

Chapter 2 The impact of policies on firm dynamics, productivity and job growth

The previous Chapter established that, in MENA, employment growth is limited by the small pool of younger firms and more productive firms. This Chapter presents several case studies that show how various policies across MENA countries tend to lower competition and create unequal opportunities between entrepreneurs, thereby limiting the number of young firms and productivity growth. The case studies cover several policies ranging from energy subsidies to industry, cumbersome business regulations, uneven implementation of these regulations, to barriers to foreign direct investment.

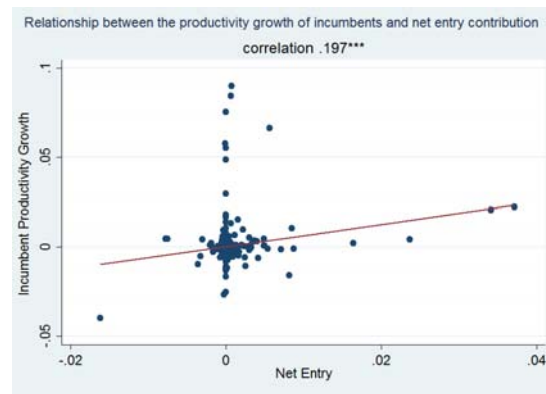
2.1. **The Schumpeterian growth model predicts that fast-growing economies are characterized by specific firm dynamics echoing neck-and-neck competition market structures.** Aghion et al. (2001) predict that the majority of sectors in fast-growing economies will exhibit high firm turnover, higher within-firm productivity growth, and low resource misallocations.

2.2. **In contrast, the firm dynamics in MENA identified in Chapter 1 resemble market structures in which a few leading firms have large (exogenous) cost advantages, while potentially large numbers of informal micro-firms use unproductive vintage technologies to serve local market niches.** The Schumpeterian growth framework predicts that sectors in which leading firms enjoy large, exogenous cost advantages due to policy distortions should display a number of traits that distinguish them from sectors in which leading firms do not enjoy such privileges. Aghion et al. (2001) predict that sectors dominated by firms with large and exclusive cost advantages should face less competition and exhibit less entry and exit. Likewise, sectors dominated by these firms should have a more skewed firm distribution, characterized by a large politically connected market leader, and a potentially large number of small and/or informal micro-firms using vintage technologies to serve local market niches.

2.3. **Low firm turnover, productivity growth, and resource misallocation, which hold back job growth in MENA, point to lack of competition.** The lack of both entering and growing young firms also reduces the pool of firms that can put competitive pressure on incumbent firms. Thus, incumbents face less pressure to become more cost-effective over time or exit. In the process of creative destruction, resources are reallocated to more productive firms, either through the higher growth of more productive firms, or through firm churning, whereby the least productive firms are forced to exit. Section Chapter 1 contends that this process is undermined by various policies in MENA.

2.4. **Competition is a catalyst in the process of creative destruction, which has been identified in Chapter 1 as the main driver of long-term employment growth in MENA.** Bartelsmann et al. (2004) demonstrate that for several Eastern European countries the *threat of entry* serves as a disciplining device, forcing incumbents to innovate more rapidly. Figure 2.1 illustrates the relationship between net entry and incumbents' productivity growth in 4-digit industrial sectors in West Bank and Gaza. It shows that incumbents' productivity growth is positively correlated with net entry across sectors. In other words, sectors that are more *contestable* — that have more competition from entering firms — tend to exhibit rapider productivity improvements among existing firms.

Figure 2.1 Incumbents productivity growth is higher in more contested sectors in West Bank and Gaza



Notes: Authors' calculations based on West Bank and Gaza industrial census. Each observation in the scatter plots represents a non-agriculture 4-digit sector. The graphs show the relationship between incumbents' productivity growth and firm turnover (left) and or net entry (right). Data are based on 4-digit industrial sectors pooled across years from 2004-2012.

2.5. **This section offers several case studies that demonstrate how policies in MENA shape (distort) private sector competition and thus firm dynamics associated with higher job growth.** Thus, while Chapter 1 documented that firm dynamics in MENA are consistent with weak *neck-and-neck* competition in the sense of Aghion et al. (2001), this section highlights specific policies in MENA countries that lower competition by providing large exogenous cost advantages, in the form of policy privileges to a few leading firms.

2.6. **Increasing the pool of younger firms and more productive firms – the engines of job creation – requires more competition and equal opportunities for all entrepreneurs; in other words, it requires the removal of policies that undermine competition by tilting the level playing field.** Increasing private sector competition requires a comprehensive approach to competition policy. A level playing field for all firms can be distorted in many different ways. Several potential distortions to fair competition in MENA countries have been investigated, including energy subsidies, access to finance, and access to land (World Bank, 2009 and 2011b).

2.7. **The following sections summarize the main results from case studies evaluating:** (i) the employment spillovers from FDI in Jordan (Section 1); (ii) the impact of mobility restrictions on firm dynamics in the West Bank (Box 2.2); (iii) the link between job growth and the quality of the business environment in Morocco (Section 2); (iv) and the impact of energy subsidies on employment and resource misallocation in Egypt (Section 3); (v) how discretionary policy implementation by public officials affect competition and innovation (Section 4).

1. FDI inflow and employment in Jordan

We show that FDI inflow in Jordan led to a partial crowding-out of domestic firms, but had positive spillovers in upstream and downstream sectors, pointing to important benefits from the removal of FDI restrictions. The employment contraction among firms in the same industry is concentrated in old and small firms. When FDI inflow increases, employment growth rises in young firms and service firms in upstream sectors, and in service firms in downstream sectors. Domestic manufacturing firms (suppliers) did not benefit from FDI spillovers, possibly reflecting a combination of weak competition in the sector and the absence of technical supplier support programs.

2.8. **Technology transfers through FDI to domestic suppliers, downstream sectors, or competitors are considered to have played a major role in the process of technology adoption, structural change and job creation of many East Asian economies including China, India, and Malaysia** (Rodrik, 2004, 2008; and Sutton, 2005). Policymakers in many developing economies provide incentives to attract FDI in the expectation that FDI inflows bring capital, new technologies, marketing techniques, and management skills. In fact, FDI is considered as one of the major channels for fostering technology transfers to developing countries (Keller, 2004). Technology spillovers may take place when local firms copy technologies either through observation or by hiring workers trained by foreign affiliates. Moreover, entries of foreign firms change the market structure in the domestic economy typically increasing competition. In particular, it has been shown that FDI in backbone service sectors can increase the quality of services benefitting using firms (Arnold et al., 2012).

2.9. **This section aims to quantify the effects of FDI inflow on jobs in Jordan by accounting both on direct as well as spillover effects.** Following the methodology of Javorcik (2004)³¹, the information on foreign ownership used is based on the establishment census data in 2006 and 2011 covering both manufacturing and service sectors. The census includes panel information (and sample weights) for a subset of 15,500 establishment covering 53 percent of total employment in the economy (relative to labor force survey data). Firms with a share of foreign ownership above 10 percent account for 19 percent of all large firms in 2006 as well as 30 percent of total employment among large firms (see Chapter 1). Data from the establishment census are combined with detailed data on input-output tables for about 80 two-digit sectors in 2006. This allows for approximating the linkages between foreign firms and the domestic suppliers and users of foreign intermediates and services. Lamla and Schiffbauer (2014) provide more details on data and methodology, and additional results and robustness tests.³²

2.10. **The approach allows us to distinguish between horizontal spillovers to firms in the same sector and vertical spillovers to domestic suppliers (backward linkages) and downstream users (forward linkages).** The distinction is important, as vertical spillovers are more likely: while foreign firms have an incentive to prevent technology leakages to local competitors in the same industry, they benefit from technology diffusion to suppliers through improved input quality. In Lithuania and Romania, Javorcik (2004) and Javorcik and Spatareanu (2008) find positive spillovers from manufacturing FDI only for domestic suppliers in manufacturing (backward linkages).

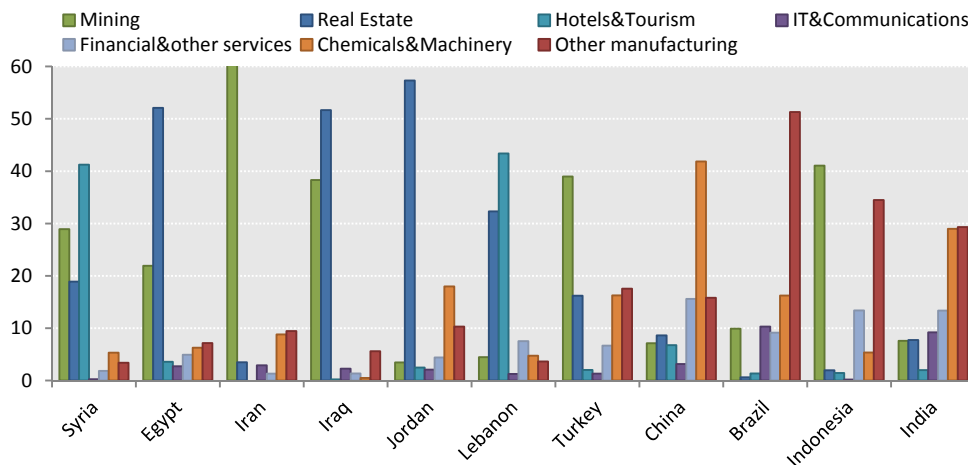
2.11. **Jordanian firms appear to be relatively well-placed to benefit from FDI spillovers in the form of foreign technology transfers that increase productivity and ultimately job growth.** Jordan has some of the highest shares of foreign investment in its total investments: almost half of total investment in Jordan is of foreign origin, according to the WDI in 2009. Likewise, FDI in Jordan accounted on average for about 11 percent of GDP from 2000-2009, which is among the highest shares in emerging economies. Figure 2.2 provides the breakdown of FDI inflows into Jordan from 2003-2010 by sector. More than half of all FDI is in real estate; FDI in manufacturing accounts for another 30 percent; foreign investments in all other sectors are negligible, at only around 10 percent of total FDI combined. This pattern is comparable with

³¹ The impact of FDI is measured on employment instead of productivity spillovers as in Javorcik (2004), since no reliable output data for establishments was available. Focus was given to the long-term employment growth effects of the presence of foreign firms in 2006 and subsequent employment growth until 2011. Thus, we assume that over a five year period learning effects (technology spillovers) of domestic suppliers materialize into job growth. Moreover, in contrast to Javorcik (2004), our data allow measuring spillovers to manufacturing and services firms.

³² See Marotta et al. (2014) for related work on Tunisia.

other MENA countries (apart from FDI in the oil sector), but contrasts with the high shares of FDI inflows into manufacturing and ICT services in India, Indonesia, China, and Brazil.

Figure 2.2 Share of FDI inflows by sector (percent of total FDI) in selected MENA countries from 2003-2010



Notes: Authors' calculations based on FDI markets database.

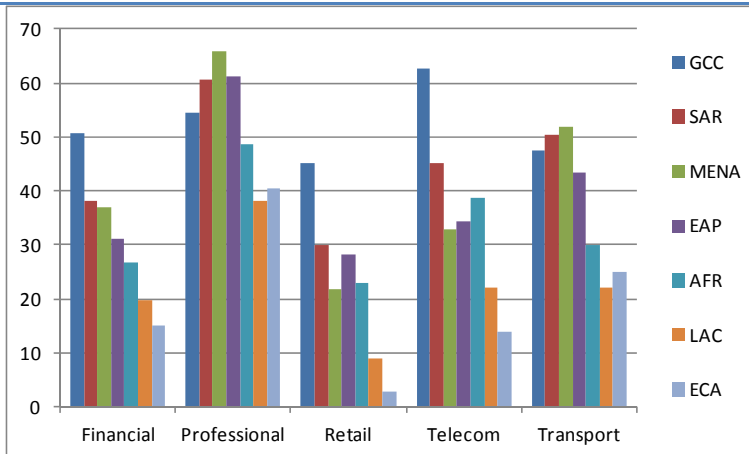
Box 2.1 Services Sector FDI Restrictions in MENA Countries

Restrictions on foreign firms entering service sectors in MENA countries are among the highest in the world. These restrictions are generally larger in GCC countries relative to non-GCC MENA countries.³³ They are particularly high for professional services (such as accounting, consulting, judiciary), transport, and finance; some service trade restrictions also exist in telecommunications and retail trade (Figure 2.3). The partial protection from foreign competition in domestic service sectors has potentially led to lower productivity growth of services. Backbone services (banking, telecommunication, transport) are important inputs for all other sectors, hence weak performance in these services might lead to weak links in the economy dragging down productivity in using sectors (Jones, 2009; Kremer, 2002). In this case, foreign entry into these services can improve performance and growth in using sectors by removing weak links.³⁴

Figure 2.3 Service Trade Restriction Index (STRI) by sector and region

³³ A new (2008) World Bank database allows comparison of service trade restrictions in five key service sectors across 103 countries, including 13 MENA countries. The database on service trade restrictions provides comparable information across countries for the following five service sectors: telecommunications, finance, transportation, retail, and professional services. The indicators focus on policies and regulations discriminating against foreign service providers. Information on the de facto implementation of policies is captured in some cases, such as the extent to which the process of granting licenses is transparent and accountable. See Borchert, Gootiiz, and Mattoo (2012) for a detailed description of the data and sampling.

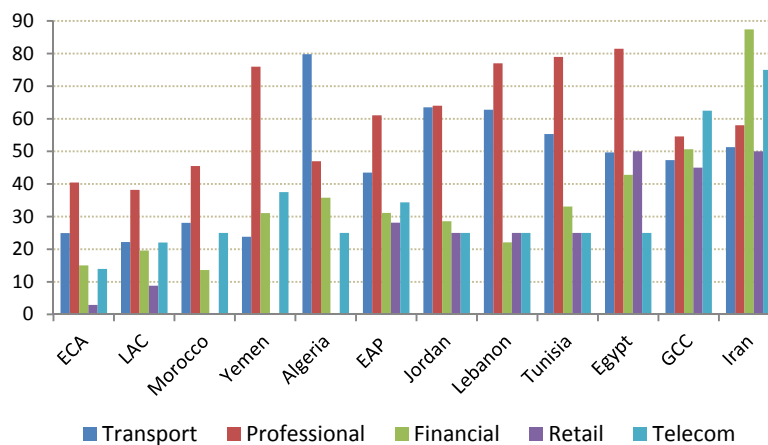
³⁴ Marotta, Ugarte, and Baghdadi (2014) analyze the extent to which weak links reduce productivity in the Tunisian economy. They show that weak links are consistently associated with lower levels of productivity per worker. Moreover, the authors identify an important spatial dimension in that the probability of facing weak links in intermediate inputs is higher in inland regions. In addition, economic sectors exposed to more international trade are less likely to be affected by the weak links.



Notes: Authors calculation based on World Bank Service Trade Restriction Database (Mattoo et al., 2011). *Note:* STRI reflects simple country averages. The higher the index, the more restrictions are imposed on foreign firm entry: zero implies no restrictions on foreign owners, 100 implies foreigners are not allowed to operate in the sector at all.

Jordan imposed some major restrictions on foreign entry in several backbone service sectors. Figure 2.4 summarizes restrictions on foreign firms to entry into different service sectors in MENA countries, and (unweighted regional) averages from other regions. Countries are ranked by their restrictiveness to foreign entry across all service sectors (from lowest to highest). In 2008, Jordan imposed higher restrictions than the average country in Latin America and the Caribbean (LAC), Eastern Europe and Central Asia (ECA), or East Asia and Pacific (EAP). Professional and transport services were the most restricted in Jordan. The transport sector comprises air, land, maritime, and auxiliary transport services. The index reveals that some transport sectors are virtually closed to foreign competition in Jordan. For example, in contrast to the majority of the 81 coastal countries in the sample, Jordan restricts foreign investors’ access to all auxiliary port services (cargo handling, storage, maritime agency services, and freight forwarding).

Figure 2.4 Service trade restrictions in transportation services in MENA, 2008



Source: Authors calculation based on World Bank Service Trade Restriction Database (Mattoo et al., 2011). *Note:* The higher the index, the more restrictions are imposed on foreign firm entry: zero implies no restrictions on foreign owners, 100 implies foreigners are not allowed to operate in the sector at all.

2.12. **Foreign firms crowd out both small and old domestic firms in the same industry.** Job creation declines among domestic firms producing the same product or service as foreign firms which operate in the same 4-digit industry. These domestic firms are directly competing with foreign firms, which are often more productive at introducing superior technologies. Thus, the results suggest at least a partial crowding-

out effect of jobs in domestic firms to jobs in foreign firms.³⁵ This crowding-out effect, however, is limited to small (less than 30 employees) or old (created before 1990) domestic establishments. Supposing that small and old establishments are less productive, the finding is consistent with a competition effect: employment is only crowded out by FDI in the least productive domestic firms, which either shrink (lose market shares) or exit.

2.13. However, the entry of foreign firms leads to growth of domestic suppliers which are young and/or operate in service sectors. On aggregate, the analysis provides no evidence to suggest that the presence of foreign firms in 2006 led to employment growth over the subsequent five years (between 2006 and 2011) among domestic suppliers (backward linkages). Domestic suppliers do not have a stronger growth pattern if goods or services are supplied to sectors with a high initial concentration of foreign firms (that is, FDI). The analysis does show, however, that the existence of backward linkages from FDI spillovers depends on specific characteristics of the domestic suppliers. Domestic suppliers only grow if they provide services, not goods, or if they are young – created after 1990. The results are summarized in Table A.1 in the Appendix. Thus, those domestic establishments supplying services to sectors with a high share of foreign firms experience higher subsequent employment growth after the foreign firms enter. Job creation among domestic service suppliers is strong at least in the first five years after foreign entry, and sometimes longer. Moreover, the findings suggest that young establishments, which started operations after 1990, created more jobs from 2006-2011 when they supplied their good or services to sectors with a larger presence of foreign firms in 2006.

2.14. Service firms create more jobs when they source inputs – goods or services – from sectors with a higher share of foreign firms. The results indicate that firms in downstream service sectors benefit from spillover from foreign entry into service or manufacturing sectors (forward linkages). Therefore, domestic service firms using inputs – goods or services – from sectors with numerous foreign firms experience higher subsequent employment growth. This effect is only found for domestic services, but not for manufacturing establishments.

2.15. These positive growth spillovers to domestic service providers and young suppliers are permanent, lasting even after foreign firms exit. In contrast, the crowding-out effect of domestic firms operating in the same sector is only temporary, as domestic firm growth picks up again after the exit of the foreign competitor. Note that the time periods provided in the data allow for a clear empirical identification to test for asymmetric effects of foreign entry (FDI) versus foreign exit (sudden stops). That is, FDI to developing countries declined substantially when many foreign firms exited in 2009 and 2010, when multinationals adjusted their portfolios to reduce exposure to high-risk investments after the global financial crisis. The data show that the average weighted share of foreign establishments, relative to all establishments, declined from 2.3 percent in 2006 to 1 percent in 2011. (The number of foreign- owned establishments declined from 338 to 142). If initial employment spillovers from FDI before 2006 are truly technology spillovers, the growth effect for domestic suppliers is expected to endure. In contrast, if it is due to a temporary demand effect, job growth among domestic suppliers should disappear after the exit of the foreign firm. The results show the positive backward spillovers from foreign firms to domestic suppliers endure even after the exit of foreign firms. In contrast, the initial decline in employment among domestic competitors in the same sectors after foreign entry is reversed after the exit of the foreign firm (crowding in). The findings suggest that job creation among domestic suppliers is due to permanent technology spillovers and not temporary demand effects. Furthermore, after the domestic supplier is able

³⁵ It is important to note that the net welfare effect might still be positive even in the case of complete crowding-out if foreign firms pay higher wages.

to supply goods or services to the foreign firms, the firm is well-positioned to supply its services also to other firms afterwards, in Jordan or abroad.

2.16. **Attracting FDI can be a powerful tool to enhance private sector competition and growth. The results show that FDI benefits primarily the type of domestic firms that are more likely to create jobs.** In Jordan, FDI led to permanent growth spillovers to young firms supplying to foreign-owned firms. In line with previous contributions, these spillovers emerge from vertical rather than horizontal foreign presence. While FDI spurs employment growth among young and service firms, it temporarily crowds out employment growth in small or old domestic competitors in the same sector. The absence of positive spillovers to domestic suppliers in Jordan's manufacturing sector, however, raises questions.

2.17. **The absence of linkages with domestic manufacturing suppliers rationalizes an evaluation of targeted policy interventions in other developing countries.** The results for Jordan contrast with evidence from other developing countries, where findings typically identify spillovers to domestic manufacturing suppliers as the main growth channel of FDI (Javorcik, 2004; Javorcik and Spatareanu, 2008; Rodrik 2008; and Sutton, 2005). The lack of spillovers to domestic manufacturing suppliers in Jordan also corroborates the findings of industry case studies. For instance, the pharmaceuticals sector hosts several large foreign multinationals (see Chapter 1) and large domestic producers. Still, the sector appears to be only weakly linked to domestic suppliers: 90 percent of all chemicals used as inputs in the sector are imported. Only HIKMA Pharmaceuticals, the largest domestic producer, has a small spin-off supplying chemicals. The main reasons are said to be the high requested quality standards; the small economies of scale relative to East Asian suppliers such as India; and the relatively low transportation costs for chemicals. Similarly, other less-sophisticated inputs such as glass containers or packaging material are often imported rather than being supplied domestically.

2.18. **Government policies in Turkey, Malaysia, India, and China actively supported linkages between foreign multinationals and domestic suppliers by subsidizing technical training programs.** For example, the government in Turkey supported producers of domestic car components by promoting joint ventures and providing training programs to bridge the initial technology gap and enable them to supply to foreign multinational automobile enterprises (MNEs) in the country. Once domestic producers satisfied MNEs' quality standards in Turkey, they also automatically obtained the quality accreditation to export to factories of the MNEs in other countries. As a result, Turkey developed a domestic car parts industry supplying intermediate goods ranging from tires to motor parts to foreign MNEs such as Ford, Mercedes, Peugeot, and Isuzu. In Malaysia, the government subsidized training programs of foreign MNEs to domestic suppliers, while China and India used domestic content requirements for foreign MNEs in the electronics and automobile sectors. (Rodrik, 2004; Rodrik, 2008; Sutton, 2005).

2.19. **Technical support programs targeting potential domestic suppliers to foreign firms have shown some success in Jordan.** Jordan implemented a technical support program operated by JEDCO targeting potential domestic suppliers to foreign firms in the mid-2000s. The program generated some success stories despite small-scale funding, but was later abandoned. In one example, the program provided technical support for a local packaging firm so it could supply Kentucky Fried Chicken (KFC) after KFC entered the Jordan market. A few years later KFC began using this firm as its main supplier of packaging material for all stores in the Middle East region.

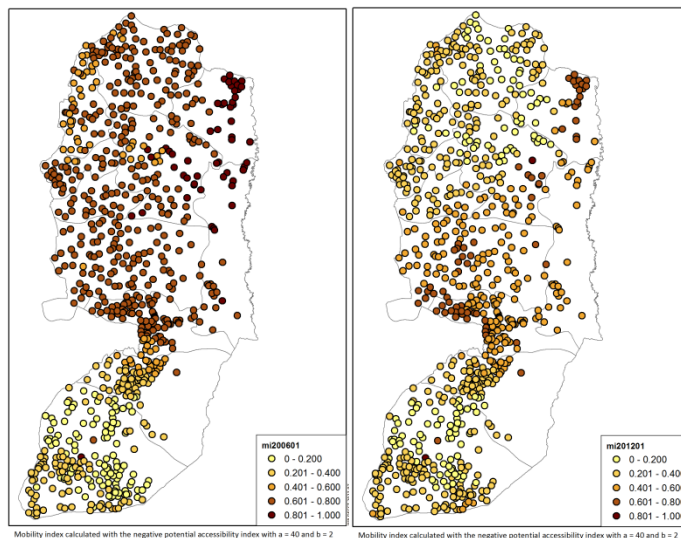
Box 2.2 How mobility restrictions distort competition and job growth in the West Bank

Competition among firms is distorted by restrictions in their access to markets. Market fragmentation increases the local market power of firms, shielding them from potential competitors. Higher transport costs increase market fragmentation and thus the degree of competition between firms operating in these markets. Transport costs are often determined by geographical distances between markets. However, what matters for the degree of competition between firms are not physical, but economic distances. In the West Bank, economic distances can be large due to restrictions on the mobility of firms. They distort firms' market access and hence the level playing field and firm dynamics associated with job growth.

Political constraints on firms' market access, in the form of mobility restrictions imposed by Israel in the West Bank, distort the firm dynamics associated with job growth. Chapter 1 highlighted that the contribution of large domestic private sector firms to total employment in the West Bank & Gaza is marginal (about 5 percent) even by regional standards. Establishments in the West Bank also have low survival probabilities and low growth: the probability that micro establishments in 2007 grow beyond ten employees in 2012 is only six percent. These stagnant firm dynamics are determined by firms' playing field, which is not only shaped by domestic policies, but also by mobility restrictions on firms' access to customers, suppliers, and so forth. Mobility restrictions were installed in the West Bank as part of the broader 'closure' regime, initially instituted by Israel in response to the first Palestinian uprising. They include roadblocks, checkpoints, earth mounds, trenches, and a separation barrier wall.

In this section, we evaluate the extent to which these restrictions in access to markets in the West Bank shaped firms' playing field and thus their dynamics. The analysis is based on an index of mobility restrictions measuring the effective physical constraints faced by firms in accessing customers, suppliers, etc. The index compares the population that can be reached within a specific amount of time in a world with and without the mobility restriction. Figure 2.5 reveals that restrictions in market access for firms in the West Bank declined between 2006 and 2012. This section is based on the analysis of Blankespoor et al. (2014) in World Bank (2014a).

Figure 2.5 Mobility Restrictions in the West Bank declined between 2006 (left) and 2011 (right)



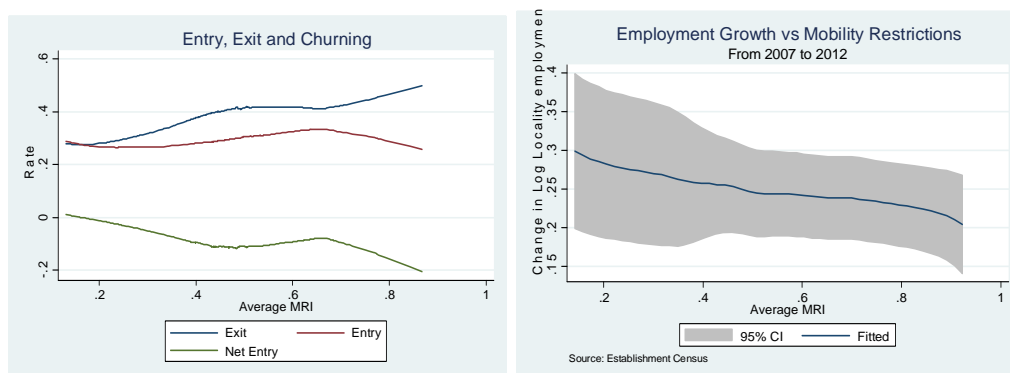
Mobility restrictions reduce net firm entry. Chapter 1 documented that gross entry and exit rates in the West Bank are relatively high by regional standards. The higher gross entry and exit rates might be related to changes in restrictions to market access over time, leading to a more frequent reshuffling of economic activity; for example, the closure and re-opening of establishments in different locations. Figure 2.6 plots the variations in entry and exit rates between 2007 and 2012 among different sub-regions within the West Bank against the average mobility restriction index for these locations over the same time period. It shows that gross entry and

exit rates tend to be higher in locations that suffer from greater constraints to market access. Figure 2.6 also reveals that the net effect of these constraints on firm entry is negative. Lower net entry rates, in turn, translate into lower competition from entry, hence reducing incumbents firms' incentives to increase their efficiency. The lower net entry due to mobility restrictions is also associated with lower firm productivity growth of incumbents.

Mobility restrictions tilt the level playing field reducing employment growth in the affected local economic centers. Figure 2.6 illustrates the impact of higher mobility restriction on job growth in the affected locations within the West Bank. It shows that job growth declines with an intensification in mobility restrictions providing evidence that distortions in firms' exposure to competition (i.e., markets access) reduces job growth.

The weaker firm dynamics due to distortions to market access also translate into lower output growth. Local economic activity is measured by night time lights (Henderson et al., 2012) for the West Bank in total as well as among four major economic centers affected by the restrictions. The strong decline in mobility restrictions around 2009 coincides with an increase in local output.

Figure 2.6 Mobility restrictions reduce net entry, employment growth (upper panel), and local output growth (lower panel)



Source: Blankespoor et al. (2014) in World Bank (2014a).

2. Quality of business environment and jobs in Morocco

We show how various dimensions of the business environment in Morocco impact employment growth and disproportionately affect young firms. The findings indicate that more competition, equivalent treatment by tax authorities, less corruption and fewer obstacles in the judicial system, and lower cost of finance would raise employment growth among young firms.

2.20. **This section evaluates the extent to which red tape in the regulatory environment distorts manufacturing job growth in Morocco.** Since the early 1990s Morocco has undertaken a range of macroeconomic, regulatory, and social reforms to improve the functioning of the market economy. Yet, GDP growth over the last decade was accompanied by stagnation in job creation. Chapter 1 asserted that the firm dynamics driving job growth are distorted in the Moroccan manufacturing sector. In this section, we relate these dynamics to cumbersome business regulations that distort private sector competition in Morocco. We empirically investigate how certain firm characteristics interact with constraints in the regulatory environment, finance, and competition, thus inhibiting job creation among Morocco's

manufacturing firms. Detailed data from the analysis presented here are found in the companion paper by Gasiorek et al. (2014).³⁶

2.21. Our approach allows for testing this hypothesis: Do young firms with high growth potential suffer more than other firms in a less competitive business environment? We combine manufacturing census data with firm-level information from the World Bank Enterprise Surveys in Morocco.³⁷ A unique feature of this version of the WBES is that it contains the same unique firm identifiers as the census. This allows us to use much more detailed firm-level information on job growth and regulatory policy variables (for competition and finance) by combining the census and the WBES data at the firm level. Cleaning the dataset results in an unbalanced panel containing 35,534 observations covering 6,119 firms over nine years (1997-2006). The list of regulatory policy, finance, and competition variables is reported in detail in Table A.2.

2.22. Startups and small firms create more jobs if they face more domestic competition. We measure three different components of competition: number of domestic competitors, unfair informal sector competition, and the extent of foreign competition. The informal sector accounts for a significant share of manufacturing firms. Since firms operating in the black market are not subject to government control or taxation, they could create a degree of “*unfair competition*” for other firms, which could negatively impact firm dynamics. We find that higher domestic competition (more competitors) is positively correlated with employment growth for startups (those less than four years old), and small firms (those with less than 15 employees). The correlation between employment growth and domestic competition is statistically zero for all other types of firms (larger and older ones). Similarly, startups and small firms create more jobs if they report higher domestic competition from the informal sector; medium-age and large firms tend to create less jobs when in competition with informal firms. Finally, firms have lower employment growth when they report higher foreign competition. This effect is particularly strong among old and large domestic firms.

2.23. Startups grow faster when they face more transparent and predictable tax authorities. “*Equivalent Fiscal Treatment*” measures the percentage of firms stating their view as to whether all firms in their sector face equivalent treatment by authorities. Hence, it indicates that the firm perceives a more transparent and predictable fiscal regime in its sector and sub-region.

2.24. After their startup phase, younger firms create fewer jobs when they report more corruption in their industries, or face greater obstacles in their district’s judiciary. The *judiciary* indicators are dummy variables reflecting firms’ responses to whether the judicial system and dispute resolution dynamics constitute an obstacle to growth, respectively. These variables are aggregated to the sector level so that they reflect the share of firms considering the judiciary as a barrier. We find that large firms and startups have higher employment growth when they operate in sectors and locations with stronger constraints from the judiciary. This result could be reflecting the privileged position of some large firms due to their superior access to legal services; the positive correlation with startup employment growth might be due to

³⁶ More details and additional analyses are described in the companion paper by Gasiorek et al. (2014). See also the Appendix for more details on data sources, methodology, and a summary table with the main empirical results.

³⁷ Table A.3 in the Appendix summarizes the results for regressions of the aggregate net job creation rate on business environment variables classified into (i) regulatory environment, (ii) competition, and (iii) access to finance. The first column shows the coefficients for these variables without any interaction, while the subsequent columns represent the policy-interacted coefficients for different ‘types’ of firms. Access to finance and competition variables are observed at the firm level (combining the census and WBES data at the firm level), while the regulatory variables are aggregated to the sector level.

self-selection because politically connected firms that can circumvent judiciary constraints through personal contacts enter districts and sectors where the judiciary is a constraint. In contrast, after their startup period, young firms (older than four but younger than ten years old) have significantly lower employment growth when they face judiciary obstacles in courts or dispute resolution processes in their district and/or sector. In addition, we find that after their startup period, small and young firms have lower growth when they report more *corruption* in their industries. In contrast, large firms grow faster in these sectors, potentially pointing to the privileged positions of some large firms.

2.25. **Younger firms that operate in sectors or locations with a higher administrative burden have lower employment growth.** We consider the following variables, which all reflect *red tape* in procedures of starting and conducting business: (i) number of days needed to obtain a construction permit (wait permit); (ii) number of permits needed each year to continue to operate (administrative constraints); and (iii) total number of permits required to create a new firm. We find that longer waiting periods for construction permits have a negative impact on employment growth for all types of firms. Young firms, after their startup period, and old firms both have lower employment growth when their sector (and sub-region) has more barriers to entry – when a larger number of permits are required to start a business. Startup firms have higher job growth when they operate in sectors with higher entry barriers, a finding which suggests that only the most promising potential entrepreneurs enter these sector or locations. In contrast, startups have lower job growth when they face higher administrative burdens in conducting their business.

2.26. **Finally, apart from startups, all types of firms that report higher costs of finance create fewer jobs.** The results show that a high *cost of external borrowing* reduces the growth of firms of all sizes. Only startups grow when cost of external borrowing is higher, suggesting that they rely on other sources of finance (self-financing or informal sources). Moreover, older and large firms create fewer jobs when they report that access to bank finance is a growth constraint. These findings are consistent with Augier et al. (2012), who show that limited access to external finance reduces productivity growth among larger and older manufacturing firms in Morocco.

2.27. Overall, the results suggest that greater administrative burdens, less transparent and predictable tax authorities, more obstacles in the judicial system, and higher corruption levels and less domestic competition reduce the growth opportunities for younger and to a lesser extent, smaller manufacturing firms in Morocco. The findings are consistent with the analysis in Section Chapter 1. Morocco's period of jobless growth over the past decade appears related to the growth constraints faced by young firms, which we identified as having a higher growth potential.

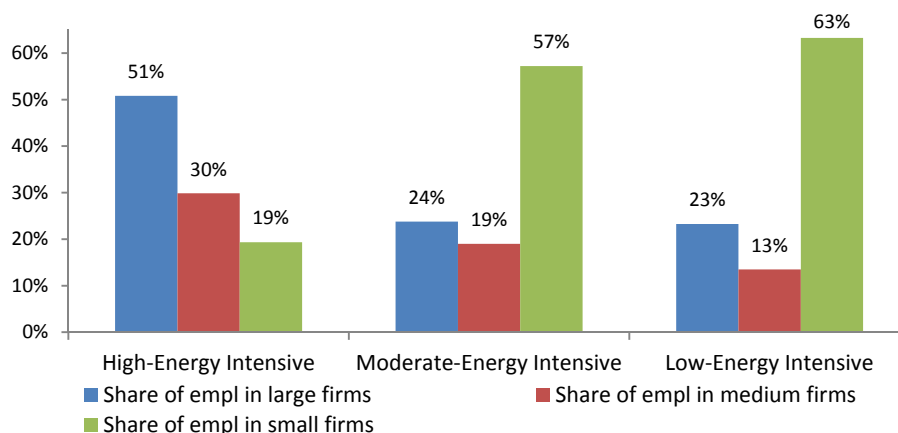
3. Energy subsidies, competition, and employment in Egypt

Energy subsidies targeted to heavy industry in Egypt are large; in 2010, subsidies to energy-intensive sectors accounted for 2.9 percent of GDP, or US\$7.4 billion. A government license is required to legally operate in energy-intensive industries, such as steel and cement, thereby limiting the prospect for free-entry and competition. Moreover, energy subsidies affect the price of labor relative to capital, thereby disincentivizing more labor-intensive activities, and drifting the economy away from its core areas of comparative advantage.

2.28. **Energy subsidies targeted to heavy industry in Egypt are large.** In 2010, subsidies to energy-intensive sectors accounted for 2.9 percent of GDP, or US\$7.4 billion (equal to nearly half of total public investments in 2010).

2.29. **Implementation of the subsidies reduced the prospect for free-entry and competition. A few large firms disproportionately benefitted from the energy subsidies.** Entry into energy-intensive industries typically requires large upfront fixed investments, which in turn demand access to land and credit. In addition, a government license is required to legally operate in energy-intensive heavy industries, such as steel and cement, thereby limiting free entry and competition. This license previously was issued by either the Ministry of Industry and Trade or the Ministry of Investment and had to be renewed annually, which meant that some firms could be excluded from the energy subsidies. Figure 2.7 illustrates the distribution of employment classified by firm size and the intensity of industries' consumption of energy.³⁸ Note that this sample covers all establishments in the 2006 census. Large firms accounted for half of the employment in high energy-intensive industries. In contrast, large firms accounted for only about 24 and 23 percent of employment in moderate and low energy-intensive industries, respectively. In contrast, employment in these industries is concentrated in small firms which employ 57 and 63 percent of all workers in moderate and low energy-intensive industries, respectively. The implied higher cost of labor – relative to capital - also helps to explain why large firms failed to contribute significantly to job creation.

Figure 2.7 Distribution of employment by size and energy intensity



Notes: Authors' calculations based on establishment census. Large: at least 200 employees, medium: at least 10 but less than 200, small: less than 10.

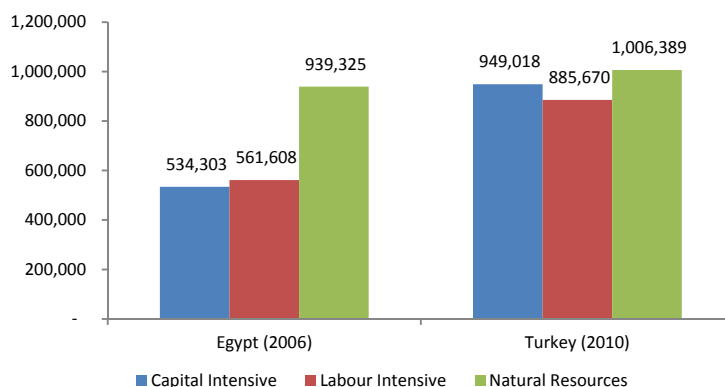
2.30. **These distortions come at a significant cost to labor; the industrial sector in Egypt generates 1.4 million fewer jobs than in Turkey.** Turkey serves as a good benchmark, as both countries have a comparable population (74 million in Turkey relative to 81 million in Egypt in 2012) while total GDP (in US\$) is about three times lower in Egypt. Moreover, Turkey's manufacturing sector grew strongly in the past 20 years, benefitting from integration into European value chains. This performance difference between manufacturing sectors in the two countries is reflected in the total number of jobs: the industrial sector in Turkey employed 4.8 million workers in 2012, compared to 3.4 million in Egypt.³⁹

³⁸ The classification of industries in high, medium, and low energy-intensities is based on the UNIDO (2010), "Compilation of Energy Statistics for Economic Analysis," *Development Policy and Strategic Research Branch Working Paper 01/2010*. High energy-intensive industries account for 22 percent of all mining and manufacturing 4-digit industries, medium energy-intensive industries for 37 percent, and low energy-intensive for 42 percent.

³⁹ The total number of employees working in the industrial sector in Egypt is based on the ELMPS, and in Turkey on the yearly labor force survey from *Turkstat*.

2.31. **Despite Egypt’s relative comparative advantage in labor, the share of jobs in labor-intensive manufacturing sectors among industrial establishments is lower than in Turkey.** Figure 2.8 plots the number of jobs by factor intensity based on the 2006 establishment census for Egypt. The figure shows that approximately 562,000 people work in labor-intensive manufacturing establishments in Egypt relative to about 886,000 in Turkey.⁴⁰ The lower share in Egypt is striking given that Egypt’s lower stage of development (GDP per capita is about 3.2 times lower than in Turkey) entails a relative comparative advantage in labor-intensive sectors such as manufacture of textiles, garments, leather products, footwear, paper products, and publishing and printing.

Figure 2.8 Employment share by sector factor intensity in Egypt (left) and Turkey (right)



Source: Authors calculation based on establishment census data; World Bank (2014) for Turkey.

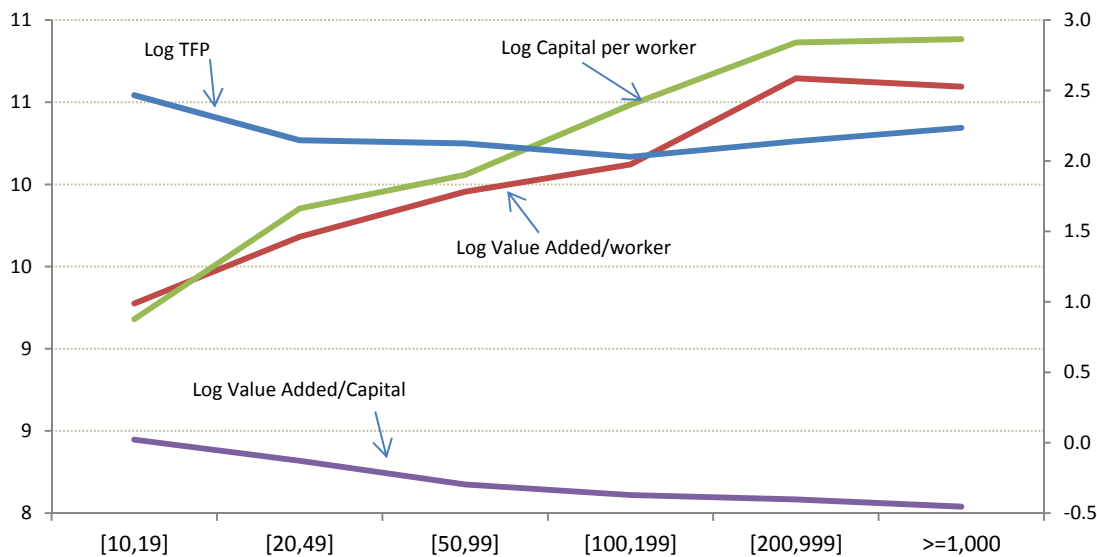
Box 2.3 Misallocation of Capital in Egypt

Larger industrial establishments in Egypt are more capital-intensive but less productive. Small firms in MENA have less access to credit (World Bank, 2011b). Thus, there is good reason to expect that small firms are more growth constrained than large firms because they cannot finance all profitable investment projects. Similarly, small firms might have less access to land, industrial zones, or subsidies, also suggesting that they face higher marginal costs of capital than large firms. As discussed in Section Chapter 1, if small firms face higher growth constraints (higher marginal costs of labor or capital), they should have higher average levels of value added per worker and capital, to the extent that average and marginal products of labor and capital move together (Hsieh and Olken, 2014). Figure 2.9 shows that this is the case in Egypt. Larger establishments in manufacturing and mining have higher labor productivity and higher capital intensities, but lower value added per capital. Larger establishments also have lower total factor productivity (TFP) which is the preferred productivity measure, as it controls for differences in capital intensities across establishments.⁴¹ Thus, the significantly higher capital-to-labor ratios of large firms over-compensate for their lower TFP and helps push their labor productivity.

Figure 2.9 Productivity by size categories in manufacturing & mining

⁴⁰ The numbers here differ from the ELMPs number of industrial employment in 2012 in the previous paragraph as the census was conducted in a different year (2006) and does not cover all informal or part-time workers.

⁴¹ Higher labor productivity accompanied by lower TFP implies higher capital intensity, at least for conventional production functions. For example, in the case of a Cobb-Douglas production function, log labor productivity is the weighted sum of log TFP and log capital intensity; i.e.: $\log\left(\frac{Y}{L}\right) = \log(\text{TFP}) + (1 - \alpha)\log\left(\frac{K}{L}\right)$, where Y is output, L labor, K capital, and α the share of labor in output.



Source: Authors calculation based on industrial census. Log value added per worker and log capital per worker refer to the left axis while Log value added per capital and log TFP refer to the right axis.

The results suggest that smaller firms in Egypt are capital constrained; in other words, capital in the industrial sector is misallocated towards a few large old firms. In an efficient economy, competitive forces lead to a reallocation of resources to more productive firms, equating marginal productivities across different categories of firms over time. Thus, reallocating capital from large to smaller industrial establishments would raise aggregate productivity in Egypt. This type of resource misallocation across firm size is striking since large establishments are typically found to be more productive in other countries, potentially reflecting past convergence because more productive firms grow before marginal productivities equate. For instance, Hsieh and Olken (2014) argue that large, rather than small firms, are potentially growth constrained, based on manufacturing census data in India, Indonesia, and Mexico.

4. Discriminatory policy implementation, competition and innovation across MENA countries

Firms in MENA identify policy uncertainty as a “severe” or “major” obstacle to growth. We show that firms’ complaints about “policy uncertainty” reflect largely a perception of “policy implementation uncertainty” resulting from discriminatory policy implementation. The variations in policy implementation observed in the data are substantial, and firms spend a significant amount of time and effort to influence policy implementation. We show that policy implementation uncertainty reduces competition and innovation in a number of MENA countries, suggesting its potential negative impact on productivity growth and private sector dynamism, especially the entry and growth of new firms.

2.32. **Policy distortions in MENA are not limited to laws, but can also materialize in the uneven implementation of rules and regulations across firms.**⁴² Despite wide gaps in some countries and areas, macroeconomic and trade policy indices for most MENA countries are approximately on par with other fast-growing countries in East Asia and Eastern Europe. The recent World Bank (2009) shows that gaps in macroeconomic and trade policy indicators are too small to explain the differences in performance

⁴² This section follows the methodology in Hallward-Driemeier et al. (2010).

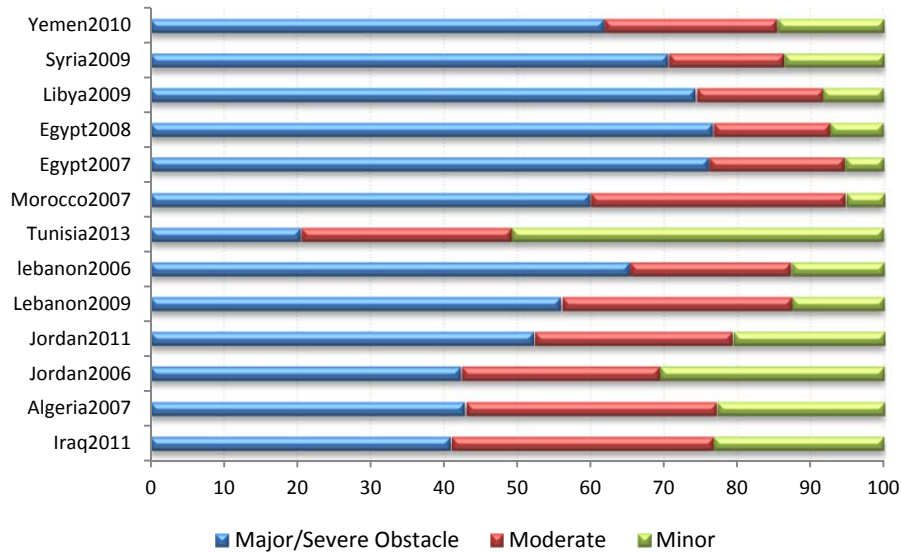
between MENA and fast-growing countries in other regions. It concludes that, apart from a few exceptions, the region's rank is as "average" as that of China, Malaysia, Poland, Thailand, and Turkey. Moreover, apart from a few very restrictive countries (Iraq, Iran, Djibouti, and to a lesser degree, Syria and West Bank and Gaza), the *Doing Business* indicators⁴³ suggest that the legal business environment in most MENA countries is comparable to those in fast-growing dynamic emerging economies in other regions, especially if one abstracts from the restrictions in access to finance and judiciary contract enforcement.⁴⁴

2.33. **In MENA, an overwhelming majority of firms surveyed identify policy uncertainty as a "severe" or "major" obstacle to firm growth.** Over 50 percent of surveyed firms regard economic and regulatory policy uncertainty as an obstacle to their firms' growth, and almost 35 percent regard it as a "severe" or "major" obstacle (Figure 2.10). Though there is some variation across countries, regulatory policy uncertainty remains one of the biggest obstacles to growth in MENA, along with illegal competition from the informal sector, access to finance, and macroeconomic uncertainty. For example, the biggest obstacle to growth in Egypt (ICA 2007) was illegal competition (over 19 percent of firms surveyed), with macroeconomic uncertainty and regulatory policy uncertainty close seconds (13.5 percent and 12.5 percent, respectively). In 2008, Egypt (ICA2008) identified macro uncertainty as the largest obstacle (over 27 percent). In Algeria, illegal competition from the informal sector (19.2 percent) and access to finance (24.5 percent) are the major factors impeding growth. Tunisian entrepreneurs identify political instability (22 percent) and the lack of skilled workers (10 percent) as the two dominant obstacles for their firms' growth. In all of the above, regulatory uncertainty does not appear to play an important role in impeding growth. When looking only at the manufacturing sector, the percentage of firms shrinks to less than 10 percent. These obstacles, such as infrastructure, macroeconomic uncertainty, access to finance, and illegal competition from the informal sector, are linked to related literature on country aggregate growth. However, what "regulatory and policy uncertainty" is, and its impact on growth, remains vague.

⁴³ The *Doing Business* indicators measure the time and costs of official legal procedures for a representative domestic firm based in the capital or the largest business center of the country. The measured policy dimensions are the cost of starting a business, dealing with construction permits, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, closing a business, and getting electricity.

⁴⁴ MENA countries underperform systematically in two dimensions: access to bank finance and enforcing contracts. "Access to finance" primarily measures laws regarding credit information, collateral, and bankruptcy. "Enforcing contracts" measures the number of official procedures, time, and costs to enforce a sale of goods dispute from the moment of filing until actual payment. Hence, it indicates a problem of implementation rather than legislation.

Figure 2.10 Regulatory Policy Implementation Uncertainty in MENA



Source: Authors' calculations using Enterprise Surveys in 2006-2013.

2.34. **MENA firms' aversion to policy uncertainty permits us to present evidence that firms' views regarding "policy uncertainty" are predominantly about "policy implementation uncertainty".** We examine the evidence provided by surveys of 8,120 firms in 11 countries in MENA⁴⁵. The Enterprise surveys carried out by the World Bank cover qualitative and quantitative assessments by firms concerning numerous obstacles to their growth. The analysis looks at evidence of variation in policy implementation outcomes, such as obtaining an operating license, getting a construction permit, clearing goods through customs; and variation in policy outcomes as reported by firms. Although the results suggest that there is some differences across countries in MENA, variations reported within-country are larger than variations across countries. These large within-country variations are linked to policy-influence actions undertaken by firms to control policy outcomes, such as spending time with government officials or paying bribes.

2.35. **One approach to understanding policy implementation uncertainty is to look at firm-level variability in MENA.** Firm survey results reveal large variations in government officials' implementation of regulations across firms in MENA, relative to most other emerging countries. Figure 2.1 summarizes the averages and dispersion of the number of days that firms in MENA countries had to wait for different regulatory services for various years between 2006 and 2013. The average waiting time to obtain an operating license, a construction permit, and an import license is the longest in Egypt, Syria, and Lebanon. The firm survey results confirm that legal business regulations are, on average, relatively restrictive in Syria and Egypt, and relatively competitive in Jordan, in line with the Doing Business results.⁴⁶ However, there exist large variations across firms in MENA countries: the coefficient of variation in waiting times for

⁴⁵ Algeria, Egypt, Iraq, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, Yemen, and West Bank and Gaza.

⁴⁶ Comparing average waiting times across countries should be viewed with caution for some regulatory services. Receiving or renewing an operating license may be associated with mandatory complementary registrations or inspections (safety or health inspections) in many countries, which would bias the mean upwards. However, comparing the dispersion of waiting times across countries does not suffer from this bias, since the coefficient of variation corrects for such level differences across each country.

different regulatory services is higher than in most other emerging economies, especially in Egypt, Jordan, Tunisia, Yemen and Morocco.⁴⁷

Table 2.1 Averages and dispersion (Coefficients of Variation) of firms' waiting days for regulatory services

Countries	Averages (number of days)					Coefficient of Variation				
	operating license	clear customs imports	clear customs exports	import license	construction permit	operating license	clear customs imports	clear customs exports	import license	construction permit
Jordan2011	.	.	2	1.43	.	.
Egypt2007	720	9	7	33	200	.	1.21	1.55	2.26	2.37
Egypt2008	282	9	6	59	346	2.89	1.22	1.05	1.47	1.93
Yemen2010	13	.	8	24	48	2.84	.	1.43	2.51	1.54
Jordan2006	10	9	4	5	37	2.59	1.50	0.94	2.14	1.75
WBG2006	30	22	6	24	50	2.46	1.40	1.25	1.15	0.72
Tunisia2013	19	9	5	19	158	2.20	1.46	1.36	1.55	2.65
Morocco2007	4	4	2	2	61	1.87	1.46	1.32	0.61	1.72
Algeria2007	19	17	14	33	112	1.39	0.91	0.91	1.04	1.46
Lebanon2006	151	10	7	109	150	1.28	1.40	1.39	1.33	0.92
Syria2009	184	10	5	39	245	1.26	1.13	1.13	1.81	1.08
Libya2009	50	13	6	.	90	1.22	0.87	0.22	.	1.24
Lebanon2009	81	7	7	30	218	0.87	1.27	1.32	0.52	1.53
Iraq2011	30	21	11	21	36	0.72	0.89	0.41	0.98	0.56
Turkey	37	10	.	21	42	2.88	1.34	.	1.67	1.65
Chile	84	17	.	17	143	2.62	1.39	.	1.59	1.94
Croatia	26	2	.	12	182	1.69	1.25	.	1.27	1.25
Bulgaria	62	3	.	21	94	1.59	1.1	.	1.17	1.04
Indonesia	21	3	.	11	32	1.43	1.09	.	0.94	1.93
India	29	14	.	15	28	1.4	1.02	.	1.82	1.33
Brazil	83	15	.	43	139	1.14	1.1	.	1.25	1.31

Only one firm in Egypt2007 for operating license days

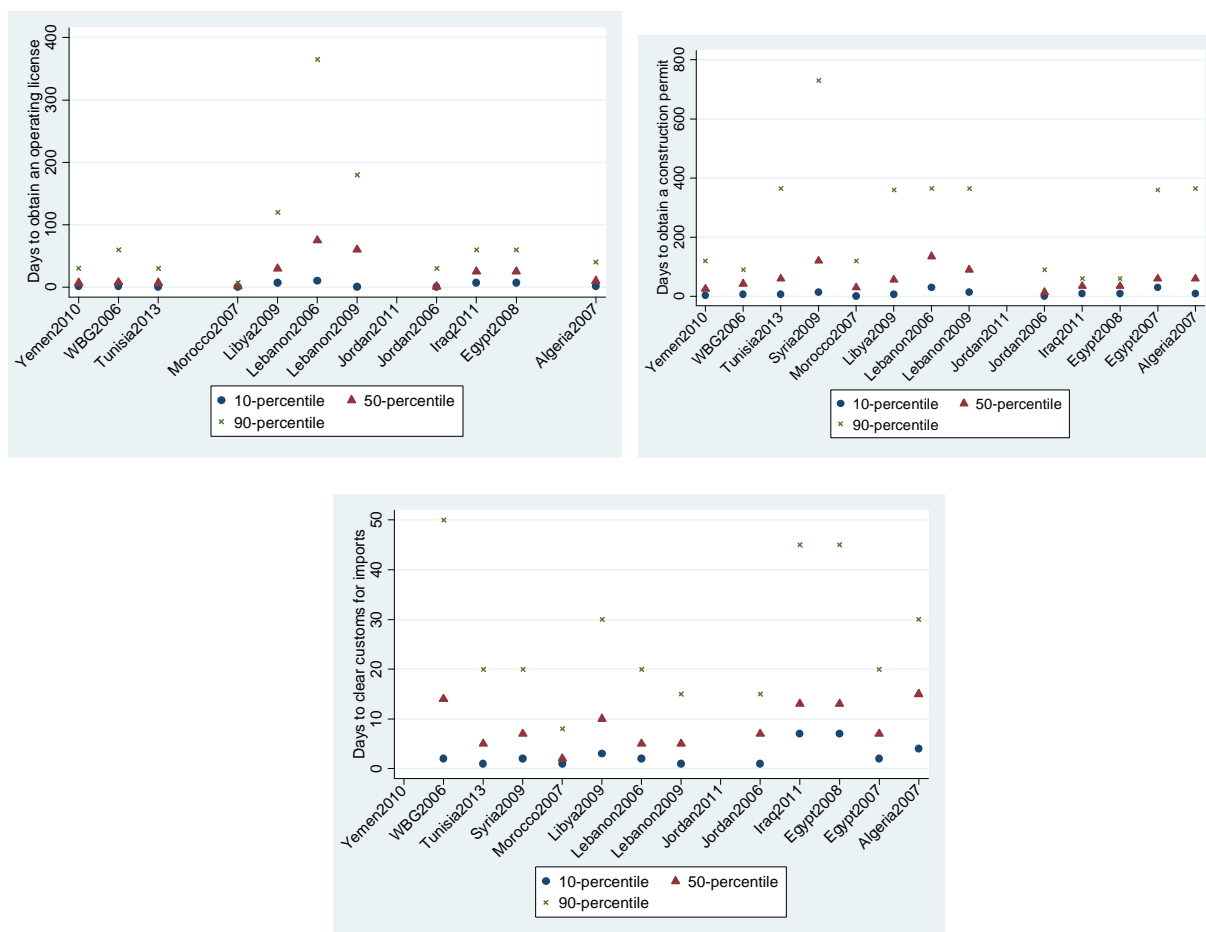
Notes: Authors' calculations using various Enterprise Surveys in 2006-2013.

2.36. **Figure 2.11 shows the 90th, 50th and 10th percentiles from the most recent Enterprise Survey data for each MENA country.** Figure 2.11 shows the distribution of the number of days to get an operating license, a construction permit, and to clear customs. The variation across firms within a country is, in many instances, larger than the differences across countries. Of the 11 MENA countries, the country with the lowest median time to obtain an operating license is Jordan, at just one day. Some others report low median times—the median time in Tunisia and Yemen is seven days. The slowest are Egypt, 25 days; Lebanon, 60 days; Libya, 30 days; and Syria, 90 days. A representative firm gets a license much faster in Jordan and Tunisia than in Egypt and Lebanon. Looking at averages or central tendency across firms, and differences in averages across types of firms, such as small versus large, or industry sector, demonstrates that there is large variability. The data indicate that firms in Tunisia waited less than seven days to get an operating license in the food sector. In contrast, firms in the services and other manufacturing sectors waited between 7 to 90 days. The dispersion within sectors is similar for other regulatory services in other countries. For example, in Egypt firms in the chemicals sector waited less than a month for an import

⁴⁷ The coefficient of variation, which is defined as the ratio of the standard deviation to the mean, is a normalized measure of dispersion of a probability distribution. The coefficient of variation should be used only for measures which take non-negative values. It is independent of the unit in which the measure has been taken (in contrast to the standard deviation which can only be understood in the context of the mean of the data). Thus, one should use the coefficient of variation instead of the standard deviation for comparison between data with widely different means.

license, whereas 80 percent of the firms in the other manufacturing industries waited between 30 and 270 days to get an import license. In Jordan, in the textile and garment sector, 10 percent of firms waited only five days to obtain a construction permit, while the next 80 percent waited between 5 and 120 days. In other manufacturing, the median firm waited seven days for imports to clear customs, while the next 40 percent of firms waited between 7 and 21 days. This variability is possibly the result of a number of sources of heterogeneity, and thus represents different types of firm uncertainty. It is potentially a measurement error in firms' responses. Sector specific rules could also potentially explain the variability in the difference in implementation time. However, there are also other sources of firm-level variation from deals. Firm-level variability could partly reflect differences in the way politically and non-politically connected firms are treated based on their characteristics, such as ownership. As these policy implementation outcomes are conditional on firms' influence activities, some of the firm-level variability could reflect firms' uncertainty about the influence function; that is, some obtained a good deal and some a bad deal (Hallward-Driemeier et al., 2010).

Figure 2.11 Variability in days to accomplish various regulatory tasks across firms (90th-10th percentile difference) within selected MENA countries



Notes: Authors' calculations using various World Bank Enterprise Surveys in 2006-2013.

2.37. **Table 2.2 shows the share of firms that disagree with the statement that implementation is "consistent and predictable."** In Egypt and Jordan there is a large difference in policy implementation perceptions between firms located in the capital city areas of Cairo and Amman and firms in the

periphery. In the greater Amman area 62 percent of firms report inconsistent and unpredictable policy implementations, as compared to only 24 percent in peripheral areas. In the greater Cairo area 51 percent of firms report inconsistent and unpredictable policy implementations, compared to 46 percent in peripheral regions. These regional differences in policy implementation perceptions are not observable in the other MENA countries, where on average policy implementation perceptions show opposite perceptions, except in the case of Algeria. Geographical differences partly reflect different attitudes or access to the government (municipal administrations). In many cases, most of the relevant business regulatory administrations are located within the capital city, reflecting an ease of access for firms in that area. A possible explanation for Jordan is that firms outside of Amman face lower competition, implying that higher costs due to variations in regulatory services are less important. Firms outside of Amman are on average smaller, less likely to export, and operate more often in the service sector. The same may be inferred for Egypt. SMEs are more likely to complain about unpredictability of policy actions in Jordan, Lebanon, Egypt, Iraq, and West Bank and Gaza. The difference between SME and large firms is also present in Tunisia and Algeria, but to a much lesser extent.

Table 2.2 Share of firms that disagree with the statement that implementation of rules is “consistent and predictable

Share of firms that disagree with the statement that implementation of rules is “consistent and predictable” across types of firms										
Country TYPE	Egypt2008	Lebanon2006	Jordan2006	Morocco2007	Tunisia2013	Algeria2007	Yemen2010	Syria2009	Iraq2011	WBG2006
Small (5<=employees<20)	47	42	34	53	23	66	65	45	70	68
Medium (20<=employees<100)	50	49	50	57	28	52	55	42	62	66
Large (100<=employees)	45	39	43	67	27	51	67	44	54	55
Food sector	53	49	40	56	25	59	45	44	62	56
Textiles & Garments	48	56	51	68	26	62	59	46	86	75
Chemicals	41	44	67	63	18	48	88	35	54	67
Other manufacturing	47	39	39	60	32	53	59	46	70	68
Services	na	43	33	51	25	na	67	43	67	68
Construction & Transport	na	n.a.	44	59	na	68	50	27	69	64
Capital city (or Major city)	51	41	62	54	21	60	58	59	34	60
Outside capital city	46	50	24	73	30	57	63	63	67	74

Notes: Authors’ calculations using various World Bank Enterprise Surveys in 2006-2013.

2.38. **Further evidence of policy implementation uncertainty in MENA is revealed by examining firms’ actions to influence policy implementation, such as paying bribes or the time spent with government officials.** The amount of policy influence activity that firms report varies across countries and among firms within countries. Table 2.3 shows the time senior management spent on average with government officials, and indicates that firms are more likely to spend time with government officials where regulatory implementation is uncertain. For example, in Yemen management spent on average 35 percent of its time influencing policy, especially in the chemicals sector. Large firms tend to spend more time influencing policy. In Tunisia, firms in the services sector, which includes tourism and hotels, are more likely to spend time with officials. In Morocco and Jordan, senior management in the construction and transport sector spend more time with officials.

Table 2.3 The extent to which firms take action to influence policy implementation across types of firms in MENA

The extent to which firms take action to influence policy implementation across type of firms										
Percentage of management time spent dealing with officials (Average)										
Country	Jordan2006	Morocco2007	Lebanon2006	Egypt2008	Tunisia2013	Algeria2007	Yemen2010	Syria2009	Iraq2011	WBG2006
Total	8.4	13.2	10.5	11.0	24.8	25.1	17.4	13.2	6.2	7.1
Firms located in Capital City	12.7	7.7	13.4	8.4	36.0	21.2	21.5	13.2	5.0	6.4
Firms NOT located in Capital City	4.3	15.6	12.1	11.7	17.7	27.5	16.0	13.2	6.5	7.9
Small (5<employees<20)	7.0	10.6	11.6	8.5	27.2	22.9	14.7	14.6	4.2	6.6
Medium (20<=employees<100)	10.6	14.0	13.3	13.1	24.8	27.7	19.8	14.1	10.2	7.7
Large (100<=employees)	6.8	13.3	13.3	10.9	22.1	27.9	24.3	9.7	8.3	8.5
Food sector	10.1	11.9	13.3	11.6	21.0	26.9	19.1	15.0	6.8	7.8
Textiles & Garments	7.1	9.0	12.8	12.7	22.1	24.7	14.2	8.8	1.6	6.2
Chemicals Other manufacturing	7.9	12.2	11.1	11.0	20.5	23.8	37.5	11.8	4.4	8.4
Services	9.9	14.6	17.5	10.2	25.9	28.4	15.1	12.0	4.1	6.6
Construction & Transport	5.5	16.2	12.0	na	29.1	21.2	22.4	16.8	7.7	7.4
	12.2	21.3	n.a.	na	na	26.3	20.4	16.5	10.3	8.3

Notes: Authors' calculations using World Bank Enterprise Surveys in 2006-2013.

2.39. **There is some evidence that de facto discriminatory implementation of policies, rather than laws themselves, deter competition, innovation, and firm growth, by granting privileges to politically connected firms.** In other words, we expect to find that firms with certain characteristics, or that undertake certain actions, benefit from streamlined regulatory services and procedures. This can lead to the lack of a level playing field, and undermine the competitiveness of firms in the region. The data suggest that:

- a. firms' characteristics (size, age, or ownership) and actions (bribes and lobbying) systematically influence policy implementation, and
- b. the resulting uncertainty reduces competition, innovation, and employment creation.

Table 2.4 Policy implementation uncertainty reduces innovation and firm growth in Jordan and Egypt

Jordan							
Dependent variables:	Pressure from domestic competition...to reduce costs		...from foreign competition		Employment growth 2003-06		Probability to innovate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coefficient of Variation of firms reporting implementation as consistent and predictable	-1.01*		.822		-.647**		-.807
	(-1.76)		(0.75)		(-2.24)		(-.97)
Difference 75-25 percentile firms reporting implementation as consistent and predictable		-.155**			-.072**		-.206*
		(-2.04)			(-1.95)		(-1.85)
R-squared	.120	.122	.336	.199	.197	.238	.241
Number of firms	467	467	419	436	436	487	487
Egypt							
Dependent variables:	Pressure from domestic competition...to reduce costs		...from foreign competition		Employment growth 2006-07		Probability to innovate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coefficient of Variation of firms reporting implementation as consistent and predictable	.025		.060		-.111**		-.787**
	(0.36)		(1.00)		(-2.57)		(-2.96)
Difference 75-25 percentile firms reporting implementation as consistent and predictable		.013			-.002		-.090
		(0.53)			(-0.09)		(-1.04)
R-squared	.031	.031	.043	.420	.418	.109	.106
Number of firms	902	902	899	878	878	905	905

Notes: results are from World Bank 2012 for Jordan; authors' calculations for Egypt. The results for Jordan are based on ES data for 2006, for Egypt on ES data for manufacturing firms in 2007. All regressions include sector dummies (apart from specification (1)), heteroscedasticity robust standard errors that are clustered at the group level; t-values are presented in parenthesis; * and ** indicate significance levels at the 10% and 5% level, respectively. The average and standard deviation are computed over grouped firms in each location-sector-size group. Innovation is a binary variable equal to 1 if the firm introduced a new product or new process, or licensed a foreign technology in the last 3 years and 0 otherwise (roughly half of the firms in sample innovated).

2.40. The results indicate that policy implementation uncertainty is associated with lower innovation and employment in Jordan and Egypt. World Bank Enterprise Surveys (ES) for Egypt and Jordan demonstrate that variations in implementing legislation among firms, rather than the legislation itself, distinguishes these countries from fast-growing emerging economies in other regions. Moreover, we contend that discriminatory policy implementation reduces economic dynamism – competition and innovation – and firm growth. Table 2.4 reports empirical findings for Jordan and Egypt. It suggests that policy implementation uncertainty reduces perceived pressure from domestic competition.⁴⁸ In contrast, it is not correlated with pressure from foreign competition (specification 3). Taken together, this suggests an indirect test against spurious correlation, since variations, or uncertainty, in policy implementation are

⁴⁸ A variable proxying for “policy implementation uncertainty” is built as follows. Firms are grouped by their location, sector, and size, for 30 groups of firms (each containing at least five firms). For each group, the coefficient of variation of the perceived consistency of policy implementation across firms is computed. The spread between the 75th and 25th percentiles of the perceived policy implementation consistency is computed as an alternative measure of policy implementation uncertainty. In addition, control variables measuring the initial size, location, age, exporting status, and the initial level of employment of firms are included in the regressions. The results for the control variables are consistent with findings in the literature on firm growth (not shown in the table). The probability of innovating is estimated with a probit regression, whereby the dependent variable is a binary variable equal to one if a firm either introduced a new product or a new process, or licensed a new technology within the last three years, and equal to zero otherwise. About 50 and 42 percent of firms in the sample in Jordan and Egypt, respectively, were innovators.

expected to reduce domestic competition, but should not affect competition from imports. Furthermore, empirical findings for Jordan and Egypt reveal that the greater the disagreement with the statement that government implementation is “consistent and predictable” within a location-sector-size firm group, the lower is employment growth and the probability to innovate for firms in these groups.

2.41. **Firms take costly actions to influence policy outcomes and cope with policy implementation uncertainty.** The variations across firms’ access to regulatory services may stem either from a subset of firms that have privileged access, such as large politically connected firms, or from differences in the performance of officials implementing policy. Even if both factors play a significant part in MENA, the regression analysis produces a set of evidence that illustrates that MENA firms also take costlier actions when faced with higher implementation uncertainty, suggesting that privileges are present and yield positive outcomes for these firms. Firms are grouped by their location, sector, and size. A coefficient of variation is computed for the perceived consistency of policy implementation across firms in each group. We refer to this explanatory variable as policy implementation uncertainty. The average management time firms spend interacting with, and lobbying government officials is also computed for each group (dependent variable), which is set as a proxy for quantifying firms’ actions to influence the outcome of policy implementation. The results shown in Table 2.5 indicate that more management time is spent dealing with officials when firm groups face greater policy implementation uncertainty.

Table 2.5 Higher policy implementation uncertainty induces senior managers to spend more time with government officials

Dependent variable:	Average management time (in %) spent dealing with officials
Coefficient of variation of firm reporting implementation as consistent and predictable	.234** (2.13)
R-squared	.331
# of location-sector-size firm groups	55

Each entry reflects the results of a regression including sector dummies and heteroscedasticity robust standard errors; t-values are presented in parenthesis; * and ** indicate significance levels at the 10% and 5% level. The correlation coefficient between management time and reported bribes is 0.305. (some countries are excluded).