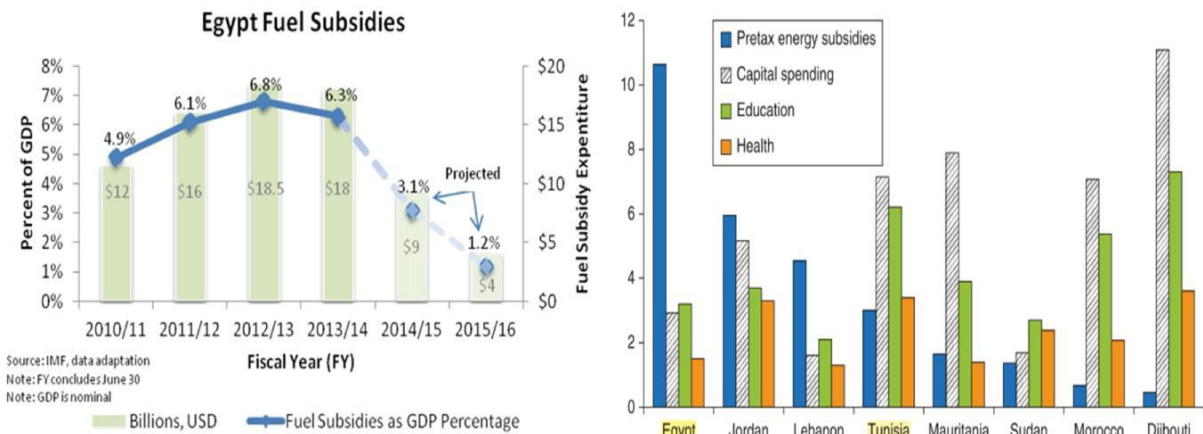
(a) Cost of subsidies covered by state budget as
% of GDP

(b) Cost of pre-tax energy subsidies as % of
GDP

Source: IMF (2014a); IMF (2014c).

In view of Egypt's strained post-2011 budget, successive post-revolutionary governments have carried out a number of price increases. In 2012, electricity prices were increased by about 20% on average and, in addition, the government raised the price of diesel for cement companies from 140 USD to 322 USD per tonne (EUI, 2013). However, the price increase was partially rolled back to 210 USD/tonne in January 2013 in response to outrage from Egypt's large cement producers (Online, 2014). In 2013, the government also raised the gas prices for cement factories from 4 to 6 USD per MBTU, this time without major resistance.

In July 2014, the government carried out a more extensive wave of price hikes, with prices rising across nearly all energy products (fuels, gas, electricity). For household consumers, prices rose by as much as 78%, including for low-income households. Businesses were equally affected by, for some large, fuel and gas price increases. For example, gas prices rose from 6 to 8 USD/MBTU for cement (33%),[6] 3 to 7 USD/MBTU for iron and steel (133%), 3 to 4.5 USD/MBTU for fertilisers (50%), and 2.3 to 7 for glass and ceramics (204%) (IISD, 2014). Diesel and heavy fuel prices were also increased for the cement sector. As before, these measures were accompanied by strong protests from affected business sectors and resulted in two major episodes of backsliding. The first one occurred in 2014 itself when the government reduced gas prices for glass and ceramic producers from 7 to 5 USD/MBTU (Dotmisr, 2014). This was followed by another reversal in 2016 when the government reduced gas prices for steel and iron from 7 to 4.5 USD/MBTU (Online, 2016). The decision came after an intensive lobbying campaign on the part of steel producers and the Egyptian business federation (see below). Another wave of electricity and fuel price increases occurred in late 2016 in the run up to the conclusion of Egypt's recent IMF programme when the government increased fuel prices and electricity prices for households between 30 and 50%; increases for commercial consumption were considerably lower. While the stated goal of the government is to phase out all energy subsidies within a 5-year period, this time frame has been postponed repeatedly.

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[6] Interestingly, gas prices were reduced from 6 to 5 USD/MBTU for bricks. This is noteworthy as many cement producers also produce bricks. Price reductions for bricks can thus be considered a compensatory measure.

3. The Told Story: Fear of civil unrest

In both countries, the reluctance to reform energy subsidies is attributed to past popular revolts against price hikes of subsidised goods. Food riots in response to food subsidy cuts have left a particularly enduring legacy.

In Tunisia, these events hark back to a series of riots that lasted from December 1983 until January 1984. Representing 'the worst violence since independence' (Bank, 1996, 28), protests left about 100 people dead and caused considerable devastation as a result of rioting and plundering. The background of the protests were government measures announced in mid-December 1983 to increase the prices of subsidised goods. In view of rapid price hikes on the international market, subsidisation had become very costly in the early 1980s. Initially, the cabinet planned to gradually increase prices over a period of several years in order to reach parity with world market prices by the early 1990s. Yet adjustment measures were sped up under the pressure of Prime Minister Mohamed Mzali, who sought to impress President Bourguiba by demonstrating his ability to achieve rapid and effective reforms (personal interview with Mohamed Ennaceur, former Minister of Social Affairs). In haste, the government also committed the mistake of launching the compensation measures consisting of wage increases and targeted social transfers after the implementation of the price increases, and there was no clear communication strategy to prepare the public (Bechri and Naccache, 2003). In response to the public discontent, Bourguiba first announced a rollback of the price increases by 50%, before scrapping the measure entirely a few days later.

In Egypt, the major event dates back to 18 January 1977 when President Sadat announced price increases for a number of subsidised food items, such as rice, tea, and gas cylinders for households. Notably, the main subsidy for 'baladi' bread was left untouched (Ahmed et al., 2001), which did not spare the regime from popular unrest. Demonstrations against the measures first broke out in Egypt's centre of steel production, Helwan, and quickly spread to the urban centres of Cairo, Alexandria, and other big cities, mobilising industrial workers, students, state employees, and, to a lesser extent, the urban poor along the way (Walton and Seddon, 1994, 196-97). As demonstrations rapidly turned violent, with administration buildings and consumer centres being attacked and burnt, a state of emergency was declared in several provinces and the regime deployed the army for the first time since 1952 to quell the unrest. Rioting only stopped after Sadat repealed the measures on 20 January. The army had to be called upon a second time when minor increases in the price of bread prompted rioting in the textile centre of Kafr al-Dawwar in 1984 (Ayubi, 1991, 229).

In both incidents, the groups rallying against subsidy reductions did not primarily hail from the ranks of marginalised urban poor. On the contrary, they represented core constituencies of the regime's lower-middle class coalition, such as industrial workers and public sectors employees (Ahmed et al., 2001, 7). While the short-term response consisted of repeals and spending increases, the long-term legacy of key support groups rising up against price increases was a realisation among political elites that 'the bread subsidy cannot be touched except at the peril of the regime' (Waterbury, 1983, 213).

It is important to realise that the legacies of food riots have also affected the way policy makers perceive the perils of subsidy reform in general, including energy subsidies. Evidence for the long-lasting effect can be found in statements of policy-makers and archival sources alike. For example, Monceur Rouissi, former minister and personal advisor to President Ben Ali, described the subsidy issue *in general* as a 'nightmare for all successive governments, too sensitive to be reformed' (personal interview, Tunis 2013). And according to former and current Minister of Supply, Ali Moselhi, there is 'a real fear' of the government to touch the subsidy issue, food and energy, as a result of past unrest (personal interview, Cairo 2012). Archival sources point in the same direction. References to the food riots are paramount in the correspondence between the Egyptian government and the IMF, which was declassified in the early 2000s. Therein, the Egyptian government repeatedly insisted throughout the 1990s that 'the pace of reform [i.e., energy price increases] had to be geared to the likely public reaction' (IMF, 1988, 19).

This risk perception is certainly not without foundation. For starters, energy subsidies accrue mainly to the middle and upper-middle classes. In Egypt, about three-quarters of the combined petrol and diesel subsidies are captured by the richest income quintile. In the case of LPG, high-income households still reap the largest absolute share (25%), ahead of the bottom two quintiles (see Figure 5a). In Tunisia, the picture is very similar with most energy subsidies being either regressive or neutral in distributive character - none of the energy subsidies is anywhere near being redistributive (see Figure 5b).

These distributive effects underpin a political economy environment where the benefits of subsidies accrue to the popular constituencies with most political resources and thus most likely to mobilise against price reform. The risk of popular backlashes is compounded by the fact that a majority of citizens in Egypt and Tunisia is in favour of keeping most energy subsidies (see Figure 6). Only a small majority in Egypt favours the removal of subsidies on petrol. In Tunisia, about 45% of respondents prefer the removal of subsidies on diesel. LPG is not even mentioned in the Tunisian survey, nor is electricity in either of the two countries. The fear of a popular backlash in response to energy price increases is thus a realistic prospect and has prevented more vigorous energy price reforms.

Figure 5: Distributive effect of energy subsidies in Egypt and Tunisia
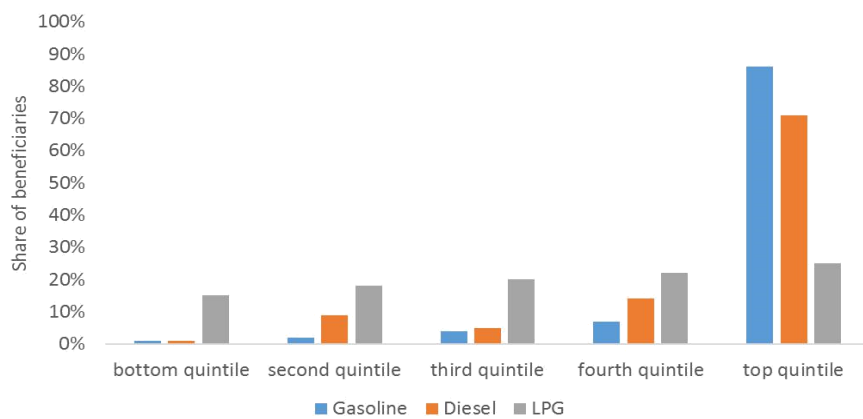
(a) Egypt
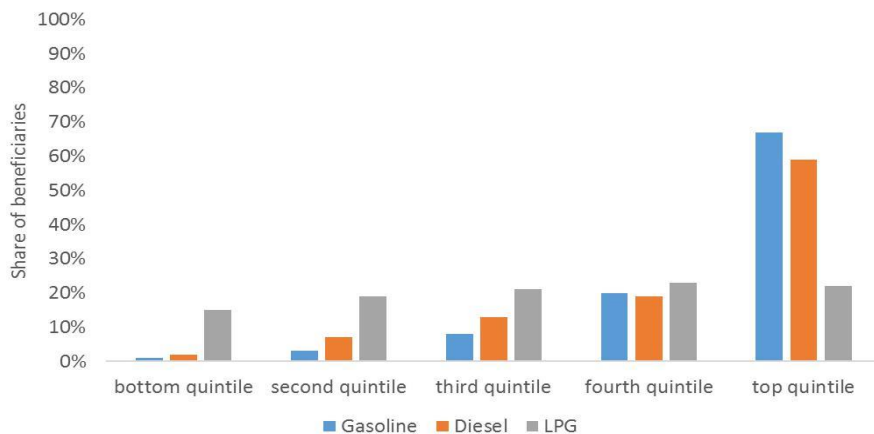
(b) Tunisia

Source: World Bank (2013a); IMF (2014b).

Figure 6: Public opinion on subsidy removal
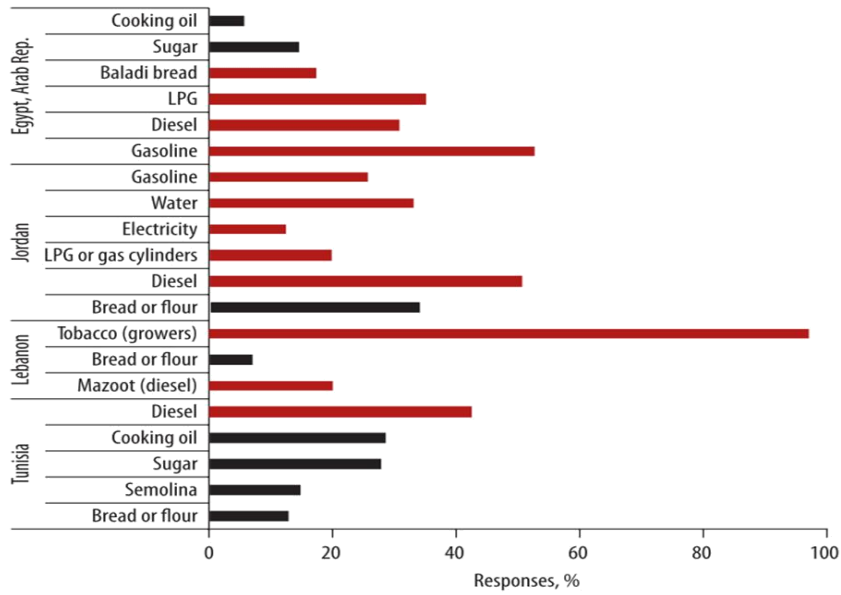
Note: Question asked about the preferred subsidy for removal. Bars in red designate fuel and other non-food subsidies

Source: World Bank (2012).

4. The Untold Story: Politically connected businessmen

Fear of consumer unrest is the predominant narrative to explain the persistence of subsidisation. Though important, this narrative is incomplete without giving due attention to another group of beneficiaries from energy subsidies which have become an important lobbying group against major reform: politically connected businessmen. As I briefly outlined above, energy price reforms for businesses have frequently been followed by backsliding in Egypt while reforms in Tunisia have followed a steadier trajectory. In this section, I will develop the argument that this difference has to do with the varying presence of crony capitalists in energy-intensive sectors and, by extension, the varying importance these actors attribute to preserving rents from energy subsidies. In a nutshell, I am going to demonstrate that Egyptian cronies more densely populate energy-intensive sectors than their Tunisian counterparts and that their decisions to enter a sector appears partly driven by the desire to capture subsidy rents. I will do so based on a novel dataset on crony capitalists in Egypt and Tunisia, using descriptive and inferential statistics as well as anecdotal case evidence.

4.1 Crony data

To measure the presence of politically connected businessmen (PCBs) in the Egyptian and Tunisian economy, I rely on a novel dataset I compiled in collaboration with Adeel Malik at Oxford (Eibl and Malik, 2016). The dataset records crony entrepreneurs in late Ben-Ali Tunisia (1998-2010) and Mubarak Egypt (1996-2010). We compiled the dataset in the following manner: First, we defined a pool of potential crony entrepreneurs. To do so, we used Roll's (2010) list of Egypt's financial and economic core elite,[7] publicly available information on confiscated enterprises belonging to the Ben Ali-Trabelsi clan, and internal reports on cronyism of the German-Tunisian Chamber of Commerce (2011) and German Trade Invest (2011), a market research and consultancy company based in Tunis. We then added to this list all shareholders who had co-invested with these businessmen or were present on the board or the management of their companies using data from the Orbis database (van Dijk, 2013).[8]

Second, we eliminated from this list all individuals without a clear political connection. Political connections are defined in the following way: (a) connections by virtue of holding a political office, being a member of parliament, or a member in a major committee of the former ruling parties (NDP, RCD) (*politicians*); (b) connections through business relations with either the Ben-Ali Trabelsi or the Mubarak clan, most notably with Gamal Mubarak (*associates*); (c) connections as a result of strong personal relationships with the Mubarak family (*confidants*) or kin relationships with the Ben-Ali Trabelsi clan (*kin*); (d) in Tunisia, we considered the Ben-Ali Trabelsi clan as a separate category (*family*) given their extensive business activities. All of these are sub-categories of the category crony/politically connected businessmen. Finally, based on these categories we classify cronies in a narrow sense – *politicians* in Egypt and *family*/*kin* in Tunisia – and a broad sense including all crony categories. We could not establish political connections for about a quarter for all entrepreneurs from the initial list who were therefore not included in the final dataset.[9]

Third, we collected data on the economic activity and date of foundation of all companies in which crony businessmen were either minor or major shareholders or of which they were CEOs. The information was predominantly taken from Orbis (van Dijk, 2013), supplemented with information from other sources if necessary.[10] Companies without a date of establishment are dropped from the list. All

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[7] This list consists of entrepreneurs whose net assets reached or exceeded 100 million US$ in the late 2000s.
[8] The Orbis database collects company-related information, such as board composition, turnover, date of foundation, sector, on an annual basis.
[9] It is worth noting that some political connections will remain hidden and thus impossible to identify. This may introduce some error in the data.
[10] These include the companies own websites and other online databases, such as *Kompass*.

activity information is recorded at the detailed four-digit level of the International Standard Industrial Classification (ISIC, Rev. 3.1).

The main variables derived from this dataset are *crony presence* – a binary indicator measuring the presence of a crony in a given sector-year – and *crony entry*, a binary indicator measuring the entry of an (additional) crony into a sector. As we are interested in cronyism in the late Mubarak/Ben Ali period, we only use crony entries from 1997 onwards and aggregate all information prior to 1997. The variables are time-varying from 1997 until 2011 and measure crony activity at the sector-year level.

Who are these political connected businessmen (PCBs)? Table 1 summarises the main sectors and the nature of political connections for a few prominent PCBs in Egypt. Their economic activities run the whole gamut of service and manufacturing sectors, with an increasing importance of service activities, such as telecommunication or real estate, since the early 2000s. All of them fall into our crony category of *politicians* due to their affiliation with the former ruling party, NDP.

Table 1: Selected PCBs in Egypt

Actor	Main sectors	Political connection
Mohammed Abu El-Enein	Food products and beverages; household equipment; industrial and construction equipment; mining and natural resources	MP: Chairman of Housing Committee (2000-5), Industry and Energy Committee (2005-10)
Ahmed Ezz	Industrial and construction equipment; finance, investment, real estate	MP: Chairman of Planning and Budget Committee (2000-10)
Shafik Gabr	Automobile sector; mining and natural resources; industrial and construction equipment	NDP: Member of Political Secretariat
Ibrahim Kamel	Automobile sector; food products and beverages; chemical and pharmaceutical industry; finance, investment, real estate	NDP: Member of General Secretariat
El-Maghraby family	Food products and beverages; other agricultural products; optical lenses; finance, investment, real estate; health services	Minister of Tourism (2004-5) and Housing (2005-11)
Mansour family	Automobile sector; cigarettes, cosmetics; food products and beverages; household equipment; entertainment and IT; industrial and construction equipment; retail; tourism; finance, investment, real estate	Minister of Transport (2004-11)
Rachid family	Retail	Minister of Industry (2004-11)
Sawiris family	Chemical and pharmaceutical industry; finance, investment, real estate; industrial and construction equipment; telecommunication; tourism	NDP: Member of Business Secretariat
El-Sewedy family NDP:	Industrial and construction equipment	Member of Business Secretariat

Source: Eibl and Malik (2015).

As for Tunisian cronies, economic activity has been more concentrated in the services sector (Table 2). [11] This supports the widely-held impression among Tunisian entrepreneurs that the Ben Ali-

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[11] Please note that this does not mean automatically that the presence of cronies in energy intensive sectors is lower in Tunisia, as the latter is determined by the relative frequency of cronies within manufacturing.

Trabelsi clan plundered the Tunisian economy, reaping quick returns rather than making long-term investments (personal communication with a Tunisian entrepreneur, Tunis, June 2013). More specifically, clan members clustered in sectors such as finance, real estate, telecommunications, the retail sector, and the lucrative importation of cars. That said, cronies have also ventured into manufacturing, amongst others food products, industrial, and construction equipment.

Table 2: Selected PCBs in Tunisia

Actor	Main sectors	Political connection
Belhassen Trabelsi	Automobile sector; finance, investment, real estate; media; telecommunication; food products and beverages; industrial and construction equipment	RCD: Member of Central Committee
Sakher El Materi	Finance, investment, real estate; automobile sector; media; telecommunication; tourism	RCD: Member of Central Committee
Abdelwahab Abdallah	Finance, investment, real estate	RCD: Member of Central Committee and Political Bureau
Hédi Jilani	Textiles	MP RCD: Member of Central Committee
Rachid Ben Yedder	Finance, investment, real estate; food products and beverages; health services; industrial and construction equipment; tourism	RCD: Member of Central Committee
Aziz Miled	Tourism; transport and logistics	RCD: Member of Central Committee
Moncef Mzabi	Automobile sector	RCD: Member of Central Committee

Source: Eibl and Malik (2015).

4.2 Cronies' presence in energy-intensive sectors

Having described the crony dataset and briefly outlined their economic activities, I now turn to the question of cronies and energy subsidies. To do so, it is first of all useful to analyse to what extent cronies have been more active in sectors benefiting from energy subsidies. In the absence of detailed sectoral energy consumption data, measuring the direct rents from energy subsidies for each

economic sector is difficult. I therefore rely on a broader sectoral classification of energy intensity provided by UNIDO (2010) which distinguishes between sectors with low and high energy intensity at the ISIC-2 level.[12]

In Egypt (Figure 7a), the general trend has been one of gradual expansion of crony capitalists across all sectors of manufacturing. While in 1996 about 44% of all sectors were populated by cronies, by 2011 their share had increased to 64%. Moreover, Egyptian cronies have exhibited a striking predilection for energy-intensive sectors. Proportionally, their share in energy-intensive sectors has been consistently higher than in low energy intensive sectors, with 72% of all energy-intensive sectors being populated by cronies in 2011 compared to 57% in non-energy-intensive sectors. What is more, the gap between relative shares has been widening over time: while in 1996 the share of crony sectors in energy-intensive sectors was 7.5 percentage points higher than in low energy intensive sectors, this gap had widened to 15.2 percentage points in 2011 – an increase of 100%. This means that in the observed time period cronies were, on average, more likely to enter energy-intensive sectors.

In Tunisia (Figure 7b), we witness a similar expansion of crony activity over time from 33% of all sectors in 1998 to 48% in 2011. Like their Egyptian counterparts, Tunisian cronies have been more numerous in energy-intensive rather than low energy intensity sectors. That said, the share in energy-intensive sectors is considerably lower than in Egypt, with cronies being present in about 55% of energy-intensive sectors compared to 72% in Egypt. In comparison with Egypt, Tunisian cronies have not increased their relative presence in energy-intensive sectors at the same rate: between 1998 and 2011, the relative difference between the crony share in energy-intensive and non-energy-intensive sectors widened by 64%, from 7.5 to 12.3 percentage points.

Figure 7: Crony presence over time by energy intensity
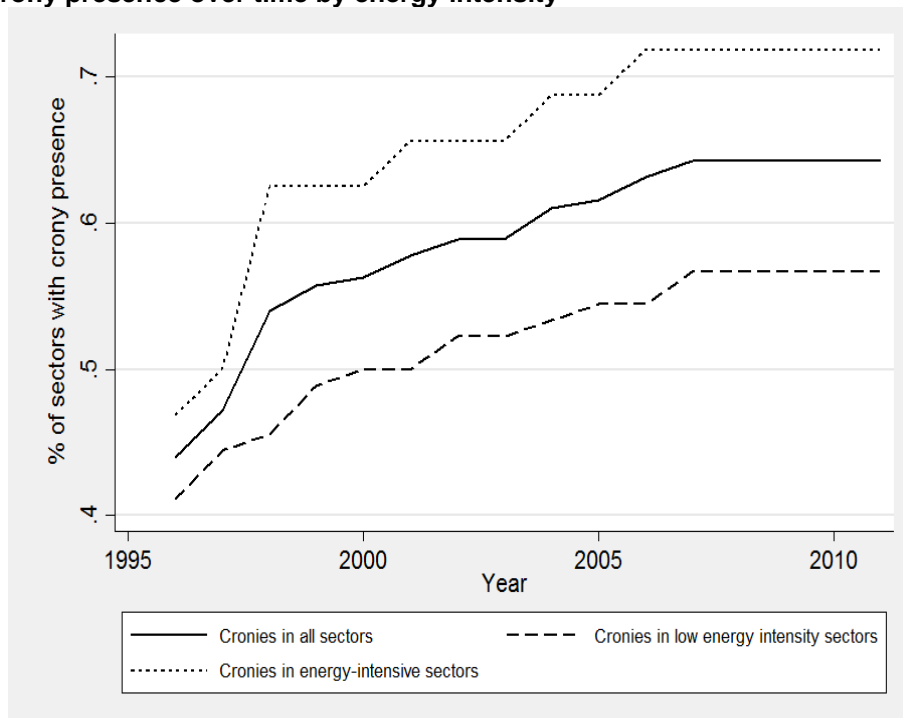
(a) Egypt
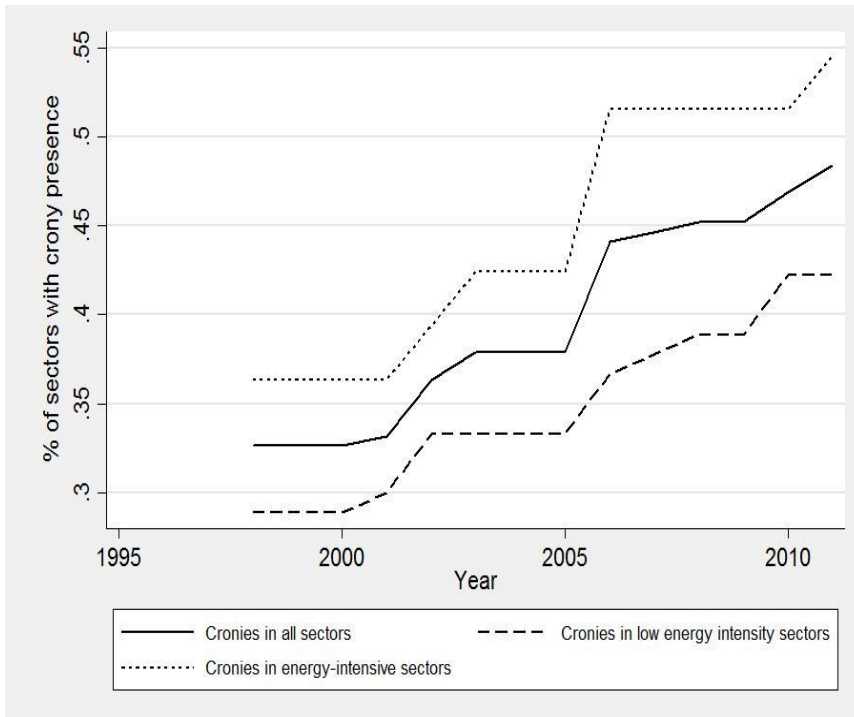
(b) Tunisia

Note: Manufacturing sectors only.

The difference between both countries becomes even more visible if we disaggregate energy-intensive industries into different sectors, as shown in Table 3. First, Tunisian cronies have been completely absent from a number of energy-intensive sectors, such refined petroleum products (ISIC 23) and non-metallic mineral products (e.g. ceramic, ISIC 269). In Egypt, all energy-intensive sectors have at least two crony families active in them.

Second, the density of crony families per sector is considerably lower in Tunisia than in Egypt. In many cases, such as textiles, paper, and glass, only one politically connected family is active. Maximal crony density is four families in Tunisia, whereas it reaches nine in Egypt. How does this influence lobbying power? The extent to which crony density influences the lobbying power of a particular sector depends on how cronies interact in a sector: if interaction is characterised predominantly by competition, higher density should diminish lobbying power as a result of collective action problems. If, on the other hand, crony interaction exhibits a pattern of collusion, larger numbers should make for a more powerful lobbying group, whose resistance to reform would be more difficult for governments to overcome. Given the anecdotal evidence in the literature on crony behaviour and the inter-linkages in dense elite networks (Chekir and Diwan, 2014; Diwan, Keefer and Schibauer, 2016; Rijkers, Baghdadi and Roballand, 2015; Rijkers, Freund and Nucifora, 2017), collusive behaviour amongst cronies has been the norm. By consequence, this suggests more robust lobbying power in Egypt than in Tunisia.

In sum, while these descriptive figures provide no evidence that cronies entered sectors *because of energy subsidies*, they nonetheless highlight the fact that politically connected actors have been amongst *the major beneficiaries of energy subsidies.*
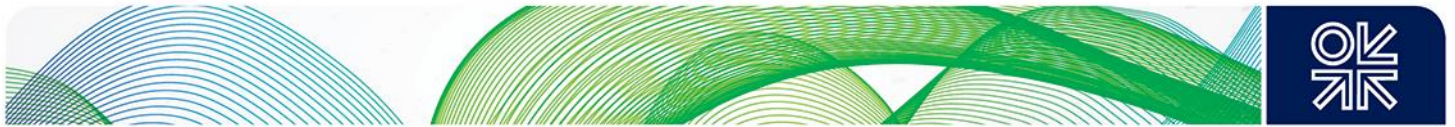
Table 3: Crony presence in energy-intensive sectors, disaggregated

Sector	Egypt	Tunisia
Textiles (ISIC 17)	Arafa family	Jilani family
	Khamis family	
	Al-Zurba family	
Paper (ISIC 21)	Mahmoud family	Ben Ayed family
	Abu El-Enein family	
	Sallam family	
	El-Sewedy family	
	El-Maghraby family	
Coke, refined petroleum	Basili family	
products (ISIC 23)	El-Sewedy family	
	Sawiris family	
Chemicals, fertilisers, plastics	Sawiris family	Ben Ali-Trabelsi family
(ISIC 241)	El-Sewedy family	Abdallah family
		Mabrouk family
		Hachicha family
Other chemicals (ISIC 242-3)	El-Maghraby family	Ben Ali-Trabelsi family
	Basili family	Boujbel family
	Rachid family	Mabrouk family
	Barakat family	Hachicha family
	Amer family	
	Al family	
Glass (ISIC 261)	Sawiris family	Mhiri family
	El-Sewedy family	
	Heikal family	
	Al-Zayyat family	
Cement (ISIC 2694)	Abu El-Enein family	Ben Ali-Trabelsi family
	Sawiris family	Sta family
	El-Sewedy family	Abdennadher family
Other non-metallic mineral	Abu El-Enein family	
products (ISIC 269)	Ezz family	
	El-Sewedy family	
	Sawiris family	
	Khamis family	

	Heikal family	
	Al-Zurba family	
	Arafa family	
	Riadh family	
Basic metals (e.g. iron, steel)	Ezz family	Ben Ali-Trabelsi family
(ISIC 27)	Mahmoud family	Ben Ayed family
	El-Sewedy family	

Source: Energy-intensive sectors taken from UNIDO 2013.

4.3 Crony entry and energy subsidies

Having described the pattern of crony presence in energy-intensive sectors in Egypt and Tunisia, I now turn to the question of whether cronies entered sectors in order to reap rents from energy subsidies. Establishing this point is important as the entry into a sector because of energy subsidies gives us a much stronger indication of the importance of energy subsidies for these actors and, by extension, their (un)willingness to give them up in the future. For example, if it turned out that PCBs in Egypt enter sectors for reasons other than energy subsidies – such as skill intensity, level of imports and exports, etc. – this would suggest that they would not be a major obstacle to subsidy reform. If, on the other hand, energy subsidies are a primary factor driving entry into a sector, we would expect considerable resistance to systemic change given that their business model is, at least partly, predicated on the presence of cheap energy supplies. We would thus expect noticeable lobbying activity against subsidy removal. The assumption behind this is that (i) cronies have to choose what to lobby for as resources for lobbying are limited, and (ii) cronies will exert their lobbying effort relative to the importance of a policy rent reflected in their entry decision.

To test the effect of energy subsidies on crony entry into a sector, I run a number of different models, separately for Egypt and Tunisia. The first model is a pooled binary time-series cross-sectional (BTSCS) regression using the entry of a crony in year t as dependent variable (*Crony entry*). For both Tunisia and Egypt, the variable is based on our broad definition of cronies. As the variable is binary in nature, the regression takes a logistic functional form. In the absence of sectoral data on energy subsidies, I approximate the effect of energy subsidies using the UNIDO (2010) classification of energy-intensive sectors mentioned above. This yields an ordinal, time-invariant measure of *Energy intensity* (high, medium, low), with the assumption that sectors with higher energy intensity reap more energy subsidies than sectors with lower intensity.

Using data from WITS (Bank, 2013b), the regression includes a number of control variables: As a crony's decision to enter a sector might be driven by the level of import penetration and/or export orientation of a specific sector, I include a variable for Imports and Exports measuring the value of imports and exports respectively in each sector-year. I also control for the average most-favoured nation tariff (MFN)[13] and the cumulative number of non-tariff measures (NTM)[14] as cronies might choose to establish a presence in sectors with a higher level of trade protection. As Imports, Exports, and MFN exhibit some skewness, I log-transform all three variables. Since crony entry might be driven by technological requirements, I include the variable Skill intensity, taken from Basu and Das (2011), measuring the skill and technology content of products in a sector on a continuous scale from 1 to 7. All regressions on Egyptian data also include a variable Army, measuring the number of products the Egyptian army is known to produce in a given ISIC-4 sector. Data are taken from Eibl

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[13] MFN tariffs are what countries promise to impose on imports from other members of the WTO, unless the country is part of a preferential trade agreement.

[14] Non-tariff measures (NTMs) are generally defined as policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both.

and Malik (2015). Please note that both Skill intensity and Army are constant across the period of observation.[15]

To mitigate the effect of unobserved sector characteristics, I include sector fixed effects at the ISIC-2 level. To account for temporal dependence in crony entry, we follow Beck, Katz and Tucker (1998) and include three evenly spaced temporal splines. As cronies have a tendency to cluster in specific sectors, the model also controls for the number of previous crony entries in a sector (*Prefail*). To mitigate potential endogeneity concerns, all time-variant right-hand side variables are lagged by one year to ensure the correct temporal order.[16] Finally, standard errors are clustered at the sectoral ISIC-4 level to allow for within-sector correlations in the errors. Summary statistics are presented in Tables 4 and 5.

Table 4: Summary statistics Egypt

Variable	Mean	Std. Dev.	Min.	Max.	N
Crony entry	0.033	0.18	0	1	4480
Crony presence	0.653	0.476	0	1	4480
Energy intensity	0.877	0.795	0	2	2440
NTM	1.381	2.074	0	10.591	2535
MFN	2.46	1.131	0	8.215	2462
Imports	7.104	1.818	0	12.673	1649
Exports	5.095	2.065	2.398	12.391	1556
Skill intensity	3.367	1.758	1	7	2924
Prefail	0.422	0.851	0	8	4484
Oil price	3.819	0.686	2.546	4.715	4480
Army	1.639	5.287	0	45	2380

Table 5: Summary statistics Tunisia

Variable	Mean	Std. Dev.	Min.	Max.	N
Crony entry	0.06	0.238	0	1	6826
Crony presence	0.484	0.5	0	1	6826
Energy intensity	0.886	0.799	0	2	3444
NTM	0.557	1.705	0	16	3560
MFN	2.806	1.085	0	5.198	2013
Imports	7.096	1.478	1.792	13.742	2130
Exports	6.226	1.804	2.398	11.904	2102
Skill intensity	3.358	1.754	1	7	4027
Prefail	0.723	1.632	0	15	6827
Oil price	3.816	0.686	2.546	4.715	4866

The results of the BTCSC models are displayed in Tables 6 and 7, for Egypt and Tunisia respectively. The tables reveal an interesting empirical pattern. In Egypt, cronies are significantly more likely to enter sectors with high energy intensity as shown by the consistently statistically significant coefficient of *High energy intensity*. In fact, based on the fully specified model in column 5, the likelihood of crony entry increases from an average of 4% for sectors with low energy intensity to about 17% for sectors

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[15] Unfortunately, the number of controls is limited by the scarcity of sectoral data in Egypt and Tunisia.
[16] The results are similar when using the simultaneous instead of the lagged regressors.

with high energy-intensity – an increase of 360% (see Figure 8). Moreover, in light of the weak and mostly insignificant coefficients of the control variables, energy intensity appears to be a primary factor driving sector entry. Only *Export* and *Army* seem to have a significant impact on crony entry, suggesting that cronies avoid export oriented sectors and, somewhat surprisingly, tend to prefer sectors with higher army activity. Overall, the model provides initial evidence that Egyptian cronies entered sectors in order to reap rents from energy subsidies.

Figure 8: Predicted probability of crony entry in Egypt
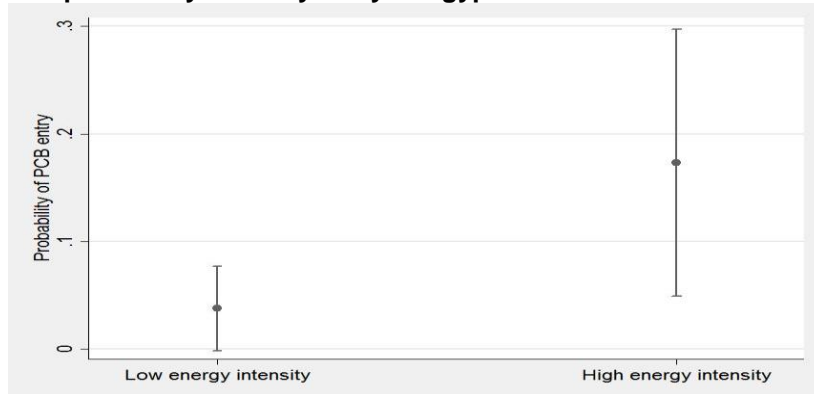
Note: Predictions based on Table 6, column 5.

Table 6: Pooled BTSCS model of crony entry in Egypt

	(1)	(2)	(3)	(4)	(5)
Medium energy intensity	-0.333	-1.239	-1.106	-1.017	-1.037
	(0.816)	(1.016)	(1.081)	(1.293)	(1.335)
High energy intensity	1.463**	1.340*	1.791**	1.837**	1.954**
	(0.632)	(0.704)	(0.846)	(0.918)	(0.963)
MFN_{t-1}		-0.212	-0.312	-0.314	-0.217
		(0.272)	(0.306)	(0.309)	(0.321)
NTM_{t-1}		-0.126	-0.119	-0.119	-0.120
		(0.179)	(0.195)	(0.195)	(0.196)
$Imports_{t-1}$			-0.177	-0.174	-0.180
			(0.130)	(0.130)	(0.118)
$Exports_{t-1}$			-0.114	-0.117	-0.156*
			(0.0932)	(0.0941)	(0.0945)
Skill intensity				0.0322	0.0360
				(0.178)	(0.180)
Army					0.0341**
					(0.0147)
Prefail	-0.178	-0.337	-0.460	-0.460	-0.474
	(0.186)	(0.262)	(0.329)	(0.329)	(0.343)
Sector FEs	No	No	No	No	No
Splines	Yes	Yes	Yes	Yes	Yes
Adjusted R2	0.0878	0.116	0.139	0.139	0.146
Sectors	104	98	98	98	98
NxT	1560	1244	1178	1178	1178

Cluster-robust standard errors in parentheses.

Crony variable based on broad definition of cronies * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Pooled BTSCS model of crony entry in Tunisia

	(1)	(2)	(3)	(4)
Medium energy intensity	1.596	0.264	0.353	0.139
	(0.996)	(1.100)	(1.110)	(1.185)
High energy intensity	1.463**	1.340*	1.791**	1.837**
	(0.632)	(0.704)	(0.846)	(0.918)
MFN_{t-1}		0.0217**	0.0239**	0.0235**
		(0.00921)	(0.00999)	(0.00987)
NTM_{t-1}		-0.271**	-0.309**	-0.319**
		(0.129)	(0.130)	(0.125)
$Imports_{t-1}$			0.123	0.130
			(0.187)	(0.193)
$Exports_{t-1}$			0.158	0.163
			(0.122)	(0.122)
Skill intensity				-0.154
				(0.246)
Prefail	1.085	0.784	0.680	0.684
	(0.244)	(0.385)	(0.403)	(0.403)
Sector FEs	No	No	No	No
Splines	Yes	Yes	Yes	Yes
Adjusted R2	0.0878	0.116	0.139	0.139
Sectors	104	98	98	98
NxT	1560	1244	1178	1178

Cluster-robust standard errors in parentheses.

Crony variable based on broad definition of cronies * p < 0:10, ** p < 0:05, *** p < 0:01

By contrast, no such pattern can be observed in Tunisia. While the coefficients of medium and high energy intensity are positive, they fail to reach statistical significance, suggesting that all else being equal Tunisian cronies enter sectors regardless of their energy intensity. In other words, Tunisian cronies do not seem to be driven by a desire to reap rents from energy subsidies when they enter a sector. Rather, in view of the positive and highly significant coefficient of tariffs (*MFN*), rents from trade protection seem to be the primary motivating factor. More specifically, cronies seem to be particularly attracted to sectors which have not yet witnessed major trade liberalisations as shown by the negative coefficient of *NTM*.[17] Finally, Tunisian cronies witness a higher degree of clustering as shown by the significant, positive effect of *Prefail*. In line with our descriptive findings, the model suggests that energy subsidies are driving crony entry in Egypt but not in Tunisia.[18]

While the above models are indicative, the pooled BTSCS model suffers from a number of shortcomings. Most importantly, the pooling of the data means that the model draws on both within and between group variation to derive its estimates. This, in turn, makes the model vulnerable to

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[17] Similar to other MENA countries, Tunisian authorities have tended to substitute tariffs with non-tariff measures in response to trade liberalisations.

[18] These results are robust to a number of robustness tests. More specifically, the results hold when (i) using time polynomials (Carter and Signorino, 2010) instead of splines to control for time dependence (column 1); (ii) using a narrow definition of cronies which only includes *politicians* (column 2); (iii) using a dummy variable for high energy intensity (column 3). In the latter specification, the effect of energy intensity is particularly strong, suggesting that cronies do indeed give preference to high energy-intensive sectors compared to sectors with low *or* medium energy intensity.

omitted variable bias as it is likely that the minimal set of controls does not control for all relevant cross-sectoral differences affecting the decisions of a crony to enter. For example, it could be that energy-intensive sectors are more capital-intensive – which is likely – and cronies enter these sectors not because of energy subsidies but because they have better access to capital.

To mitigate for such omitted variable bias, I run a conditional logit fixed effect model controlling for sector-specific characteristics. These models condition on fixed effects rather than explicitly including them in the model as the standard way of estimating fixed effects can generate the well-known incidental parameters problem. Specifically, conditional logit relies on units (sectors) that experience change in the response variable over time. I use a variant of this approach that involves conditioning on the actual number of crony entries in a group (see Beck (2015)).[19]

Estimating the effect of energy intensity on crony entry is not straightforward in this setup, though, as energy intensity is time-invariant and thus dropped from a fixed effects regression. To circumvent this problem, I add an additional variable, Oil price, which measures the log of the oil price in constant US dollars. Data for the this variable is provided by the Federal Reserve Bank of St Louis (2017). I then interact this variable with the indicator for energy intensity. While the base term of energy intensity is still dropped in this specification, the interaction term allows me to estimate the effect of energy-intensity on crony entry as oil prices vary over time. Like other time-varying variables, I lag Oil price by one period to mitigate potential endogeneity. While in a country without energy subsidies higher oil prices should lead to reduced entry into energy-intensive sectors, my expectation is that crony entry in energy-intensive sectors increases, at least relative to other sectors, as the price of oil goes up because the increasing oil price means that comparatively more rents from energy subsidies can be reaped.

The results of the conditional logit model are displayed in Tables 8 and 9. In the case of Tunisia, the findings are in line with the previous model, suggesting no significant relationship between energy subsidies and crony entry. Neither *Oil price* nor the interaction term are statistically significant. In fact, the included covariates perform very poorly in predicting crony entry, with only *Prefail* being significant in two of three specifications. Most variation thus seems to be at the cross-sectional level and being absorbed by the sectoral fixed effects.

The situation is different in Egypt. Here, the negative and highly significant coefficient of *Oil price* indicates that entry into low energy sectors becomes increasingly unlikely as the oil price increases. In sectors with high energy intensity, by contrast, the interaction term shows a positive counter-effect which means that, as oil prices increase cronies tend to become more likely to enter sectors with high rather than low energy intensity. Such counter-cyclical behaviour in the face of rising energy cost only make sense if we take into account the positive rents crony firms receive from energy subsidies. In fact, the relative benefits from energy subsidies increase parallel to energy prices, which makes it more attractive for cronies to enter energy-intensive sectors.

Taken together, the findings suggest that Egyptian cronies' decision to enter a particular sectors has at least partly been motivated by energy subsidies. A word of caution is in order, however, as the identification strategy of the presented models is far from water-tight. The findings are thus strongly suggestive of a pattern without necessarily implying a causal relationship.

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[19] As Beck (2015) shows, this has superior finite sample properties compared to the conventional fixed effects logit.

Table 8: Conditional logit FE model of crony entry in Egypt

	(1)	(2)	(3)
Oil price$_{t-1}$	-2.563***	-2.570***	-2.268***
	(0.637)	(0.667)	(0.670)
Oil price$_{t-1}$ * Medium energy intensity	1.295	1.220	1.434
	(1.050)	(1.070)	(1.176)
Oil price$_{t-1}$ * High energy intensity	1.357*	1.263*	1.283*
	(0.732)	(0.762)	(0.781)
MFN$_{t-1}$	0.0245	0.0146	0.0169
	(0.019)	(0.0199)	(0.0200)
NTM$_{t-1}$	-0.581**	-0.560*	-0.542*
	(0.282)	(0.292)	(0.309)
Imports$_{t-1}$		-0.496*	-0.538*
		(0.275)	(0.278)
Exports$_{t-1}$			-0.182
			(0.180)
Prefail	0.717***	0.696***	0.688***
	(0.236)	(0.246)	(0.260)
Sector FEs	Yes	Yes	Yes
Time polynomials	Yes	Yes	Yes
Adjusted R2	0.219	0.231	0.237
Sectors	37	36	36
NxT	481	479	440

Cluster-robust standard errors in parentheses. Crony variable based on broad definition of cronies * $p < 0:10$, ** $p < 0:05$, *** $p < 0:01$

Table 9: Conditional logit FE model of crony entry in Tunisia

	(1)	(2)	(3)
Oil price$_{t-1}$	1.543	1.558	1.404
	(1.825)	(1.872)	(1.988)
Oil price$_{t-1}$ * Medium energy intensity	-2.333	-2.327	-2.289
	(2.214)	(2.219)	(2.233)
Oil price$_{t-1}$ * High energy intensity	-0.705	-0.703	-0.665
	(1.99)	(1.992)	(2.006)
MFN$_{t-1}$	0.0166	0.0166	0.0168
	(0.036)	(0.0317)	(0.0315)
NTM$_{t-1}$	-0.970	-0.971	-0.953
	(2.01)	(2.012)	(1.998)
Imports$_{t-1}$		-0.0389	-0.109
		(1.084)	(1.136)
Exports$_{t-1}$			0.194
			(0.839)
Prefail	0.728	0.732	0.717
	(0.41)	(0.431)	(0.438)
Sector FEs	Yes	Yes	Yes
Time polynomials	Yes	Yes	Yes
Adjusted R2	0.481	0.481	0.482

| Sectors | | | 27 | 27 | 27 |
| NxT | | | 162 | 162 | 162 |

Cluster-robust standard errors in parentheses. Crony variable based on broad definition of cronies * p < 0:10, ** p < 0:05, *** p < 0:01

4.4 Anecdotal case evidence

Given that the above findings are suggestive but not finally conclusive, is there any case evidence suggesting that backsliding in Egypt was indeed driven by lobbying on the part of politically connected entrepreneurs? Looking at the most recent episode of price reversals this indeed seems to be the case. In July 2016 the head of the Federation of Egyptian Industries, Mohamed El Sewedy, declared that cutting natural gas prices for manufacturers is 'better for the state's budget' and would 'help reduce the budget deficit' as the benefits would outweigh the direct financial costs for the state (Akhbar, 2016). His main concern was to obtain a reduction of the gas prices for steel manufacturers which had seen their gas prices increase from 3 to 7 USD/MBTU in 2014. The episode dragged on for several months as the Egyptian national gas company EGAS was reluctant to reduce the gas prices as this would entail a further deterioration of its ongoing deficit. In the end, the tug-of-war was resolved in the favour of business as gas prices were reduced accordingly.

The figure of El-Sewedy is interesting in this context. He was part of the group of well-connected businessmen in the late Mubarak period and was, amongst others, member of the NDP Business Secretariat. In the post-Mubarak era, the El-Sewedy family managed to further extend its influence in politics, with two family members being elected as heads of the strategically important Industrial (Mohamed El Elsewedy), and Energy and Environment (Talaat El Sewedy) Committees. Mohamed El-Sewedy also took over the leadership of the Union of Egyptian Industries, which has made him one of Egypt's chief industrial lobbyists. While his core manufacturing business lies in the cable sector, the El-Sewedys command a large business conglomerate encompassing numerous sectors, amongst others chemicals, fertilisers, plastic, glass, cement, and also steel. The fact that El-Sewedy lobbied for a reduction of gas prices for the steel sector was thus in his very own economic interest. In addition, the Egyptian steel sector has long been described as oligopolistic, with a handful of producers dividing up the market amongst themselves (Selim, 2006).

This leads me to the wider question about the persistence of crony networks post-2011. In Tunisia, the confiscation of assets of the Ben Ali-Trabelsi clan and a number of associates has arguably disrupted pre-2011 crony networks as the major patrons in these largely clientelistic state-business networks were removed. Regarding energy-intensive industries (see Table 3), this mainly affected three formerly important business clans: the Ben Ali-Trabelsi, Mabrouk, and Mhiri family. In Egypt, at the level of economic elites, very little turnover has actually taken place. Judicial proceedings against major Mubarak-era cronies – Ezz, Rachid, and Sallam for example – have been dropped or settled by payment of penalties.[20] Moreover, a vast number of pre-2011 cronies have managed to preserve or reconstitute their political influence. Business tycoon Naguib Sawiris, for instance, founded the Free Egyptians Party, which won 65 seats in the 2015 parliamentary elections, making it the single largest party in parliament; the Khamis family is represented in parliament by Mahmoud Khamis, brother of the textile magnate and former Mubarak-era crony Mohamed Khamis; Elia Tharwat Basili represents one of Egypt's leading business families in the production and wholesale of pharmaceuticals; he very fittingly presides over parliament's Health Committee. As result, in every energy-intensive sector as defined in Table there is at least one PCB still active in post-Mubarak Egypt.

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[20] The exception here is Safwan Thabet whose assets were confiscated due to alleged ties with the Muslim Brotherhood.

5. Conclusion

Energy subsidies have represented a major political conundrum for MENA governments, in particular labour-abundant, resource-scarce countries like Egypt and Tunisia that lack the fiscal capacity to maintain expensive subsidisation of energy in the long-run. The economic argument for reforming energy subsidies is very clear: firstly, they devour large sums of state revenue and crowd out fiscal capacity for more productive outlays, such as health and education, which they frequently surpass in size. Secondly, energy subsidies are regressive, directing precious resources toward those least in need, most notably middle and upper-middle classes.

This distributive pattern is important to explain governments' reluctance to meaningfully reform energy subsidies. In the case of Egypt and Tunisia, the middle class has been a core constituency of authoritarian regimes under Ben Ali and Mubarak, and now under Sisi. I demonstrated that a legacy of subsidy riots strongly influences governments' fear of popular backlashes against subsidy reform. In this sense, food and energy subsidies are considered by policy-makers as a joint problem as both have historically underpinned the social contract in Tunisia and Egypt.

This narrative, though correct, is incomplete, however. As this paper has demonstrated, the political economy of subsidies is not only a story of household consumers but also industrial producers. Using a novel dataset on crony capitalists in late-Mubarak Egypt and late-Ben Ali Tunisia, this study has demonstrated that in Egypt crony capitalists are highly overrepresented in energy-intensive industries, reaping large rents from energy subsidies. This pattern is similar but much less pronounced in Tunisia where crony capitalists are been spread more evenly across sectors with different levels of energy intensity. In addition, while Egyptian cronies have populated all energy-intensive sectors, Tunisian cronies have been more dispersed and concentrated on a few energy-intensive sectors only. Furthermore, the findings from the regression analysis suggest that, in Egypt, cronies' decision to enter a specific sector has been driven by a desire to reap rents from energy subsidies, whereas in Tunisia crony entry is uncorrelated with the level of energy subsidies. This difference – so the argument in this paper – explains why recent price reforms in Egypt have been characterised by important backsliding in response to industrial lobbying whereas the reform trajectory in Tunisia was comparatively much more frictionless. Looking beyond the two cases, this study highlights the importance of taking into account the political economy of industrial producers when analysing subsidy reforms and that resulting lobbying activity can seriously disrupt, decelerate, or even derail reform.

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