

WHAT'S HOLDING BACK THE PRIVATE SECTOR IN MENA?

LESSONS FROM THE ENTERPRISE SURVEY



European Bank
for Reconstruction and Development



European
Investment
Bank
The EIB bank



WORLD BANK GROUP

WHAT'S HOLDING BACK THE PRIVATE SECTOR IN MENA?

LESSONS FROM THE
ENTERPRISE SURVEY



European Bank
for Reconstruction and Development



**European
Investment
Bank**
The EU bank



WORLD BANK GROUP

CONTRIBUTORS

What's Holding Back the Private Sector in MENA? Lessons from the Enterprise Survey has been jointly produced by the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), and the World Bank (WB). The team was led by, in alphabetical order, Pedro de Lima (EIB), Debora Revoltella (EIB), Jorge Luis Rodriguez Meza (WB), and Helena Schweiger (EBRD). Chapter contributors are as follows:

Chapter 1: Tim Bending (EIB) and Pedro de Lima (EIB).

Chapter 2: Mohammad Amin (WB, chapter leader), Tim Bending (EIB), David C. Francis (WB), Asif M. Islam (WB), Arvind Jain (WB), and Jorge Rodriguez Meza (WB).

Chapter 3: Frank Betz (EIB, chapter leader), Ralph de Haas (EBRD), Farshad R. Ravasan (Paris School of Economics and Université Paris 1 Panthéon-Sorbonne), Asif M. Islam (WB), and Jorge Rodriguez Meza (WB).

Chapter 4: Mohammad Amin (WB, chapter leader), Frank Betz (EIB), David C. Francis (WB), Asif M. Islam (WB), Valeria Perotti (WB), Jorge Rodriguez Meza (WB), and Christoph Weiss (EIB).

Chapter 5: Helena Schweiger (EBRD, chapter leader), David C. Francis (WB), Alexander Stepanov (EBRD), and Sarah Stölting (EIB).

Economy fiches: Frank Betz (EIB), David C. Francis (WB), Arvind Jain (WB), Helena Schweiger (EBRD), and Sarah Stölting (EIB).

ACKNOWLEDGMENTS

The authors are grateful to the peer reviewers Mark Allen (Fellow at CASE – Center for Social and Economic Research), Ahmed Galal (Managing Director of the Economic Research Forum and Chairman of the Board of Forum Euroméditerranéen des Instituts des Sciences Économiques) and Jan Svejnar (James T. Shotwell Professor of Global Political Economy at Columbia University). Caroline Freund (Peterson Institute for International Economics) provided comments to the Concept Note. The report benefited from comments and feedback from Husam Abudagga (WB), Simon Bell (WB), Fabrizio Coricelli (Paris School of Economics), Shanta Devarajan (WB), Rand Fakhoury (EBRD), Carolin Geginat (WB), Sergei Guriev (Sciences Po), Fadel Jaoui (EBRD), Augusto Lopez-Claros (WB), Hanan Morsy (EBRD), Peter Mousley (WB), Tarek Osman (EBRD), Alexander Plekhanov (EBRD), and Aminur Rahman (WB). Tim Bending (EIB) and Romesh Vaitilingam provided editorial support.

Most of the material in this report is based on the EBRD-EIB-WB MENA Enterprise Survey (MENA ES), which was funded by the World Bank, European Investment Bank, and the EBRD (Southern and Eastern Mediterranean cooperation funds account). This funding is gratefully acknowledged.

TABLE OF CONTENTS

FOREWORD	vi
EXECUTIVE SUMMARY	1
Lessons from the MENA Enterprise Survey	2
Firm productivity and the business environment.	2
Access to finance	3
Jobs and skills	4
Competitiveness: trade, innovation, and management	5
Conclusions	6
CHAPTER 1: INTRODUCTION	8
The MENA Enterprise Survey	9
The MENA ES region.	9
The focus of this report	12
Appendix A1	13
References	14
CHAPTER 2: FIRM PRODUCTIVITY AND THE BUSINESS ENVIRONMENT	15
Introduction.	15
Firm productivity	16
Box 2.1: Estimating total factor productivity with survey data	16
The business environment	19
What are the main obstacles perceived by firms?	21
Political instability.	22
Corruption	25
Unreliable electricity supply	26
The business environment experiences of large and small firms	27
Box 2.2: Political instability and electricity supply	28
Policy conclusions	29
Appendix A2	31
References	34
CHAPTER 3: ACCESS TO FINANCE	35
Introduction.	35
The context: financial sectors in the MENA region	36
Firms in the MENA region are not typically credit-constrained, but many are disconnected	39
Box 3.1: A measure of credit constraints.	41
What explains the “disconnect” between firms and the banking sector and what are the consequences?	43
Box 3.2: The case of collateral practices for employment growth	47
Banking sector competition and firm access to credit	48
Policy conclusions	49
Appendix A3	53
References	57

CHAPTER 4: JOBS AND SKILLS IN THE FORMAL PRIVATE SECTOR	59
Introduction	59
Employment in the formal private sector	60
The formal private sector’s contribution to women’s employment	63
The formal private sector’s contribution to youth employment	67
Employment dynamics	68
Box 4.1: Comparing ES transition matrix data with census findings from Tunisia that include information on rates of firm exit	70
Skills, training, and employment	70
The wage bill per worker in the formal private sector	72
Policy conclusions	74
Appendix A4	78
References	82
CHAPTER 5: COMPETITIVENESS IN THE MENA REGION: TRADE, INNOVATION, AND MANAGEMENT PRACTICES	84
Introduction	84
Trade participation and competitiveness	85
Increasing firm productivity through innovation and better management	92
Box 5.1: Estimating the impact of innovation on labor productivity	93
Box 5.2: Types of firm-level innovation	94
Box 5.3: Management practices in the MENA region	99
Policy conclusions	100
Appendix A5	104
References	112
ENTERPRISE SURVEY–ECONOMY FICHES	115
Djibouti	116
Arab Republic of Egypt	118
Jordan	120
Lebanon	122
Morocco	124
Tunisia	126
West Bank and Gaza	128
Republic of Yemen	130
GLOSSARY OF TERMS AND ACRONYMS	132
ALL ES ECONOMIES	135

FOREWORD

In the Middle East and North Africa (MENA), the development of a vibrant private sector is essential to fire up the engines of economic growth and that, in turn, is necessary to meet the needs and aspirations of the people in the region. The formal private sector represents a relatively small part of these economies; nonetheless it has the potential to become a powerful driver of job creation and rising living standards in the region. Creating an environment that is conducive to private sector development depends on a detailed understanding of the key determinants of firm performance and the major challenges that firms face, and also the role of government in providing the right business environment.

This is why three of the leading international institutions active in the MENA region, the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), and the World Bank Group (WBG) have joined forces to produce this report. It presents the results of the MENA Enterprise Surveys (MENA ES) conducted during 2013-2014 in eight economies: Djibouti, the Arab Republic of Egypt, Jordan, Lebanon, Morocco, Tunisia, the West Bank and Gaza, and the Republic of Yemen. By analysing detailed information on more than 6,000 private firms in the manufacturing and services sectors, the report provides fine-grained insights into their performance and the business environment in which they operate.

Firms in MENA face many distorting incentives and barriers to competition. On the financing side, many appear to be not so much constrained by financing conditions as completely disconnected from the financial sector, thereby forgoing opportunities for growth. Workforce skills are another constraint, with a need for the re-orientation of education and training, so that workers have greater workplace skill and are prepared for the modern work environment. Enhancing the productivity of firms in the region also requires greater openness to international trade, something which will support innovation by facilitating the acquisition of knowledge about new products and processes.

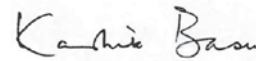
In 2015, the EIB, the EBRD and the World Bank Group together provided more than USD 7.7 billion in financing for development in MENA. Looking forward, we remain committed to supporting private sector development in the region, each institution according to its strategy and remit, and in partnership with local authorities and stakeholders.



Hans Peter Lankes
MD, Acting Chief Economist
EBRD



Debora Revoltella
Director Economics Department
EIB



Kaushik Basu
Sr. VP and Chief Economist
WB



EXECUTIVE SUMMARY

Over the last few years, the Middle East and North Africa (MENA) region has witnessed unprecedented transformation. In the Arab Uprisings, thousands of young people took to the streets to voice their frustration with the lack of economic and social opportunities. These events reflected demands for improvements in living conditions, infrastructure, job quality, education, and healthcare services, as well as better governance.

The Arab Uprisings were a response to the failure of the region's economic models to satisfy people's needs and expectations. These models typically featured strong protectionism, lack of integration into international markets, misguided state intervention, and inadequate support for a business environment that fosters innovation, entrepreneurship, and good management practices.

Enhancing the prospects for more inclusive growth—with accessible opportunities for sustainable employment, particularly for young people and women—is vital to raise living standards, to underpin stability, and to offer an alternative to economic migration out of the region. There is an overwhelming consensus among economists that the development of a vibrant private sector is essential for delivering that growth. Creating an environment that is conducive to private sector development depends on a detailed understanding of the key drivers of private firms' performance and the major challenges of the business environment in which they operate.

LESSONS FROM THE MENA ENTERPRISE SURVEY

This report is an assessment of the constraints on private sector development, which has been jointly conducted by the three leading international institutions active in the MENA region. The report presents the results of the MENA Enterprise Survey (MENA ES) conducted in 2013 and 2014 in eight middle-income economies in the region: Djibouti, the Arab Republic of Egypt, Jordan, Lebanon, Morocco, Tunisia, the West Bank and Gaza, and the Republic of Yemen. Implemented and co-financed by the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), and the World Bank Group (WBG), the MENA ES provides data on a representative sample of the formal private sector.

Covering more than 6,000 private firms in the manufacturing and services sectors, the MENA ES includes data on the experiences of firms with a broad range of dimensions of the business environment, including access to finance, corruption, infrastructure, crime, and competition. The surveys also provide information on firm characteristics and the cost of labor and other inputs; workforce composition and women's participation in the labor market; trade, innovation, and management practices.

This unique set of information is an extremely valuable complement to the macroeconomic data most commonly used by researchers. Firm-level data permit fine-grained analysis of the drivers of firm performance, disaggregating effects by key firm characteristics, such as their size, their sector, their inputs and output, and their involvement in innovation and international trade. The data also provide a window on how managers and CEOs themselves perceive the challenges and opportunities that they face. While the region is far from homogeneous, with managers reporting widely different experiences, analysis of the data helps to provide a basis for sound policies for private sector development.

FIRM PRODUCTIVITY AND THE BUSINESS ENVIRONMENT

While the formal private sector represents a small part of the MENA ES economies, it has the potential to become the driver of a more sustainable model of growth

Firms in the MENA ES have comparatively higher labor productivity than their middle-income peer economies outside the region; yet following global financial turmoil and the Arab Uprisings, their labor productivity has been declining. Moreover, higher labor productivity belies lower total factor productivity (TFP), in part due to relatively high use of capital.

Large firms, which provide the majority of formal private jobs in the MENA ES, tend to be more efficient, but their activities are skewed toward more capital-intensive production. In general private sector firms are typically small, old, and faced with limited growth opportunities.

On the positive side, economic fundamentals seem to be at work in the formal private sector. For example, it is the more productive firms that are the most likely to grow. After taking size into account, the most productive firms also have higher wage bills and greater access to finance. Encouragingly, these positive relationships reveal that in certain areas at least, market forces are working as might be expected. Policies should allow these forces to operate more efficiently.

Addressing key constraints in the business environment is vital to help the private sector grow

Addressing some of the key concerns of firms about the environment in which they operate is a way to unlock their transformative potential. In the MENA ES region, four particular areas of concern stand out: political instability, corruption, unreliable electricity supply, and inadequate access to finance.

Political instability is the leading concern for firms in most of the region, and it has a negative impact on sales and productivity growth

Reflecting the effects of the Arab Uprisings, unresolved social tensions, and conflicts in the wider region, political instability stands out as the greatest concern of firm managers and CEOs in Egypt, Lebanon, Tunisia, the West Bank and Gaza, and the Republic of Yemen. In most of these economies, political instability seems to have negatively affected firm and productivity growth.

High perceived levels of corruption are associated with lower growth of sales and employment, as well as lower labor productivity

Corruption stands out as a key concern of firm managers and CEOs. High perceived corruption is associated with lower sales, employment growth, and labor productivity. There is also evidence that corruption deters firms' interactions with public authorities, preventing them from making full use of available opportunities. In addition, concerns about corruption seem to go beyond petty corruption, possibly indicating deeper problems in the economies concerned, such as state capture by interest groups or elites, corruption at high levels, or even under-reporting for fear of potentially adverse consequences.

An unreliable electricity supply is a serious obstacle for firms in several economies

Unreliable electricity supply remains a significant problem for firms in Egypt, Lebanon, the West Bank and Gaza, and the Republic of Yemen despite efforts by some governments to tackle this problem. An irregular power supply accounts for a significant loss of sales for many firms, and is associated with lower productivity levels.

The relevance of poor electricity access as a constraint on firm growth should be read in the context of the overall institutional framework that characterizes the energy sector in the region. Many economies have used energy subsidies as a safety net when their systems of social welfare have proved inadequate or ineffective. But this is costly and, by distorting prices, there have been systematic incentives to move toward more capital-intensive

technologies, linked with a lack of incentives for investment in critical infrastructure, while creating room for vested interests. As part of the reform program in recent years, various international institutions, including the IMF and the World Bank, have called for a comprehensive reform of subsidies to open the way to a more efficient energy sector.

Inefficiencies in the business environment are felt disproportionately by small and medium-sized enterprises

While several elements of the business environment—notably political instability, unreliable electricity supply, and inadequate access to finance—are widely reported as constraints on firms, inefficiencies stemming from these factors have a more negative impact on smaller firms. SMEs are more likely than large firms to report these three elements as major obstacles to their operations, though they are no more likely to report corruption as a major obstacle.

ACCESS TO FINANCE

Financial and banking sectors in the region are relatively large, but credit is mostly channeled to a small number of large firms

The financial sector of the MENA ES economies is dominated by a relatively large banking sector, with loans-to-GDP ratios above the standards in peer economies. Bank lending is highly concentrated, however, with credit targeting only a limited number of large companies, leaving the bulk of firms with little or no access to credit.

MENA ES firms finance their operations and investments in a similar way to firms in peer economies

There is considerable variation in the use of internal funds to finance operations and investments across the region. The use of bank credit and credit from suppliers and customers is in line with peer economies. Equity finance plays a negligible role in the region, while other sources of finance, including microfinance, are only significant in Tunisia and the West Bank and Gaza.

A large share of firms are not credit-constrained

The MENA ES economies have a smaller share of credit-constrained firms than other regions of the world. But this is not driven by successful loan applications; instead, many firms report that they have enough capital and thus do not need a loan.

There is a notable disconnect between firms and banks in the region

A significant share of firms that are not credit-constrained have disconnected from the banking sector altogether. Compared with firms that have encountered difficulties obtaining credit, the disconnected firms are more likely to be small, less likely to have audited financial reports, and less likely to use the banking system even for payments.

Disconnected firms resemble credit-constrained firms, as they both have low propensity to invest and are less likely to plan for expansion, even when capacity constraints are binding. The difference is that disconnected firms seem content with their current situation and do not complain about access to finance.

The business cycle alone cannot account for this pattern as a downturn may prompt firms to seek loans for purposes of liquidity management. It seems that many of the disconnected firms have adapted production strategies to an environment in which they do not consider banks as a financing option, albeit at the cost of reduced growth prospects.

Collateral standards affect firms' propensity to disconnect from the banking sector and ultimately their growth prospects

In the MENA ES economies, more than four in five loans require collateral with an average value of just over twice the loan amount, slightly above that in peer economies. The higher the relative collateral requirements, the more likely young firms are to disconnect from the banking sector. Older firms, on average, have more assets that they can use to secure loans and are relatively less affected by collateral standards. But they also create jobs at a slower rate than young firms and, as such, collateral practices may constrain employment growth.

Regardless of age, firms are less likely to disconnect from the banking sector and more likely to create new jobs if banks accept movable assets as collateral. Since a large share of firms' assets consists of machinery and equipment, banks' willingness to accept movable assets as collateral can be considered a business-friendly collateral standard. This suggests a potential link between the adoption of business-friendly collateral standards and the potential for job creation.

JOBS AND SKILLS

Compared with other regions, formal private sector employment is concentrated in manufacturing and exporting firms; but employment of women is low; and youth employment is strongest in young innovative firms

The structure of employment in the region's formal private sector is in many ways similar to comparable economies elsewhere, although the manufacturing sector and exporting firms play a comparatively larger role in providing employment, with the retail sector lagging behind.

The employment of women in a typical firm is much lower than elsewhere in the world, and the same is true for women as top managers and firm owners. Within the region, the share of women's employment is higher in labor-intensive sectors and among exporting firms. Youth employment is higher among firms that are young and fast-growing, and which tend to innovate.

Firm dynamics are generally weak, but high labor productivity firms are still more likely to grow fast

Overall, firm dynamics are weak in the region: comparatively few firms move between size categories, whether expanding or downsizing. In a difficult period for the private sector in the MENA region, medium-sized firms have been more likely to become small firms and less likely to grow over a three-year period, compared with other regions. Fast-growing firms over the period 2009-2012, however, had higher levels of initial labor productivity, an indication of reallocation of resources toward the more productive firms and a signal of potentially positive private sector developments.

Skills shortages affect the fastest-growing firms

Across the region, firms that have grown the fastest are more likely to perceive the lack of an adequately educated workforce as a major constraint. Unlike other firms, fast-growing firms are also more likely to invest in the formal training of employees, suggesting that the supply of relevant knowledge and skills is a severe constraint for the most promising, high-growth firms in the region.

More productive firms pay higher wages, but larger firms do not

The MENA ES results confirm the expectation that more productive firms pay higher wages. This suggests that labor markets are, to some extent, able to facilitate the reallocation of labor resources to the firms with the most potential to grow and provide rewarding jobs. Nonetheless, such high-productivity, high-paying private sector jobs remain scarce, which is likely to encourage jobseekers to pursue public sector jobs instead.

In most economies, larger firms pay higher wages, but that standard result does not hold in the MENA ES region. It seems that larger firms, which are more productive mostly due to inefficiently high capital intensity, focus on stronger capital remuneration rather than labor remuneration. This gives an indication that distorting incentives, which are at the base of the decision to favor more capital-intensive production, might also affect the quality and remuneration of jobs.

COMPETITIVENESS: TRADE, INNOVATION, AND MANAGEMENT

The growth of the region's small yet productive private sector may be constrained by wider considerations of competitiveness

The MENA ES economies generally perform worse on various global competitiveness rankings than their peer economies in other regions. The apparent inability of the region's small yet productive firms to scale up their operations may indicate distortions and uncertainties underlying the competitiveness of these economies.

The region's exporters are numerous but small, with labor productivity gains concentrated in large "superstar" exporters

Trade per se is not the problem underlying relatively weak competitiveness: firms in the MENA ES economies are more likely to export, to import, or to do both than their counterparts elsewhere, but these firms are also more likely to be SMEs. Furthermore, the average size and productivity differentials between exporting and non-exporting firms are smaller than in other regions. Indeed, the region's exporter size and productivity premia are achieved almost entirely by a small number of superstar exporters. The inability or unwillingness of small exporters to scale up their operations may indicate barriers to market entry or distortions, such as subsidized energy costs.

Access to foreign technology and supply chains can raise the productivity of importing firms

In terms of productivity gains from trade, the winners in the region are importers. This could be due to the access to foreign technology and supply chains from which they benefit. This is despite the fact that importers face considerable obstacles in terms of relatively high tariffs, non-tariff restrictions on trade, and the time it takes for imports to clear customs.

Nearly a third of firms in the region engage in basic forms of innovation

Firms in the region engage in both technological and non-technological innovation, introducing new products, new processes, and new organizational or marketing methods at a similar rate. Much of this innovation activity involves adapting existing products to local conditions or upgrading machinery and equipment, practices that are typical of firms in developing economies.

Innovation by firms is associated with certain supporting conditions: human capital, access to knowledge, and access to finance

Firm-specific human capital—obtained through formal training or by giving employees time to develop new approaches and ideas—is associated with innovation, as is access to knowledge and information and communications technology facilitated by firms. Two-way traders

(firms that both import and export), in particular, are more likely to license foreign technology and more likely to introduce technological innovations. Firms with access to credit are more likely to introduce new products and processes.

Innovation is positively linked to increases in labor productivity

Labor productivity gains from innovation are in line with those found in developed economies, but lower than those observed in developing economies. This may be explained by the general lack of competition in many MENA ES economies compared with other developing economies. Returns to innovation vary by sector, with high-tech manufacturers benefitting most from product innovation and low-tech firms benefitting more from non-technological innovations.

Poorly managed firms benefit more from improving their management practices than from innovation

The quality of management practices is positively correlated with GDP per capita but not significantly associated with firm-level labor productivity, except for firms that score below the median for their management practices. While better-managed firms are more likely to benefit from innovation, poorly managed firms are more likely to benefit from improving their management practices.

In economies with lower energy subsidies, better management practices are associated with lower energy intensity and higher labor productivity

Where energy subsidies are high, better management is associated with the opposite effect: higher energy intensity and lower labor productivity.

CONCLUSIONS

The formal private sector in the MENA ES economies is relatively small, but its size belies its significance for economic development. The labor productivity of formal private firms in the region is higher than that of their counterparts in comparable regions of the world; yet TFP lags behind. Many firms are successful in enhancing their productivity through significant engagement in innovation

and international trade. The more productive firms in the region are able to grow faster and pay higher wages to attract workers. This suggests an encouraging potential for MENA economies to reallocate resources to the most promising firms.

In this way, it is possible to see the potential of the private sector in the region to grow and meet the aspirations of the growing workforce for rewarding employment. Indeed, it is through more widespread employment creation that private sector growth can principally be expected to contribute to a more inclusive growth model in the region.

At the same time, it is essential to understand that firms operate under conditions that are often very difficult. Distortive incentives push large firms toward inefficient more capital-intensive production models; SMEs face limited growth opportunities and are more negatively affected by the business environment. Almost all firms in the region are severely affected by issues of political instability, corruption, and unreliable electricity supply. Firm innovation and growth are also constrained by barriers to trade and a scarcity of appropriately trained workers. In many places, there is a striking disconnect between firms and formal financing channels, with the result that firms are not seeking external finance, inevitably reducing their growth potential.

Strategies to support firms in enhancing their productivity—as well as the process of resource reallocation toward more productive firms—should be a high priority for public authorities in the region. The report suggests some key areas for policy attention. These include looking at the complex system of distortive incentives, privileges, and barriers to competition, as well as their intended and unintended consequences.

Policies to improve the business environment

Achieving political stability is obviously a critical issue. Across many of the economies, tackling corruption and an unreliable electricity supply are also likely to be important priorities. Corruption may be deterring many firms from strategies that require engagement with public authorities, limiting their opportunities. Dealing with the reliability of electricity may also depend on a policy approach that addresses corruption and vested interests.

More generally, the region is known for a large number of distorting incentives, which form the basis of the current system of transfers. Unintended consequences are often addressed by adopting new and potentially distorting incentives. A serious reassessment of distorting incentives, transfers, privileges, and barriers to competition is of central importance.

Policies to enhance firms' access to finance

While disconnecting from the financial sector is a choice that many firms make, the fact that this has an impact on their growth potential reveals the need for policy action. Several issues may need to be addressed to facilitate firms' access to finance, to encourage them to connect with the formal financial sector, and to seize opportunities for growth that rely on external financing.

Capacity building for banks to strengthen their credit risk assessment would help those interested in lending to SMEs, without putting financial stability at risk. This should be accompanied by reforms to establish modern secured transactions laws and an efficient collateral registry; to introduce credit guarantee schemes to alleviate collateral constraints; and to build capacity for SMEs to improve their transparency and reduce the information asymmetries.

Policies for better education, employment and skills

With regard to employment in the formal private sector, there is considerable scope for improvements, particularly in relation to women's employment. Supporting the expansion of labor-intensive and exporting sectors may help to provide more jobs for women, but opportunities are also required in capital-intensive sectors. Measures that support the emergence and growth of young innovative firms

are likely to be particularly positive for the employment of young people. They will also boost aggregate productivity growth and raise living standards through better-paid jobs.

A re-orientation of the region's education systems toward learning skills that are relevant for private sector employment—with greater status given to vocational training—will facilitate the growth of high quality employment. Fast-growing and more productive firms are already providing more training to their employees as well as better-paid jobs. More appropriate education and training of young people before they join the labor market would help to address skill shortages in these firms.

Policies to promote trade, competition, and innovation

Enhancing the productivity of firms in the region requires greater openness to international trade. In particular, this means more effective customs and trade regulations—both in terms of imports and exports—and reducing entry costs for all firms. Importing should not be viewed solely through the lens of trade deficits and foreign exchange reserves; imports allow firms to source component parts of better quality or lower cost than those available in the domestic market. They also facilitate the acquisition of knowledge about new products and processes.

Other essential measures include promoting greater competition by reducing restrictions on firm entry and exit, and on foreign investment. Measures that give incumbent firms undue advantage—for example, privileged access to markets, licensing, and contracts—should be eliminated, along with regulations protecting state-owned or politically connected firms. Improving access to finance and improving the skills of the workforce will also support the ability of firms to innovate and grow.



1. INTRODUCTION

Over the last few years, the Middle East and North Africa (MENA) region has witnessed unprecedented social and economic transformation. In the Arab Uprisings, thousands of young people took to the streets to voice their frustration with the lack of economic and social opportunities. These events reflected the demand for improvements in living conditions, infrastructure, job quality, education and healthcare services, as well as better governance.

The Arab Uprisings took place against the background of a rapidly expanding workforce and rising unemployment—particularly among young people—to some of the highest levels in the world. Indeed, a World Bank study conducted in the early 2000s concluded that the region would need to create about 6 million new jobs each year to absorb new labor market entrants and bring down unemployment, especially among young people. This will

certainly require significant growth of the private sector.¹

The Arab Uprisings reflected the failure of the region's economic models to satisfy people's needs and expectations. These models typically featured strong protectionism, lack of integration in international markets, misguided state intervention, and lack of support for a business environment that fosters innovation, entrepreneurship, and good management practices. In contrast, there is currently an overwhelming analytical consensus that the development of a vibrant private sector is crucial for creating more opportunities, more sustainable employment, and thus more inclusive growth in the region.²

In light of this, sound policies for private sector development need to be based on a thorough assessment of the state of the private sector in the region and the challenges it faces. As a diagnostic

tool, this report presents and discusses firm-level data collected by the MENA Enterprise Survey (ES) in eight economies—Djibouti, the Arab Republic of Egypt, Jordan, Lebanon, Morocco, Tunisia, the West Bank and Gaza, and the Republic of Yemen—which are collectively referred to in the report as the MENA ES region.

Firm-level survey data are a crucial complement to macro-economic data. They make it possible to analyze firm-level productivity and performance—as well as their variation across different types of firms—to understand what drives firm performance and the specific challenges faced by the private sector.

The collection of these data took place in 2013 and 2014, amid considerable social and economic upheaval. In particular, entrepreneurs and firms across the MENA region faced increased uncertainty with negative implications for their business and investment decisions. In addition to domestic developments, international economic conditions were also unfavorable, particularly as economic activity in Europe—one of the region’s major trading partners—was weak.

This difficult environment is inevitably reflected in the snapshot that the data provide on firm performance, the business environment, and firms’ expectations of the future. Nonetheless, the survey also reveals much about the objective status and performance of firms in the region, as well as the structural challenges that they face. Both factors—the short-run events and the long-standing environment in which they emerged—are important for understanding the potential foundations of prosperity in the region.

THE MENA ENTERPRISE SURVEY

The Enterprise Survey provide a rich source of information about firms and the business environment in which they operate. Topics include firm characteristics, annual sales, costs of labor and other inputs, performance measures, access to finance, workforce composition, women’s participation in the labor market, and many aspects of the business environment. Survey data are not only useful for corroborating findings based on macroeconomic data but also for exploring heterogeneity at the firm level and examining how firms experience laws and regulations.

The MENA ES provides a representative sample of the non-agricultural, formal private sector (figure 1.1). As shown in table 1.1, the survey respondents comprised 6,083 formal (registered) firms in the private sector across the eight economies. Table A1.1 in the Appendix provides a breakdown of the type of firms that were interviewed, along with the geographic regions of the surveys.

To be included in the survey, firms needed to have at least five employees and to operate in the manufacturing or services sectors. “Services” include retail, wholesale, hospitality, repairs, construction, information and communication technology (ICT) and transport. Not included in the survey are agriculture, fishing and extractive industries, as well as utilities and some services sectors, such as financial services, education and healthcare.³ Also not included are firms with 100 percent state ownership.

TABLE 1.1: MENA Enterprise Survey characteristics

Economies covered*	Djibouti; Egypt, Arab Rep.; Jordan; Lebanon; Morocco; Tunisia; West Bank and Gaza; and Yemen, Rep.
Sample	6,083 private firms, which are: <ul style="list-style-type: none"> • registered, • with five or more employees, and • in the manufacturing or services sectors.
Sampling	Random, stratified by: <ul style="list-style-type: none"> • regional location within each economy, • firm size, and • sector of activity.
Reference period	Fiscal year 2012

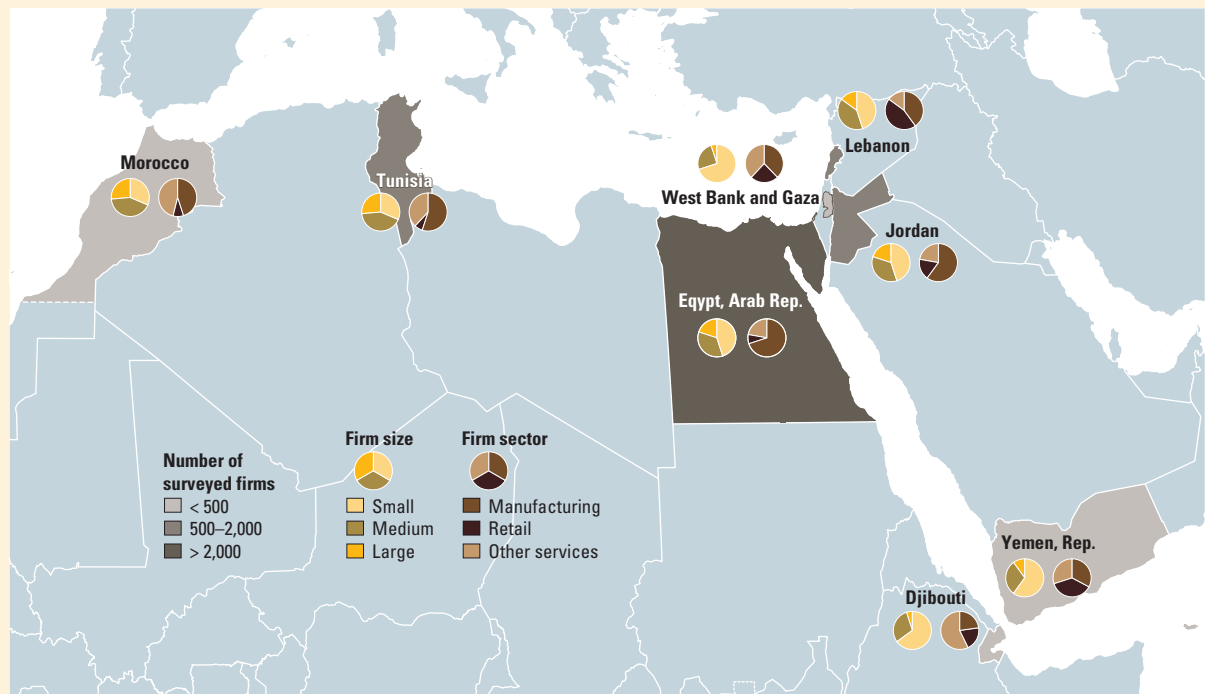
* The MENA ES rollout included the economies of Djibouti, the Arab Republic of Egypt, Jordan, Lebanon, Morocco, Tunisia, the West Bank and Gaza, and the Republic of Yemen. Initial plans to include Algeria, Libya, and the Syrian Arab Republic were suspended due to the security situation and additional budget constraints.

The survey used random sampling, stratified by firm size, sector of activity, and regional location within each economy. Stratification ensures that there are enough observations for robust analysis within each stratum. The survey design, comprehensive sample frames, and sampling weights used in the MENA ES together ensure that the surveys are statistically representative of the private sector in each economy.

THE MENA ES REGION

Given the differences among MENA ES economies, it is useful to benchmark results against other regions covered by the surveys, as well as distinguishing

FIGURE 1.1: Number, size and sector of firms surveyed



Source: Enterprise Surveys.

between lower-middle-income and upper-middle-income economies.⁴ Using the World Bank Group classifications, Jordan, Lebanon, and Tunisia are upper-middle-income economies, while Djibouti, Egypt, Morocco, the West Bank and Gaza, and the Republic of Yemen are lower-middle-income economies.

It should be stressed that while this report makes many references to the MENA ES private sector as a whole, the region is far from homogeneous, with entrepreneurs across the region facing wide differences. As table 1.2 shows, MENA ES economies have very different population sizes, ranging from just under one million (Djibouti) to 81 million (Egypt). The MENA ES economies also have different levels of development: at the extremes, Lebanon's GDP per capita in 2012 was 10 times that of the Republic of Yemen. Using a broader measure of well-being, such as the Human Development Index (which takes account of life expectancy, levels of schooling, and income), also reveals wide disparities, with Djibouti ranked 170th out of 187 economies in 2013 and the upper-middle-income economies of Jordan, Lebanon, and Tunisia nearer the middle of the rankings.

TABLE 1.2: Selected indicators for the MENA ES economies

Economy	Population 2012 (millions)	Human Development Index rank (HDR), 2013	GDP per capita, 2012 (constant USD 2005)
Djibouti	0.9	170	1,144
Egypt, Arab Rep.	81.0	110	1,560
Jordan	6.3	77	2,839
Lebanon	4.4	65	7,245
Morocco	33.0	129	2,462
Tunisia	11.0	90	3,921
West Bank and Gaza	4.0	107	1,564
Yemen, Rep.	24.0	154	729
Lower-middle-income	60.0		1,509
Upper-middle-income	55.0		5,291

Source: UN National Accounts Main Aggregated Database (2005 USD). HDR: low value indicates better performance.

As is to be expected for middle-income economies, all of the MENA ES economies have undergone considerable structural transformation,⁵ with industry on average accounting for 30 percent of GDP and services for 61 percent (table 1.3). Agriculture plays a lesser role in terms of value-added (although providing 14 percent of GDP in Egypt and Morocco), but it remains very important in terms of employment, particularly in Egypt, Morocco, and the West Bank and Gaza (table 1.4).

The sectors analyzed in the MENA ES include the full manufacturing sector, which provides an average of

13 percent of GDP and 11 percent of employment, and most segments of the services sector, which provides 35 percent of employment on average.⁶ The MENA ES excludes informal economic activity. The size of the informal economy in the MENA ES economies has been estimated as equivalent to 33 percent of GDP on average (for economies where estimates are available, table 1.3), but this activity is only partially included in the GDP measure. The informal sector is estimated to provide up to 67 percent of non-agricultural employment in Morocco and 49 percent overall (table 1.4).

TABLE 1.3: GDP by sector and the informal economy in the MENA ES economies

	GDP by sector (%)*				Informal economy (% of GDP), 2004/2005**
	Agriculture	Industry		Services	
			Of which manuf.:		
Djibouti	3.5	16.9	2.5	79.3	n.a.
Egypt, Arab Rep.	14.5	39.2	15.8	46.3	35
Jordan	3.1	30.1	18.8	66.8	20
Lebanon	6.1	20.5	8.5	73.4	37
Morocco	14.4	30.3	15.9	55.3	37
Tunisia	9.2	31.1	17.0	59.7	38
West Bank and Gaza	5.3	25.1	16.2	69.6	n.a.
Yemen, Rep.	10.1	49.2	7.8	40.6	27
MENA ES	8.3	30.3	12.8	61.4	33

Source: * World Development Indicators. Data are for 2012, except for Djibouti (2007) and the Republic of Yemen (2006).

** Schneider (2007). Informal sector activity is only partly estimated in official figures for GDP.

Note: n.a.—not available.

TABLE 1.4: Employment by sector and the informal economy in the MENA ES economies

	Employment by sector (formal and informal sectors, %)*					Employment in the informal economy (% non-agricultural employment), 2000-2004**
	Agriculture	Manufacturing	Services (ISIC groups F-I)	Public administration, defense & education	Other sectors	
Djibouti	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Egypt, Arab Rep.	27	11	32	18	12	46
Jordan	2	10	33	36	18	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	52
Morocco	38	11	32	8	11	67
Tunisia	16	19	35	19	11	35
West Bank and Gaza	38	12	40	25	13	43
Yemen, Rep.	16	7	39	22	8	51
MENA ES	20	11	35	21	12	49

Source: * ILO, KILM. ** Charnes (2012).

Note: n.a.—not available. Agriculture refers to ISIC Rev. 3.1 group A; manufacturing to Group D; services includes groups F-I (construction; wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods; hotels and restaurants; transport, storage and communications); public administration, defense and education refers to groups L and M; other sectors refers to groups B, C, E, J, K, N-X (including mining, utilities, finance, real estate and health). Data are for 2012, except the Republic of Yemen (2010).

The MENA ES does not cover publicly provided services and purely state-owned firms, which are important providers of employment in the region. Jobs in public administration, defense and education comprise 21 percent of employment on average, but this may underestimate the total number of employees in the public sector, as it excludes for example, state-owned enterprises.

The universe of sectors included in the surveys comprises a relatively restricted segment of the MENA ES economies. But the segment it covers is important for development: it is the growth of both employment and value-added in the formal private sector that provides the best opportunities for improving the long-term prospects and prosperity for the growing workforces of the economies in the region.

THE FOCUS OF THIS REPORT

The following four chapters focus on key issues for understanding the growing role played by the formal private sector in the MENA ES region, the constraints faced by these firms, and the opportunities for promoting faster private sector growth and job creation.

Chapter 2 examines firm productivity and its relationship to the general business environment. Political instability is a particularly acute concern for firms in the economies most directly affected by the Arab Uprisings, and this seems to have affected their economic performance. The chapter also discusses corruption and unreliable electricity supply, which are two further core concerns of firms across the region.

Chapter 3 explores a critical issue in the business environment: the extent to which firms experience difficulties in getting access to finance, and whether some may even choose to opt out of the formal financial system. The chapter argues that by disconnecting from financial services, firms forgo growth opportunities. More financial sector flexibility and competition would help firms to re-engage. The chapter highlights the specific issues of collateral requirements, branch density, and lack of banking sector

competition, all of which make finance more difficult to access for many firms in the region.

Chapter 4 examines the contribution of different segments of the private sector to employment, with a particular focus on youth employment, women's employment, and the role of women in management. The chapter highlights the lack of dynamism of medium-sized firms and explores the relationship between employment growth and factors such as access to finance and labor productivity. It also considers the extent to which firms face constraints in terms of access to adequately skilled workers and the impact of skills on productivity and wages.

Chapter 5 explores the broad issue of firm competitiveness, and specifically the effect on firm performance of participation in international trade, innovative activity, and management practices. The chapter investigates the extent to which firms in the region have been able to take advantage of opportunities for output and productivity growth through participation in trade. It investigates the state of innovation and its relationship to productivity growth. It also discusses the effect of management practices on firm productivity and the efficient use of energy resources.

Endnotes

- 1 World Bank (2004).
- 2 Kabbani and Kothari (2005, p.16).
- 3 More information on the ES methodology along with inclusion/exclusion criteria can be found in www.enterprisesurveys.org/methodology.
- 4 These regions are Latin America and Caribbean (LAC), Eastern Europe and Central Asia (ECA), Sub-Saharan Africa (AFR), South Asia (SAR) and East Asia and Pacific (EAP).
- 5 Atiyas and others (2015).
- 6 The MENA ES excludes certain segments of the services category, such as public administration, healthcare and education. The services covered by the ES are represented by ISIC Rev. 3.1 groups F-I (including construction, retail, vehicle repair, hotels and restaurants, transport and communications) as well as K.72 (computer and related activities).

APPENDIX A1

TABLE A1.1: Enterprise Survey in the MENA region: Number of firms interviewed (n=6,083) and levels of stratification by economy

Size of the economy	Economy	Stratification level					Sector of activity	Locations
		Firm size (no. employees)				Total		
		Small (5-19)	Medium (20-99)	Large (100+)				
Large	Egypt, Arab Rep.	1,273	1,029	595	2,897	Food (257), Textiles (224), Garments (206), Leather (111), Printing & Publishing (58), Chemicals (173), Rubber & Plastic (121), Non-Metallic Mineral Products (245), Fabricated Metal Products (91), Furniture (142), Wood Products (78), Other Manufacturing (316), Construction (134), Services of Motor Vehicles (49), Wholesale (122), Retail (147), Hotels & Restaurants (163), Transport, Storage & Communications (256), IT (4)	Cairo (794), Giza (476), Upper Egypt (355), Kafr-El-Sheikh/Menoufiya/Beheira (226), Alexandria (192), Sharqia (187), Qalyubia (144), Gharbiya (132), Port Said/Suez/Ismaia (124), Damietta (117), Dakahliya (114), Red Sea/Matrouh/Wadi Al Jadid/Sinai (36)	
Medium	Tunisia	199	237	156	592	Food (83), Garments (84), Other Manufacturing (163), Retail (34), Other Services (228)	South Coast/West (148), Northeast (141), Tunis (135), Sfax (126), Interior (42)	
	Jordan	266	181	126	573	Food (88), Garments (66), Other Manufacturing (181), Retail (106), Other Services (132)	Amman (274), Zarqa (99), Irbid (97), Aqaba (52), Balqa (51)	
	Lebanon	264	207	90	561	Food (89), Other Manufacturing (150), Retail & Wholesale (231), Other Services (91)	Mount Lebanon (139), Beirut (123), South Lebanon (98), Bekaa Valley (85), North Lebanon (77), Nabatieh (39)	
	Morocco	141	153	113	407	Food (49), Garments (38), Other Manufacturing (100), Retail (36), Other Services (184)	Grand Casablanca (107), South (100), Central (80), Rabat/Sale/Zemmour/Zaer (71), North (49)	
	Yemen, Rep.	211	102	40	353	Manufacturing (117), Retail (126), Other Services (110)	Rest of the country (204), Amanat Al-Asemah (149)	
Small	West Bank and Gaza	292	119	23	434	Manufacturing (158), Retail (112), Other Services (164)	West Bank (295), Gaza (139)	
Very Small	Djibouti	169	79	18	266	Manufacturing (62), Retail (59), Other Services (145)	Djibouti City (266)	

Source: Enterprise Surveys.

Note: The Enterprise Survey sample designs are based on stratified random sampling. More information can be found in <http://www.enterprisesurveys.org/methodology>. For sector of activity and locations, the number in the parentheses indicates the number of interviewed firms in that particular strata level. For comparisons with other geographic regions, the number of firms is as follows: ECA (8,730), LAC (12,046), EAP (9,026), SAR (13,381), and AFR (16,968).

REFERENCES

- Atiyas, Izak, Ahmed Galal, and Hoda Selim. 2015. "Structural Transformation and Industrial Policy: Volume 1: A Comparative Analysis of Egypt, Morocco, Tunisia and Turkey," Luxembourg: European Investment Bank.
- Charmes, Jacques. 2012. "The Informal Economy Worldwide: Trends and Characteristics," *The Journal of Applied Economic Research* 6(2): 103-132.
- Kabbani, Nader, and Ekta Kothari. 2005. "Youth Employment in the MENA Region: A Situational Assessment," Social Protection Discussion Paper No. 534, Washington, DC: World Bank.
- Schneider, Friedrich. 2007. "Shadow Economies and Corruption All Over the World: New Estimates for 145 Countries," *Economics*, No. 2007-9.
- World Bank. 2004. "Unlocking the Employment Potential in the Middle East and North Africa: Toward a New Social Contract," Washington, DC: World Bank.



2.

FIRM PRODUCTIVITY AND THE BUSINESS ENVIRONMENT

INTRODUCTION

Firms' productivity—their effectiveness in producing output from inputs—is the basis for their ability to survive and compete in national and international markets. Rising productivity in the private sector is key for economic growth, and it is a good indicator of a well-functioning private economy. In the absence of market frictions, resources are reallocated toward more productive firms, thereby reinforcing the process of growth and opening opportunities for more productive jobs.

This chapter analyzes firm productivity and the business environment in the MENA ES region. It shows that firms are relatively more productive in terms

of labor productivity, but that labor productivity has been declining over time. Furthermore, high labor productivity has been achieved through inefficiently high capital intensity, resulting in lower total factor productivity (TFP). Large firms are generally more productive, but tend to be more capital-intensive and to focus on capital remuneration.

The chapter also presents evidence on the impact of the business environment on firm performance and growth. Firms perceive political instability, unreliable electricity, corruption, and inadequate access to finance as key constraints. Small and medium-sized enterprises (SMEs) tend to experience a more challenging operating environment than larger firms.

FIRM PRODUCTIVITY

Labor productivity is somewhat higher than in peer economies of the MENA ES region, but total factor productivity lags behind

Figure 2.1 shows the distribution of firm-level labor productivity and TFP in the formal private sector for each of the MENA ES economies in comparison with the median productivity level for economies at a similar income level outside the region—its “peer economies.”¹ If the distribution of either performance measure in an economy is similar to that in peer economies, roughly half of firms will fall below the comparable median and roughly half will be above this level. Likewise, if a relatively higher proportion of firms are above the income-group median, this indicates generally higher levels of firm performance, with the converse being true if more firms fall below the median.

In most MENA ES economies, firms have labor productivity levels that are somewhat above the comparable income-level median—that is, more than half of firms report higher revenues per worker compared with peer economies. Jordan and the Republic of Yemen, where a majority falls below the median, are the only exceptions.²

This higher labor productivity could result from greater efficiency, superior technology, and/or the intensive use of complementary inputs, such as capital or material intermediates. The latter explanation seems to be confirmed by the fact that TFP lags behind peer economies in most MENA ES economies (figure 2.1),³ the only exceptions being Jordan and Morocco. TFP measures the efficiency of use of all factors of production including not only labor but also capital and intermediates (see box 1.2 for details on TFP computation). The results in figure 2.1 thus suggest that in most MENA ES economies, higher levels of labor productivity are achieved at the expense of an over-reliance on capital and intermediates—and not underlying technological superiority—with a resulting lag in TFP.

BOX 2.1: Estimating total factor productivity with survey data

The use of micro or firm-level data to estimate total factor productivity (TFP)—the portion of output not explained by the amount of inputs utilized—has enabled analysts to explore how the efficiency of production varies with heterogeneous firm characteristics. Most analytical work begins with a Cobb-Douglas production function in the form: $y_i = a_i k_i^{\beta_k} l_i^{\beta_l} m_i^{\beta_m}$ where firm-level output y_i is a function of inputs of capital (k_i), labor (l_i), and other inputs such as materials (m_i); firms’ efficiency of production is measured by the term a_i which is the portion of output that cannot be directly attributed to the utilized inputs. Analytically straightforward, estimation can be troublesome. Often only monetary (as opposed to physical) output and inputs are observed, and the resulting productivity measures thus incorporate market dynamics through clearing prices; such revenue-based TFP is often referred to as TFPR.^a In addition, it has been widely noted that even within narrowly defined industries results exhibit large and persistent differences across firms.^b

Empirically, TFPR is generally estimated by regressions in the form of: $Y_i = \beta_k K_i + \beta_l L_i + \beta_m M_i + \varepsilon_i$, where capital letters indicate natural logarithm of monetary inputs and outputs. ε_i is the natural logarithm of firm-specific productivity. Capital, K_i , is proxied by the replacement value of machinery and equipment. Labor, L_i , inputs are represented by total wage bill, while materials, M_i , are measured as the cost of raw materials and intermediate goods used in production. TFPR is thus only meaningful for manufacturing firms. It should be noted that since data are cross-sectional (and not time-series), corrections for the endogeneity of inputs (that is when firms have knowledge of their productivity and set their capital and labor inputs simultaneously) is not possible.

Since the above specification assumes a common production technology, TFPR was estimated separately for each industry—grouped by two-digit ISIC codes, s —and pooling economies by income level—grouped by the World Bank classifications, w . To allow for an average economy-level effect, a dummy variable for each economy c is included.^c The final estimation is then $Y_{isw} = \beta_{ksw} K_{isw} + \beta_{lsw} L_{isw} + \beta_{msw} M_{isw} + \sum \beta_c c + \varepsilon_{isw}$. The firm-level TFPR is the sum of the economy-industry-level effect and firm-specific productivity: $TFPR_i = \varepsilon_{isw} + \beta_c$.

For an economy-level measure of productivity, the firm-level TFPR is aggregated by taking into account each firm’s share in the economy: $TFPR_c = \sum_{i=1}^{N_c} TFPR_i \cdot \left(\frac{s_i}{\sum s_i} \right)$, where three different measures of shares (s) were used: (i) sample weights, ω_i , giving each firm a weight equal to the share of firms it represents in the economy; (ii) sales share, $y_i \omega_i$; and (iii) employment share, $e_i \omega_i$ with e_i being the number of permanent employees.

a Foster and others (2008).

b See, e.g., Syverson (2011).

c Halvorsen and Palmquist (1980).

In all economies but Jordan, Morocco, and the Republic of Yemen, higher-than-median labor productivity goes hand in hand with lower-than-median TFP. This is an indication that while labor is used somewhat efficiently, when all factors are taken into consideration, firms are actually less productive. In Jordan, firms tend to be more inefficient in using labor, as reflected by below-median labor productivity, but above-median TFP. The Republic of Yemen stands out: firms are relatively inefficient and characterized by low labor productivity and TFP. By contrast, in Morocco, relatively high labor productivity is also associated with relatively high TFP, indicating a comparatively efficient system.

MENA ES manufacturers tend to have lower labor intensity and higher capital and intermediates intensity

Factor shares have long been used to study the importance of each type of input in the production process. Each ratio—expressed as a proportion of total annual revenues—shows the relative intensity of those input costs to revenue output, and is thus itself a simple measure of productivity. If a firm’s ability to command greater revenue is high relative to inputs, it is generally regarded as more productive, a sign of underlying efficiency; if, however, factor shares are high relative to revenues (as well as to each other and vis-à-vis comparators), they may reveal lower underlying productivity—a disproportionate expense on inputs. The latter scenario can be due to inferior technology and/or comparatively expensive costs of production—as would be the case if input costs were high

due to inefficiencies or imperfectly competitive markets, or through incentives favoring greater factor intensity than would otherwise be optimal.

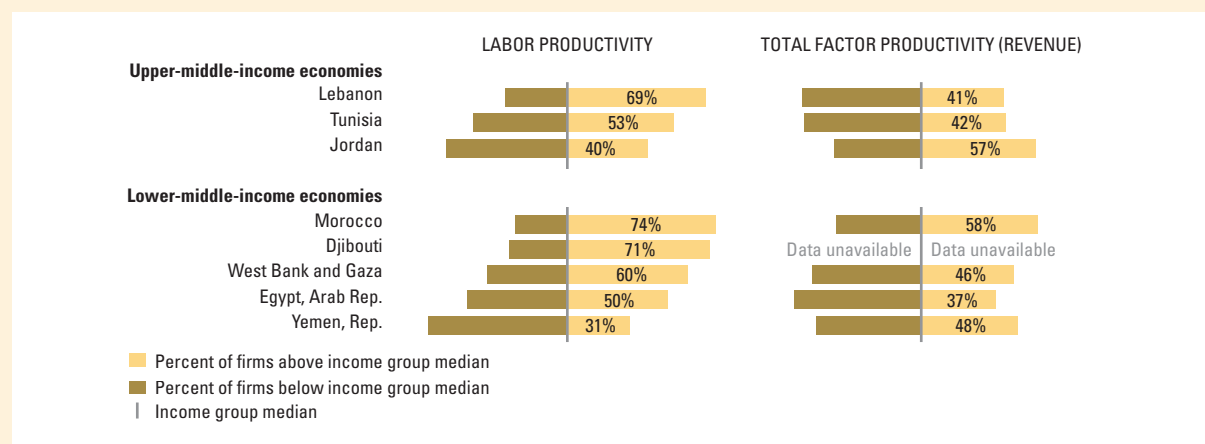
Figure 2.2 shows the median factor shares of three main inputs used by manufacturers—their labor, intermediate inputs, and capital costs respectively. The capital factor share is above the respective peers in Egypt, Jordan, Lebanon, and Tunisia, revealing higher capital intensity. The labor factor share is above the respective peers only in Jordan and Lebanon.

Egypt and Tunisia’s story is consistent with a pattern of relative investment in energy-intensive (subsidized) and capital-intensive industries—for example, in metal and cement production.⁴ Moreover, the subsidization of energy inputs (and the subsequent favoring of capital-intensive production) renders labor relatively more expensive. This limits the potential of job expansion through greater labor intensity. Furthermore, if labor is relatively more abundant relative to private sector demand, wages will slump. While this will increase employment, it will be at the cost of lower wages rather than a result of more labor-intensive production techniques (chapter 4).

Larger firms have higher levels of productivity in manufacturing but not in services

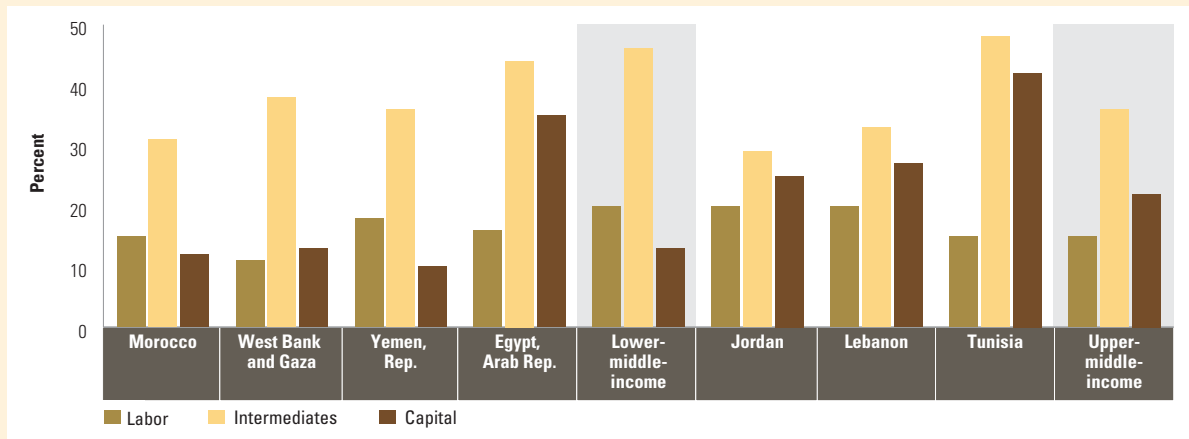
In the MENA ES economies, there is no significant association between firm size and productivity in the services

FIGURE 2.1: Distribution of firm-level labor productivity and total factor productivity



Source: Authors’ calculations based on Enterprise Surveys. Economies are ordered within income group by labor productivity distribution.

FIGURE 2.2: Median factor shares



Source: Enterprise Surveys.

Note: Within each income group, economies are ordered by the total sum of factor shares, low to high from left to right.

sector; this is not the case in the manufacturing sector. When only labor is considered as a factor of production, manufacturers in the MENA ES economies show a significant and positive relationship between the number of workers they employ and their revenues per worker—that is, labor productivity (table A2.1, column 2). But when other factors of production are taken into account—namely the costs of capital and intermediate inputs—the addition of more workers reduces labor productivity.

This finding may imply that the positive association between firm size and labor productivity is due to the extensive use of capital by large firms, not necessarily due to the number of employees in the firm. This again points to a strong bias towards capital and intermediates relative to labor: that is, firms with comparably more employees maintain higher labor productivity precisely through their intensive use of other inputs of production.

Relative to revenue, larger firms spend more on capital than on labor inputs

In the MENA ES economies, larger firms allocate relatively fewer resources to labor costs. While this pattern is consistent with lower-middle-income economies elsewhere, it is not consistent with other upper-middle-income economies, in which there is no change in the labor-to-revenue ratio as firms grow (figure 2.3A). More striking is the relatively large amount of resources allocated to

capital across the region (figure 2.3C). In both income groups, this allocation increases with firm size.

The analysis above suggests that the higher productivity of larger firms overlies their higher capital intensity. If this is efficiency-enhancing in terms of physical production (and not just in commanding greater revenue), the substitution of labor intensity with capital inputs would expand overall productivity. But the MENA ES economies' relatively poor TFP compared with peers suggests that this relative intensity may be less than optimal, possibly a consequence of distortive incentives pushing toward capital intensity.

Labor productivity is declining

Despite comparatively higher labor productivity, revenues per worker are contracting over time in all MENA ES economies. This may be partly explained by the widespread social and political upheaval. The surveys make use of recall on sales and employment data from fiscal years 2009 and 2012, allowing for indicators of performance before and during the upheaval.⁵ Compared with their peer economies, the MENA ES economies tend to lag behind on average in sales, employment, and labor productivity growth rates (figure 2.4). In fact, the annual rate of growth of labor productivity for every economy in the MENA ES region over the period 2009–2012 is negative (figure 2.4). This is the result of steady and positive employment

FIGURE 2.3A: Labor cost factor share by size

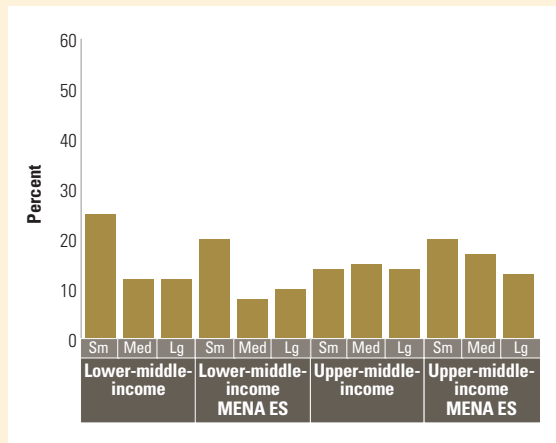


FIGURE 2.3B: Intermediate input cost factor share by size

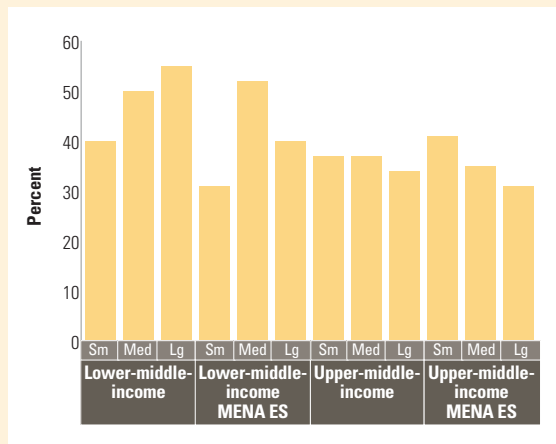
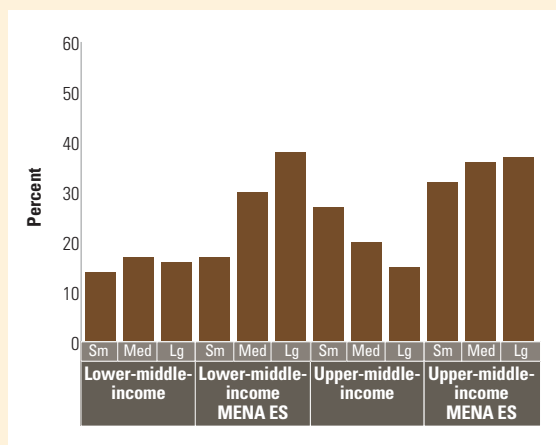


FIGURE 2.3C: Capital replacement cost factor share by size



Source: Enterprise Surveys, all shares shown on the same scale for comparison.

growth, except in Egypt and the Republic of Yemen, accompanied by weaker, and sometimes negative, sales growth.

In response to the Arab Uprisings, several governments in the region responded by rapidly increasing public spending on food and energy subsidies; between 2009 and 2012, subsidy expenses in real terms more than tripled in Jordan, more than doubled in Tunisia, and increased by over 40 percent in Lebanon. The increase in Egypt was only 4 percent, but it constituted a 1.6 billion expansion in public spending in 2012 U.S. dollars.⁶ While making debt levels somewhat untenable, this additional public spending may induce further misallocations in the private sector, biasing firms toward capital and energy intensity and against further employment generation.⁷

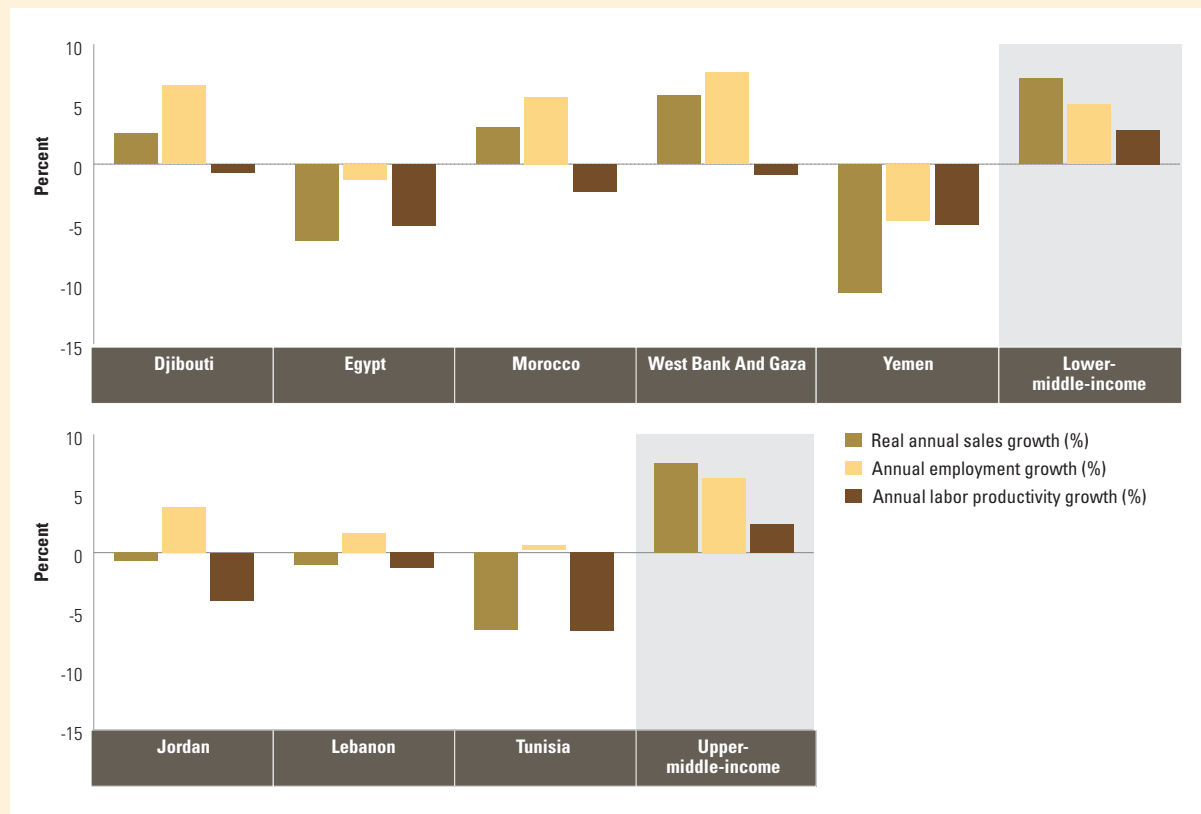
Governments in Egypt, Jordan, Tunisia, and Morocco have announced and begun energy subsidy reforms—allowing gasoline and other fuel prices to rise as well as electricity tariffs.⁸ Though initial efforts have proceeded—in 2015, the Egyptian government cut subsidies by nearly a third compared with the previous year—these reforms face persistent political resistance.⁹ The starkest example is in the Republic of Yemen, where protests erupted after the Saleh government cut energy subsidies in 2014, and these reforms have been withdrawn further following the conflict.¹⁰

THE BUSINESS ENVIRONMENT

The business environment includes regulatory compliance, access to finance, infrastructure, and several other contextual elements that affect the day-to-day experiences of firms. Productivity is as much dependent on internal factors, such as technology, research and development (R&D), management practices, and human capital as it is on the external factors of the business environment.¹¹ But external factors can affect “within” aggregate productivity growth by forcing individual firms to become more efficient; and they can affect “between” aggregate productivity by allowing more efficient firms to grow faster than less efficient ones or by replacing less efficient firms with newer more efficient entrants.

Many studies have established the effect of different dimensions of the business environment on firm performance, particularly in developing economies.¹²

FIGURE 2.4: Labor productivity growth has been negative in all MENA ES economies



Source: Enterprise Surveys.

The business environment can affect firm productivity directly—for example, through the reliability of electricity supply—or indirectly by affecting decisions on the allocation of resources.¹³ For example, corruption or burdensome regulation can create incentives for the reallocation of labor or capital resources from productive tasks to less than optimal uses, leading to lower aggregate productivity and output.

Several aggregate measures of the business environment in the MENA ES economies point to substantial differences among them. The World Bank's *Doing Business* Index measures the overall regulatory environment by considering the cost and complexity across 10 common business transactions for a medium-sized limited liability company. According to this measure, in 2013, Tunisia was the 50th business-friendly economy in the world, while Djibouti was 170th. Tunisia, together with Jordan, also ranked relatively high in the Transparency International's

Corruption Perceptions Index in 2013, while the Republic of Yemen ranked 167th out of 177 economies worldwide.¹⁴

The World Economic Forum's Global Competitiveness Index, which covers a broader range of issues from infrastructure to financial markets and innovation-related issues, reveals a similar picture of heterogeneity across the MENA ES economies. While Jordan, Morocco, and Tunisia rank in the middle of the range, Egypt, Lebanon, and the Republic of Yemen rank much lower, with the Republic of Yemen at 145 out of 148 economies.

Similarly, according to the six World Governance Indicators for 2013, on average, Jordan, Tunisia, and Morocco tend to rank just below the middle of the range among 210 economies and the remaining MENA ES economies rank much lower. For example, the Rule of Law index ranks Jordan at 79th, Tunisia at 103rd, and Morocco at 111th; Egypt, Lebanon, and Yemen are ranked much lower at

TABLE 2.1: Selected business environment indicators for the MENA ES economies

Economy	Doing Business rank, 2013	Corruption Perception rank, 2013	Global Competitiveness rank, 2013-14
Djibouti	171	94	–
Egypt, Arab Rep.	109	114	118
Jordan	106	66	68
Lebanon	115	127	103
Morocco	97	91	77
Tunisia	50	77	83
West Bank and Gaza	135	N/A	–
Yemen, Rep.	118	167	145

Sources: World Bank Group, Doing Business Index 2013; Transparency International, Corruption Perceptions Index 2013; World Economic Forum, Global Competitiveness Index 2013-2014 edition.

Note: Larger numbers represent worse performance.

140th, 158th, and 185th respectively. Overall, these aggregate measures indicate that even in the more prosperous economies of the region, there is ample room for improvement.

The World Bank's Enterprise Survey also provide a valuable window into an economy's business environment, rooted in the day-to-day experiences of firms. The evaluation can be made from either a perception-based view of the obstacles faced by the firm or by looking at factually-based

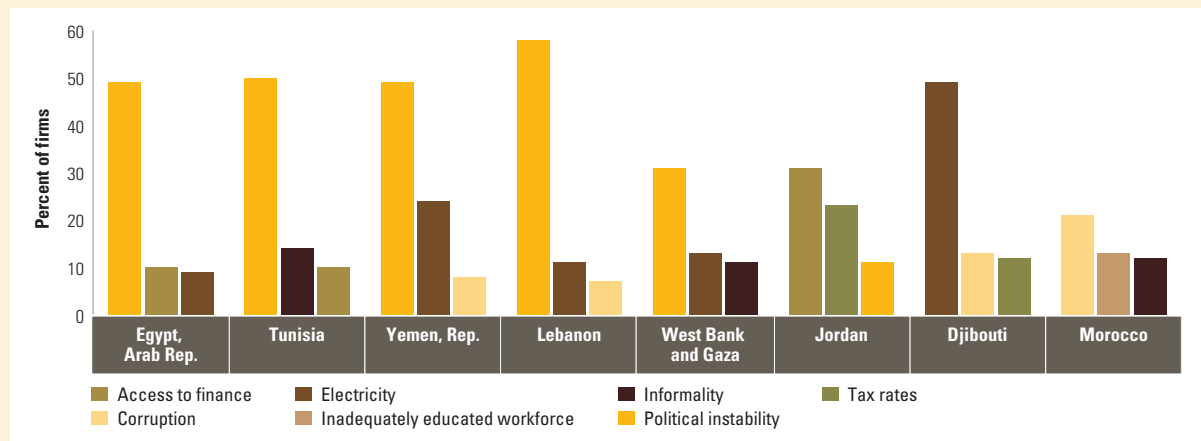
business environment measures and benchmarking them against other regions of the world.

WHAT ARE THE MAIN OBSTACLES PERCEIVED BY FIRMS?

Political instability, corruption, and electricity are most commonly identified as “top obstacles”

Managers and CEOs who took part in the MENA ES were asked to select the “top obstacle” from a list of 15 potential obstacles. As figure 2.5 shows, political instability is the most commonly chosen top obstacle in five of the eight economies. In the three economies that experienced a change of regime in the Arab Uprisings—Egypt, Tunisia, and the Republic of Yemen—one out of two firms cite political instability as the top obstacle. Similarly, in Lebanon, with a history of political struggle compounded by the effects of the conflict in neighboring Syria, this percentage nears 60 percent. Likewise, in the West Bank and Gaza—which was entering a period of heightened tension with Israel at the time of the survey—political instability is also the top obstacle for the private sector. In Jordan, political instability is still among the top three cited obstacles, primarily due to the spillovers from regional instability.

In five economies, electricity is among the top three cited obstacles. In comparatively stable Djibouti, nearly half of

FIGURE 2.5: Political instability is most commonly chosen as the top obstacle in the MENA ES economies

Source: Enterprise Surveys.

Note: For each economy the three obstacles most frequently chosen as the top obstacle by firms are shown.

firms consider electricity to be their top obstacle. Indeed, electricity seems to be a particular problem for firms in three of the lower-middle-income economies in the group—Egypt, the West Bank and Gaza, and the Republic of Yemen—as well as in one upper-middle-income economy, Lebanon. Corruption is among the three most frequently cited top obstacles in four economies, which is largely consistent with the rankings of Transparency International. Access to finance is ranked among the top three obstacles in three economies of the region; in Jordan, it is the top obstacle.

In addition to the top obstacle ranking, respondents were given the opportunity to evaluate individual elements of the business environment to determine whether each element was a major or very severe concern to the operations of the firm. Since this evaluation was done independently of the other elements of the business environment, it can be used to benchmark the extent to which any given obstacle is perceived as severe compared with other economies.¹⁵ Figure 2.6 shows that political instability and corruption stand out: they are considered severe by a much larger share of firms than in all ES economies. Electricity and access to finance are also above the average of all economies with ES data, but the difference is not as large. The future growth of the formal private sector requires reforms aimed at addressing the specific

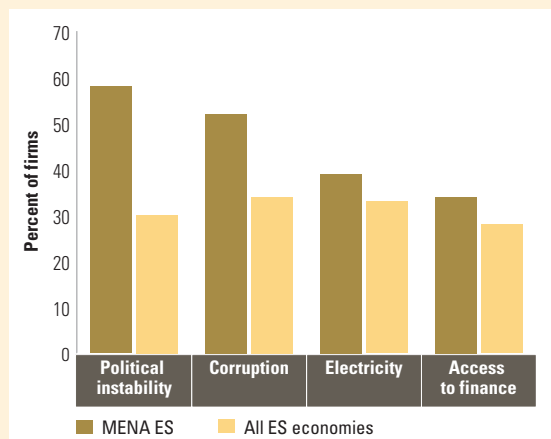
concerns of firms about electricity, corruption, and access to finance, all of which contribute to and are fed by the overarching political instability.

Experience-based indicators of the business environment reveal specific areas of concern

The MENA ES data also contain measures of firms' actual day-to-day experience dealing with specific elements of the business environment. These include indicators of regulatory costs, such as the time that senior management spends in dealing with government regulations—the “time tax”; indicators of administrative efficiency, for example, the number of meetings held with tax officials and the waiting times to obtain licenses and permits; indicators of the exposure to crime and bribery; and indicators of the quality of infrastructure and market conditions, such as shipment losses or power outages (table 2.2).

For many of these indicators, the overall average for MENA ES economies is comparable to results elsewhere, though there are a few areas of concern. For example, the time tax for Tunisia is exceptionally high, the highest of any economy with ES data. Respondents there also report three-month delays, on average, in getting an electricity connection. In Lebanon and Tunisia, obtaining an operating license can take over 40 days; in Egypt, this waiting time is substantially longer with nearly a third of applicants reporting that their request was still in process. In Lebanon, Morocco, and the West Bank and Gaza, obtaining an import license may take up to a month, well above the time in the other economies. While overall, the MENA ES economies do not show particularly poor business environments, these specific deficiencies may still be binding and can provide a starting point for policy reforms.

FIGURE 2.6: Political instability, corruption, and unreliable electricity supply are considered severe obstacles more frequently in the MENA ES region



Source: Enterprise Surveys.

POLITICAL INSTABILITY

Between 2010 and 2013, diverging growth patterns reflected different levels of political stability

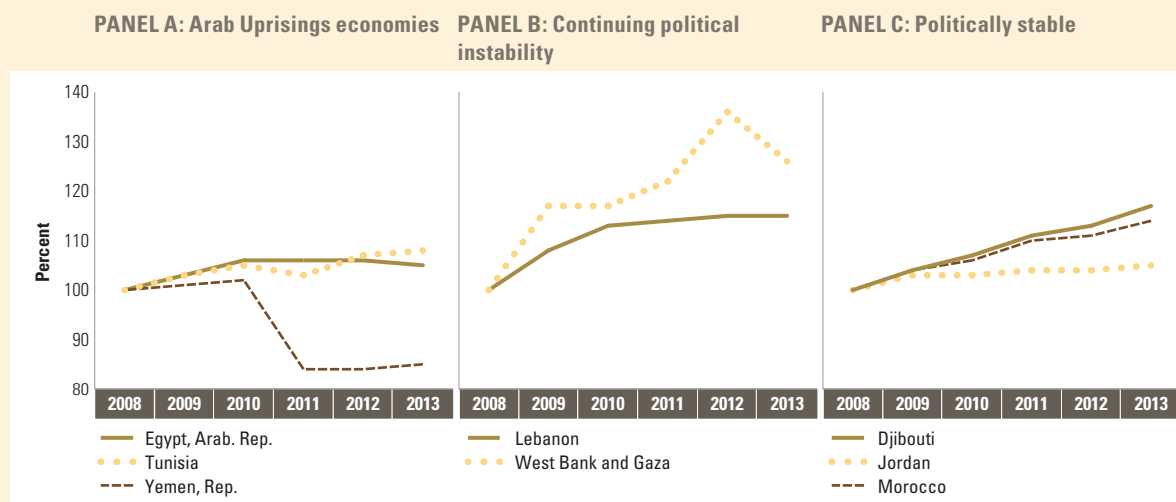
One useful way of viewing the private sector in different economies in the region is to look at relative trends following the period of upheaval around the Arab Uprisings and the onset of the Syrian civil war. While in the lead-up to 2010, all economies in the region showed positive

TABLE 2.2: MENA ES business environment averages mask individual areas of concern

	Senior management time spent in dealing with government regulations	Days to obtain import license	Days to obtain operating license	Average days to clear direct exports through customs	Days to obtain an electrical connection	Days to obtain a water connection	Percentage of firms paying for security	Losses due to theft, robbery, vandalism, and arson (% of sales)	Products exported directly lost due to breakage or spoilage (%)
Djibouti	5.3	7.7	8.8	10.4	34.1	16.1	49.8	0.5	0.1
Egypt, Arab Rep.	3.1	19.8	138.9	7.4	75.7	20.5	20.4	0.6	0.5
Jordan	5.3	2.1	1.4	4.6	13.1	21.0	12.4	0.3	0.4
Lebanon	4.1	28.0	50.0	4.9	56.0	40.2	21.8	0.2	0.2
Morocco	4.6	30.6	24.1	3.5	13.8	49.8	39.5	0.3	0.6
Tunisia	46.5	12.9	39.2	3.0	89.3	17.2	68.7	1.0	0.2
West Bank and Gaza	4.4	35.4	11.5	2.5	42.5	13.4	35.2	1.9	4.2
Yemen, Rep.	1.9	11.6	7.0	11.2	25.6	35.9	27.1	0.6	1.6
MENA ES	9.4	18.5	35.1	5.9	43.8	26.8	34.4	0.7	1.0
Lower-middle-income	10.3	17.3	24.3	9.2	25.5	24.2	57.1	1.3	1.3
Upper-middle-income	10.6	22.7	35.7	7.3	23.7	29.8	55.5	0.7	0.8
All ES economies	9.8	18.4	30.1	7.9	30.0	27.7	57.5	1.0	1.0

Source: Enterprise Surveys.

FIGURE 2.7: In economies with higher political instability, growth stagnated between 2010 and 2013



Source: WDI, authors' calculations.

Note: Figures are indexed to GDP per capita levels in 2008, which is set to 100.

growth, they differed sharply as political events unfolded. In the three Arab Uprisings economies that underwent a regime change—Egypt, Tunisia, and the Republic of Yemen—a distinct pattern is clear (figure 2.7, panel A). In the Republic of Yemen after 2010, GDP per capita dropped precipitously amid tension leading up to the civil conflict. In Egypt, which after the Arab Uprisings saw the removal

of the government of Mohamed Morsi in 2012, GDP per capita growth stagnated. In Tunisia, which experienced a relatively smoother political transition, growth initially dropped, though it recovered after 2011.

In the two other economies where political instability was most often ranked as the top obstacle—Lebanon and the

West Bank and Gaza—growth also seems to have been affected by geo-political events. As figure 2.7 shows (panel B), growth flattened in Lebanon after 2010, a period that includes the civil war in neighboring Syria. While GDP per capita in the West Bank and Gaza has grown considerably relative to 2008, this was punctuated by periods of conflict, including in 2008–2009. Djibouti, Jordan, and Morocco (figure 2.7, panel C) can be considered relatively stable. In Djibouti and Morocco, growth seems to have been little affected by instability, either domestic or in the wider region. Growth in Jordan has been relatively flat since 2009, which may partly reflect the economy's exposure to events in neighboring Syria. While the causal effect of this pattern is hard to discern—whether low growth has resulted in instability or the other way around—the association is clear.

The formal private sector is disproportionately affected by political instability

In all of the economies severely affected by political instability, the formal private sector's contribution to GDP growth—as represented by the manufacturing and services categories covered by the MENA ES—seems to have fallen considerably, comparing periods before and after 2010 (figure 2.8). In contrast, over the same period, the contribution to growth of other sectors, including public administration, defense, health, education, the financial sector, and extractive industries (all sectors not covered

by the surveys), was less dramatically affected in Egypt, Lebanon and Tunisia, although these trends resulted in explosions in public debt.¹⁶ In the politically stable Djibouti, Jordan, and Morocco, the shares of these sectors in GDP growth have changed comparatively little.

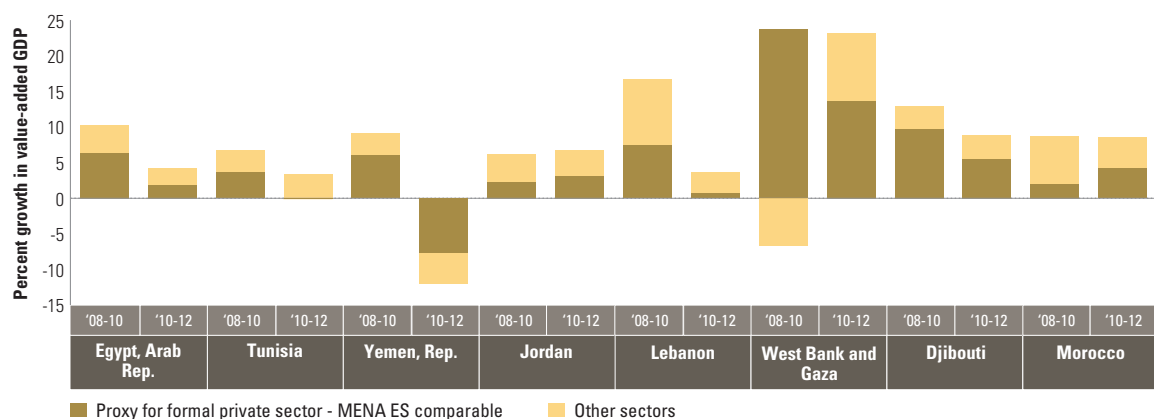
On this basis, it can be suggested that private sector activity has tended to be disproportionately affected by political instability in the region, while other sectors, many associated with the public sector, were bolstered by high—and probably unsustainable—levels of public spending and incurred deficits.

Political instability is associated with negative sales and labor productivity growth

Between 2009 and 2012, the typical firm in the Republic of Yemen, Tunisia, and Egypt saw revenues collapse by a rate of -11, -7, and -6 percent per year respectively (figure 2.4). In contrast, firms in Lebanon and Jordan saw their revenues remain virtually flat (at a rate of -1 percent per year) over the same period. Only in Djibouti, Morocco and the West Bank and Gaza was annual sales growth positive, though these rates lagged behind comparable rates in other upper-middle-income and lower-middle-income economies.

Poor sales growth performance in the Arab Uprisings economies was accompanied by a contraction in employment:

FIGURE 2.8: The role of the private sector in real growth in value-added GDP



Source: UN National Accounts Main Aggregated Database (2005 USD).

Note: 2008–2010 is relative to overall value-added in 2008; 2010–2012 is relative to overall value-added in 2010. The values for the private sector are proxied by manufacturing (ISIC Rev. 3.1 Group D) and selected services (Groups F–I). "Other sectors" include Groups A–C, E and J–P.

the average firm shed jobs in Egypt and the Republic of Yemen, and kept its employment level virtually the same in Tunisia (figure 2.4). In contrast, in Jordan and Lebanon, firms added jobs, showing positive employment growth, but sales did not keep pace, resulting in a contraction of sales per worker (labor productivity). In Djibouti, Morocco, and the West Bank and Gaza, firms both added jobs and increased their sales on average, indicating a potential driving force for current and future growth.

The relatively poor growth performance of firms in economies suffering from greater political instability—coupled with the large number of firms that find political instability a key constraint on their performance—make a strong case for social, political and economic reforms to provide greater political stability in the region.

CORRUPTION

Perceptions of corruption as an obstacle may be driven by factors beyond the scope of individual firms' activity

Corruption can result in a misallocation of resources, both through the allocation of resources to bribery and through the distortions in decision making that it creates. Corruption is the second most frequently rated major obstacle in the survey, after political instability. In addition, the survey collected information on the actual experience of firms dealing with petty corruption when engaging in six different transactions, including applications for utilities (water and electricity), imports, operating licenses, construction permits, and when paying taxes.¹⁷

As table 2.3 shows, the average share of firms exposed to at least one bribe in the MENA ES economies (bribery incidence) is considerably lower than the percentage of firms that consider corruption as a major obstacle to their operations. On average, the frequency with which firms in the MENA ES region are confronted with bribe requests (bribery depth) is somewhat greater than the average for lower-middle-income and upper-middle-income economies. But there is considerable variation across economies, with Morocco and the Republic of Yemen standing out as having the highest values for bribery incidence and depth.¹⁸

TABLE 2.3: Perceptions of corruption score much higher than factual indicators of exposure to bribery

Economy	Bribery depth (% of transactions)	Bribery incidence (% of firms)	Identifying corruption as a major obstacle (% of firms)
Djibouti	8	11	39
Egypt, Arab Rep.	16	17	59
Jordan	10	13	21
Lebanon	14	19	61
Morocco	29	37	53
Tunisia	9	10	36
West Bank and Gaza	5	7	49
Yemen, Rep.	61	64	97
MENA ES	19	22	52
Lower-middle-income	16	21	38
Upper-middle-income	9	12	33

Source: Enterprise Surveys.

Note: "Major obstacle" refers to a rating by respondents as "major or "very severe". Bribery depth refers to the frequency with which firms are confronted with bribe requests. Bribery incidence shows the average share of firms exposed to at least one bribe.

The share of firms recognizing corruption as a serious impediment is above 50 percent in Egypt, Lebanon, Morocco, and the Republic of Yemen. The higher incidence of corruption in the perception indicator compared with the transaction-based bribery indicators seems to indicate that firms may be perceiving corruption in elements of the business environment that are not related to their day-to-day operations. Some of these elements could include corruption at high political levels and/or state capture by particular interest groups or elites. Furthermore, respondents may be reticent and not report an interaction where a bribe was requested.¹⁹ Each of these could be a possible explanation for higher perceptions of corruption that are not reflected in the experience-based information in the MENA ES.

Corruption perceptions may deter firms from interactions with public authorities

In the MENA ES economies, firms engage in transactions with public officials at a considerably lower rate than in other regions (table 2.4). Excluding visits by tax officials—a transaction that is rarely voluntary—only a third of firms in the MENA ES economies engage in a public transaction, which is well below the average for peer economies.

TABLE 2.4: Firms in the MENA ES economies engage in public transactions less frequently

Percent of firms	Engaging in transaction*	Engaging in transaction excluding visits by tax officials
Djibouti	72	53
Egypt, Arab Rep.	78	16
Jordan	75	47
Lebanon	50	24
Morocco	44	35
Tunisia	48	31
West Bank and Gaza	69	43
Yemen, Rep.	89	26
MENA ES	66	34
Lower-middle-income	80	54
Upper-middle-income	72	41

Source: Enterprise Surveys.

Note: *Transactions include applications for: an import license, an operating license, water connection, electrical connection, a construction permit, or visits by tax officials.

Assuming this is partly driven by the demand for transactions by firms, this may be an indication of the effects of economic uncertainty and the investment environment on firms' willingness to undertake activities that require applications for licenses and permits. Firms' expectations of bribe requests and poor service may also be a significant factor deterring such interactions with public administrators.

High perceived corruption is associated with lower sales and employment growth and lower labor productivity

The difference between perception-based and transaction-based measures of corruption also matters for the relationship between corruption and firm performance, even after taking several firm characteristics into account. The survey results suggest that bribery incidence and depth are not related to firm performance, whereas firms that perceive corruption as a severe obstacle tend to experience lower growth rates of sales and employment, and a lower level of labor productivity (table A.2.1).²⁰

Together, these results suggest that while petty corruption may not limit firms' performance, more widespread corruption is problematic. Firms that see corruption as an important constraint perform more poorly. Add to this the fact that firms in the MENA ES economies are less likely to engage in transactions with public officials, and the case for reforms that go beyond petty corruption is strengthened.

UNRELIABLE ELECTRICITY SUPPLY

The quality of electricity provision varies greatly among the MENA ES economies

Electricity is the third most frequently cited major obstacle in the MENA ES economies. This measure, based on the perceptions of managers and CEOs, can be compared to a number of experience-based measures of power supply

TABLE 2.5: Electricity provision in the MENA ES economies

	Number of electrical outages in a typical month	Average total time of power outages per month (hours)	Value lost due to electrical outages (% of sales)	Firms owning or sharing a generator (%)	Electricity from generator (%)
Djibouti	1.6	2.3	2.8	69.1	13.3
Egypt, Arab Rep.	16.3	28.8	5.6	5.9	1.0
Jordan	0.2	0.7	0.2	8.1	2.0
Lebanon	50.5	211.0	5.7	84.6	40.1
Morocco	0.6	1.0	0.2	11.2	2.3
Tunisia	0.3	4.1	0.2	4.3	1.8
West Bank and Gaza	8.7	66.5	6.4	21.4	6.3
Yemen, Rep.	38.8	158.4	16.1	80.5	38.5
MENA ES	14.6	59.1	4.7	35.6	13.2
Lower-middle-income	6.7	32.3	3.3	35.4	9.3
Upper-middle-income	2.1	7.6	1.1	25.8	3.4

Source: Enterprise Surveys.

quality in the survey. These include the number of power outages in a typical month, the total duration of power outages in a typical month, and the total losses due to power outages as a percentage of the firm's annual sales (table 2.5). On each of these indicators, the MENA ES economies perform worse than peer economies with available data. For example, for a typical firm in the MENA ES economies, losses due to power outages equal 5 percent of annual sales, while the corresponding figures for peer economies are 3.3 and 1.1 percent.

This picture is somewhat misleading, however, as the economies in the survey should really be split into two groups in relation to power supply. In Egypt,²¹ Lebanon, the Republic of Yemen, and the West Bank and Gaza, the quality of power supply as measured by the three objective indicators is much worse than in Djibouti, Jordan, Morocco, and Tunisia. On all three power supply indicators, the first group of economies performs significantly worse than peer economies, while the second group performs better than peer economies within and outside the region.

The poor quality of power supply in the first group of economies can be attributed to a number of factors. These include the rapid expansion of demand for electricity, distorting energy subsidies that lead to inefficiently high use of electricity, inefficiencies resulting from state control of the power supply, and a lack of adequate investment in the power sector (see box 2.2). In the case of Egypt, however, there is evidence that the situation has improved since the time of the survey, with considerable investment in bolstering electricity supply.

The need for policy measures to improve the quality of power supply in some of the MENA ES economies is evident. In the meantime, use of generators has helped to reduce the impact of the failure in electricity provision. For example, while power cuts in Lebanon last on average 7 times as long as those in Egypt, firms in both economies lose an equivalent percentage of sales to these outages. This may be largely explained by the fact that 85 percent of firms in Lebanon own generators, which together provide 40 percent of the supply, while in Egypt, only 6 percent of firms own or share generators, which produce only 1 percent of the supply. In Djibouti, where reported disruptions due to outages are low but electricity is frequently

cited as a major constraint, firms are also heavily reliant on generators: 7 in 10 firms own or share a generator, and firms using those generators draw over a fifth of their electricity from those sources.

Poor quality electricity provision is associated with lower labor productivity

The observed high losses due to power outages suggest that improvements in the quality of power supply could result in a substantial increase in firms' output and productivity. Indeed, it turns out that there is a significant and negative relationship between poorer supply of electricity and labor productivity (table A2.3).²²

The relevance of electricity access as a constraint for firms' growth in the region should be read in the context of the overall institutional framework characterizing the local energy sector. Economies in the MENA ES have traditionally used energy subsidies as a safety net, in the context of ineffective systems of social welfare. This generated high associated costs and inefficiencies. By distorting prices, there has been a systematic lack of incentives for investment in critical infrastructure, while creating room for vested interests. The distorted prices have also led to inefficiently high usage of electricity.

As part of the reform program in recent years, various international institutions, including the IMF and the World Bank, have been vocal in calling for a comprehensive reform of subsidies, to open the way to a more efficient energy sector.

THE BUSINESS ENVIRONMENT EXPERIENCES OF LARGE AND SMALL FIRMS

As discussed at the beginning of the chapter, large firms in the MENA ES are generally more productive. Chapter 4 also shows that relative to SMEs, large firms are the major employers in the private sector but they are also comparatively static. It has been shown elsewhere that this dynamic may be due to the privileged positions enjoyed by large firms, both directly and indirectly. If this holds true, it may also be the case that SMEs experience poorer conditions in the business environment more broadly.

BOX 2.2: Political instability and electricity supply

While political and civil conflict can have a pervasive impact on economic activity and the private sector, one specific and tangible consequence can be the deterioration of electricity supply. The conflict in the Republic of Yemen has had stark effects on the electricity supply: entire cities have been without power for months at a time, exacerbated by bombing campaigns damaging existing electricity networks.^a According to one estimate in 2012, 90 percent of firms reported that the conflict had resulted in power-related losses to their business, a figure that has certainly not improved in the middle of upheaval.^b

Such conflict can have persistent and lasting effects. Lebanon's 1975–1990 civil war (as well as its later war with Israel) seriously damaged the economy's power infrastructure: even today Lebanese consumers often face outages lasting up to 12 hours.^c As of December 2012, total electricity production in Lebanon stood at 1500 MW while the demand exceeded 2400 MW at peak times.^d The state electricity company, Electricite du Liban (EDL), accounts for about 75 percent of power generation. The company is beset with inadequate capacity, inefficient production and distribution, subscriber delinquency, and corruption. Half of EDL's existing capacity was installed in the 1970s and 1980s, making it extremely inefficient and unreliable. According to a government study, EDL's cost of production was 22.7 cents per KWh, one of the highest in the world.^e EDL is highly subsidized as well. At the end of 2014, the total accumulated deficit of EDL stood at 27 billion U.S. dollars or about 40 percent of the total Lebanese public debt and 55 percent of the economy's GNP. The annual payout by the state to cover EDL's losses stood at US\$2.1 billion in 2014.^f Recent influxes of refugees from the civil war in neighboring Syria threatens to put further stress on the limited capacity of the Lebanese electricity supply. One recent estimate put the cost of providing electricity to refugees at US\$393 million in 2014.^g

Further investment in electricity capacity may be required for several economies with politically uncertain environments. In Egypt, for example, demand has

surged past capacity, due to a growing population and energy-intensive investments. Near the time of the survey, the World Bank estimated that demand was growing at 6 percent per annum, overwhelming capacity and resulting in recurring outages.^h New investments in both traditional and alternative energy sources have been developed, with several sources due to come online in the next few years.ⁱ These include a gas-powered Helwan South Power Plant, which will produce 1950 MW.

Even with expanded capacity through further investment, chronic under-provision may present further challenges for securing a well-integrated electricity system. In the West Bank and Gaza, there have been recent efforts to develop and support local electricity production, which has been lacking: nearly 90 percent of the economy's electricity supply is imported. As of 2014, with support from both the World Bank and the EIB, the Palestinian Authority started the Electric Utility Management Project, to improve and streamline electricity distribution into four substations. While this promises improved capacity and lower costs, one challenge going forward will be the integration of non-payers into this network. Currently, nearly 60 percent of the cost of electricity provision is lost due to non-payment, up from 37 percent in 2013.^j

a Al-Harazi (2015).

b Stone and others (2012).

c <http://www.businessweek.com/ap/financialnews/D9H029MG0.htm>

d <http://www.georgessassine.com/lebanon-electricity-regulation/>

e <http://www.al-monitor.com/pulse/originals/2015/01/lebanon-electricity-supply-debt-disaster.html#>

f *Ibid.*

g World Bank (2013a).

h World Bank (2013b).

i *Ibid.*

j World Bank (2014c).

In fact, SMEs do report different experiences and perceptions in their day-to-day operations. SMEs are more likely to indicate that political instability is a major obstacle. They are also more likely to experience longer periods without power and less likely to use a generator to offset those disruptions. It is thus not surprising that SMEs also more frequently report unreliable electricity supply as a major obstacle in their daily work. Similar results hold for access to finance, which is explored more fully in chapter 3: SMEs are more likely to be credit-constrained and to report access to finance as a major obstacle. For the four most frequently cited top obstacles by MENA ES firms, only in the area of corruption are there no significant differences between SMEs and large firms (table A2.4).

POLICY CONCLUSIONS

A supportive business environment is a critical factor underpinning the ability of firms to survive, invest, create jobs, and innovate, which in turn raises productivity and competitiveness. Overall, the level of productivity of firms in the region is not too different from firms in economies with similar income levels—labor productivity is somewhat higher in the region, but TFP lags behind, possibly due to inefficiently high capital intensity, particularly in larger firms. Yet labor productivity is declining as revenues are also falling, notably in politically unstable economies.

Understanding the factors that may be impeding the growth of private firms, as well as addressing these constraints through policy reforms, remains a top priority for policy makers. The MENA ES data point to political instability as the most commonly cited impediment to private sector development, reflecting the impact of the Arab Uprisings and their aftermath, as well as unresolved social tensions and conflicts in the region.

In Egypt, Lebanon, Tunisia, the West Bank and Gaza, the Republic of Yemen, and, to some extent, Jordan, political instability seems to have negatively affected firms' sales, employment, and labor productivity growth. The impact of political instability goes beyond the obvious disruptive impact of political turmoil and armed conflict. It needs to be seen as creating a general environment of uncertainty with regard to economic policy and the regulatory environment that may reach across national boundaries.

This broad undercurrent is impossible to separate from various aspects of the business environment. Corruption stands out as a key concern of managers and CEOs. High perceived corruption is associated with lower sales and employment growth, as well as lower labor productivity. There is also evidence that it may deter interactions with public authorities, preventing firms from making full use of the opportunities available to them.

Firms' experiences with petty corruption affecting day-to-day operations do not seem to account for the severity of corruption perceptions, suggesting the influence of wider problems of corruption and state capture in the societies concerned. Hence, policies aimed at reducing corruption in the region must look beyond petty corruption and at the broader institutional environment that governs public-private interactions. Such a general perception of corruption as a constraint and an unwillingness to engage the state can have wide impacts. Indeed, it was the harassment and attempted bribe extraction from a street vendor, and his subsequent self-immolation, that led to the start of Tunisia's uprising.

Electricity is frequently cited as a major constraint—notably in Egypt, Lebanon, the West Bank and Gaza, and the Republic of Yemen. Each of these economies has been characterized by political instability as well as difficulties in the provision of electricity, accounting for a significant direct loss of sales and associated with lower sales and labor productivity growth at the firm level.

This relationship may be self-reinforcing: the inadequate provision of services such as electricity supply may feed broad discontent, just as political upheaval may allow infrastructure to deteriorate through lack of investment or to be destroyed by violent conflict. Reform agendas to improve energy-sector efficiency and investment, including through the streamlining or removal of distorting subsidies, should be seen through where they have begun and taken up again where they have stalled. As subsidies can lead to a sub-optimal use of resources, such reforms may also lead to increased TFP.

Another key business environment constraint in the region, not discussed in this chapter, is access to finance. This is the most frequently named top obstacle by firms in Jordan, and also features prominently in the results for two other economies. Indeed, access to finance might

appear as more of a concern, were it not for the influence of factors such as political instability that are likely to deter investment by firms, reducing their demand for capital, and encouraging a level of disconnectedness from the formal financial sector. These issues are discussed in the next chapter.

Finally, addressing constraints related to the business environment might also support competition and overall efficiency in the economy. As indicated above, large firms are more productive but inefficiently capital-intensive. At the same time, SMEs are disproportionately affected by inefficiencies in the business environment. Ameliorating these constraints, carefully assessing distorting incentives, removing privileges and more generally enhancing competition, can be effective policies toward a more inclusive growth.

Endnotes

- 1 Note that total factor productivity estimate is available only for manufacturing firms.
- 2 The comparison income group includes either 36 upper-middle-income or 38 lower-middle-income economies (according to the World Bank income classification, as of 2012) for which Enterprise Survey data are available, excluding MENA economies. Survey years for the comparators can run from 2009 to 2014.
- 3 The pattern shown in figure 2.1 remains when labor productivity and TFP are restricted to the same subsample of only manufacturing firms with TFP estimates available.
- 4 Schiffbauer and others (2015).
- 5 While this is the case, several caveats should be noted. First, the use of recall data is subject to potential bias, as is the fact that the ES necessarily can only gather information on surviving firms. Yet while the nature of such upheaval in these economies is not necessarily easily confined to this period, the two periods do offer useful indicators of firm performance.
- 6 Based on authors' calculations from IMF Government Finance Statistics; see also Mottaghi (2014).
- 7 Mottaghi (2014).
- 8 Sdravovich and others (2014).
- 9 Coats (2015).
- 10 Devarajan and others (2014).
- 11 Syverson (2011).
- 12 See Kinda and others (2015), Xu (2011), Ayyagari and others (2015).
- 13 Restuccia and Rogerson (2008).
- 14 The Corruption Perceptions Index scores the degree of public sector corruption in an economy based on a series of broad perception questions.
- 15 For each element of the business environment respondents are asked to assess its degree of difficulty on scale from 0 to 4, with 0 indicating no obstacle and 4 very severe obstacle. The graph provides the percentage of firms that chose major or very severe, 3 or 4, for each obstacle.
- 16 Calculations based on IMF Government Finance Statistics show changes of near 400 percent increases in debt (negative gross operating balance) of Tunisia and Egypt, in real terms. In Lebanon, public deficits grew by 30 percent. See also Mottaghi (2014).
- 17 Two indicators are derived to measure the degree of a firm's exposure to corruption. Bribery depth captures the percentage of these six transactions in which a gift or informal payment was requested. Bribery incidence is the percentage of firms experiencing at least one bribery request in any of the six transactions.
- 18 It should also be noted that the bribery depth and incidence indicators are based on questions that are only asked to firms that engage in at least one of the six transactions. Therefore, results across economies may not be fully comparable if there are systematic differences in the way firms engage in these transactions across economies.
- 19 Kraay and Murrell (2013).
- 20 A firm-level regression model including all the usual firm characteristics is used to assess the relationship between several measures of firm performance (sales growth, employment growth, and labor productivity levels) with the three measures of corruption (whether corruption is perceived as a severe obstacle, and the bribery depth and incidence indicators). As noted above, the bribery indicators are only available for firms that engage in at least one of the transactions. To make sure that the result on the perception indicator is not driven by the larger sample, an alternative specification was used by excluding firms for which the bribery indicators are not available. Results for the perception-based indicator still hold although at a lower significance level.
- 21 Egypt experienced a major deterioration in electricity supply reliability in 2012, the reference year for the survey. The situation has since improved.
- 22 But there is no significant relationship for manufacturing between total factor productivity and poor quality of power supply as defined in table A2.3.

APPENDIX A2

TABLE A2.1: Firm performance and firm size

	Services	Manufacturing		
	Labor productivity	Labor productivity		TFP
	(1)	(2)	(3)	(4)
Log of size	0.01 (0.085)	0.12** (0.057)	-0.58*** (0.066)	0.18*** (0.067)
Log of cost of capital			0.10*** (0.040)	
Log of cost of intermediate goods			0.50*** (0.053)	
Foreign ownership (Y/N)	0.11 (0.242)	-0.08 (0.170)	0.01 (0.144)	0.27 (0.220)
Exports 10% or more of sales (Y/N)	0.22 (0.168)	-0.16 (0.166)	0.08 (0.105)	-0.01 (0.247)
Firm is part of a larger firm (Y/N)	0.09 (0.221)	-0.19 (0.255)	-0.18 (0.258)	-0.14 (0.316)
Constant	9.26*** (0.580)	8.97*** (0.305)	4.111*** (0.479)	1.67*** (0.384)
Number of observations	2,201	2,218	2,218	2,218
R-squared	0.208	0.181	0.600	0.088

Source: Enterprise Surveys.

Note: Simple OLS using survey-weighted observations (using Stata's svy prefix). Linearized Taylor standard errors that account for survey stratification are indicated in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels respectively. Economy and locality fixed effects not shown. Columns 2, 3, and 4 are run over the subsample of manufacturing firms for which TFP is available.

TABLE A2.2: Association of perceptions of the severity of corruption with performance measures

Dependent variable	Real annual sales growth (%)	Annual employment growth (%)	Log labor productivity (sales per worker, USD)
	(1)	(2)	(3)
Corruption as major/severe obstacle (Y/N)	-3.18** (1.239)	-2.25*** (0.851)	-0.14* (0.085)
Log of size	1.55*** (0.500)		-0.040 (0.051)
Log of size, 3 FY ago		-4.00*** (0.534)	
Young firms (5 years or less) (Y/N)	3.21 (2.621)	5.29*** (1.838)	-0.03 (0.119)
Firm is part of a larger firm (Y/N)	-3.31 (3.556)	2.19* (1.184)	0.07 (0.189)
Manager has university education (Y/N)	0.33 (1.802)	1.86 (1.210)	0.50*** (0.105)
Manager experience in sector (years)	-0.18*** (0.057)	-0.11*** (0.036)	0.00 (0.004)
Exports 10% or more of sales (Y/N)	0.67 (1.397)	1.46 (1.061)	0.09 (0.113)
Foreign ownership (Y/N)	-0.78 (2.695)	2.36* (1.408)	0.03 (0.161)
Retail firms (Y/N)	-2.52 (1.719)	-2.34* (1.229)	0.32** (0.124)
Other services firms (Y/N)	-2.20 (2.018)	-0.30 (0.978)	-0.004 (0.113)
Constant	-8.60* (4.815)	13.62*** (2.476)	9.33*** (0.311)
Number of observations	4,019	4,848	4,908
R-squared	0.128	0.191	0.216

Source: Enterprise Surveys.

Note: Simple OLS using survey-weighted observations (using Stata's svy prefix command). Linearized Taylor standard errors that account for survey stratification are indicated in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. All regressions include economy fixed effects.

TABLE A2.3: Deficiencies in the provision of electricity and labor productivity

	Log labor productivity (sales per worker, USD)	
	(1)	(2)
Number of electrical outages in a typical month	-0.01* (0.003)	
Duration of electrical outages (hours)		-0.02** (0.009)
Log of size	-0.04 (0.050)	-0.03 (0.051)
Young firms (5 years or less) (Y/N)	-0.03 (0.116)	-0.05 (0.116)
Firm is part of a larger firm (Y/N)	0.09 (0.164)	0.07 (0.188)
Manager has university education (Y/N)	0.49*** (0.100)	0.49*** (0.104)
Manager experience in sector (years)	0.004 (0.004)	0.003 (0.004)
Exports 10% or more of sales (Y/N)	0.14 (0.109)	0.10 (0.114)
Foreign ownership (Y/N)	0.02 (0.161)	0.02 (0.163)
Retail firms (Y/N)	0.28** (0.120)	0.29** (0.119)
Other services firms (Y/N)	-0.01 (0.111)	-0.03 (0.111)
Constant	9.36*** (0.258)	9.29*** (0.306)
Number of observations	4,912	4,890
R-squared	0.220	0.212

Source: Enterprise Surveys.

Note: Simple OLS using survey-weighted observations (using Stata's svy prefix command). Linearized Taylor standard errors that account for survey stratification are indicated in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. All regressions include economy fixed effects.

TABLE A2.4: The experiences of SMEs and large firms with the business environment

	Electricity				Corruption		Access to finance		Political instability
	OLS	Probit	OLS	Probit	OLS	Probit	Probit	Probit	Probit
	(1) ^a	(2) ^a	(3) ^a	(4)	(5)	(6)	(7) ^a	(8) ^a	(9)
	Typical power outage (hrs)	Uses power generator (Y/N)	Proportion of electricity from generator (%)	Electricity major obstacle (Y/N)	Bribery depth	Bribery incidence	Credit-constrained - (Y/N)	Finance major obstacle (Y/N)	Political instability major obstacle (Y/N)
SME (Y/N) (<100 employees)	0.42** (0.192)	-0.73*** (0.139)	-3.61** (1.590)	0.26* (0.155)	0.27 (3.766)	0.01 (0.155)	0.65*** (0.165)	0.30** (0.125)	0.26** (0.111)
Foreign ownership (Y/N)	-0.16 (0.219)	0.24 (0.163)	2.58 (2.458)	0.01 (0.177)	1.47 (3.876)	0.13 (0.221)	-0.07 (0.168)	-0.26* (0.150)	0.05 (0.127)
Exports 10% or more of sales (Y/N)	-0.56** (0.285)	0.38*** (0.118)	3.29** (1.503)	-0.04 (0.165)	4.96 (4.801)	0.19 (0.184)	-0.12 (0.137)	0.12 (0.135)	0.26** (0.108)
Firm is part of a larger firm (Y/N)	0.11 (0.311)	0.16 (0.142)	0.68 (2.354)	0.28*** (0.103)	1.43 (4.823)	0.04 (0.171)	0.13 (0.105)	-0.14 (0.146)	-0.14 (0.170)
Constant	1.26*** (0.342)	-1.10*** (0.194)	9.67*** (2.059)	-0.31* (0.185)	13.80** (5.723)	-1.01*** (0.237)	-0.95*** (0.202)	-0.58*** (0.175)	0.70*** (0.166)
Number of observations	5,690	5,903	5,765	5,894	4,258	4,258	5,565	5,865	5,850
R-squared	0.215		0.470		0.272				

Source: Enterprise Surveys.

Note: Using Stata's svy prefix command. Linearized Taylor standard errors that account for survey stratification are indicated in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. All regressions include economy, sector, and location fixed effects. Bribery depth is the number of transactions that were subject to a bribe request. Bribery incidence is a dummy variable if a firm was subjected to such a request in any transaction.

a. Indicates that the log of size is also statistically significant with an opposite sign from SME dummy variable.

REFERENCES

- Al-Harazi, Ebrahim Mohammad Yahya. 2015. "The unheard voices of exhausted Yemenis." Blog, accessed at: <http://blogs.worldbank.org/arabvoices/unheard-voices-exhausted-yemenis>
- Ayaggari, Meghana, Asli Demirguc-Kunt, and Vojislav Maksimovic. 2015. "Are larger firms born or made: Evidence from developing countries." World Bank Policy Research Working Paper No. 7406. World Bank: Washington DC.
- Coats, Christopher. 2015. "Energy subsidy cuts finally providing relief for Egypt." *Forbes*. Online. Available at: <http://www.forbes.com/sites/christophercoats/2015/03/30/energy-subsidy-cuts-finally-providing-relief-for-egypt/#6f3818c53b97>
- Devarajan, Shanta, Lili Mottaghi, Farrukh Iqbal, Gabriela Mundaca, Maria Laursen, Maria Vagliasindi, Simon Commander, and Isabelle Chaal-Dabi. 2014. *MENA economic monitor: corrosive subsidies*. Middle East and North Africa (MENA) Economic Monitor. Washington, DC : World Bank Group.
- Foster, Lucia, John Haltiwanger, and Chad Syverson. 2008. "Reallocation, firm turnover and efficiency: Selection on productivity or profitability?" *American Economic Review*, 98(1): 394-425.
- Halvorsen, R., and R. Palmquist, 1980. "The interpretation of dummy variables in semilogarithmic equations." *American Economic Review* 70(3): 474-475.
- Kinda, Tidiane, Patrick Plane, and Marie-Ange Véganzonès-Varoudakis. 2015. "Does investment climate matter for firms technical efficiency: An application to Middle Eastern and North African manufacturing." *Journal of International Development* 27(7): 1267-93.
- Kraay, Aart, and Peter Murrell. 2013. "Misunderestimating corruption." World Bank Policy Research Working Paper No. 6488.
- Mottaghi, Lili. 2014. *Predictions, Perceptions and Economic Reality: Challenges of seven Middle East and North Africa countries described in 14 charts*. MENA Quarterly Economic Brief No. 3.
- Restuccia, Diego and Richard Rogerson. 2008. "Policy distortions and aggregate productivity with heterogeneous establishments." *Review of Economic Dynamics* 11(4), 707-20.
- Schiffbauer, Marc, Abdoulaye Sy, Sahar Hussain, Hania Sahnoun, and Philip Keefer. 2015. *Jobs or Privileges: Unleashing the Employment Potential of the Middle East and North Africa*. Washington, DC: World Bank.
- Sdravovich, Carlo, Randa Sab, Younes Zouhar, and Giorgia Albertin. 2014. *Subsidy Reform in the Middle East and North Africa: Recent Progress and Challenges Ahead*. Washington, DC: International Monetary Fund.
- Syverson, Chad. 2011. "What determines productivity?" *Journal of Economic Literature* 49(2): 326-65.
- Stone, Andrew, Lina Badaway, and Nabila Assaf. 2012. "The plight of Yemeni private enterprises since the 2011 crisis: a rapid assessment." MENA Knowledge and Learning, Quick Note Series No. 72, World Bank, Washington, DC.
- Xu, Lixin Colin. 2011. "The effect of business environment on development: Surveying new firm level evidence." *The World Bank Research Observer* 26(2): 310-40.
- World Bank. 2013a. *Lebanon: Economic and Social Impact Assessment of the Syrian Conflict*. Washington, DC: World Bank Group.
- World Bank. 2013b. "World Bank Supports Boosting Much Needed Electricity Generation Capacity across Egypt." World Bank, Washington, DC. Available at: <http://www.worldbank.org/en/news/press-release/2013/06/27/world-bank-supports-boosting-much-needed-electricity-generation-capacity-across-egypt>
- World Bank. 2014c. *West Bank and Gaza - Assessment and action plan to improve payment for electricity services in the Palestinian territories: study on electricity sector contribution to net lending*. Washington, DC; World Bank Group. <https://hubs.worldbank.org/docs/ImageBank/Pages/DocProfile.aspx?nodeid=23040668>



3.

ACCESS TO FINANCE

INTRODUCTION

A well-functioning financial sector can facilitate the exchange of goods and services, the diversification of risk, the mobilization of savings, and the identification of good business opportunities—all of which encourage investment and entrepreneurship.¹ These functions enable rapid accumulation of physical and human capital, boost technological advances, and thus promote faster growth and higher levels of employment.²

This chapter explains the relationship between the financial sector and the formal non-financial private sector in the MENA ES economies. A few fairly consistent patterns emerge. On the borrower side, a large proportion of firms exclude themselves from formal financial markets. More importantly, the evidence is highly suggestive that firms have adjusted production strategies and expectations to the reality of limited involvement with the financial sector, even

if this comes at the cost of losing possible growth opportunities. This “disconnect” between firms and banks goes so far that in some economies, even the use of checking and savings accounts by firms is low. Instead, firms rely to a large extent on internal financing.

On the supply side, the financial sector is dominated by banks. Banks in the MENA ES region seem to have adopted a cautious approach, based on traditional lending technologies and conservative practices. Thus, despite comparatively high volumes of private credit, only a small segment of the private sector is financed by the formal financial sector. Credit is highly concentrated, favoring a small number of large clients.

This chapter first provides some context for the survey results by examining financial sector characteristics, drawing on other data sources, including relevant *Doing Business* indicators. It then turns to the question of whether firms in the region are

credit-constrained, presenting an evidence-based indicator of credit constraint. In light of the finding that a substantial proportion of firms seem to be disconnected from the formal financial sector, and are therefore likely to forgo growth opportunities, the third section draws on data from the surveys to examine some supply-side factors that may have contributed to this situation. The last section outlines policy implications.

THE CONTEXT: FINANCIAL SECTORS IN THE MENA REGION

The formal financial sector is dominated by a banking sector that is typically large compared with peer economies

The banking sector dominates the formal financing channels available in the MENA ES region. Bank deposits account for 85 percent of GDP in the MENA ES economies, compared with only 49 percent for the average upper-middle-income economy (see table 3.1). The region's banking sectors are therefore large in relation to peer economies in other regions. The size of the banking sectors reflects the capacity of the banking sector to attract relatively large amounts of deposits. The supply of deposits is supported by remittances and capital inflows.³ In 2012, the MENA ES economies attracted remittances worth 9.6 percent of GDP, compared with an average of 3.5 percent for upper-middle-income economies.

Lebanon serves as the most striking example. The economy benefits from a large and loyal diaspora, which contributes remittances equivalent to around 16 to 20 percent of Lebanon's GDP. Due in large part to the diaspora, bank deposits have been growing steadily over the years despite episodes of high political instability.⁴ The inflows have been supported by the ability to hold deposits in foreign currency and the unrestricted convertibility between local and foreign currency deposits.⁵

Another example is Morocco, where the size of the banking sector may be attributed to successful financial sector reforms, notably between 1986 and 1996. The reforms led to the elimination of credit controls, deregulation of interest rates, improved prudential regulation and supervision, and the first steps toward the liberalization of international capital flows.⁶

TABLE 3.1: Banking sector characteristics

Economy	Deposits (% of GDP)	Loans to deposits	Credit to government (% of GDP)	Credit to private sector (% GDP)
Djibouti	71	38	4	28
Egypt, Arab Rep.	60	48	35	29
Jordan	94	76	41	70
Lebanon	228	38	72	84
Morocco	89	81	17	71
Tunisia	55	128	5	69
West Bank and Gaza	64	43	12	24
Yemen, Rep.	21	20	13	5
MENA ES	85	59	25	48
Lower-middle-income	35	102	7	31
Upper-middle-income	49	100	8	47
High-income: non-OECD	78	82	15	68
High-income: OECD	99	120	17	122

Sources: World Bank Global Financial Development Database, Palestine Monetary Authority, reference year 2012.

Compared with banks, the role of institutional investors and equity markets is limited. With the exception of Morocco, the mutual fund industry is small compared with peer economies. The size of the insurance industry is also limited. While equity markets display comparatively high levels of market capitalization, they are dominated by financial and infrastructure firms. According to the World Bank,⁷ the market capitalization of the industry (excluding infrastructure firms) and non-financial services sectors in the wider MENA region represents less than 12 percent of GDP, which suggests that equity markets play a limited role in funding the real economy.

The leasing industry is similarly small by international standards.⁸ Leasing firms retain ownership of the leased asset, which should facilitate repossession in case the lessee defaults. Thus, leasing can be an attractive alternative to bank finance in an environment characterized by weak creditor rights. Among the MENA ES economies, leasing is most prevalent in Tunisia, followed by Jordan, Morocco, and Egypt. Most leasing firms are banks or bank-related institutions, reflecting their easy access to

deposit funding. Factoring plays only a minor role in the MENA ES economies.

Ratios of loans to deposits are low in many MENA ES economies and they are often associated with high levels of credit to governments

At 59 percent, the region's loan-to-deposit ratio is well below the average of all income brackets. This means that comparatively few of the deposits received by banks are translated into lending to the non-financial private sector. The low ratios reflect both a large supply of deposits and plentiful opportunities to hold local government debt.⁹

The MENA ES economies receive substantial remittance inflows. Under a floating exchange rate, such capital inflows would put upward pressure on the exchange rate. But all MENA ES central banks that issue their own legal tender pursue an exchange rate arrangement that is pegged in some way. To resist appreciation, the central bank buys foreign currency and thereby creates liquidity in the domestic currency. As a result, capital inflows lead to the creation of local currency bank deposits.

Large local currency deposits in the MENA ES economies are also the result of banks' policies to hold large volumes of local public debt, which is widely available in the region. Household savings are mostly held in the form of bank deposits rather than direct holdings of government debt. Monetary financing of public debt also increases bank deposits as the government spends the borrowed money to pay employees and suppliers.

But large-scale lending to governments also has a cyclical component that is closely associated with the Arab Uprisings. Egypt is the most striking example. Following the protests of 2011, bank claims on the public sector increased from 27 percent of GDP in 2010 to over 50 percent in 2015. This can be attributed to both deteriorating fiscal balances and capital flight.¹⁰ As foreign investors withdrew, the domestic banking system stepped in. With local treasury bill rates approaching 16 percent in 2012, bank claims on the private sector decreased. Because the government was able to offer more attractive risk-adjusted returns, parts of the private sector were crowded out.¹¹

Similar patterns, albeit less pronounced, prevail in the other MENA ES economies, where, on average, credit to

governments increased by 6 percentage points between 2010 and 2013.¹² In contrast, the average level of credit to governments in lower-middle-income and upper-middle-income economies in the rest of the world did not increase.

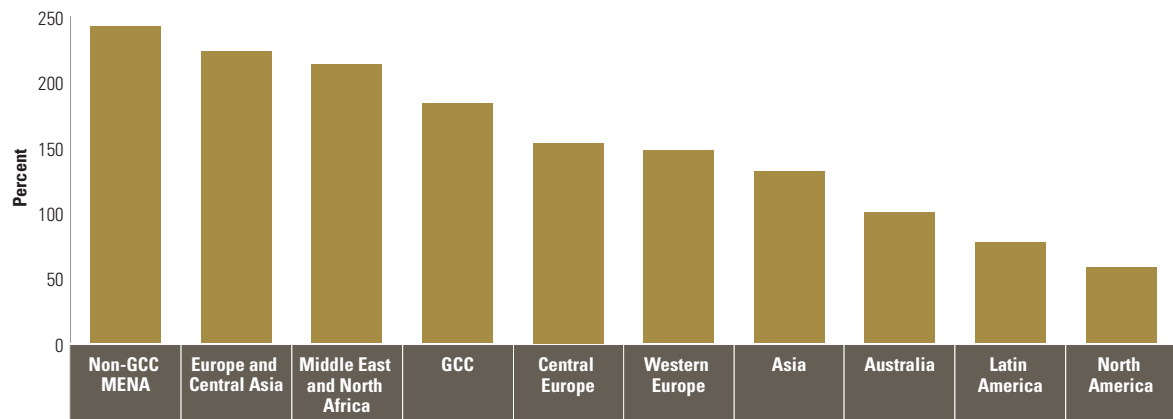
Tunisia is the only MENA ES economy with a loan-to-deposit ratio exceeding 100 percent. Relative to Jordan and Morocco, which have similar levels of private credit, the Tunisian deposit base is relatively small. Banks therefore have to rely on wholesale (and cross-border) funding.¹³ Tunisia is the only economy in the region where banks experienced significant withdrawals of deposits during the Arab Uprisings; it also suffered from a high ratio of non-performing loans, 13 percent in 2011.¹⁴

Credit to the private sector is relatively high in the region's upper-middle-income economies, but lending is concentrated

Despite the low loan-to-deposit ratios, private credit to GDP for the MENA ES is well above the average for peer economies. Private credit is especially high in the upper-middle-income economies—Jordan, Lebanon, and Tunisia—and lower-middle-income Morocco. In the other lower-middle-income economies—Djibouti, Egypt, and the West Bank and Gaza—private credit to GDP is in line with peer economies in other regions. Only the Republic of Yemen is lagging behind.

While high volumes of private credit are desirable, they do not necessarily translate into financial access for a broad cross-section of firms. Figure 3.1 shows that credit concentration ratios in non-Gulf Cooperation Council MENA, which is the aggregate corresponding most closely to the MENA ES economies, are among the highest in the world. Within the region, Egypt has the highest credit concentration ratio. In 2010, the top 20 exposures accounted for more than half of total loans in the economy, implying that credit is absorbed primarily by large corporate clients.¹⁵

A similar divergence between depth and access can be observed on the deposit side. The share of the population that saves in formal financial institutions is much lower than in economies with similar deposit volumes, suggesting a lopsided distribution of wealth. It is the strength of surveys such as the MENA ES that they can give a

FIGURE 3.1: Top 20 loan exposures as a percentage of total bank equity, by world region

Source: World Bank (2011).

Note: Data are regional averages computed between 2005 and 2010.

detailed representation of financial access that is not unduly affected by the largest players.

The institutional financial infrastructure does not facilitate expansion of credit to small and medium-sized enterprises

Financial intermediation in the MENA ES economies takes place against an unfavorable institutional background. Table 3.2 presents institutional quality as represented by the getting credit dimension of *Doing Business*. This set of indicators is based on a case study that seeks to represent the institutions faced by a domestically owned limited liability company that has up to 50 employees and operates in the largest business city. With an average rank of 135, the region scores worse than economies in any income bracket. Jordan and the Republic of Yemen both rank 185 out of the 185 economies examined.

The getting credit ranking has two components: a legal rights index; and a depth of credit information index. The strength of legal rights index measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders, thereby facilitating lending.

The index thus assesses the quality of the secured transaction framework. The MENA ES economies have a particularly poor record on legal rights, suggesting that collateral regimes in the MENA ES economies have serious deficiencies across the board, a result highlighted in other studies.¹⁶

The depth of credit information index measures rules and practices affecting the coverage, scope, and accessibility of credit information available through either a private credit bureau or a public credit registry. The index provides a measure of the extent to which these institutions help to mitigate the informational asymmetries that impede lending to SMEs. In terms of the depth of credit information, the economies of the region fall into two groups. Djibouti, Jordan, and the Republic of Yemen receive a score of 0, while the other economies obtain scores between 5 and 8, indicating advanced credit information systems.

The last two columns of table 3.2 present data on the coverage of credit information systems, which do not affect the index score. In the region, public credit registries have on average better coverage than private credit bureaus. The only economies with functioning private credit bureaus are Egypt and Morocco.

TABLE 3.2: *Doing Business* getting credit indicators

Economy	Getting credit rank	Strength of legal rights index (0-12)	Depth of credit information index (0-8)	Public credit registry coverage (% of adults)	Private credit bureau coverage (% of adults)
Djibouti	181	1	0	0	0
Egypt, Arab Rep.	79	2	8	7	21
Jordan	185	0	0	2	0
Lebanon	109	2	6	24	0
Morocco	109	2	6	0	23
Tunisia	126	2	5	29	0
West Bank and Gaza	109	0	8	23	0
Yemen, Rep.	185	0	0	1	0
MENA ES	135	1	4	11	6
Lower-middle-income	90	5	4	8	15
Upper-middle-income	82	5	5	20	33
High income: non-OECD	91	4	5	16	37
High income: OECD	54	6	6	12	67

Source: *Doing Business* report, 2016.

Note: GCR: low value better performance. SLRI and DCI: high value, better performance.

FIRMS IN THE MENA REGION ARE NOT TYPICALLY CREDIT-CONSTRAINED, BUT MANY ARE DISCONNECTED

The composition of firm finance in the region is similar to peer economies, but with a slightly larger role for internal funds and great variation in the use of bank and supplier credit

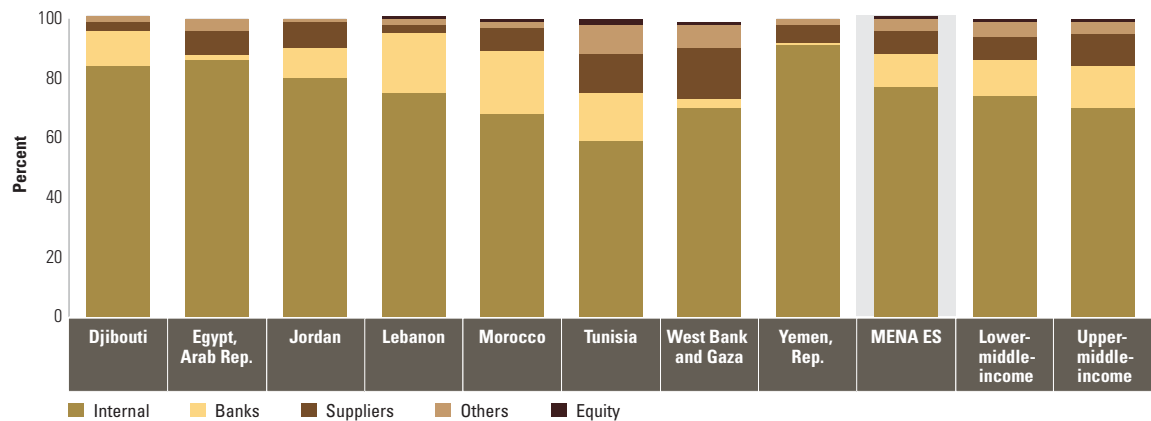
To examine whether firms are credit-constrained, it is first useful to examine the types of finance that they use. The MENA ES data provide detailed information on firms' use of the different sources of funds for both their working capital and their purchases of fixed assets. For each firm, information is available on the relative use of internal funds, bank finance, credit from suppliers or customers, equity finance, and other sources of finance, including informal sources and non-deposit-taking institutions.

Figure 3.2 presents the composition of firm financing. With 77 percent of working capital and investment financed internally, firms in the MENA ES region rely more on internal funds than the average lower-middle-income and upper-middle-income economy.

Unsurprisingly, firms in the MENA ES region are more likely to use external finance from banks wherever financial deepening is greater, as measured by private credit to GDP. The share of bank finance in Lebanon (20 percent), Morocco (21 percent), and Tunisia (16 percent) is well above that of their peer economies' average of 12 percent for lower-middle-income economies and 14 percent for upper-middle-income economies with ES data. Jordan is the only economy where high levels of financial deepening are not associated with a strong use of bank financing by the average firm. In Egypt, the West Bank and Gaza, and the Republic of Yemen, banks play a negligible role for firm financing, with Jordan and Djibouti an intermediate case.

The use of credit from input suppliers and customers in the MENA ES economies is broadly comparable to peer economies, accounting for, on average, 8 percent of firm financing in the region. The use of input supplier credit does not seem to be associated with the level of income of the economy. Supplier credit is most widely used in Tunisia and the West Bank and Gaza, whereas firms in Djibouti and Lebanon rarely resort to this source of financing.

FIGURE 3.2: External sources of finance are similar to comparable economies elsewhere



Source: Enterprise Surveys.

The use of equity finance is negligible throughout the region, reaching a maximum of only 2 percent in the case of Tunisia, which confirms the limited role of equity markets for funding the real economy. Other sources of financing, which include non-deposit-taking financial institutions, microfinance operators, and Islamic finance, are not prevalent either.¹⁷ These sources of finance matter most in Tunisia and the West Bank and Gaza.

Although the discussion on sources of finance used by firms elucidates important features of the relationship between the private sector and the financial sector, it does not measure credit constraints. Combining information on loan applications and their outcomes with data on the sources of finance for both working capital and the purchase of fixed assets yields a measure of the prevalence of credit-constraints faced by firms in the fiscal year 2012. The credit-constraint measure splits firms into three categories—fully credit-constrained, partially credit-constrained, and not credit-constrained (see box 3.1 for details). Fully and partially constrained firms are considered to be credit-constrained in this report.

The MENA ES economies are characterized by an unusually high share of firms that are not credit-constrained

Figure 3.3 shows that on average 73 percent of firms in the MENA ES are not credit-constrained.¹⁸ Because previous Enterprise Survey implemented in other regions

do not contain detailed information on loan outcomes, the figure can only provide boundaries for not credit-constrained firms in other regions.¹⁹ Regardless, the share of not credit-constrained firms in the MENA ES region exceeds the upper bound for all other world regions except for ECA, where the upper bound estimate matches the MENA ES average.

Djibouti and Morocco have the highest share of not credit-constrained firms (87 percent) in the region while the Republic of Yemen has the lowest share of not credit-constrained firms (51 percent), followed by Jordan (64 percent), as shown in figure 3.4.

Credit-constrained firms have weaker performance on average

Fully and partially credit-constrained firms (FCC and PCC) in the MENA ES region are associated with lower employment growth, lower levels of capacity utilization, and lower levels of labor productivity as measured as sales per employee (table A3.1).²⁰

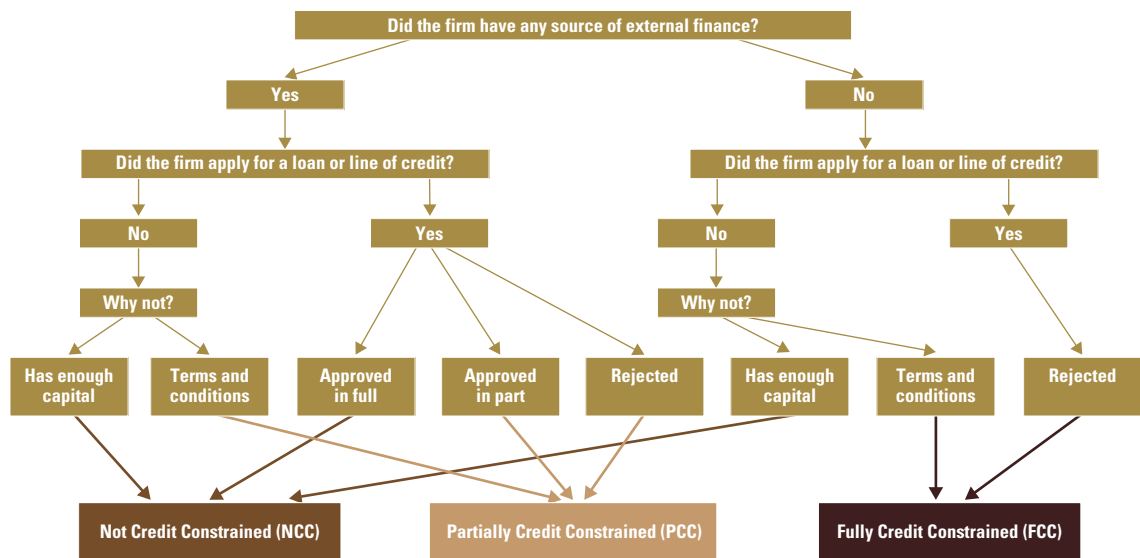
The negative relationship between performance measures and credit constraints can be interpreted in a number of ways. It is possible that firms face credit constraints because they were evaluated by financial intermediaries to lack creditworthiness, because they proposed projects that were not financially viable, or simply because they did not have good accounting records. All of these

BOX 3.1: A measure of credit constraints

Figure B3.1 shows how external and bank finance usage and applications are used to compute the credit constraint indicator. Based on this indicator, three categories of firms are defined: fully credit-constrained

(FCC), partially credit-constrained (PCC), and not credit-constrained (NCC) firms. Credit-constrained firms are defined as those that are fully (FCC) or partially constrained (PCC).

FIGURE B3.1: Correspondence between credit-constrained classification and ES questions



Source: Methodology based on Kuntchev et al. 2014.

Fully credit-constrained firms (FCC) are those that find it challenging to obtain credit. These are firms that have no source of external financing and typically fall into two categories: those that applied for a loan and were rejected; and those that were discouraged from applying either because of unfavorable terms and conditions or because they did not think the application would be approved. The terms and conditions that discourage firms include complex application procedures, unfavorable interest rates, high collateral requirements, and insufficient size of loan and maturity.

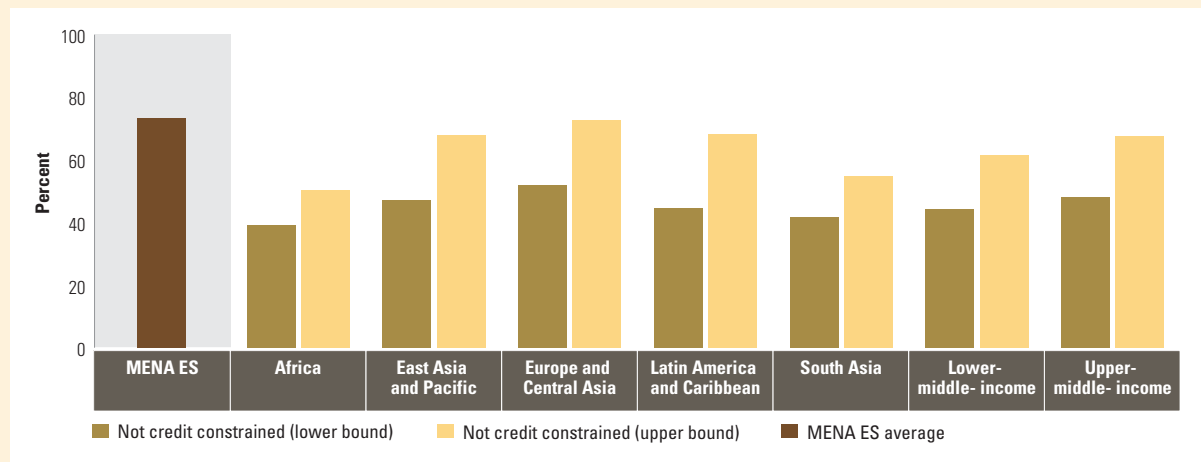
Partially credit-constrained firms (PCC) are those that have been somewhat successful in obtaining external financing. PCC firms include those that have external financing but were discouraged from applying for a loan from a financial institution; and firms that have an

external source of financing and applied for a loan that was partially approved or rejected.

Not credit-constrained firms (NCC) are those that do not seem to have any difficulties accessing credit or do not need credit. Firms under this category encompass those that did not apply for a loan as they have sufficient capital either on their own or from other sources; and firms that applied for a loan and the application was approved in full.

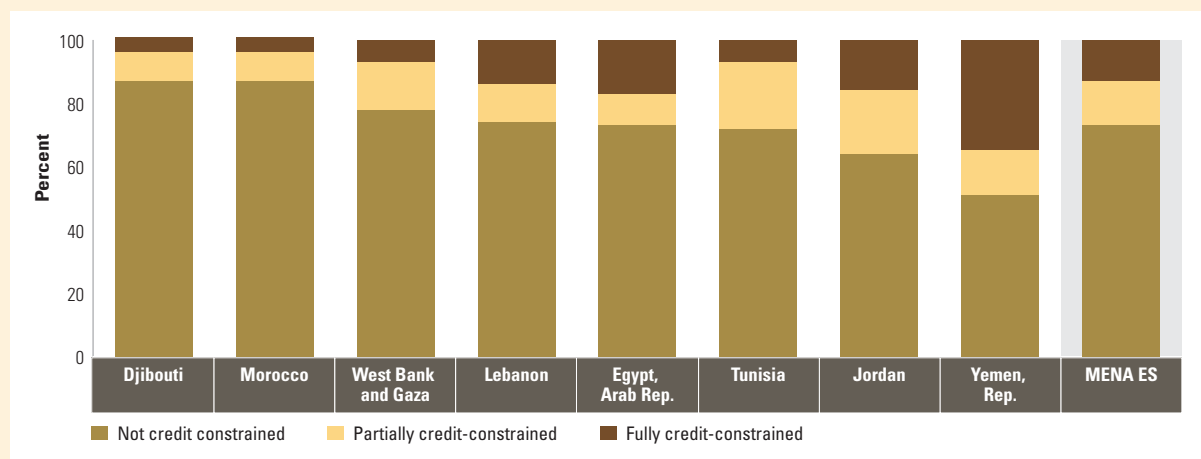
There are limitations to the credit constraint indicator. The indicator does not incorporate any information on creditworthiness of the firm, and therefore among the credit-constrained firms there may be some that were rationed for good reasons, such as insufficiently productive projects or a bad repayment history.

FIGURE 3.3: A high percentage of firms are not credit-constrained



Source: Enterprise Surveys.

FIGURE 3.4: The percentage of not credit-constrained firms varies considerably across MENA ES economies

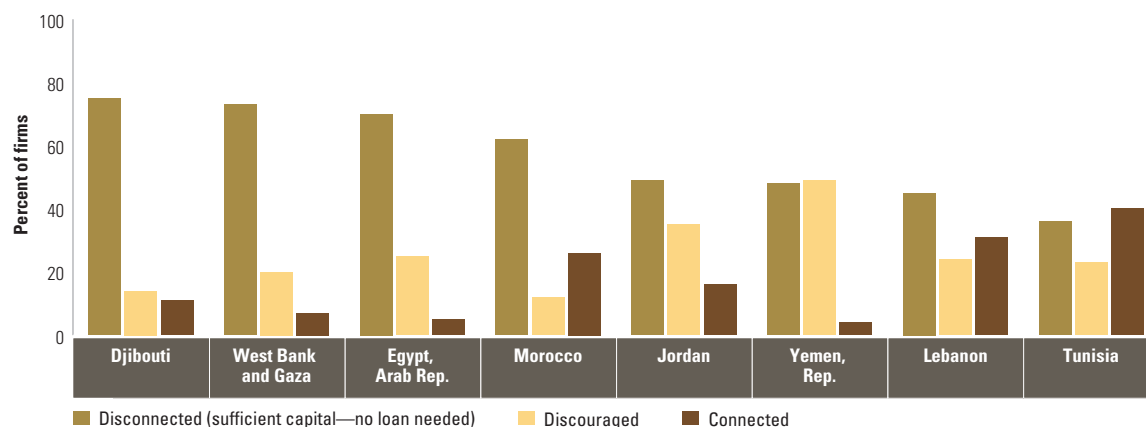


Source: Enterprise Surveys.

factors could be correlated with weak firm performance. But lack of access to credit may also be the cause of low performance as firms are unable to expand due to limited finance. The negative association between credit constraints and performance measures implies that the evidence does not contradict the possibility that credit is being properly allocated and that financial markets are working appropriately even if only a limited cross-section of the private sector benefits.

Many firms in the region are disconnected from the banking sector

Why do the data show such high levels of not credit-constrained firms in the MENA ES region? A closer examination offers important insights. Firms are not credit-constrained for one of two reasons: either they have their loan application approved; or they see themselves as having sufficient amounts of capital and therefore see no need to engage financial intermediaries. In the MENA ES

FIGURE 3.5: Firms' credit relationship with the financial sector

Source: Enterprise Surveys.

economies, the latter type accounts for the vast majority of unconstrained firms. An important question is whether these latter firms are in fact losing growth opportunities because of their stance.

Figure 3.5 shows these results by decomposing the population of firms into three categories: connected, disconnected, and discouraged. Connected firms are those that applied for loans regardless of whether their application was approved or rejected. They are “connected” in the sense that they see financial markets as an option. Disconnected firms are those that did not apply for any loan as they had sufficient capital. Discouraged firms are those that did not apply for any loans due to terms and conditions. Given these definitions, it follows that all disconnected firms are unconstrained (not credit-constrained), but not all unconstrained firms are disconnected.

The share of firms that are disconnected, explicitly stating that they do not need a loan, is highest in Djibouti, the West Bank and Gaza, and Egypt. These figures largely drive the share of unconstrained firms in these economies. At the other end of the spectrum are Tunisia and Lebanon, suggesting that firms in these economies do generally see bank finance as an option. In Morocco, a particularly low share of discouraged firms mirrors the high prevalence of bank financing of firms.

WHAT EXPLAINS THE “DISCONNECT” BETWEEN FIRMS AND THE BANKING SECTOR AND WHAT ARE THE CONSEQUENCES?

Firm-bank disconnectedness reflects a number of different factors and may lead to lost growth opportunities

Firms in economies where there are lower levels of credit to the private sector relative to GDP—such as Djibouti, Egypt, and the West Bank and Gaza—tend to have a higher percentage of firms disconnected from the financial sector. It may be that the prevailing banking systems have led firms to adjust their expectations and production strategies to an environment in which they do not consider banks as an option. It is plausible that some of these firms would engage with the formal financial sector by applying for loans if the banking system were more attuned to their needs.

In some regards, disconnected firms resemble credit-constrained firms more closely than firms with a successful loan application. Both disconnected and credit-constrained firms are significantly less likely to invest and less likely to have expansion plans. The major difference is that disconnected firms are content with their situation whereas credit-constrained firms are not (table A3.2). Indeed, the propensity to view access to finance as a major constraint

is much lower for disconnected firms than for credit-constrained firms and firms that obtained a loan.²¹

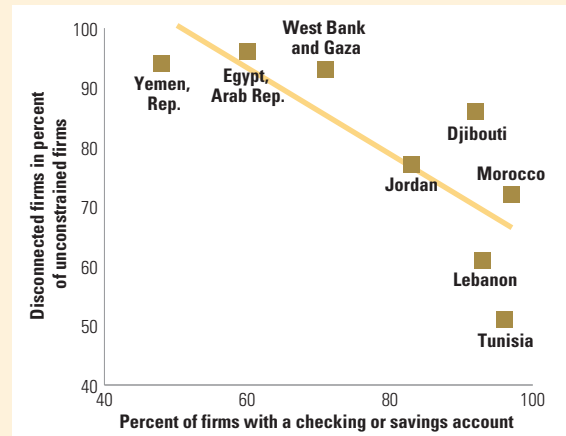
For manufacturing firms, it is possible to examine how the propensity to invest changes with capacity utilization. Disconnected firms with above median capacity utilization have a propensity to invest that is 22 percentage points lower than firms that obtained a loan. The corresponding difference for firms with below median capacity utilization is zero. Thus, disconnected firms are less likely to invest, especially when they are doing well, and they may well be forgoing growth opportunities (table A3.3).

It is possible that firms may also disconnect because of limited growth opportunities. Firms that had no intentions of investing during the fiscal year 2012, the reference period of the survey, may have had no need to apply for a loan. This could be a likely scenario given the political situation in some economies of the region. But the high prevalence of disconnected firms across the region makes it difficult to claim that this reflects just idiosyncratic variation in project timing.

Similarly, it is unlikely that the macroeconomic environment is fully responsible for the larger share of disconnected firms. It could be argued that lack of demand for loans is a consequence of the downturn that most of the MENA ES economies experienced following the events of 2011. While a downturn may explain the lack of demand for investment finance, it does not necessarily explain the lack of demand for working capital. In fact, the demand for working capital may increase to bridge temporary liquidity problems. Furthermore, there is considerable variation in the proportion of disconnected firms across the MENA ES region even though there is little variation in the macroeconomic environment, which was consistently difficult in most economies.

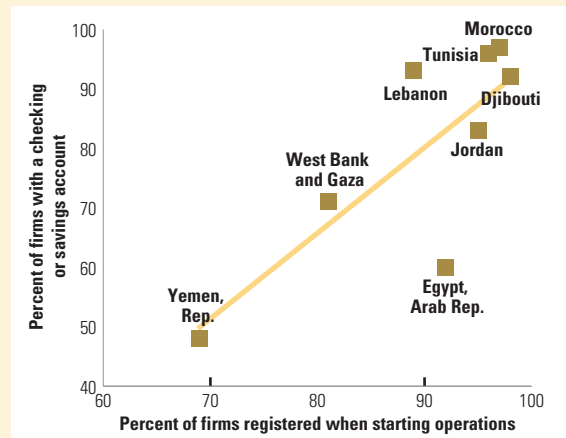
Disconnected firms are also less likely to use banks for cash-flow management and payment services. It turns out that the share of firms with a bank account is lowest in the Republic of Yemen, where only 48 percent of firms in the formal sector have a bank account, followed by Egypt and the West Bank and Gaza. These economies also have the highest share of disconnected firms as a proportion of not credit-constrained firms, which exceeds 90 percent in all three economies (figure 3.6). The fact that a substantial share of the private sector in these economies does not

FIGURE 3.6: Firms' disconnect from the banking sector concerns both credit and the use of payment services



Source: Enterprise Surveys.

FIGURE 3.7: Checking or saving accounts are more prevalent in economies where a larger share of firms were registered when starting operations



Source: Enterprise Surveys.

even use banks for cash-flow management and payment services supports the notion that these firms are indeed opting out of the banking system.

Firms that were not registered when starting operations are less likely to have a checking or savings account (figure 3.7). The share of firms that were not registered when starting operations is likely to be higher in economies with a larger informal sector. It is therefore likely that the propensity of firms to disconnect from the banking system also depends on the costs and benefits of participating in

the formal economy. This association is consistent with anecdotal evidence from Egypt, according to which the Egyptians themselves characterize their economy as a cash economy, and in line with the strong role typically ascribed to Egypt's informal sector.

Loan rejection rates are very low, while firms connected to the banking sector tend to be large and more likely to have audited financial reports

One salient result emerging from the MENA ES data is the small share of rejected loan applications. Thus, most of the firms that decide to apply for a loan are successful. As figure 3.8 shows, the rate of rejection of loan applications per firm varies from zero percent in Djibouti to three percent in Tunisia. This seems to indicate that the private sector in the MENA ES economies is divided into two sets of firms. On the one hand, there is a large set of disconnected firms that have adjusted to operate without financing options from financial markets; on the other hand, there is a smaller set of firms—with the exception of Tunisia—that is linked to financial markets and is able to raise funds through credit from financial organizations. In between these two sets are the discouraged firms.

Firms in the MENA ES region that have a loan or line of credit differ significantly from those that do not (table A3.4). SMEs are less likely than large firms to have a loan or a line of credit. Firms that have audited financial reports are also more likely to have a loan or a line of credit

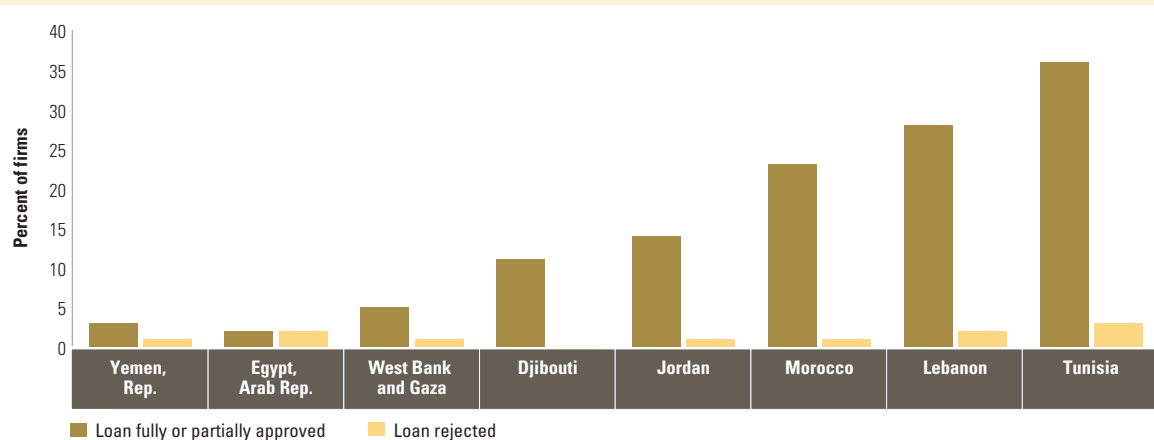
than those that do not. This is to be expected given that audited financial reports reduce informational asymmetries, or alternatively signal better-managed firms.²² Both relationships vary with the depth of the banking sector. It is only in economies with deep banking sectors—Jordan, Lebanon, Morocco, and Tunisia—that the relationship between access to credit and both firm size and audited financial reports applies. For economies in the MENA ES with lower levels of financial deepening—Djibouti, Egypt, and the Republic of Yemen—these relationships are not statistically significant.

The absence of an association between firm size and access to credit in economies lacking depth in the financial sector is probably due to a very small overall share of firms with a bank loan or line of credit. The lack of significance of financial reports may be the result of banks attaching little importance to screening borrowers in economies lacking financial depth.

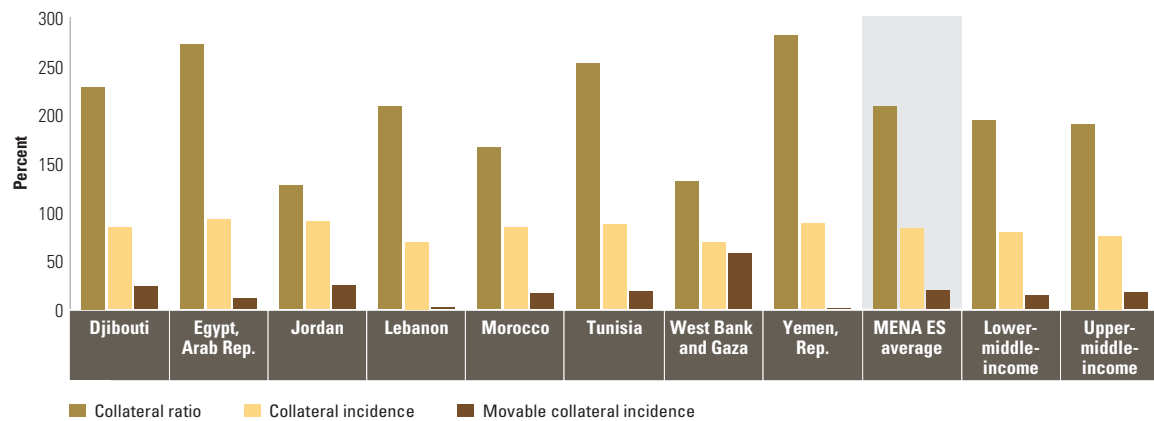
The availability and type of collateral can play an important role in facilitating access to credit

One important aspect of the financial sector that may influence the connectivity with the private sector is the use of collateral. Collateral can facilitate lending when banks face a risky operating environment dominated by opaque firms—that is, firms for which information is difficult to obtain and costly to process. Collateral serves to reduce the risk faced by lenders as losses are recoverable

FIGURE 3.8: Loan applications are rarely rejected



Source: Enterprise Surveys.

FIGURE 3.9: Collateral requirements in the MENA ES economies are comparable to peer economies

Source: Enterprise Surveys.

Note: The collateral ratio is the average ratio of the value of the collateral to the value of the loan at disbursement. Collateral incidence is the share of outstanding loans that are collateralized (with any form of underlying asset, namely real estate, land, movable assets, etc.). Finally, movable collateral incidence is the share of collateralized loans where either machinery and equipment or receivables were pledged as collateral.

through collateral in cases of default. Collateral also increases the incentives for borrowers to repay given the consequences of losing the collateral in case of default. It further mitigates informational asymmetries, as information on the quality of the collateral can substitute for borrower information. Consequently, it has been shown that loans secured by collateral tend to have much more favorable terms—higher loan volumes, longer repayment periods and lower interest rates—than unsecured loans.²³

Collateralized lending also has drawbacks as collateral requirements can affect the allocation of credit. The availability of assets that can be pledged can become a binding constraint on access to credit when loans need to be collateralized. Secured lending also favors investment in assets that can be pledged as collateral, and thus tilts production toward capital-intensive strategies. As the vast majority of firms' assets are movable, a collateral regime that allows for movable assets tends to facilitate financial access.²⁴ Movable assets, such as machinery, equipment, or receivables, account for 78 percent of the capital stock of firms in developing economies.²⁵ But banks have shown reluctance to accept movable assets as collateral and prefer land or real estate instead. Several metrics of collateral use in the MENA ES economies are presented in figure 3.9.

The MENA ES economies have both collateral ratios (the value of collateral to the value of the loan) and collateral incidence (the share of collateralized loans) above the averages for lower-middle-income and upper-middle-income economies. Higher collateral ratios are often required by banks to compensate for costly and long processes to foreclose collateral, while a high overall collateral incidence reflects systems based on relatively prudent and conservative lending practices. Collateral ratios in particular differ widely across economies with the average collateral ratio in Egypt more than twice the level observed in Jordan.

As movable assets represent a substantial share of firms' assets, collateral practices allowing the posting of machinery, equipment, or receivables to secure a loan can be considered business-friendly. The high regional average is driven by West Bank and Gaza where weak land property rights prevent the use of real estate assets as collateral. In fact, a large share of land in the West Bank is simply not registered. Without West Bank and Gaza the regional average is much closer to the average for lower-middle-income economies. At 24 percent, Jordan has the second highest share of loans secured by movable collateral. In contrast, Lebanon and the Republic of Yemen have only 2 and respectively 1 percent of loans secured by movable collateral.

It should be noted, however, that in the MENA region movable assets are often used as secondary collateral, in addition to real estate.²⁷ Owing to uncertain foreclosure outcomes, banks may ask to complement real estate collateral with more liquid assets. In this case, the relevant measure to assess the tightness of the collateral requirement is the overall collateral ratio.

Firms are more likely to disconnect from the banking system when faced with stringent collateral practices

The collateral regime affects firms' propensity to disconnect from the banking system. Table A3.5 presents the results of an analysis that explains the propensity of a firm to disconnect with the prevailing collateral standards required by banks located in the area where the firm operates. The approach addresses potential reverse causality (from poor firm quality to stringent collateral requirements) by obtaining an estimate of collateral requirements cleansed of client firm characteristics. For a more detailed description of the methodology, see box 3.2.

The analysis shows that young and old firms respond differently to the collateral standards prevalent in the area where they operate. Young firms are less likely to disconnect from the banking system when they are located in an area where the value of required collateral is low relative to the volume of the loan.²⁸ This may be a reflection of the fact that young firms more frequently experience lack of assets to be pledged as collateral as a binding constraint. Older firms, which over time have been able to accumulate assets, are in a better position to pledge them as collateral.

Firms located in areas where banks accept movable assets as collateral are less likely to disconnect from the banking system. This applies to both young and old firms. Again, this result holds after accounting for other potential determinants of being disconnected (table A3.6).²⁹

When firms differ in their ability to meet collateral requirements such requirements can affect the allocation of credit. Box 3.2 goes one step further and links collateral

BOX 3.2: The case of collateral practices for employment growth^a

Empirical evidence has highlighted the central role of young firms for job creation.^b There is some debate about whether employment growth is driven by market entry itself or the expansion of existing firms. Earlier work emphasizes the importance of the fast expansion of firms in early stages of their life cycle in the United States compared with slow expansion in Mexico and no expansion in India.^c This suggests that insufficient job creation could partly be explained by firms' limited ability to expand in early stages of their life cycle.

What can unlock firms' ability to expand?

The availability and cost of external finance is one of the factors that affect the ability of a business to expand.^d Furthermore firms in different stages of their lifecycle face different external financing environments.^e Empirical evidence indicates that due to their opacity and the limited availability of assets that can be pledged as collateral, young firms face a larger wedge between the cost of internal and external finance that makes external finance less attractive.^f

In the MENA ES economies, banks rely extensively on collateralized lending. About 83 percent of loans require some type of collateral with an average value exceeding twice the loan amount. While these requirements

are certainly demanding, collateral can facilitate lending when information asymmetries are salient and therefore banks face high credit risk. But collateralized lending can also bring about problems if only a small fraction of firms' assets can be pledged as collateral. As machinery, equipment, and tradables account for most of firms' assets, banking practices allowing movable property as collateral might help. But financial institutions may be reluctant to accept movable property as collateral if they lack the creditor protection that comes with a modern secured transaction regime that encompasses movable property.

The MENA ES provides a unique source of information to investigate the extent to which financing constraints generated through the collateral channel restricts firms' ability to expand and create new jobs. Simply documenting the association between collateral posted by the firm, access to finance, and employment growth is not enough. The central methodological problem that the research design needs to address is reverse causality. Do stringent collateral requirement lead firms to grow slower or do banks require more collateral from slow-growing firms? Both channels are plausible and both imply a negative association between collateral requirements, access to finance, and employment growth.

(continued on next page)

To address the reverse causality problem, the analysis needs to be based on a measure of collateral requirements that is not affected by the characteristics of the specific firm. In practice this measure is derived through a two-stage procedure. The first stage recovers each bank's collateral policies. In the second stage, the estimated collateral policies are aggregated into collateral indices, reflecting market conditions applied by banks in the area where the firm is located.

The MENA ES provides information on the identity of the bank that granted the last loan or line of credit to the firm. This information is used to identify borrower-lender linkages. Single banks' collateral policies are then defined as the average conditional collateral requirement for *all* clients of that specific bank and can be recovered through a regression of the collateral requirement on firm characteristics and a bank-specific parameter.⁹ The bank-specific parameter represents the collateral policy, while the firm-level explanatory variables account for firm features that may affect the collateral requirement. Data on the location of bank branches and the firms are then used to obtain a representation of the collateral requirements prevalent in the specific market where the firm is located. This idea is implemented by averaging the estimated collateral policies of all banks that have branches in a circle within a radius of 10km centered on the sample firm. This index is branch-weighted, thus banks that have more branches in the circle receive greater weight in the index.

In practice two collateral indices are constructed to represent different aspects of the collateral environment. The first index tracks the ratio of collateral to loan value (the collateral ratio index), whereas the second index measures the share of collateralized loans where either machinery and equipment or receivables were pledged as collateral (the movable collateral index). The collateral ratio index is given by the negative of the average collateral ratio applied by branches of banks located in the area close to the firm. As it is the negative of the

collateral value to the value of the loan, higher values imply lower collateral ratios. The movable collateral index measures the weighted share of branches of banks willing to lend against movable collateral in the area and varies between zero and one. Thus, if banks that are more likely to accept movable collateral have a larger share of branches close to the firm, this will be represented by a higher score of the corresponding movable collateral environment index.

The collateral index is then used to explain firms' employment growth. Table A3.7 shows that firms create more jobs when they are young—under 5 years old. The results also show that these young firms have higher employment growth if they are located in areas where banks with less stringent collateral policies have a stronger presence. Table A3.8 presents results on movable collateral. The regressions indicate that firms' ability to expand diminishes if they are located in areas with a stronger presence of banks less likely to accept movable assets as collateral. This result applies both to young and old firms. The analysis thus provides evidence that collateral practices, by influencing firms' financial choices and options, influence employment creation.

a Based on Betz and Ravasan (2015).

b http://www.oecd.org/sti/Flyer_DynEmp.pdf, Haltiwanger and others (2013), Schiffbauer and others (2015), Anyadike-Danes and others (2013), Ayyagari and others (2011), Birch (1979, 1981, and 1987).

c Hsieh and Klenow (2012).

d See Binks and Ennew (1996a) and Oliveira and Fortunato (2006) for empirical evidence, and Clementi and Hopenhayn (2006) for a theoretical exposition.

e This literature is known as financial growth cycle paradigm.

f Schiantarelli (1996), Hubbard (1998).

g Technically the bank-specific parameter is a fixed effect.

requirements to economic performance. It turns out that firms located in areas where stringent collateral practices are dominant have lower employment growth on average.

BANKING SECTOR COMPETITION AND FIRM ACCESS TO CREDIT

The section examines the relationship between some specific characteristics of the banking system and the

ability of firms to access credit.³⁰ Two features of the banking sector are explored: the density of bank branches; and banks' net interest margin, considered as a measure of profitability of banks traditional intermediation activities. While the analysis is far from exhaustive, both features are relevant, as they help to shed some light on the relationship between banking sector competition and firms' access to finance.

A denser network of bank branches is associated with greater access to credit

Branches serve an important role in relationships between borrowers and lenders. These relationships are important to facilitate better access to credit. But banks consider several factors when deciding whether to increase the number of branches. At one extreme, they have the option of branchless banking, which in recent years has received a lot of attention from both market participants and international financial institutions.³¹ Branchless banking is attractive given that branches are expensive and require a minimum level of economic activity close to the location to be viable.

In the MENA ES economies,³² however, a denser network of bank branches is associated with greater access to credit by firms. Firms are more likely to have a loan or line of credit outstanding if they are located in areas with higher branch density (table A3.9).³³ A concern with this finding is that it may be that branches choose to locate in areas of high population density—and therefore high economic activity—where firms are more likely to demand credit. But the positive association between branch density and access to credit holds after accounting for the effects of population density.

High bank profit margins may deter access to credit

The MENA ES data show that profit margins may be negatively associated with access to credit. Firms located in regions where banks earn higher net interest margins are less likely to have a bank loan than firms in regions where banks earn lower margins.³⁴ This finding holds after accounting for several other factors that could also explain the result, such as firm size, age, sector of activity, owner and manager characteristics, and level of engagement of the firm in trade and with the real economy (table A3.9). This result is consistent with the literature that finds high interest margins to be impediments to financial access.³⁵

The literature provides several potential explanations for high interest margins: information asymmetries between lenders and borrowers, high fixed costs for banks, macroeconomic factors,³⁶ and monopoly rents from lack of competition in the banking sector.³⁷ Information asymmetries make it difficult for a bank to assess borrowers' creditworthiness effectively, leading to higher lending

rates and also credit rationing.³⁸ High margins can also be due to high fixed costs as a side-effect of a small financial system. Running a bank involves fixed costs that arise, for example, from the necessity to develop and sustain a branch network or IT infrastructure. If these fixed costs are borne by a small number of clients bank lending will be more expensive.

High interest margins can also be driven by the macroeconomic environment; inflation can affect margins if changes in monetary policy affect lending and deposit rates at different speeds. In addition, the creditworthiness of borrowers varies over the business cycle and can likewise affect lending rates. Finally, monopoly rents can lead to high interest margins in the absence of competitive forces to drive down the margins.

In the present context, it seems likely that elevated interest margins result from lack of competition among banks in the MENA ES region. The institutional and macroeconomic factors do not vary within economies and therefore they cannot explain the observed variation of interest margins within an economy. Most banks operate in one economy and thus rely on the local market to cover their fixed costs. Furthermore, monetary policy is set at the national level.

Previous studies indicate that banking markets in the MENA region are less competitive than in other regions of the world.³⁹ Lack of competition in the banking sector is attributed to a poor credit information environment and lack of market contestability. Additional findings from the MENA ES support this explanation: using the return on average assets as an alternative measure of profit margins provides consistent results (table A3.9). Firms located in areas where banks with high returns on assets have a strong presence are less likely to have a bank loan or line of credit.

POLICY CONCLUSIONS

This chapter highlights that in most MENA ES economies, a substantial share of the private sector does not use banks but chooses to remain disconnected from the financial sector. This may be seriously undermining the potential for growth of the private sector. The chapter also provides evidence that financial exclusion carries costs in terms of

forgone employment growth. Such costs are particularly high in societies plagued by persistent underemployment. While such financial exclusion may be caused by both demand and supply factors, it clearly represents a sub-optimal outcome. The chapter also highlights potential pathways to re-connect firms with the financial system.

More bank competition and lower government funding needs are likely to have a positive effect on access to finance. The first section shows that the MENA ES region stands out for the high level of credit to governments and state-owned enterprises. Governments can offer more attractive risk-adjusted returns than private sector borrowers, crowding out the marginal private sector borrowers. Following the popular protests of 2011, governments have increased spending to maintain economic activity as well as social cohesion. In Egypt, for example, claims on the public sector increased from 27 percent of GDP in 2010 to above 50 percent in 2015. The expansionary policies have strained fiscal buffers, leaving few alternatives to fiscal consolidation, which is likely to undo some of the crowding-out observed in recent years.

Programs aimed at strengthening banks' capacity to assess credit risk should accompany a shift in the regulatory stance toward increased competition. Improvements in financial access should not come at the expense of financial stability. The institutional framework therefore needs to be adapted so that competition does not lead to irresponsible lending practices.⁴⁰ Capacity-building measures could help banks interested in entering the SME segment to avoid pitfalls. Such programs may also lower potential resistance to reform from incumbents, as they will be in a better position to cope with the challenges that increased competition entails.

Governments and donors can support capacity-building measures that increase banks' screening capacity and the supply of bankable firms. Such measures should aim to make SMEs less opaque and thus reduce the information asymmetries that plague lending to them. In practice, this may involve helping entrepreneurs develop a business plan or define an organizational structure.⁴¹ A limitation of such programs is that they are typically bound to be small relative to the size of the economy.

Credit guarantee schemes can be an alternative mechanism to alleviate collateral constraints.⁴² But the ability of guarantee schemes to foster financial inclusion hinges critically on operational design. In particular, incentives between lender, borrower, and guarantor need to be aligned.⁴³ In principle, collateral and guarantees can be used on the same loan. Putting up collateral reduces the borrower's incentives to default. If, however, guarantees simply provide back-up protection for collateralized loans, they no longer contribute to financial inclusion. It is therefore crucial that contractual mechanisms governing the level of collateralization prevent this scenario. A modern secured transactions framework is likely to increase the appeal of bank finance. The second section shows how a rigid collateral regime can induce firms to disconnect from the banking system. The MENA ES economies have for many years scored poorly on the legal rights index of *Doing Business*, and earlier work by the World Bank⁴⁴ highlights the benefits of a modern secured transactions law and an efficient collateral registry. While it is understandable that policy makers have prioritized other issues, there should now be scope to tackle secured transaction reform, at least in those jurisdictions that experience a return to political stability.

The chapter also shows that access to finance suffers in regions where banks with high interest margins have a stronger presence. This is consistent with earlier work finding that competition between banks is weaker than in other regions.⁴⁵ Banks' market power has been attributed to a lack of market contestability: indeed, the region has the highest share of rejected applications for bank licenses among emerging economies.

Increased competition could provide incentives for banks to seek out new market segments such as SME lending.⁴⁶ SME lending may not be attractive for banks focusing on corporates as long as the appropriate organizational structure is not in place. Competition, however, could promote organizational and procedural change, and thereby facilitate access to finance. Thus, bank regulators may want to take account of the competitive landscape when evaluating applications for a banking license.

The association between the share of firms with a checking or savings account and the share of firms that were registered when they started their operations suggests

that the banking sector disconnect is also associated with the perceived costs and benefits of formalization. Informal firms may economize on taxes, but informality also implies opportunity costs in terms of forgone growth. Addressing informality, however, is beyond the scope of this report.

Endnotes

- 1 Creane and others (2004).
- 2 An extensive empirical literature provides country-level, industry-level and firm-level evidence to show that financial development is conducive to economic growth, see Levine (1997), Levine (1998) and Levine and others (2000).
- 3 World Bank (2011).
- 4 IMF (2014, 2015a), <http://blog.blominvestbank.com/wp-content/uploads/2014/10/The-banking-sector-in-Lebanon.pdf>.
- 5 ESCWA (2014).
- 6 Yu and others (2014).
- 7 World Bank (2011).
- 8 World Bank (2011).
- 9 Gray and others (2014).
- 10 Herrera and others (2013), Gray and others (2014).
- 11 IMF (2015b).
- 12 Owing to lack of data, the average does not take into account Lebanon and the West Bank and Gaza.
- 13 Gray and others (2014).
- 14 AMF and EBRD (2015), Gray and others (2014), IMF (2013).
- 15 World Bank (2011).
- 16 World Bank (2011).
- 17 With the exception of the Republic of Yemen, Islamic banks have only a small presence in the MENA ES economies. Therefore the survey makes no effort to distinguish Islamic banks from banks and non-bank financial institutions.
- 18 The results closely resemble those that would be obtained from a simpler measure that classifies as credit-constrained those firms that had their loan application rejected or were discouraged from applying in the first place; see, for example, Popov and Udell (2012).
- 19 While the MENA ES allows for the measurement of the degree of credit constraint by loan outcomes, for older surveys this information is not available. Thus the outcome of the loan is approximated by whether or not the firm has a loan outstanding.
- 20 These findings are significant after accounting for firm size, age and sector of activity.
- 21 These findings hold after accounting for various firm characteristics such as firm size, age, sector of activity, exporting status, as well as owner and manager characteristics.
- 22 This pattern holds after accounting for other factors such as firm sector of activity, firm age, and attributes of ownership.
- 23 World Bank (2006).
- 24 Alvarez de la Campa (2011), Love and others (2015).
- 25 World Bank (2006).
- 26 Collateral can be enforced in zone A of the West Bank only, which substantially constrains lending.
- 27 Alvarez de la Campa (2011).
- 28 These results hold after accounting for other potential determinants of firms being disconnected.
- 29 This finding is likely to understate the full benefits of adopting a modern secured transaction framework as they are based on the observed behavioral variation under the existing regimes. It is likely that structural changes to a secured transaction regime would bring additional benefits not accounted for in this analysis.
- 30 Similar to the approach outlined in box 2.2 the methodology uses data on the location of firms and bank branches to construct branch weighted measures of banking system properties at the subnational level and relate them to credit outcomes at the level of the firm. This within-economy design has the advantage of removing potential confounding factors at the economy level. Confounders are variables that are correlated with the explanatory variable of interest and the outcome. Economies differ in so many dimensions that it is impossible to statistically remove all possible confounding factors. The within-economy approach circumvents this problem by effectively comparing only entities within the same economy.
- 31 EIB (2014a).
- 32 Owing to lack of data on the location of bank branches, the analysis does not take into account Djibouti and the Republic of Yemen.
- 33 This finding stands after accounting for several factors such as firm size, age, sector, and owner characteristics.
- 34 Bank profit margins are proxied by the net interest margin defined as interest income minus interest expense expressed as a percentage of interest earning assets.
- 35 Brock and Rojas-Suarez (2000), Beck and Hesse (2009).
- 36 Beck and Hesse (2009).
- 37 Anzoategui and others (2010).
- 38 Stiglitz and Weiss (1981).
- 39 Anzoategui and others (2010).
- 40 Economic theory makes conflicting predictions on the relationship between bank competition and financial

stability. According to the “competition-fragility” view, increased competition erodes the charter value of banks (Keeley, 1990). Intense completion between banks leads to excessive risk taking. The quality of the loan portfolio deteriorates with the quality of the marginal borrower, increasing financial stability. According to the “competition-stability” view, market power leads to high interest rates, which triggers excessive risk taking on the side of borrowers (Boyd and de Nicoló, 2005). The evidence in Beck and others (2013) suggests that the trade-off between competition and financial stability depends on country-specific characteristics.

41 McKenzie (2015).

42 See, for example, EIB (2014b).

43 EIB (2014a).

44 World Bank (2011).

45 Anzoategui and others (2010).

46 According to standard economic theory, market power leads to reduced supply at higher cost. In the presence of asymmetric information, on the other hand, banks with market power have greater incentives to establish relationships with young or distressed firms by shifting interest payments into the future (Petersen and Rajan, 1995). In a cross country setting, Beck and others (2004) find that firms in countries with low levels of economic and institutional development perceive access to finance as a greater obstacle when banking markets are concentrated.

APPENDIX A3

TABLE A3.1: Credit constraints and firm performance

Dependent variable: credit constrained (FCC, PCC - Y/N)	Probit (marginal effects)		
	(1)	(2)	(3)
Annual employment growth (%)	-0.46*** (0.104)		
Capacity utilization (%)		-0.21** (0.091)	
Log of sales per worker (USD)			-0.03*** (0.012)
Log of size, 2010	-0.09*** (0.016)		
Log of size		-0.09*** (0.020)	-0.08*** (0.014)
Young firms: 0-5 years (Y/N)	0.05 (0.050)	0.07 (0.065)	0.05 (0.038)
Firm is part of a larger firm (Y/N)	0.12*** (0.039)	-0.02 (0.074)	0.13*** (0.038)
Manager has university education (Y/N)	-0.04 (0.036)	-0.04 (0.057)	-0.02 (0.035)
Manager experience in sector (years)	-0.00 (0.002)	0.00 (0.002)	-0.00 (0.002)
Exports 10% or more of sales (Y/N)	-0.01 (0.044)	0.06 (0.063)	-0.03 (0.042)
Foreign ownership (Y/N)	0.01 (0.061)	-0.06 (0.069)	0.02 (0.058)
Number of observations	4,715	2,760	4,772

Source: Enterprise Surveys.

Note: Marginal effects from probit regression using survey-weighted observations (Stata's svy prefix). Standard errors are reported in parentheses below the coefficient. The dependent variable is the credit-constraint indicator described in box 3.1. All specifications consider a firm as credit constrained if it is either partially or fully credit constrained and include both economy and sector fixed effects. Capacity utilization is defined only for manufacturing firms. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.2: Characteristics of disconnected firms

Dependent variable	Probit (marginal effects)		
	(1)	(2)	(3)
	Investment— purchased fixed assets (Y/N)	Plans to increase size of establish- ment (Y/N)	Access to finance: major or severe obstacle (Y/N)
Disconnected (no need for a loan due to sufficient funds - Y/N)	-0.16*** (0.041)	-0.10** (0.042)	-0.12*** (0.044)
Credit constrained (FCC, PCC) (Y/N)	-0.19*** (0.041)	-0.17*** (0.063)	0.15*** (0.054)
Wald test: disconnected = credit constrained	1.17	2.63	43.25***
P-value	0.280	0.105	0.000
Number of observations	5,403	5,316	5,394

Source: Enterprise Surveys.

Note: Marginal effects from probit regression using survey-weighted observations (Stata's svy prefix). Other control variables included but not reported include size, age, manager education, manager experience in the sector, exporting status, gender of the owner, foreign ownership, multi-establishment firm and legal status. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.3: Investment and capacity utilization

Dependent variable	(1)
	Investment—purchased fixed assets (Y/N)
Disconnected (no need for a loan due to sufficient funds—Y/N)	-0.02 (0.958)
Above median capacity utilization (Y/N)	0.43 (0.180)
Disconnected * above median capacity utilization	-0.64* (0.080)
	Marginal effects of interaction
Disconnected above median capacity utilization = 0	0.00 (0.095)
Disconnected above median capacity utilization = 1	-0.22 (0.094)
P-value of the difference	0.087*
Number of observations	2,202

Source: Enterprise Surveys.

Note: Coefficient estimates and marginal effects from Probit regression using survey-weighted observations (Stata's svy prefix). The marginal effects show the difference in the probability to invest relative to firms that obtained a loan condition on the state of capacity utilization. Capacity utilization is defined only for manufacturing firms. Control variables included but not reported include size, age, manager education, manager experience in the sector, exporting status, gender of the owner, foreign ownership, multi-establishment firm and legal status. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.4: Probability of having a loan or line of credit

Dependent variable: Firm has a loan or line of credit from a bank (Y/N)	Probit (marginal effects)		
	(1)	(2)	(3)
	All MENA ES	Djibouti, Egypt, West Bank and Gaza, Yemen	Jordan, Lebanon, Morocco, Tunisia
Young firms: 0-5 years (Y/N)	-0.08*** (0.031)	-0.06** (0.026)	-0.09* (0.053)
Small and medium firms (less than 100 full time employees) (Y/N)	-0.10*** (0.037)	-0.06 (0.050)	-0.16*** (0.047)
Female principal owner (Y/N)	0.04 (0.029)	-0.02 (0.031)	0.09** (0.043)
Foreign ownership (Y/N)	-0.05 (0.036)	-0.00 (0.043)	-0.10* (0.055)
External auditor reviewed financial statements (Y/N)	0.07*** (0.025)	-0.00 (0.024)	0.16*** (0.042)
Shareholding company (Y/N)	0.07** (0.032)	0.06 (0.046)	0.07 (0.047)
Manager has university education (Y/N)	0.05** (0.025)	0.05* (0.028)	0.04 (0.039)
Manager experience in sector (years)	0.00 (0.001)	0.00 (0.001)	0.00 (0.002)
Exports 10% or more of sales (Y/N)	-0.00 (0.027)	-0.02 (0.029)	0.01 (0.039)
Firm is part of a larger firm (Y:1 N:0)	0.07** (0.034)	0.10** (0.042)	0.03 (0.048)
Number of observations	5,486	3,597	1,889

Source: Enterprise Surveys.

Note: Marginal effects from probit regression using survey-weighted observations (Stata's svy prefix). Standard errors are reported in parentheses below the coefficient. All regressions include economy and sector fixed effects. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.5: Collateralized lending and the banking system disconnect

Dependent variable: Disconnect (no need for a loan due to sufficient funds—Y/N)	Probit (marginal effects)		
	(1)	(2)	(3)
	Full sample	Collateral environment based on loans only after 2005	Single firms or HQ of multi-establishment firms
Collateral Environment Index (higher values means less collateralization of loans)	0.00 (0.003)		
Collateral Environment Index * young firms (younger than five)	-0.01** (0.005)		
Collateral Environment Index 2005 (based only on loans after 2005)		0.00 (0.003)	0.00 (0.003)
Collateral Environment Index 2005 * young firms (younger than five)		-0.01* (0.005)	-0.01* (0.005)
Young firms (younger than five) (Y/N)	-0.05 (0.046)	-0.04 (0.046)	-0.05 (0.046)
Number of observations	4,855	4,855	4,054

Source: Enterprise Surveys.

Note: Marginal effects from probit regression using survey-weighted observations (Stata's svy prefix). Standard errors are reported in parentheses below the coefficient. The collateral ratio index is a branch-weighted average of the collateral policies of banks that have branches in a circle with radius 10km centered on the sample firm. The MENA ES has information on the identity of the bank that granted the last loan or line of credit. It is therefore possible to estimate banks' collateral policies as bank-specific effects in a fixed effect regression of the collateral ratio on firm characteristics (not shown). Other control variables included but not reported include size, manager education, exporting status, gender of the manager, foreign ownership, multi-establishment firms, having a website, having audited financial reports. Firms and banks from Djibouti and the Republic of Yemen are not part of the sample. For more details on the methodology see box 3.2. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.6: Movable collateral and the banking system disconnect

Dependent variable: disconnect (no need for a loan due to sufficient funds—Y/N)	Probit (marginal effects)		
	(1)	(2)	(3)
	Full sample	Collateral environment based on loans only after 2005	Single firms or HQ of multi- establishment firms
Movable Collateral Environment Index (higher values means greater acceptance of movable collateral for loans)	-0.96** (0.455)		
Movable Collateral Environment Index 2005 (based on loans after 2005)		-1.02* (0.525)	-1.11** (0.528)
Young firms (younger than five) (Y/N)	-0.04 (0.045)	-0.04 (0.045)	-0.04 (0.045)
Number of observations	4,855	4,855	4,625

Source: Enterprise Surveys.

Note: Marginal effects from probit regression using survey-weighted observations (Stata's svy prefix). Standard errors are reported in parentheses below the coefficient. The movable collateral index is a branch-weighted average of the collateral policies of banks that have branches in a circle with radius 10km centered on the sample firm. The MENA ES has information on the identity of the bank that granted the last loan or line of credit. It is therefore possible to estimate banks' collateral policies as bank-specific effects in a fixed effect regression of an indicator for movable collateral on firm characteristics (not shown). Other control variables included but not reported include size, manager education, exporting status, gender of the manager, foreign ownership, multi-establishment firms, having a website, having audited financial reports as well as economy and sector fixed effects. Firms and banks from Djibouti and the Republic of Yemen are not part of the sample. For more details on the methodology see box 3.2. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.7: Collateralized lending and employment growth

Dependent variable: employment growth	(1)	(2)	(3)
	Full sample	Collateral environment based on loans only after 2005	Single firms or HQ of multi- establishment firms
Collateral Environment Index (higher values mean less collateralization of loans)	0.00 (0.002)		
Collateral Environment Index * young firms (younger than five)	0.01** (0.005)		
Collateral Environment Index 2005 (based only on loans after 2005)		0.00 (0.002)	0.00 (0.002)
Collateral Environment Index 2005 * young firms (younger than five)		0.01** (0.005)	0.01** (0.005)
Young firms (younger than five) (Y/N)	0.13** (0.053)	0.13** (0.053)	0.13** (0.053)
Number of observations	4,256	4,256	4,054

Source: Enterprise Surveys.

Note: OLS using survey-weighted observations (Stata's svy prefix). Standard errors are reported in parentheses below the coefficient. The collateral ratio index is a branch-weighted average of the collateral policies of banks that have branches in a circle with radius 10km centered on the sample firm. The MENA ES has information on the identity of the bank that granted the last loan or line of credit. It is therefore possible to estimate banks' collateral policies as bank-specific fixed effects in a regression of collateral ratio on firm characteristics (not shown). Other control variables included but not reported include initial size (log), manager education, exporting status, gender of the manager, foreign ownership, multi-establishment firms, having a website, having audited financial reports and economy and sector fixed effects. Firms and banks from Djibouti and the Republic of Yemen are not part of the sample. For more details on the methodology see box 3.2. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.8: Movable collateral and employment growth

Dependent variable: employment growth	(1)	(2)	(3)
	Full sample	Collateral environment based on loans after 2005	Single firms or HQ of multi-establishment firms
Movable Collateral Environment Index (higher values mean greater acceptance of movable collateral for loans)	0.66** (0.312)		
Movable Collateral Environment Index 2005 (based on loans after 2005)		0.77** (0.362)	0.83** (0.362)
Young firms (younger than five) (Y/N)	0.13** (0.054)	0.13** (0.054)	0.14** (0.054)
Number of observations	4,855	4,855	4,625

Source: Enterprise Surveys.

Note: OLS using survey-weighted observations (Stata's svy prefix). Standard errors are reported in parentheses below the coefficient. The movable collateral index is a branch-weighted average of the collateral policies of banks that have branches in a circle with radius 10km centered on the sample firm. The MENA ES has information on the identity of the bank that granted the last loan or line of credit. It is therefore possible to estimate banks' collateral policies as bank-specific effects in a fixed effect regression of an indicator for movable collateral on firm characteristics (not shown). Other control variables included but not reported include initial size (log), manager education, exporting status, gender of the manager, foreign ownership, multi-establishment firms, having a website, having audited financial reports. Firms and banks from Djibouti and the Republic of Yemen are not part of the sample. For more details on the methodology see box 3.2. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A3.9: Probability of firms having a loan and characteristics of the banking system

Dependent variable: firm has a loan or line of credit from a bank (Y/N)	Probit (marginal effects)		
	(1)	(2)	(3)
Log of bank branches per firm	0.09*** (0.003)		
Net interest margin, 2nd tercile		-0.03 (0.378)	
Net interest margin, 3rd tercile		-0.09*** (0.002)	
Return on assets, 2nd tercile			-0.03 (0.274)
Return on assets, 3rd tercile			-0.06* (0.084)
Young firms: 0-5 years (Y/N)	-0.08** (0.030)	-0.08** (0.042)	-0.07* (0.058)
Small and medium firms (less than 100 full time employees) (Y/N)	-0.13*** (0.001)	-0.13*** (0.000)	-0.12*** (0.001)
Female principal owner (Y/N)	0.04 (0.178)	0.05 (0.164)	0.05 (0.127)
Foreign ownership (Y/N)	-0.07* (0.090)	-0.06 (0.119)	-0.07 (0.107)
Financial statement reviewed by external auditor (Y/N)	0.10*** (0.000)	0.11*** (0.000)	0.11*** (0.000)
Shareholding firm (Y/N)	0.06* (0.095)	0.06* (0.088)	0.06* (0.087)
Manager education: university (Y/N)	0.03 (0.310)	0.03 (0.307)	0.04 (0.164)
Years of experience of the top manager working in the firm's sector	0.00 (0.228)	0.00 (0.296)	0.00 (0.275)
Exporter (Y/N)	-0.01 (0.706)	-0.01 (0.765)	0.00 (0.928)
Firm is part of a larger firm (Y/N)	0.04 (0.218)	0.05 (0.201)	0.05 (0.132)
Log of population density	-0.01 (0.228)	0.00 (0.894)	0.00 (0.800)
Number of observations	5,155	5,155	5,155

Source: Enterprise Surveys, Bankscope.

Note: Marginal effects from Probit regression using survey-weighted observations (Stata's svy prefix). Branch density is given by the log of bank branches at the locality level divided by the number of sample firms in that locality. Net interest margin and return on assets are branch weighted averages at the locality level. The resulting distributions exhibit bunching at the country level. To generate sufficient within-country variation they are then split into terciles. Firms and banks from Djibouti and the Republic of Yemen are not part of the sample. Bank balance sheet data comes from Bureau van Dijk's Bankscope. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

REFERENCES

- Alvarez de la Campa, Alejandro. 2011. "Increasing Access to Credit through Reforming Secured Transactions in the MENA Region." *Policy Research Working Paper* 5313, World Bank, Washington, DC.
- Anzadike-Danes, Michael, Mark Hart, and Jun Du. 2013. "Firm dynamics and job creation in the UK." *ERC White Paper* 6.
- Anzoategui, Diego, Maria Soledad Martínez Peria, and Roberto Rocha. 2011. "Bank Competition in the Middle East and North Africa." *Policy Research Working Paper* 5363, World Bank, Washington, DC.
- Arab Monetary Fund and European Bank for Reconstruction and Development. 2015. Joint IFI Needs Assessment on Local Capital Market Development: Egypt—Jordan—Morocco—Tunisia. Abu Dhabi: Arab Monetary Fund and London: European Bank for Reconstruction and Development.
- Ayyagari, Meghana, Asli Demirgüç-Kunt, and Vojislav Maksimovic. 2011. "Small vs. young firms across the world: contribution to employment, job creation, and growth." *World Bank Policy Research Working Paper* 5631.
- Beck, Thorsten, Olivier De Jonghe, and Glenn Schepens. 2013. "Bank Competition and Stability: Cross-country heterogeneity." *Journal of Financial Intermediation* 22(2): 2018-244.
- Beck, Thorsten, Asli Demirgüç-Kunt, and Vojislav Maksimovic. 2004. "Bank Competition and Access to Finance: International Evidence." *Journal of Money, Credit, and Banking* 36(3): 627-648.
- Beck, Thorsten, Ross Levine, and Norman Loayza. 2000. "Finance and the sources of growth." *Journal of Financial Economics* 58: 261-300.
- Beck, Thorsten, and Heiko Hesse. 2009. "Why are interest spreads so high in Uganda." *Journal of Development Economics* 88(2): 192-204.
- Betz, Frank, and Farshad Ravasan. 2015. "Collateral regimes and missing job creation in the MENA region." Unpublished manuscript.
- Birch, David GW. 1979. "The job generation process." MIT Program on Neighborhood and Regional Change.
- . 1981. "Who Creates Jobs?" *Public Interest* 65(1), 3–14.
- . 1987. "Job creation in America: How our smallest companies put the most people to work." *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.
- Binks, Martin R., and Christine T. Ennew. 1996. "Growing firms and the credit constraint." *Small Business Economics* 8(1): 17-25.
- Boyd, John, and Gianni de Nicoló. 2005. "The Theory of Bank Risk Taking Revisited." *Journal of Finance* 60 (3): 1329-1343.
- Brock, Philip, and Liliana Rojas Suarez. 2000. "Understanding the behavior of bank spreads in Latin America." *Journal of Development Economics* 63: 113-34.
- Clementi, Gian Luca, and Hugo A. Hopenhayn. 2006. "A theory of financing constraints and firm dynamics." *The Quarterly Journal of Economics* 121(1): 229-65.
- Creane, Susan, Rishi Goyal, Ahmed Mushfiq Mobarak, and Randa Sab. 2004. "Evaluating Financial Sector Development in the Middle East and North Africa: New Methodology and Some New Results." Topics in Middle Eastern and North African Economies, Proceedings of the Middle East Economic Association, Vol. 6.
- Economic and Social Commission for Western Asia. 2014. "Remittances to Lebanon: Economic Impact and the Role of Banks." Beirut: Economic and Social Commission for Western Asia.
- European Investment Bank. 2014a. *Digital Financial Services in Africa: Beyond the Kenyan Success Story*. Luxembourg: European Investment Bank and UN Capital Development Fund.
- European Investment Bank. 2014b. *Credit Guarantee Schemes for SME lending in Central, Eastern and South-Eastern Europe*. Luxembourg: European Investment Bank.
- Gray, Simon, Philippe Karam, and Rima Turk. 2014. "Are banks really lazy? Evidence from Middle East and North Africa." *IMF Working Paper* WP/14/86.
- Haltiwanger, John, Ron S. Jarmin, and Javier Miranda. 2013. "Who creates jobs? Small versus large versus young." *Review of Economics and Statistics* 95(2): 347-61.
- Hsieh, Chang-Tai, and Peter J. Klenow. 2014. "The Life Cycle of Plants in India and Mexico." *The Quarterly Journal of Economics* 129(3): 1035-84.
- Herrera, Santiago, Christophe Hurlin, and Chahir Zaki. 2013. "Why don't banks lend to Egypt's private sector?" *Economic Modelling* 33 (1): 347-56.
- Hubbard, Glenn R. 1998. "Capital-market imperfections and investment." *Journal of Economic Literature* 36 (1): 193-225.
- International Monetary Fund. 2013. Regional Economic Outlook Update, Middle East and Central Asia, World Economic and Financial Surveys, Washington D.C.
- International Monetary Fund. 2014. Lebanon 2014 Article IV Consultation—Staff Report. Washington, DC: International Monetary Fund.
- International Monetary Fund. 2015a. Lebanon 2015 Article IV Consultation—Staff Report. Washington, DC: International Monetary Fund.

- International Monetary Fund. 2015b. Arab Republic of Egypt 2014 Article IV Consultation—Staff Report. Washington, DC: International Monetary Fund.
- Keeley, Michael. 1990. "Deposit insurance, risk, and market power in banking." *American Economic Review* 80: 1183-1200.
- Kuntchev, Veselin, Rita Ramalho, Jorge Rodríguez-Meza, and Judy S. Yang. 2014. "What Have We Learned from the Enterprise Survey Regarding Access to Finance by SMEs?" *Policy Research Working Paper* 6670, updated May 2014, World Bank, Washington, DC.
- Levine, Ross. 1997. "Financial development and economic growth: views and agenda." *Journal of Economic Literature* 35(2): 688–726.
- Levine, Ross. 1998. "The legal environment, banks and long-run economic growth." *Journal of Money Credit and Banking* 30 (3): 596-613.
- Levine, Ross, Norman Loayza, and Thorsten Beck. 2000. "Financial intermediation and growth: causality and causes." *Journal of Monetary Economics* 46(1): 31–77.
- Love, Inessa, Maria Soledad Martinez Peria, and Sandeep Singh. 2015. "Collateral Registries for Movable Assets: Does Their Introduction Spur Firms' Access to Bank Financing?" *Journal of Financial Services Research*, forthcoming DOI 10.1007/s10693-015-0213-2.
- Oliveira, Blandina, and Adelino Fortunato. 2006. "Firm growth and liquidity constraints: A dynamic analysis." *Small Business Economics* 27(2): 139-56.
- McKenzie, David J. 2015. Identifying and spurring high-growth entrepreneurship: experimental evidence from a business plan competition. *Policy Research working paper*, no. WPS 7391; Impact Evaluation series. Washington, D.C.: World Bank Group.
- Perez-Quiros, Gabriel, and Allan Timmermann. 2000. "Firm size and cyclical variations in stock returns." *The Journal of Finance* 55(3): 1229-62.
- Petersen, Mitchell and Raghuram Rajan. 1995. "The Effect of Credit Market Competition on Lending Relationships." *Quarterly Journal of Economics* 110(2): 407-443.
- Popov, Alexander, and George Udell. 2012. "Cross-border banking, credit access, and the financial crisis." *Journal of International Economics* 87(1): 147-161
- Schiantarelli, Fabio. 1996. "Financial constraints and investment: methodological issues and international evidence." *Oxford Review of Economic Policy* 12(2): 70-89.
- Schiffbauer, Marc, Abdoulaye Sy, Sahar Hussain, Hania Sahnoun, and Philip Keefer. 2014. *Jobs or Privileges: Unleashing the employment potential of the Middle East and North Africa*. World Bank Publications.
- Stiglitz, Joseph, and Andrew Weiss. 1981. "Credit Rationing in Markets with Imperfect Information." *American Economic Review* 71(3): 393-410.
- World Bank. 2006. *Reforming Collateral Laws to Expand Access to Finance*. Washington, DC: World Bank.
- World Bank. 2011. *Financial Access and Stability—A Roadmap for the Middle East and North Africa*. MENA Development Report. Washington, DC: World Bank.
- World Bank. 2016. *Doing Business 2016: Measuring Regulatory Quality and Efficiency*. Washington, DC: World Bank.
- Yu, Jung-Suk, M. Kabir Hassan, Abudllah Mamun, and Abul Hassan. 2014. "Financial Sectors Reform and Economic Growth in Morocco: An Empirical Analysis." *Journal of Emerging Market Finance* 13(1): 69–102.



4.

JOBS AND SKILLS IN THE FORMAL PRIVATE SECTOR

INTRODUCTION

The importance of jobs in the MENA region can hardly be exaggerated. The region has been suffering from structural unemployment for years, with an unemployment rate averaging over 12 percent in the 1990s and 2000s, substantially higher than elsewhere in the world.¹ While the economic performance of the region over the last two decades has been reasonably good, it has failed to keep pace with large increases in population and demand for jobs. A World Bank study from the early 2000s estimated that close to 6 million new jobs each year would be required to absorb new labor market entrants.² But the MENA region was able to add only 3.2 million jobs per year during the 2000s.³

Recent developments, punctuated by downturns in growth following the Arab Uprisings, have made the situation more tenuous. Several governments in the region responded to this uncertainty by ramping up public expenditure, particularly on food and energy subsidies, resulting in government fiscal deficits of approximately 10 percent of GDP in Egypt, Jordan, Lebanon, Tunisia, and the Republic of Yemen.⁴ Given the tight fiscal and budgetary situation, it is highly unlikely that the public sector—long a desired source of employment—alone will be able to create enough jobs in the coming years. The only solution to high unemployment rates lies with the development of a dynamic and competitive formal private sector.

Aside from overall job creation, employment opportunities for young people and women in the MENA region are important, not only for economic

reasons, but also for social and political ones. Women's participation in the labor market in the region is one of the lowest in the world; youth unemployment is one of the highest.⁵ The youth unemployment rate neared 30 percent in the region in 2013, more than twice as high as the global average.⁶ Failure to provide jobs for millions of people can lead to social unrest and political turmoil, as was evident during the Arab Uprisings. Along with the demand for more political inclusion, young people in particular took to the streets out of frustration with the lack of opportunities to put their skills and talents to productive use.⁷ Creating these jobs remains a key challenge.

The formal private sector constitutes only a fraction of total employment in the MENA ES region, which is known for a high level of public sector employment and a large informal sector.⁸ Precise estimates of the importance of the formal private sector for employment are difficult to obtain, but labor force and household surveys suggest that the share of private formal employment ranges from around 10 percent in Morocco and Egypt to 15 percent in Tunisia and 25 percent in Jordan. Public sector employment also ranges from just under 10 percent in the Republic of Yemen to more than 30 percent in Jordan.⁹ At the same time, informality accounts for roughly 50 percent of non-agricultural sector employment. Given the limits of public sector employment creation and the typically low productivity and wages of the informal sector,¹⁰ greater attention must be devoted to the role of the formal private sector in creating productive employment.

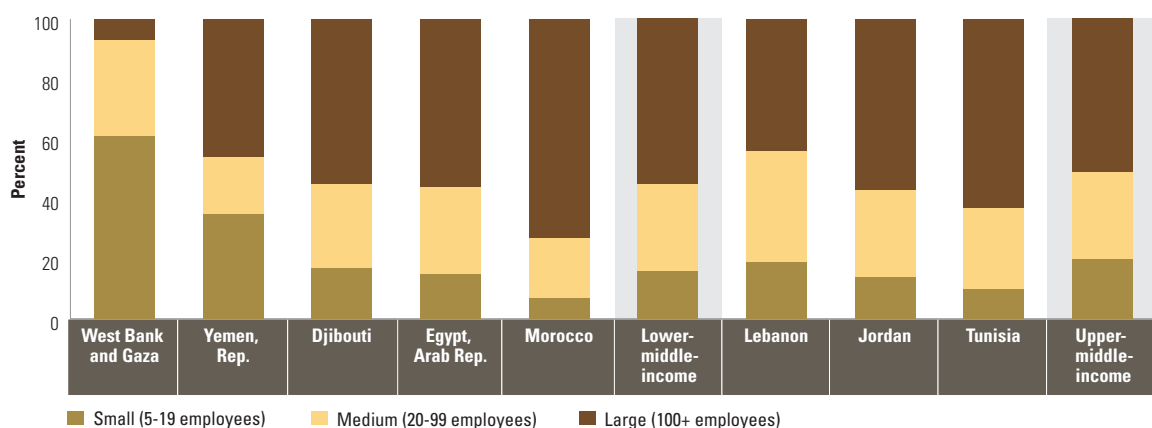
Despite its importance, there is little systematic research on the role of the formal private sector in providing employment in the MENA region. Lack of data is one reason. This chapter uses the MENA ES data to shed light on key issues, such as the share of jobs provided by different types of firms, women and youth employment, firm dynamism, and the relationship between employment, skills, and wages.

EMPLOYMENT IN THE FORMAL PRIVATE SECTOR

Larger firms provide the majority of formal private sector jobs in the MENA ES region

The MENA ES data provide a unique source of information on employment provided by different types of firms, combined with evidence on firm productivity. This will help policy makers to identify appropriate policies and actions for fostering job growth. A pattern that has been widely observed—particularly in developing economies—is that private sector jobs tend to be clustered in either a vast abundance of smaller firms or a handful of substantially larger ones.¹¹ In the MENA region, previous analysis has found that most jobs are in large firms.¹² In all MENA ES economies except the West Bank and Gaza, the largest share of private sector jobs is indeed in large firms (figure 4.1).¹³

FIGURE 4.1: The proportion of employment by firm size



Source: Enterprise Surveys.

The relatively small share of employment in small and medium-sized enterprises (SMEs) is notable, particularly given a strong policy focus on those firms as sources of gainful employment in the private sector. This share is not explained by a relative lack of SMEs: in the MENA ES economies, 96 percent of establishments have fewer than 100 employees. Rather, firms in the MENA ES economies tend to be smaller (with a handful of large firms being exceptionally large). Figure 4.2 shows the proportion of firms in ES economies below the median size of the same income group. In all economies except Morocco and Tunisia, the majority of MENA ES firms are smaller than the comparative median size (15 employees in lower-middle-income economies and 13 employees in upper-middle-income economies).

Put simply, firms in the MENA ES economies are smaller on average. Morocco and Tunisia have the smallest employment shares in SMEs; they are also the only two MENA ES economies with average firm size higher than in their peer economies. This distribution may have implications for overall productivity: although larger firms in the MENA ES economies tend to be more productive (as explained in chapter 2), they are rare. Less productive SMEs are abundant.

Firms older than 10 years provide three quarters of jobs

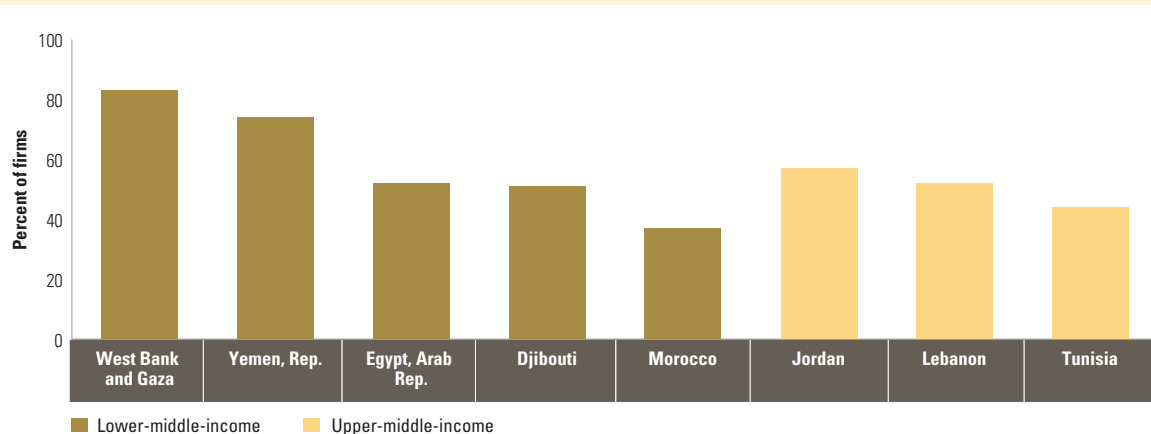
If small firms are in the early stages of their lifecycle, they may represent dynamic sectors and new sources

of employment growth; but if firms do not grow in size over time, the large presence of small firms may be indicative of market distortions that hamper competition and obstruct the incentives or opportunities for firms to grow.¹⁴ It is often argued that younger firms tend to be more dynamic, learn faster from mistakes, provide better quality jobs, and generate higher employment growth than their older counterparts.¹⁵ Conversely, older firms may tend to have better political connections and enjoy protection from competitive forces, undermining economic dynamism.¹⁶ One study concludes that the latter forces are more predominant in the MENA region.¹⁷

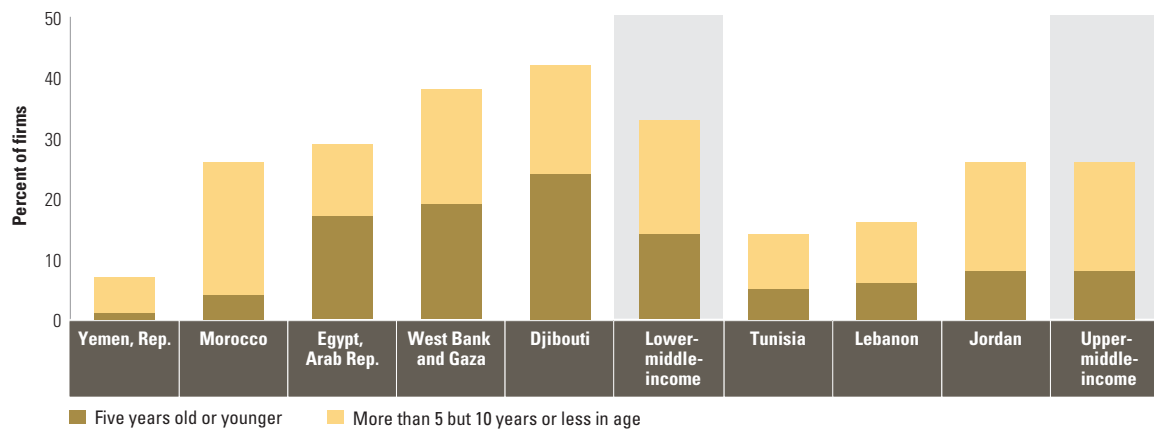
The dominance of older firms is borne out by the distribution of jobs between young and old firms in the MENA ES economies. About three quarters of jobs are provided by firms that are more than 10 years old. The contribution of young firms to private sector employment stands out as particularly high in Djibouti, Egypt, and the West Bank and Gaza.¹⁸ In contrast, in Lebanon, Tunisia, and the Republic of Yemen, older firms are the source of more jobs.

Firms in the MENA ES also tend to be older on average (table 4.1), which may be indicative of high barriers to entry for new firms.¹⁹ A continual and efficient entry of new firms would necessarily lower the average age of firms, but this seems not to be the case in the MENA ES economies.

FIGURE 4.2: The proportion of firms below income-group median size



Source: Enterprise Surveys.

FIGURE 4.3: The proportion of young firms in total formal private sector employment is lower than elsewhere in the world

Source: Enterprise Surveys.

As discussed in chapter 2, the business environment varies substantially across these economies. This variation is also found in the *Doing Business* sub-indicator measuring the ease of starting a business.²⁰ Several MENA ES economies maintain burdensome regulations for business start-ups: Djibouti ranks last of 185 economies, the West Bank and Gaza 179th, and the Republic of Yemen and Lebanon rank 110th and 114th respectively. While Egypt ranks 26th globally, followed by Tunisia, which is 50th, recent upheaval in both economies risks discouraging new entrants, which will limit competitive pressure on incumbent firms. At the same time, MENA ES economies maintain remarkably high shares of employment in micro-sized firms²¹ (which are not covered by the MENA ES) as well as pervasive informality.²² If productive firms are unable to grow over their lifecycle, the incentives for new firms to enter the market will be undermined.

Exporters account for a higher proportion of formal jobs in the region than elsewhere in the world

One additional source of competitive market forces can come from abroad to the extent that economies engage in foreign trade. As detailed in chapter 5, several firms in the MENA ES economies are internationally engaged; but a very large share of these traders tend to be SMEs, possibly due to market distortions. Similarly, the distribution of jobs shows that on average 30 percent of employment in the formal private sector in the MENA ES economies occurs in exporting firms (figure 4.4), more so than in

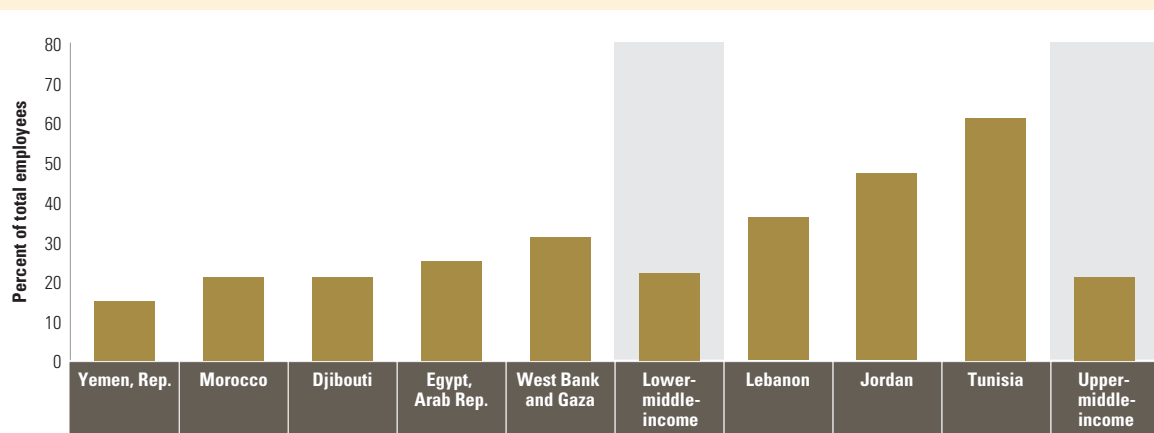
TABLE 4.1: Average firm age

	Mean	Median
Djibouti	16	12
Egypt, Arab Rep.	14	12
Morocco	20	16
West Bank and Gaza	16	12
Yemen, Rep.	24	21
Lower-middle-income	16	13
Jordan	16	13
Lebanon	22	20
Tunisia	20	17
Upper-middle-income	16	13

Source: Enterprise Surveys.

other parts of the world (22 percent in all other economies with ES data).

There is substantial variation, however. Tunisia stands out with exporters providing close to 61 percent of formal private sector jobs (the result of an explicit policy of focusing on the export sector), followed by Jordan and Lebanon (47 and 32 percent). At the other extreme, only 15 percent of jobs in the Republic of Yemen are provided by exporting firms. Not surprisingly, exporting firms contribute more to jobs in the relatively rich economies (Jordan, Lebanon, and Tunisia) than elsewhere.²³ From a policy perspective, this international exposure may result in global factors influencing domestic employment. The task of policy then

FIGURE 4.4: The proportion of jobs provided by exporters is higher than in the rest of the world

Source: Enterprise Surveys.

is to maximize the gains offered by positive global shocks and guard against the negative ones.

THE FORMAL PRIVATE SECTOR'S CONTRIBUTION TO WOMEN'S EMPLOYMENT

According to the United Nations Development Program's Gender Inequality Index, in 2014, the MENA region was the second most unequal region for women, preceded only by Sub-Saharan Africa.²⁴ These results are in part driven by women's low participation in the labor market: the region's women tend to be comparatively well educated, showing important advances in investment in human capital, but their labor market participation remains low.²⁵ Increasing women's employment in the MENA ES economies is important not only for purely economic reasons, increasing the productive capacity of the region, but also for society's well-being and stability.

Women's employment is low compared with other regions

Labor force participation rates for women in the MENA region are lower than the average for low- and middle-income economies, as previous reports have shown extensively.²⁶ In the average firm in the MENA ES economies, women constitute 17 percent of the workforce (full-time permanent workers). This is significantly lower than what is found in the rest of the world with ES data (34 percent),

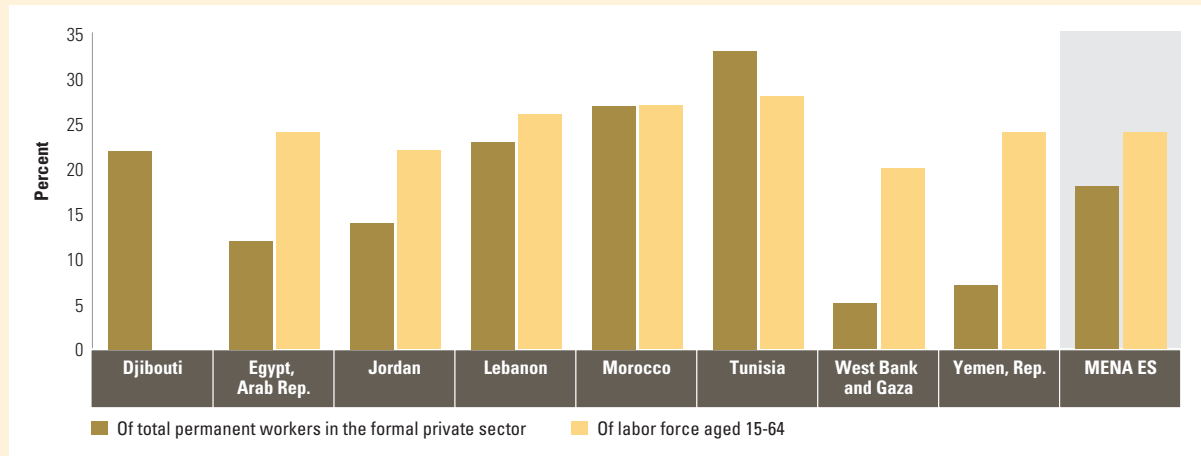
including upper-middle-income economies (37 percent) and lower-middle-income economies (29 percent).

In the MENA ES region, the average percentage of women employed in the formal private sector as a whole is even lower than the proportion of women in the labor force (18 percent compared with 24 percent, as shown in figure 4.5).²⁷ Because labor force data also include the unemployed and sectors not covered by the MENA ES (such as agriculture, government, the informal sector, and the financial and social services sectors), the lower proportion of women employed in firms in the MENA ES economies may be due to different factors: either unemployment is higher among women, or women tend to work more in sectors not covered by the Enterprise Survey.²⁸ Both factors seem to be at play and are suggestive of a gap in women's employment in the formal private sector.²⁹

Women's employment is higher in labor-intensive sectors and exporting firms

Previous evidence suggests that women are more likely to be employed in sectors that are relatively labor-intensive as well as in retail.³⁰ In the MENA ES economies, labor-intensive manufacturing sectors—such as the production of garments, footwear, leather, and furniture—have the highest average share of women workers (21 percent), followed by retail (20 percent), and other services (17 percent). In other manufacturing sectors, which are less labor-intensive, only 13 percent of employees are

FIGURE 4.5: The percentage of women employed in the formal private sector is smaller than the percentage of women in the total labor force



Source: Enterprise Surveys; ILOSTAT.

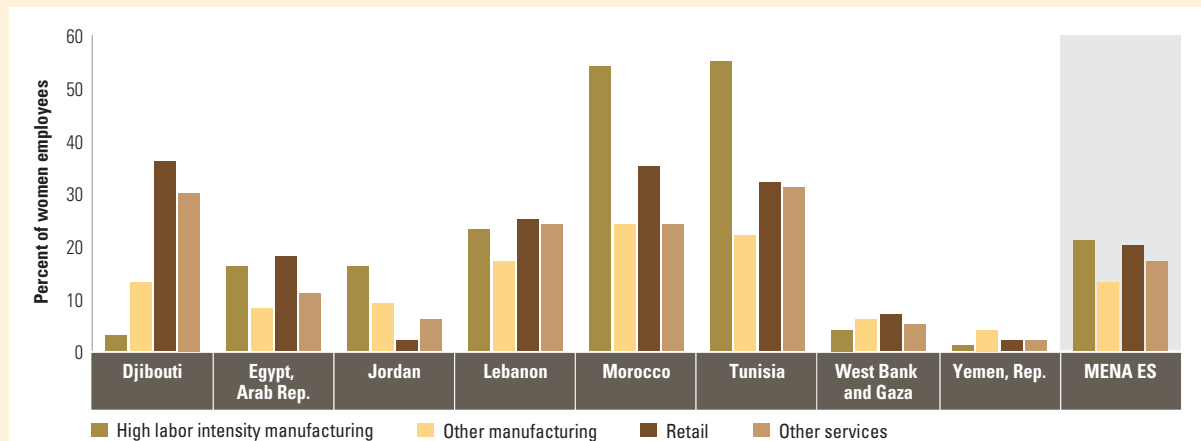
women.³¹ There are important differences, however: Djibouti, the West Bank and Gaza, and the Republic of Yemen stand out with low shares of women employed by labor-intensive manufacturers (figure 4.6).

Differences also emerge after accounting for basic firm characteristics (table A4.1): firms in the formal private sector in Djibouti, Lebanon, Morocco, and Tunisia tend to employ significantly more women than firms in Egypt, Jordan, the West Bank and Gaza, or the Republic of Yemen. All else equal, firms located in capitals or main

business cities also tend to have a higher percentage of women. These results indicate that other factors might explain the differences in women's employment across and within economies, factors probably associated with cultural norms and differential enforcement of customs and laws.³²

Earlier studies generally support a positive effect of globalization on women's employment.³³ One reason could be that women tend to be concentrated in labor-intensive exporting sectors that expand following trade liberalization.

FIGURE 4.6: Labor-intensive manufacturing and retail have the highest percentage of women employees



Source: Enterprise Surveys.

Note: High labor intensity manufacturing includes manufacturing of wearing apparel, leather, and furniture.

Another possibility is that by increasing competition, international trade makes it more expensive for employers to discriminate against women employees. MENA ES results confirm that the share of women employees is 4 percentage points higher for firms that export,³⁴ even after discounting other potential explanations such as the sector of activity and labor intensity (first column, table A4.1). The larger percentage of women employed by firms in manufacturing sectors with high labor intensity compared with sectors with lower labor intensity is also confirmed when accounting for basic firm characteristics (first column, table A4.1).

Women's participation in top management and firm ownership is low by international standards

Looking at women's participation in entrepreneurship, MENA has the highest gender gap in the world: 12 percent of adult women are entrepreneurs compared with 31 percent of adult men.³⁵ MENA also has many legal restrictions on women's employment and entrepreneurship. The *Women, Business, and the Law (WBL) 2016* report measures legal gender differences in the areas of accessing institutions, using property, getting a job, building credit, and going to court; it also measures legal incentives for women's work and legislation on violence against women. According to the report, MENA hosts 18 of the 30 economies around the world that have 10 or more legal differences favoring men over women.³⁶ All the

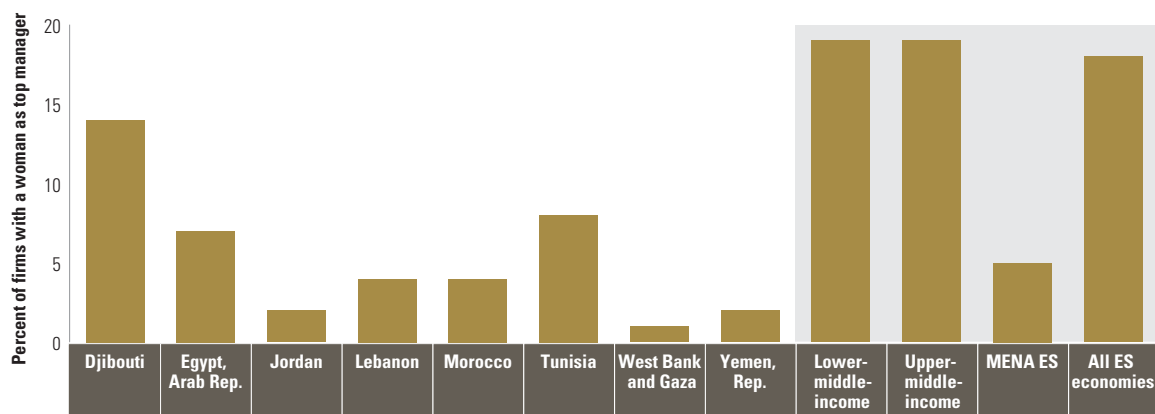
eight MENA ES economies have more than 10 such legal differences.

The MENA ES data show real implications in terms of women's participation in ownership and top management. Women own on average less than 8 percent of firms in the MENA ES economies, significantly lower than 16 percent in upper-middle-income economies and 13 percent in lower-middle-income economies. Similarly, only about 5 percent of firms in the MENA ES economies have a woman top manager, compared with 19 percent in both lower-middle-income and upper-middle-income economies (figure 4.7).

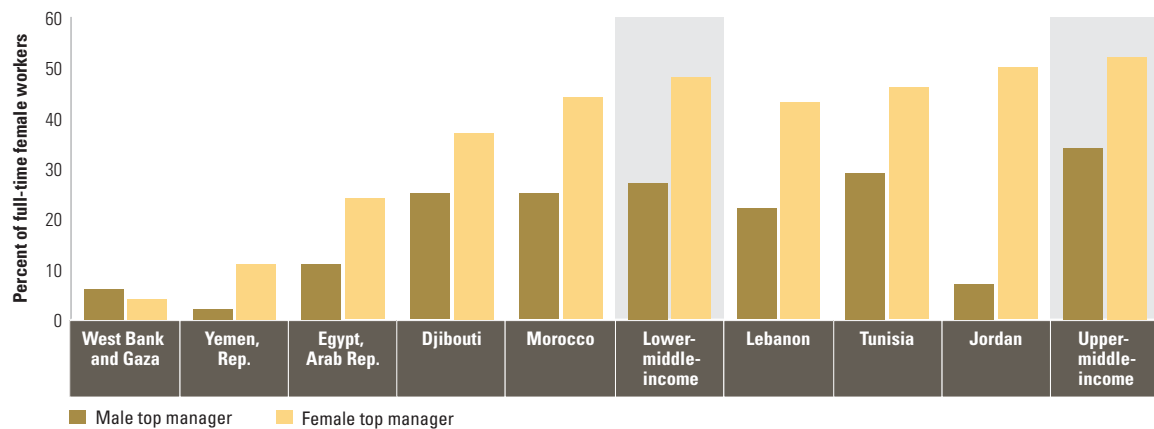
There is substantial variation across MENA ES economies in the level of women's participation in ownership and top management (table A4.1, columns 2 and 3). Even Tunisia and Lebanon—where women's ownership is higher than in peer economies—lag behind in terms of women in top management. Looking across the MENA ES economies, Egypt, Jordan, the West Bank and Gaza, and the Republic of Yemen perform worse than any of the other economies.

A significantly larger percentage of women is employed by firms with a woman top manager or by firms with one or more women owners (figure 4.8). This is consistent with previous literature indicating that women in top leadership positions can increase hiring of women, reduce sex segregation, and improve retention rates among women

FIGURE 4.7: Women's participation in top management positions is low



Source: Enterprise Surveys.

FIGURE 4.8: Firms managed by women have a higher proportion of women employees

Source: Enterprise Surveys.

staff.³⁷ Strikingly, women's participation in ownership is the only factor that helps to explain the probability of a firm having a woman as the top manager. In addition, in firms where the top manager has fewer years of experience, the same manager is more likely to be a woman (table A4.1, column 3).

Firm performance is not related to the gender of top managers, owners, or employees

A number of studies have shown that firms managed and owned by women tend to lag behind their male counterparts in terms of productivity, growth, and firm size.³⁸ This could be due to gender discrimination in obtaining finance or dealing with government, and prevailing laws that tend to favor men over women. MENA ES results provide no evidence of worse performance among firms managed or owned by women. Labor productivity and TFP levels, as well as growth rates of sales and employment, are not associated with the top manager's gender, the proportion of women employed, or the presence of at least one woman owner.³⁹ On the other hand, firms that have at least one woman owner are more likely to invest and innovate (columns 4 through 8 in table A4.1). Overall, performance does not help to explain the gender gap in entrepreneurship and management rates. The next question is therefore whether women experience a more hostile business environment compared with men, limiting the ability of women-owned and women-managed businesses to survive.

The business environment is not worse for women top managers and owners than for their male counterparts

Twenty-two objective measures and 17 subjective measures were used to detect potential differences in the business environment faced by firms with women top managers compared with firms with men top managers.⁴⁰ Only two indicators point to a worse business environment for women: the percentage of firms that spent on security; and security costs as a percentage of annual sales. In contrast, firms with women top managers enjoy a significantly better business environment according to indicators related to interactions with the government (meetings with or inspections by tax officials, time to obtain licenses). The picture does not change much when looking at firms with at least one woman among the owners compared with firms with all male owners.

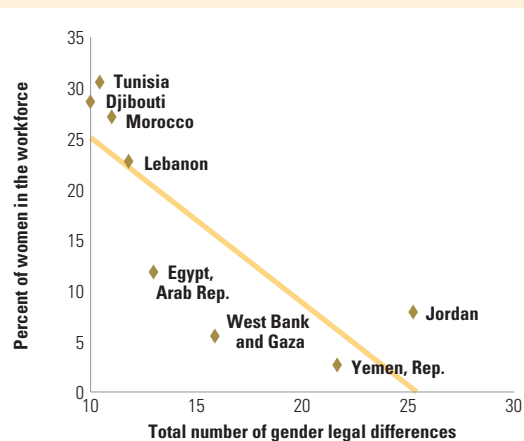
MENA ES data therefore contribute to the debate on the region's low participation of women in the labor market by ruling out the influence of firm performance or aspects of the business environment measured by the survey. The majority of such aspects are not affected by legal discrimination, as they refer to power outages, custom clearance waiting times, or bribes, for example. The results further corroborate the idea that the legal and social framework could instead play an important role in women's participation in the private sector.⁴¹ Furthermore, legal obstacles to starting a business may be such that only women who can navigate this environment are ultimately able to run a

business, and those women encounter fewer difficulties in certain areas of the business environment.

The role of the legal framework for women's employment and entrepreneurship

The WBL report shows that across the world, a higher number of legal gender differences is associated with more negative social and economic outcomes for women, such as a lower proportion of girls enrolled in secondary school compared with boys, a lower employment rate for women, and a more pronounced wage gap between men and women.⁴² The same report and other previous work using ES data show that more legal gender differences are also associated with a lower percentage of firms with a woman top manager and a lower percentage of women in a firm's workforce.⁴³ This is also true in the MENA ES economies, as figure 4.9 shows. These results, combined with the fact that the business environment—as measured by the survey indicators—does not seem to be a constraining factor for women's entrepreneurship, suggest that eliminating gender discrimination would lead to better integration of women in the economy and therefore contribute to the development of the private sector in the MENA ES economies.

FIGURE 4.9: More gender legal differences are associated with a lower percentage of women working in firms in the region



Source: Enterprise Surveys and Women, Business and the Law 2016.

THE FORMAL PRIVATE SECTOR'S CONTRIBUTION TO YOUTH EMPLOYMENT

Youth employment is greater in young, dynamic, and innovative firms

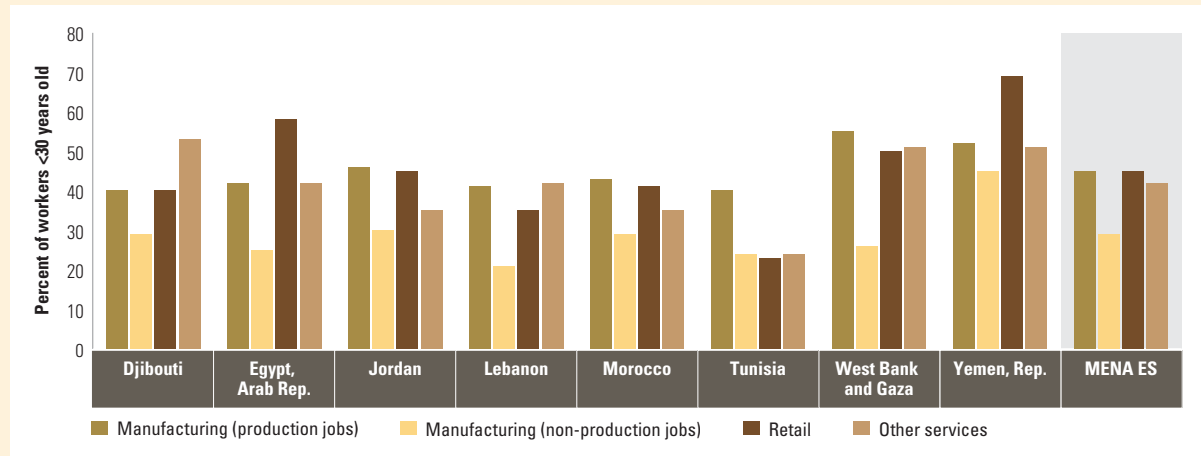
Youth employment is another major labor market challenge for the MENA region. On average across the MENA ES economies, labor force data show that young people between the ages of 15 and 29 represent 47 percent of the working-age population and 40 percent of the labor force.⁴⁴ Compared with a total unemployment rate of 13 percent in the region, unemployment among the young is more than double at 30 percent.⁴⁵

Previous research shows that unemployment in the MENA region is mostly due to difficulties in entering the labor market, since the majority of the unemployed are first-time jobseekers.⁴⁶ Hence, policies aimed at improving labor market flexibility for new entrants, facilitating information on entry-level jobs, and improving the linkages between the private sector and education institutions could be key avenues for addressing the issue of youth unemployment in the region.

The average share of workers under 30 in the formal private sector is 43 percent across the MENA ES economies. While there is no evidence of a systematic difference in youth employment across sectors (table A4.2, column 1), figure 4.10 shows that within manufacturing firms, a much smaller percentage of young people is employed in non-production jobs (29 percent) compared with production jobs (45 percent). Since non-production jobs in manufacturing firms typically require higher skills than production jobs,⁴⁷ this evidence potentially points toward a problem of skills mismatch for qualified young workers in the MENA ES economies.

Further indication of the skills mismatch problem for young workers comes from firms' propensity to provide training to their workers and the severity of inadequate worker education as an obstacle. In the MENA ES economies, firms with larger shares of young workers are more likely to provide training to their workers (table A4.3, column 1). This points to a skills mismatch problem with young workers since the need for training may arise because workers do not have the necessary skills for their job.

FIGURE 4.10: Fewer young people are employed in non-production manufacturing jobs than in other manufacturing or services jobs



Source: Enterprise Surveys.

In fact, the higher the share of university-educated employees the higher the probability of providing training (tables A4.3 column 2). In addition, firms that use proportionately more young workers are significantly more likely to report skills shortages as a very severe constraint (table A4.4). Thus, a closer alignment of education curricula with the requirements of industries is likely to improve job prospects for the young in the region.

The MENA ES results also indicate that firms that are younger or larger tend to employ proportionately more workers under 30 (table A4.2, column 1). This result, combined with the evidence that younger firms in the MENA ES economies create more jobs documented below and in previous work,⁴⁸ suggests that encouraging firm entry would help boost youth employment in the formal private sector.

The survey results also indicate that firms with proportionately more young employees are significantly more likely to increase employment, to invest in fixed assets and to innovate (table A4.2, columns 2–4). Although these results cannot be interpreted as evidence of a causal relationship, they seem to indicate the presence of a “virtuous circle” of young and innovative firms hiring younger employees and creating more jobs.

EMPLOYMENT DYNAMICS

Understanding the dynamics of employment or net job additions—jobs created minus jobs terminated—can provide useful insights on policy measures aimed at increasing job creation in the MENA region. Dynamic analysis using MENA ES data needs to be interpreted with caution: the data provide information only on growth rates for surviving firms, not for firms that exit the market. They also exclude very recent entrants and micro firms, which may affect the observed short-run growth rate of employment and any conclusions about the impact of policy measures or economic shocks. Nonetheless, understanding growth among surviving firms remains a useful starting point for analyzing long-run employment growth, the size distribution of existing firms, and the impact of the entry and exit patterns on surviving firms.⁴⁹

Young firms grow faster, but the average number of net jobs created is similar for young and old firms in the MENA ES economies

Consistent with the broader literature,⁵⁰ firm-level growth rates of employment in the MENA ES economies between 2009 and 2012 is much higher among relatively younger firms. For example, for a typical firm that has been operating for five years or fewer, employment grows on average by 9.4 percent per annum compared with only 1.7 percent for a typical firm older than five years.⁵¹ The total number of new jobs does not vary much between

TABLE 4.2: Firm transitions across size categories between 2009 and 2012

Average for the full sample			
Status in 2009	Status in 2012		
	Small (5-19)	Medium (20-99)	Large (100+)
Small (5-19 employees)	93%	7%	0%
Medium (20-99 employees)	14%	82%	4%
Large (100+ employees)	0%	9%	91%

Source: Enterprise Surveys.

young and old firms. The average number of net jobs added between 2009 and 2012 by firms under five years old is not significantly different from the result for older firms (3.1 and 4.6 permanent employees respectively).

Few firms expand or downsize over time

An extensive literature in labor economics suggests that the growth of firms over time reflects an important process of learning and selection, with some firms exiting and others growing, thereby improving aggregate firm productivity. The data show that firm dynamics in the MENA ES economies are weak. Relatively few firms moved from one size category (small, medium, or large) to another between 2009 and 2012.

This finding is illustrated in table 4.2, which summarizes the percentage of firms that move from one size category to another. Of the firms that were small in 2009, 93 percent were still small in 2012. Only 7 percent grew beyond 19 employees in 2012. Similarly, 82 percent of medium-sized firms and 91 percent of large firms remained in the same size category. These findings are consistent with the idea that distorted competition and privileged access to the government by some firms—known to be widely prevalent in the region—have blunted the dynamic forces that force firms to learn and grow over time.⁵² Although the employment transition matrix using ES data only considers surviving firms, the findings are in line with findings for Tunisia based on census data that also take account of firm exit (see box 4.1).

Medium-sized firms struggle to grow

Across the region, nearly 14 percent of firms that were medium-sized in 2009 became small in 2012, while only

4 percent became large (table 4.2).⁵³ In the Republic of Yemen, almost a third of firms that were medium-sized in 2009 became small in 2012, quite possibly due to the conflict. These findings stand in contrast with ES data on other lower-middle-income and upper-middle-income economies.⁵⁴ In lower-middle-income economies, only 6 percent of medium-sized firms became small after three years, while 4 percent became large. In upper-middle-income economies, 6 percent of medium-sized firms became small, while 7 percent became large.

This indicates that the period 2009–2012 may have been particularly difficult for medium-sized firms in the MENA ES region in the context of challenging economic and political circumstances. Despite this, labor productivity in 2009 seems to be positively associated with a higher probability of becoming a medium-sized or large firm in 2012 (table A4.5).⁵⁵ This suggests that productive firms were able to grow or maintain firm size despite political instability, which may have constrained greater growth.

Moreover, as stated in chapter 2, SMEs are at a disadvantage, since they are more negatively affected by the inefficiencies of the business environment. Measures to address these inefficiencies might also serve as drivers for more dynamic growth of such firms.

Between 2009 and 2012, growth was faster for more productive firms and slower for credit-constrained firms

In the MENA ES region, the employment growth rate between 2009 and 2012 is strongly associated with the labor productivity in 2009 (table A4.6), indicating that highly productive firms are able to generate new jobs at a faster rate than less productive firms, leading to the mostly positive employment growth rates presented in chapter 2.

Another important factor for firm performance and firm dynamics is access to finance. Using the definition of credit constraint introduced in chapter 3, the results in table A4.6 show that the growth rate of employment in firms in the MENA ES economies is significantly lower for firms that are credit-constrained compared with those that are not. The employment growth rate is also lower for firms that report that corruption is a major constraint on their operations. In addition to and in line with the economic literature discussing which firms create more jobs,⁵⁶ table

BOX 4.1: Comparing ES transition matrix data with census findings from Tunisia that include information on rates of firm exit

The ES data only consider firms that exist in 2012, and exclude firms that exited the market between 2009 and 2012. To help gauge the extent to which ES results may be biased by this fact, it is useful to compare the ES findings with recent findings for Tunisia that are based on census data and that also take account of firm exit.

Table B4.1.1 reproduces the employment transition matrix for Tunisian firms using census data over the period 2007-2011 and shows that the probability of exit is substantially larger for smaller firms: while only 6 percent of SMEs and large firms exited the market over this period, 9 percent of micro firms (2 to 9 employees) and 22 percent of one-person firms ceased to exist.^a

TABLE B4.1.1: Employment transition matrix for Tunisian firms between 2007 and 2011 using census data

Status in 2007	Status in 2011				
	Exited	1-person	Micro (2-9)	SME (10-99)	Large (100+)
1-person	22%	76%	2%	0%	0%
Micro (2-9)	9%	21%	67%	3%	0%
SME (10-99)	6%	11%	16%	63%	4%
Large (100+)	6%	11%	3%	15%	65%

Source: Schiffbauer and others (2015).

To make it comparable to the employment transition matrix for MENA ES, table B4.1.2 reweights the Tunisian census data to omit firms that exited the market and one-person firms that are not captured in MENA ES data. The firm size categories and the time period are

slightly different than the estimates reported in table 4.2 but this does not affect the results qualitatively.

TABLE B4.1.2: Reweighted employment transition matrix for Tunisian firms between 2007 and 2011 based on census data but excluding firm exit and 1-person firms

Status in 2007	Status in 2011		
	Micro (2-9)	SME (10-99)	Large (100+)
Micro (2-9)	96%	4%	0%
SME (10-99)	19%	76%	5%
Large (100+)	4%	18%	78%

Source: Calculations based on Schiffbauer and others (2015).

The estimates are very much in line with the ES data for Tunisia reported in table B4.1.3. This lends support to the finding that medium-sized firms in MENA ES are more likely to become small than grow to large size, in contrast with other regions of the world, despite the lack of data on firm exit.

TABLE B4.1.3: Employment transition matrix for Tunisian firms between 2009 and 2012 using ES data

Status in 2009	Status in 2012		
	Small (5-19)	Medium (20-99)	Large (100+)
Small (5-19)	94%	7%	0%
Medium (20-99)	11%	85%	4%
Large (100+)	0%	9%	91%

Source: Enterprise Surveys.

a Schiffbauer and others (2015).

A4.6 shows that younger and smaller firms have higher employment growth rates than older and larger firms.

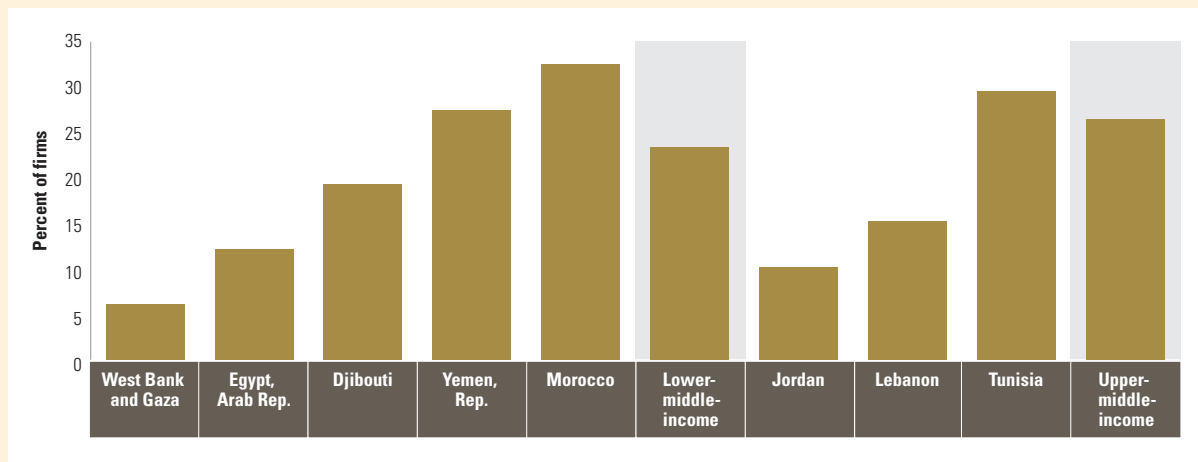
SKILLS, TRAINING, AND EMPLOYMENT

Despite massive improvement in enrollment rates in secondary and tertiary education, the quality of education in the MENA region remains poor, particularly in providing skills that are relevant for private sector employment.⁵⁷ A major problem in education systems seems to be a focus on competitive examinations as a screening mechanism mainly aimed at securing access to public sector employment. Technical and vocational education and training, which may be more suitable for private sector jobs, are associated with lower status. While there is a great

mismatch between the aspirations of graduates and the supply of rewarding jobs, it has also been argued that the region's education systems fail to provide private sector employers with employees with the relevant skills.

Surprisingly, the share of firms in the formal private sector that consider an inadequately educated workforce as a major or very severe obstacle in the MENA ES economies is relatively low.⁵⁸ Only in Morocco, Tunisia, and the Republic of Yemen is this share above the average levels in lower-middle-income and upper-middle-income economies (figure 4.11). Skills as an obstacle to firm growth are likely to have a cyclical component. During the period under study, the MENA ES economies experienced growth rates barely above population growth, making skills a less

FIGURE 4.11: The proportion of firms reporting an inadequately educated workforce as a major or very severe constraint



Source: Enterprise Surveys.

pressing issue. On the other hand, skill shortages may become more salient once these economies start to recover.

Skills-related constraints are seen as more severe by firms that have grown quickly

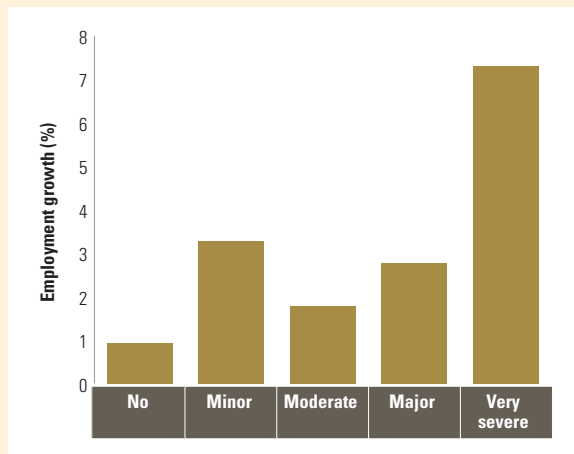
Figure 4.12A shows that firms that report an inadequately educated workforce as a very severe obstacle to their operations tend to have grown faster in the preceding

three years.⁵⁹ In other words, skill shortages seem to be a particular concern for those firms that may have the highest growth potential. Firms that view an inadequately educated workforce as a very severe obstacle also tend to employ a higher share of university-educated employees (see figure 4.12B).⁶⁰

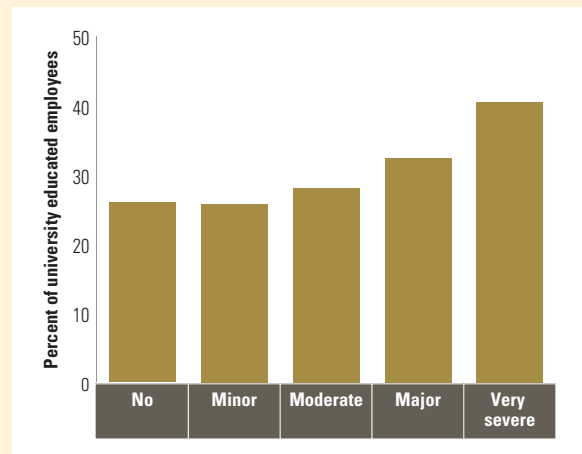
This could be interpreted in at least two different ways. First, it could be that the inadequacy of the workforce is

FIGURE 4.12: Skill shortages are a particular concern for firms that grow rapidly and that rely more on university-educated employees

PANEL A: Employment growth and an inadequately educated workforce as an obstacle to the enterprise



PANEL B: The share of university-educated employees and inadequately educated workforce as an obstacle to the enterprise



Source: Enterprise Surveys.

a problem for firms requiring higher levels of skills, therefore indicating a scarcity of workers with tertiary-level skills. Second, firms may have to resort to hiring more tertiary graduates to address the lack of skills in workers with lower levels of education, reflecting a problem in the education system.

Training provision is low in MENA ES economies

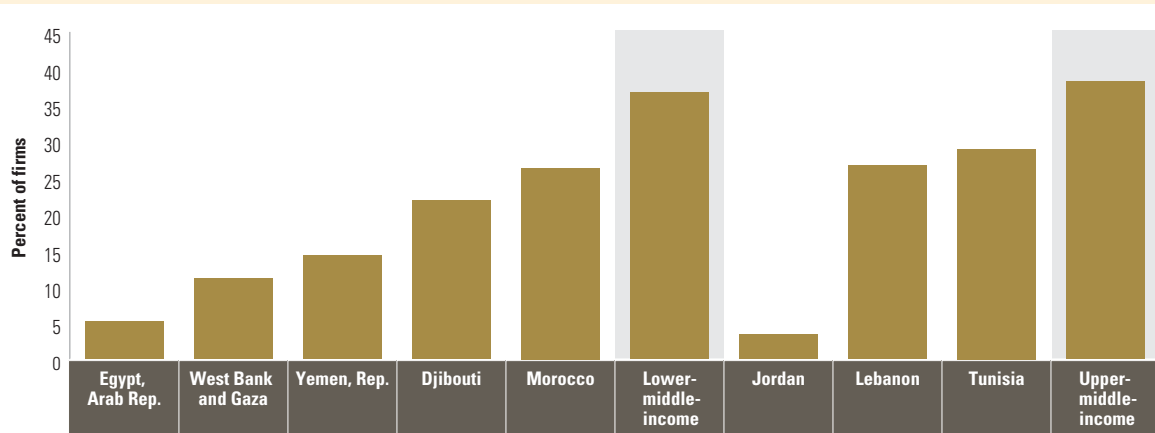
The education systems in the MENA ES economies have failed to provide the necessary skills required by the private sector. Training by the private sector could fill the gap left by the education system. Across the MENA ES economies, however, the intensity of training provided by firms is low. A higher proportion of firms provide training in Morocco, Tunisia, Lebanon, and Djibouti (ranging from 22 to 29 percent), but none of these economies exceeds the average shares of firms providing training in lower-middle-income and upper-middle-income economies at around 38 percent (figure 4.13). This is consistent with previous findings that although training plays a prominent role in active labor market programs in the region, it tends to be class-based rather than on-the-job, and supply-driven rather than coordinated with the private sector, thus diverging from international best practices.⁶¹

THE WAGE BILL PER WORKER IN THE FORMAL PRIVATE SECTOR

In addition to the number of jobs, the quality of jobs—in terms of wage rates—is also important, particularly for the MENA ES region where the private sector has failed to provide high-paying jobs to attract talent. Many in the region, especially young people, prefer to remain unemployed while seeking high-paying jobs in the public sector rather than taking up low-paying jobs offered by the private sector.⁶² This creates greater pressure on the government to provide more public sector jobs, adds to unemployment, and dries up the flow of talent to the private sector.

One narrative that has emerged in the MENA region as a whole is that inflexible wages, including formal and de facto wage floors, may limit employment mobility and exacerbate skill mismatches. One report finds that a “measurable share” of firms in Jordan and Egypt pay their workers less than the mandated minimum wage.⁶³ The same report notes that minimum wage rules and collective wage agreements at the sector level—which establish a negotiated wage minimum often linked to education level and seniority—are often shirked.⁶⁴ As these rules are often tied to education level, private sector employers “do not absorb an ever growing graduate population at the wages foreseen for graduates.”⁶⁵

FIGURE 4.13: Percent of firms offering formal training



Source: Enterprise Surveys.

A lens to evaluate these trends is provided by the total wage bill per worker. This is given by the total remuneration cost including wages, taxes, and social security payments divided by the number of employees at the firm level. To account for local cost adjustments, it is defined in terms of U.S. dollars adjusted for purchase power parity (PPP). While remuneration may reflect higher wages, it also includes taxes and social security contributions, which can vary substantially between firms and across economies.

More productive firms have higher wage bills per worker

Ideally, competitive forces should drive wages higher for more productive workers; but labor market imperfections suggest that ties between wages and worker productivity are not always watertight. In the MENA ES economies, more productive firms—on a sales per employee basis⁶⁶—do have significantly larger wage bills per worker, in line with previous research (table A4.7), and this holds in both lower-middle-income and upper-middle-income economies (table A4.8).⁶⁷

This dynamic may indicate that more productive firms in the MENA ES region also dedicate more of that revenue per worker toward total remuneration (and this relationship is higher in lower-middle-income economies, table A4.8). While this may be considered as a sign of sound labor markets on the surface, it is important to take account of the limited size of the formal private sector and consequently the possible scarcity of those fairly remunerated or high-productivity private sector jobs. Consequently, it is likely that many new entrants to the job market seek and are trained for public sector jobs—and not jobs in the private sector—due in part to a relative scarcity of fairly remunerated private sector jobs.⁶⁸

Relative to revenue, larger firms spend less on remuneration

A well-established finding in the literature is that large firms tend to pay their employees more.⁶⁹ This so-called “wage-size effect” has been linked to management quality, the capacity of larger firms to attract and recruit better employees, and issues of scale for larger firms that make it harder to monitor and evaluate employees.⁷⁰ This relationship can have important policy implications. If large

firms do pay higher wages, then encouraging a business environment that allows firms to scale up their operations will lead to higher living standards for workers as well as a more equitable distribution of income between owners of capital and labor.

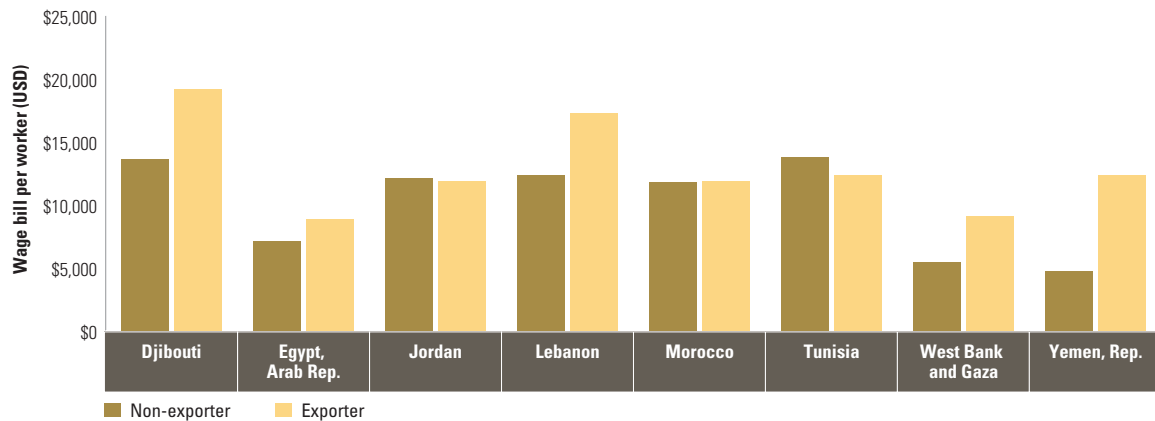
However, the MENA ES economies seem to defy this trend. Larger firms in the MENA ES economies do not dedicate a greater share of their revenues toward their wage bill; in fact, all else equal, larger firms tend to spend significantly *less* (table A4.7). This is consistent with the findings from chapter 2, which showed that larger firms are actually less labor-intensive (measured by the wage bill cost) relative to smaller ones.

One possible explanation is that larger firms tend to transfer a larger share of returns to remunerate capital rather than labor. Small firms may also adopt fewer labor-saving technologies, and so are more reliant on labor relative to their revenues, resulting in their higher average wage bill. Similarly, large firms may be able to leverage their market position or privileged status to drive down wages or other remuneration costs, including labor-related taxes. They may also be in a position to pay less given their comparably low labor demand (relative to other inputs) in an environment of high unemployment.

Higher wage bills are associated with university education in upper-middle-income MENA ES economies

A higher share of employees with tertiary education is also related directly to higher wage bills per worker in the upper-middle-income MENA ES economies: Tunisia, Lebanon, and Jordan (table A4.8). While this may be an indication of firms’ ability to recruit and pay skilled workers, it is also likely to be a consequence of education-tied wage levels in these economies and possibly driven by public sector policy. In contrast, the percentage of employees with a university degree is not tied to the average wage bill in lower-middle-income MENA ES economies, which is a possible indication of distortions in the labor market, low quality higher education, or skills mismatch.

Similarly, exporting firms that provide a large share of total jobs have a much higher wage bill per worker than non-exporting firms (figure 4.14). Lastly, the median wage bill per worker for firms more than 5 years old is higher than

FIGURE 4.14: The wage bill per worker is higher for exporting firms in most MENA ES economies than for non-exporting firms

Source: Enterprise Surveys.

in young firms in all the MENA ES economies with the exception of Morocco. On average across all the MENA ES economies, it equals US\$10,888 for old firms and a much lower US\$8,832 for the young firms.

POLICY CONCLUSIONS

Recent political upheaval as well as pressure on public budgets will limit public sector employment as a source of jobs in the MENA ES region. This means that the formal private sector will need to play an increasingly important role in providing critically needed jobs.

Large firms provide the majority of jobs in the formal private sector employment, compared with formal SMEs. They are also more productive, though their activities are skewed toward inefficiently high capital intensity, with associated lower remuneration of labor. At the same time, SMEs in the region typically fail to grow. Given that distorting incentives may favor capital at the cost of labor and that the SMEs seem to be more penalized by the business environment, carefully assessing current policies, removing privileges, and more generally supporting competition may have implications for inclusive growth.

Fast-growing firms are also those that have higher productivity, possibly indicating a partial reallocation of jobs toward more productive firms. Fostering such firms can encourage the development of the private sector as a whole. While fast-growing firms are more likely to invest

in the formal training of employees, they are also more likely to complain about the adequacy of workforce education levels. Skill shortages are striking in the context of the high share of university educated young people in the region. There seems to be evidence of a mismatch between the skills learned in the formal education process and those required by the business community, indicating the need for more effective training.

Policies should not constrain firm growth or discourage new firm entry. In some MENA ES economies, burdensome regulations for start-up businesses may prevent new and dynamic firms from entering the market. Well-heeled firms can take advantage of a lack of competitive forces to extract rents and reduce overall efficiency. Other forces that hamper competition (such as privileged access to markets, licensing and contracts) would have similar effects.

While lowering the barriers to entry for new (possibly more efficient and competitive firms) is one avenue for employment growth, ensuring that future job creation is inclusive of women and young people is another. Inclusive growth is important not just for economic or egalitarian reasons, but also for ensuring greater political stability and for coping with cross-border migration and the refugee crisis currently affecting the region.

The MENA ES economies are characterized by lower rates of women's employment, management, and private

sector ownership compared with the rest of the world. The benefits of job growth will be limited if women are prevented from being employees or employers, either through restrictions on jobs they can do or on their access to real assets. Similarly, women's employment is higher in labor-intensive sectors and among exporting firms. An expansion of labor-intensive and exporting sectors may help to provide more jobs for women, but more opportunities are also needed in capital-intensive sectors to reduce sector segregation and women's greater vulnerability to external shocks to the economy.

Likewise, young jobseekers and newly employed workers in the region must be in a position to be well integrated into the private sector. Young, fast-growing, and innovative firms tend to employ a greater share of young workers. Ensuring the entry and growth of such firms will likely have knock-on effects on youth employment. A re-orientation of education and training systems toward learning skills that are relevant for private sector employment, with greater status given to vocational training, will be likely to facilitate growth of high quality employment in the region. Similarly, creating conditions that allow larger firms to provide greater remuneration to employees—or allowing better-remunerated small firms to add jobs—will attract talented workers into the private sector.

Endnotes

- 1 See, for example, ILO (2013), World Bank (2013a), ILO-KILM Database, via World Bank (2013a), World Bank (2011).
- 2 World Bank (2004).
- 3 World Bank (2011).
- 4 Schiffbauer and others (2015).
- 5 See, for example, World Bank (2011, 2013a).
- 6 ILO (2014).
- 7 See, for example, World Bank (2013a).
- 8 See, for example, World Bank (2013a) and Devarajan and others (2014).
- 9 World Bank (2013a).
- 10 See, for example, Devarajan and others (2014).
- 11 Ayyagari and others (2014) and Aga and others (2015)).
- 12 Schiffbauer and others (2015) and Rijkers and others (2014) note, for example, that outside of micro firms, which are not included in the MENA ES data, large firms are the second largest source of private sector employment.
- 13 Distributions for MENA ES and comparators are based on the coverage of the ES and therefore they exclude the micro sector—less than 5 employees—and the informal or unregistered sector.
- 14 Hsieh and Klenow (2012).
- 15 See for example, Pages and others (2009) and Haltiwanger and others (2014).
- 16 See Rijkers and others (2014) or Diwan and others (2015).
- 17 Schiffbauer and others (2015).
- 18 The methodology of the ES can introduce a downward bias to the contribution of young firms as samples are drawn from sampling frames that typically are several years old. In the MENA ES project, however, most sampling frames were current and whenever older frames were used—the oldest dating to 2012—the frame was updated with current listings of firms operating in the economy.
- 19 One caveat of these results is that firms are randomly drawn from a sample frame that often necessarily omits the youngest start-ups, having an upward age bias.
- 20 Figures are based on *Doing Business 2013*.
- 21 Micro firms are defined as those registered firms with less than 5 employees and informal firms are unregistered firms.
- 22 Schiffbauer and others (2015), World Bank (2014).
- 23 Chapter 5 discusses various issues related to exporting firms in more detail.
- 24 The UNDP's Gender Inequality Index includes measures of reproductive health, empowerment and labor market participation. A low value indicates low inequality between women and men. The scores for the different regions in 2014 were: 0.317 for ECA, 0.331 for EAP, 0.416 for LAC, 0.539 for SAR, 0.546 for MENA, and 0.578 for AFR (UNDP 2014).
- 25 World Bank (2013b).
- 26 See World Bank (2013b), Verme (2014).
- 27 To compare ES micro data to aggregate indicators from other sources, such as labor force statistics, the average percentage of women employed in the formal private sector as a whole was calculated as the weighted sum of all female employees across all firms, divided by the total number of employees in all firms. In all other instances in this section, the percentage of women in the workforce refers to the firm-level average. Labor force data from ILOSTAT: 2013 for West Bank and Gaza; 2012 for Morocco, Tunisia; 2010 for Egypt; 2007 for Lebanon; 2004 for Jordan; 1999 for the Republic of Yemen. Data are not available for Djibouti.
- 28 The methodology is also very different between the ES data and labor force data. The latter are typically based on surveys of the population.

- 29 The World Bank (2013b) report indicated that in many MENA economies, unemployment rates among women aged 15–24 were around 50 percent compared with 10 percent to 20 percent for men of the same ages. At the same time, the report highlights that women in MENA economies tend to consider employment in the public sector preferable to a job in the private sector (p. 20).
- 30 See Joeques (1995), Bardasi and others (2011), Amin and Islam (2014).
- 31 Manufacturing sectors are classified as follows, based on Xu (2003). High labor intensity: wearing apparel, leather, furniture; moderate labor intensity: wood products, publishing, printing; low labor intensity: food, tobacco, textiles, paper and paper products, rubber and plastics, machinery and equipment, electrical machinery and apparatus, motor vehicles, transport equipment, other manufacturing; very low labor intensity: coke, refined petroleum products and nuclear fuel, chemicals and chemical products, basic metals, fabricated metal products, other non-metallic mineral products.
- 32 For example, Amin and Islam (2015, 2016) show provision of paternity leave and presence of laws prohibiting discrimination against women in hiring practices as defined by World Bank's Women, Business and Law (WBL) data boost women's employment prospects.
- 33 See Amin and others (2015) and papers cited therein.
- 34 That is, firms that export more than 10 percent of their sales compared with firms that export less than 10 percent or do not export at all.
- 35 Result from an OECD (2014) report using data from the Global Entrepreneurship Monitor (GEM).
- 36 World Bank (2015).
- 37 See Carrington and Troske (1995) and (1998); Huffman and others (2010); Giuliano and others (2006); Kurtulus and Tomaskovic-Devey (2012).
- 38 See, for example, Brush (1992) and Sabarwal and Terrell (2008).
- 39 Estimates of total factor productivity are available for manufacturers only. Chapter 2 provides details on how these estimates are obtained.
- 40 The 22 objective measures cover areas including the quality of power supply, water shortages, waiting time to obtain various licenses and permits, customs delays (in exporting and importing goods), bribes paid or asked for in dealing with government officials, inspections and meetings with tax officials, time spent by senior management of the firm in dealing with business regulations (time tax), crime and security losses (incidence and cost). The 17 subjective measures include the firm's perception on the amount of bribes paid to public officials by other firms like itself to get things done, and whether or not the following is a major obstacle for the firm's operations—electricity, transport, telecommunications, labor laws, lack of skilled workers, corruption, courts, access to finance, tax rates, tax administration, customs and trade regulations, competition from informal sector firms, access to land, crime and security, obtaining licenses and permits, and regulatory policy uncertainty.
- 41 World Bank (2013b).
- 42 World Bank (2015).
- 43 Amin and Islam (2015).
- 44 Labor force data from ILOSTAT: 2013 for West Bank & Gaza; 2012 for Morocco, Tunisia; 2010 for Egypt; 2007 for Lebanon; 2004 for Jordan; 1999 for the Republic of Yemen (no data available for Djibouti). Population data: authors' calculation from UN Population Division *World Population Prospects: The 2012 Revision* (no data available for West Bank and Gaza).
- 45 Data from World Development Indicators (2013). Youth category refers to labor force participants between 15 and 24 years old.
- 46 Kabbani and Kothari (2005).
- 47 Berndt, Morrison and Rosenblum (1992), Davis and Haltiwanger (1991).
- 48 Schiffbauer and others (2015).
- 49 See, for example, the large literature on the size distribution of surviving firms and its economic implications following the seminal work of Gibrat (1931).
- 50 See, for example, Haltiwanger and others (2013) and Ayyagari and others (2011, 2014).
- 51 This results holds after accounting for firm characteristics.
- 52 See Rijkers and others (2014) and Schiffbauer and others (2015).
- 53 The finding that medium-sized firms were more likely to reduce their size and become small firms (than increase size and become large firms) between 2009 and 2012 also holds in a regression that controls for firm characteristics—including age, economy, sector and locality.
- 54 The time period for the transition matrices for the MENA ES economies and other ES economies are different. Hence, some caution is needed in comparing these.
- 55 The results in Table A4.5 are qualitatively similar when total factor productivity in 2012 is used in the analysis instead of labor productivity in 2009. In other words, firms that were medium-sized in 2009 and are less productive are more likely to become small in 2012, while medium-sized firms that have higher total factor productivity are more likely to maintain or expand their size.
- 56 See, for example, Schiffbauer and others (2015, pp.25-26) and the references therein.
- 57 World Bank (2013a).
- 58 Firms in MENA have to report the severity of the obstacle on a scale ranging from 0 to 4 where "no obstacle" is coded as 0 and "very severe obstacle" as 4.

- 59 The positive relationship between employment growth and reporting inadequately educated workforce as an obstacle holds when using the scale 0-4 as presented in figure 4.13A and when controlling for firm characteristics and economy fixed effects.
- 60 The relationships in figure 4.12 hold after accounting for firm and economy characteristics.
- 61 World Bank (2013a).
- 62 See, for example, Devarajan and others (2014) and World Bank (2013a).
- 63 World Bank (2013a).
- 64 *Ibid.* Musette and Mohamed-Meziani (2011).
- 65 World Bank (2013a).
- 66 Estimations are only provided for labor productivity as total wage bill cost is the main factor input for TFPR.
- 67 See, for example, Haltiwanger and others (1999), Haltiwanger and others (2007) and Dunne and others (2004).
- 68 World Bank (2013a).
- 69 These findings are expansive and build on the seminal work of Brown and Medoff (1989), using data from the U.S.
- 70 For a detailed discussion see Idson and Oi (1999).

APPENDIX A4

TABLE A4.1: Percentage of women workers, probability of a firm having a woman owner or top manager, and key performance indicators

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Female full-time workers (%)	Female participation in ownership (Y/N)	Female top manager (Y/N)	Labor productivity (log)	Real annual sales growth (%)	Annual employment growth (%)	Purchase of fixed assets in last FY (Y/N)	Innovator (Y/N)
Size (log)	0.80 (0.605)	0.07* (0.038)	-0.08 (0.052)	-0.03 (0.040)	1.90*** (0.560)	3.02*** (0.398)	0.32*** (0.040)	0.19*** (0.040)
Age (log)	-0.91 (0.803)	0.10* (0.059)	0.07 (0.079)	0.01 (0.061)	-1.85* (1.103)	-4.02*** (0.857)	-0.17*** (0.056)	0.00 (0.056)
High labor intensity manufacturing (Y/N)	8.40*** (2.624)	0.06 (0.163)	0.03 (0.179)	-0.76*** (0.193)	-4.06 (2.937)	-3.34 (2.266)	-0.55** (0.213)	0.11 (0.151)
Moderate labor intensity manufacturing (Y/N)	1.27 (3.289)	-0.09 (0.239)	0.20 (0.416)	-0.68*** (0.227)	1.24 (2.898)	0.49 (2.282)	0.01 (0.240)	0.30 (0.259)
Very low labor intensity manufacturing (Y/N)	-7.01*** (2.083)	-0.14 (0.151)	-0.19 (0.266)	-0.02 (0.166)	-0.75 (3.025)	1.07 (1.480)	-0.18 (0.164)	0.06 (0.147)
Retail (Y/N)	5.00** (2.313)	0.00 (0.136)	-0.03 (0.193)	0.16 (0.163)	-4.54* (2.401)	0.06 (1.509)	-0.12 (0.143)	-0.27* (0.147)
Other services (Y/N)	1.34 (1.949)	0.01 (0.113)	-0.19 (0.164)	-0.26* (0.157)	-3.66 (3.113)	0.50 (1.127)	-0.16 (0.144)	-0.17 (0.114)
Exporter (Y/N)	3.84** (1.492)	0.09 (0.117)	-0.03 (0.173)	0.18* (0.103)	0.39 (1.569)	-1.07 (1.200)	-0.09 (0.115)	0.15 (0.118)
Capital/main business city (Y/N)	4.32*** (1.619)	0.08 (0.098)	0.29* (0.163)	0.43*** (0.132)	-1.01 (2.164)	1.20 (1.040)	0.16 (0.125)	-0.21** (0.101)
Manager experience (years)	-0.05 (0.053)	0.00 (0.004)	-0.03*** (0.008)	0.00 (0.005)	-0.17** (0.080)	-0.12** (0.045)	0.00 (0.004)	0.00 (0.005)
Djibouti (Y/N)	10.54*** (2.808)	0.17 (0.153)	0.22 (0.202)	0.07 (0.184)	12.81*** (4.008)	6.84*** (1.555)	0.77*** (0.170)	0.91*** (0.157)
Jordan (Y/N)	-4.69** (1.875)	-0.03 (0.161)	-0.93*** (0.285)	0.14 (0.147)	7.30*** (1.688)	6.13*** (1.432)	0.34* (0.189)	0.25 (0.169)
Lebanon (Y/N)	11.06*** (2.238)	0.77*** (0.146)	-0.79*** (0.276)	0.90*** (0.154)	9.02*** (2.928)	5.58*** (1.554)	1.08*** (0.160)	0.82*** (0.155)
Morocco (Y/N)	14.09*** (1.907)	0.45*** (0.118)	-0.38* (0.201)	0.49*** (0.163)	10.25*** (2.074)	6.69*** (1.177)	0.87*** (0.143)	0.65*** (0.139)
Tunisia (Y/N)	17.72*** (2.056)	0.96*** (0.123)	-0.22 (0.212)	0.81*** (0.123)	1.19 (2.194)	2.82** (1.273)	0.99*** (0.146)	0.50*** (0.132)
West Bank And Gaza (Y/N)	-3.22 (2.177)	-0.04 (0.184)	-0.88** (0.412)	-0.09 (0.139)	14.25*** (2.866)	10.47*** (1.703)	0.90*** (0.158)	0.40*** (0.154)
Yemen, Rep. (Y/N)	-4.75** (2.183)	-0.46** (0.191)	-0.47 (0.316)	-0.86*** (0.288)	-0.52 (7.148)	-1.02 (1.786)	0.89*** (0.289)	1.09*** (0.124)
Female participation in ownership (Y/N)	0.03** (0.015)		0.01*** (0.002)	0.00 (0.001)	0.00 (0.015)	-0.02 (0.011)	0.00** (0.001)	0.00** (0.001)
Female top manager (Y/N)	0.14*** (0.036)			-0.00* (0.002)	0.01 (0.025)	-0.01 (0.017)	0.00 (0.002)	0.00 (0.002)
Female full time workers (%)				0.00 (0.003)	0.04 (0.034)	0.00 (0.018)	0.00 (0.002)	0.00 (0.002)
Constant	7.28** (2.834)	-1.54*** (0.197)	-1.41*** (0.244)	10.88*** (0.186)	-2.24 (3.739)	3.02 (2.141)	-1.60*** (0.190)	-1.39*** (0.180)
Observations	5,077	5,625	5,624	4,553	3,697	4,476	5,048	5,034

Source: Enterprise Surveys.

Note: Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. Innovator means the firm has introduced a new or significantly improved product, service, or process. Manufacturing sectors are classified as follows, based on Xu (2003): High labor intensity: wearing apparel, leather, furniture; moderate labor intensity: wood products, publishing, printing; low labor intensity: food, tobacco, textiles, paper and paper products, rubber and plastics, machinery and equipment, electrical machinery and apparatus, motor vehicles, transport equipment, other manufacturing; very low labor intensity: coke, refined petroleum products and nuclear fuel, chemicals and chemical products, basic metals, fabricated metal products, other non-metallic mineral products. All regressions control for a dummy variable indicating whether at least 10 percent of the firm is owned by foreign agents and economy fixed effects. Ordinary least squares regression coefficients reported for columns 1, 4, 5, 6; probit regression coefficients reported for columns 2, 3, 7 and 8.

TABLE A4.2: Percentage of workers under 30 and key performance indicators

Dependent variable	(1)	(2)	(3)	(4)
	Percentage of workers under 30	Annual employment growth (%)	Purchase of fixed assets in last FY (Y/N)	Innovator (Y/N)
Size (log)	3.39*** (0.819)	2.84*** (0.455)	0.33*** (0.045)	0.18*** (0.048)
Age (log)	-8.52*** (1.231)	-2.84*** (0.896)	-0.18*** (0.063)	0.01 (0.067)
High labor intensity manufacturing (Y/N)	-0.56 (2.989)	-3.10 (2.276)	-0.50** (0.228)	0.12 (0.167)
Moderate labor intensity manufacturing (Y/N)	-1.87 (3.234)	2.95 (2.788)	0.08 (0.278)	0.21 (0.331)
Very low labor intensity manufacturing (Y/N)	-0.22 (3.641)	1.83 (1.597)	0.10 (0.199)	0.32* (0.194)
Retail (Y/N)	-1.44 (2.937)	0.73 (1.613)	-0.03 (0.159)	-0.34** (0.163)
Other services (Y/N)	-3.27 (2.652)	1.42 (1.193)	-0.04 (0.155)	-0.16 (0.135)
Percentage of under 30		0.06*** (0.02)	0.01*** (0.002)	0.01** (0.002)
Constant	52.81*** (4.147)	-2.16 (2.532)	-1.92*** (0.246)	-1.55*** (0.239)
Observations	4,149	3,689	4,135	4,115

Source: Enterprise Surveys.

Note: Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. Innovator means the firm has introduced a new or significantly improved product, service, or process. Manufacturing sectors are classified as follows, based on Xu (2003): High labor intensity: wearing apparel, leather, furniture; moderate labor intensity: wood products, publishing, printing; low labor intensity: food, tobacco, textiles, paper and paper products, rubber and plastics, machinery and equipment, electrical machinery and apparatus, motor vehicles, transport equipment, other manufacturing; very low labor intensity: coke, refined petroleum products and nuclear fuel, chemicals and chemical products, basic metals, fabricated metal products, other non-metallic mineral products. All regressions control for dummy variables indicating if there is at least one woman among the owners, if the top manager of the firm is a woman, if at least 10 percent of the firm is owned by foreign agents, if at least 10 percent of annual sales of the firm are made abroad, and they control for the years of experience the top manager of the firm has working in the industry, and economy fixed effects. Ordinary least squares regression coefficients reported for columns 1 and 2; probit regression coefficients reported for columns 3 and 4.

TABLE A4.3: Probability of offering training

Dependent variable	Formal training (Y/N)	
	(1)	(2)
Proportion of workers younger than 30	0.66*** (0.235)	0.61** (0.241)
Share of university educated employees		0.79*** (0.215)
Constant	-2.21*** (0.264)	-2.30*** (0.272)
Number of observations	4,461	4,331

Source: Enterprise Surveys.

Note: Simple probit estimations using survey-weighted observations (using Stata's svy prefix). Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. Variables omitted from the table: Foreign ownership, exports, young firms, firm size, manager university education, manager experience, sector, locality, and economy fixed effects.

TABLE A4.4: Probability of reporting skill shortages as a constraint

Dependent variable	Inadequately educated workforce a very severe constraint (Y/N)
Proportion of workers younger than 30	0.67** (0.292)
Constant	-2.84*** (0.383)
Number of observations	4,386

Source: Enterprise Surveys.

Note: Simple OLS estimations using survey-weighted observations (using Stata's svy prefix). Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. Variables omitted from the table: Foreign ownership, exports, young firms, firm size, manager university education, manager experience, sector, locality, and economy fixed effects.

TABLE A4.5: More productive firms are more likely to expand in size

Dependent variable	(1)	(2)	(3)
	Small firm in 2012 (Y/N)	Medium firm in 2012 (Y/N)	Large firm in 2012 (Y/N)
Log of labor productivity (PPP) in 2009	-0.16*** (0.041)	0.09** (0.035)	0.19*** (0.049)
Small (5-19 employees) in 2009 (Y/N)	2.64*** (0.119)	-2.40*** (0.105)	-1.66*** (0.238)
Large (+100 employees) in 2009 (Y/N)	-3.07*** (0.364)	-2.29*** (0.137)	3.13*** (0.156)
Young firms (0-10 years) (Y/N)	-0.08 (0.119)	0.09 (0.11)	-0.08 (0.162)
Constant	0.87* (0.477)	-0.37 (0.413)	-3.49*** (0.586)
Number of observations	4,365	4,365	4,365

Source: Enterprise Surveys.

Note: PPP—purchasing power parity. The regressions include controls for economy, sector and locality fixed effects. Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. Profit regression coefficients are reported.

TABLE A4.6: The rate of growth of employment is lower for firms that have lower initial labor productivity level and for credit-constrained firms

	Annual employment growth (%)
Credit-constrained (partially and fully) (Y/N)	-4.06*** (1.399)
Log of labor productivity (PPP) winsorized, 3 FY ago	1.26*** (0.382)
Corruption: major constraint (Y/N)	-1.99** (0.997)
Small firms (based on size 3 FY ago) (Y/N)	6.81*** (1.419)
Large firms (based on size 3 FY ago) (Y/N)	1.71 (1.273)
Young firms (0-10 years) (Y/N)	3.52*** (1.309)
Constant	-18.19*** (5.075)
Sample size	3,911
R-squared	0.171

Source: Enterprise Surveys.

Note: OLS regressions. Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. The regressions include controls for economy, 2-digit sector and locality fixed effects.

TABLE A4.7: The wage-size effect in the MENA ES region

Dependent variable	Log (Average wage bill, PPP-adjusted)	
	(1)	(2)
Size (log)	-0.06** (0.031)	-0.09*** (0.033)
Age (log)		0.07*** (0.035)
Labor productivity (2012 USD)		0.39*** (0.033)
Manager has university education (Y/N)		-0.03 (0.074)
Percentage of workers with university degree		0.14 (0.133)
Formal training (Y/N)		0.13 (0.080)
Constant	9.74*** (0.232)	5.41*** (0.440)
Observations	5,348	4,668
R-squared	0.166	0.376

Source: Enterprise Surveys.

Note: OLS regressions. Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. Economy and 2-digit sector fixed effects not shown.

TABLE A4.8: The wage-size effect in the MENA ES region

Dependent variable: Log (Average wage bill, PPP-adjusted)	Lower-middle-income		Upper-middle-income	
	(1)	(2)	(3)	(4)
Size (log)	-0.10** (0.047)	-0.12*** (0.046)	-0.03 (0.034)	-0.06 (0.042)
Age (log)		0.08 (0.051)		0.06 (0.036)
Labor productivity (2012 USD)		0.43*** (0.042)		0.29*** (0.048)
Manager has university education (Y/N)		-0.06 (0.114)		0.04 (0.080)
Percentage of workers with university degree		0.00 (0.171)		0.38** (0.167)
Formal training (Y/N)		0.17 (0.112)		0.09 (0.110)
Constant	9.85*** (0.271)	5.07*** (0.574)	9.57*** (0.228)	6.25*** (0.520)
Observations	3,782	3,207	1,566	1,461
R-squared	0.152	0.387	0.039	0.198

Source: Enterprise Surveys.

Note: OLS regressions. Standard errors in parentheses. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. Economy and 2-digit sector fixed effects not shown.

REFERENCES

- Aga, Gemechu, David. C. Francis, and Jorge Rodriguez Meza. 2015. "SMEs, age, and jobs: A review of the literature, metrics, and evidence." World Bank Policy Research Working Paper No. 7493, World Bank, Washington, DC.
- Amin, Mohammad and Asif Islam. 2014. "Are there more female managers in the retail sector? Evidence from survey data in developing countries." *Journal of Applied Economics*, 17(2): 213-28.
- Amin, Mohammad and Asif Islam. 2015. "Does mandating nondiscrimination in hiring practices influence women's employment? Evidence using firm-level data." *Feminist Economics*, 21(4): 28-60.
- Amin, Mohammad, Asif Islam, and Khrystyna Kushnir. 2015. "Do exports hurt or help women employment in developing economies? Evidence using firm-level data." Mimeograph. Washington DC: World Bank.
- Ayyagari, Meghana, Asli Demirgüç-Kunt, and Vojislav Maksimovic. 2011. "Small vs. young firms across the world: Contribution to employment, job creation, and growth." World Bank Policy Research Working Paper No. 5631, World Bank, Washington, DC.
- Ayyagari, Meghana, Asli Demirgüç-Kunt, and Vojislav Maksimovic. 2014. "Who creates jobs in developing countries?" *Small Business Economics* 43(1): 75-99.
- Bardasi, Elena, Shwetlana Sabarwal, and Katherine Terrell. 2011. "How do female entrepreneurs perform? Evidence from three developing regions." *Small Business Economics* 37(4):417-41.
- Berndt, Ernst R., Catherine J. Morrison, and Larry S. Rosenblum. 1992. "High-tech capital formation and labor composition in US manufacturing industries: an exploratory analysis." NBER Working Paper No. 4010.
- Brown, Charles, and James Medoff. 1989. "The employer size-wage effect." *Journal of Political Economy* 97(5): 1027-59.
- Brush, Candida G. 1992. "Research on women business owners: Past trends, a new perspective and future directions." *Entrepreneurship Theory and Practice* 16(4): 5-30.
- Carrington, William J., and Kenneth R. Troske. 1995. "Gender segregation in small firms." *Journal of Human Resources* 30(3): 505-33.
- . 1998. "Sex segregation in U.S. manufacturing." *Industrial and Labor Relations Review* 51(3): 445-64.
- Crivelli, Ernesto, Davide Furceri and Joël Toujas-Bernat. 2012. "Can policies affect employment intensity of growth? A cross-country analysis." IMF Working Paper No. WP/12/218, International Monetary Fund (IMF), Washington, DC.
- Davis, Steve J., and John Haltiwanger. 1991. "Wage dispersion between and within U.S. manufacturing plants, 1963-1986," *Brookings Papers on Economic Activity: Microeconomics*, (1991): 115-200.
- Devarajan, Shanta, and Lili Mottaghi. 2014. "Predictions, Perceptions and Economic Reality—Challenges of seven Middle East and North Africa countries described in 14 Charts" Middle East and North Africa Quarterly Economic Brief, (July), World Bank, Washington, DC.
- Diwan, Ishac, Phillip Keefer, and Marck Schiffbauer. 2015. "Pyramid capitalism: Political connections, regulation, and firm productivity in Egypt." World Bank Policy Research Working Paper No. 7354. Washington DC: World Bank.
- Dunne, Timothy, Lucia Foster, John Haltiwanger, and Kenneth R. Troske. 2004. "Wage and productivity dispersion in United States manufacturing: The role of computer investment." *Journal of Labor Economics* 22(2): 397-430.
- Gibrat, Robert. 1931. *Les inégalités économiques; applications: aux inégalités des richesses, à la concentration des entreprises, aux populations des villes, aux statistiques des familles, etc., d'une loi nouvelle, la loi de l'effet proportionnel*. Paris: Librairie du Recueil Sirey.
- Giuliano, Laura, Jonathan Leonard, and David I. Levine. 2006. "Do race, gender, and age differences affect manager-employee relations? An analysis of quits, dismissals, and promotions at a large retail firm." Institute for Research on Labor and Employment Working Paper No. 151-07. University of California, Berkeley, CA.
- Haltiwanger, John, Julia Lane, and James Spletzer. 2007. "Wages, productivity, and the dynamic interaction of businesses and workers." *Labour Economics* 14(3): 575-602.
- . 1999. "Productivity differences across employers: The roles of employer size, age, and human capital." *American Economic Review*, Papers and Proceedings 89(2): 94-98.
- Haltiwanger, John, Ron Jarmin, and Javier Miranda. 2013. "Who creates jobs? Small vs. large vs. young." *The Review of Economics and Statistics* 95(2): 347-361.
- Haltiwanger, John, Stefano Scarpetta, and Helena Schweiger. 2014. "Cross country differences in job reallocation: The role of industry, firm size and regulations." *Labour Economics* 26(1): 11-25.
- Huffman, Matt L., Philip N. Cohen, and Jessica Pearlman. 2010. "Engendering change: Organizational dynamics and workplace gender desegregation, 1975-2005." *Administrative Science Quarterly* 55(2):255-77.
- ILO. 2013. *Global Employment Trends 2013: Recovering from a Second Jobs Dip*, International Labour Organization (ILO), Geneva.

- ILO. 2014. *Global Employment Trends 2014: Risk of a jobless recovery?* International Labour Organization (ILO), Geneva.
- Joekes, Susan. 1995. "Trade-related employment for women in industry and services in developing countries." Occasional Paper 5, Geneva: United Nations Research Institute for Social Development.
- Kabbani, Nader, and Ekta Kothari. 2005. "Youth employment in the MENA region: A situational assessment." *World Bank Social Protection Discussion Paper* 534. Washington DC: World Bank.
- Kurtulus, Fidan Ana, and Donald Tomaskovic-Devey. 2012. "Do female top managers help women to advance? A panel study using EEO-1 records." *The ANNALS of the American Academy of Political and Social Science* 639(1): 173-197.
- OECD. 2014. *Women in Business 2014: Accelerating Entrepreneurship in the Middle East and North Africa Region*, Paris: OECD Publishing.
- Idson, Todd L., and Walter Y. Oi. 1999. "Workers are more productive in large firms." *American Economic Review* 89(2): 104-108.
- Pagés, Carmen, Gaëlle Pierre, and Stefano Scarpetta. 2009. *Job creation in Latin America and the Caribbean: Recent trends and policy challenges*. World Bank, Washington DC.
- Rijkers, Bob, Caroline Freund, and Antonio Nucifora. 2014. "All in the family: State capture in Tunisia." Policy Research Working Paper Series 6810. Washington, DC: World Bank.
- Sabarwal, Shwetlana, and Katherine Terrell. 2008. "Does gender matter for firm performance? Evidence from Eastern Europe and Central Asia." Policy Research Working Paper Series No. 4705, World Bank, Washington DC.
- Schiffbauer, Marc, Abdoulaye Sy, Sahar Hussain, Hania Sahnoun, and Philip Keefer. 2015. *Jobs or Privileges: Unleashing the Employment Potential of the Middle East and North Africa*. Washington, DC: World Bank.
- Verme, Paolo. 2014. "Economic development and female labor participation in the Middle East and North Africa: A test of the U-shape hypothesis," Policy Research Working Paper 6927, World Bank, Washington, DC.
- Xu, Bin. 2003. "Capital abundance and developing country production patterns." University of Florida, Department of Economics. <http://www.ceibs.edu/faculty/xubin/Puzzle.pdf>
- World Bank. 2004. *Unlocking the Employment Potential in the Middle East and North Africa: Toward a New Social Contract*. Washington DC: World Bank.
- World Bank. 2011. *Investing for Growth and Jobs*. Washington DC: World Bank.
- World Bank. 2013a. *Jobs for Shared Prosperity: Time for Action in the Middle East and North Africa*. Washington DC: World Bank.
- World Bank. 2013b. *Opening Doors: Gender Equality and Development in the Middle East and North Africa*. Washington DC: World Bank.
- World Bank. 2014. *More jobs, better jobs: a priority for Egypt*. Washington, DC: World Bank.
- World Bank. 2015. *Women, Business and the Law 2016: Getting to Equal*. Washington DC: World Bank.



5.

COMPETITIVENESS IN THE MENA REGION: TRADE, INNOVATION, AND MANAGEMENT PRACTICES

INTRODUCTION

Competitiveness is much talked about, but complex to define. There is neither a shared definition of competitiveness nor a consensus on how to measure it consistently across economies and over time—unsurprisingly, as it is firms rather than economies that compete in the global market.¹ At the level of a firm, competitiveness can be thought of as the ability to sustain market position by supplying quality products on time—at competitive prices²—and the ability to adapt quickly to changes in the external environment. It requires continuous increases in productivity, shifting from comparative advantages, such as low cost labor, to competitive

advantages—competing on cost, quality, delivery, and flexibility.³

On average, the MENA ES economies are middle-income, though their performance in recent years has been disappointing. In the World Economic Forum *Global Competitiveness Report 2015-2016*, the highest ranked developing economy in the MENA ES region was Jordan, in 64th place (out of 140 economies). Moreover, economies in the region have on average regressed by five places in the rankings since 2012-2013. The average value of the global competitiveness index in the MENA ES region was below that of their middle-income peer economies.⁴

This chapter sheds light on the position of firms in the MENA ES economies in terms of labor productivity and competitiveness.⁵ Perhaps surprisingly, the survey results reveal that the labor productivity of firms in the region compares favorably with that in economies with comparable incomes.⁶ The proportion of firms with labor productivity above the median labor productivity in peer economies is higher than 50 percent in most MENA ES economies. Yet despite somewhat higher labor productivity levels, firms in the MENA ES economies remain small: everywhere except Morocco, a majority of firms employ fewer workers than the typical firm in similar economies. The fact that these firms are unable (or unwilling) to scale up their operations may indicate distortions and uncertainties underlying the competitiveness of these economies.

A wide variety of factors have been suggested as drivers of productivity and competitiveness. This chapter considers two broad areas: entrance and exposure to international markets through trade; and firms' innovation and management practices. These factors are interlinked. Innovation and management quality affect how inputs are employed and influence competitiveness. It is often only competitive firms that are able to be involved in a globalized system of production, allowing them to make the most of trading across borders.

TRADE PARTICIPATION AND COMPETITIVENESS

Exposure to international trade has long been viewed as a driver of competition both within and across economies. An extensive and diverse literature has found the existence of positive exporter size and productivity premia: firms that export are on average larger and more productive than their non-exporting competitors.⁷ The two main mechanisms underlying this relationship are self-selection into the export market and "learning-by-exporting."

The self-selection mechanism implies that firms must incur sunk costs to enter the export market, which only a select few—presumably larger and more productive firms—find advantageous to bear. Lowering these barriers to entry, for example, through decreased regulatory time and procedures as well as transport costs, may ensure that this selection process works more efficiently: while the least productive firms, faced with expanded competition from home and abroad, will exit the market, more firms can enter

and benefit from exporting.⁸ In contrast, the presence of factors that affect entry costs for selected firms only—such as subsidies, access to cheaper inputs, regulatory capture, or preferential access to foreign markets—may distort which firms benefit from exporting.

Likewise, the learning-by-exporting mechanism argues that exporters gain knowledge from exposure to foreign markets and practices, allowing them to grow and increase their efficiency. Evidence of the significance of this mechanism for the greater size and productivity of exporters is mixed. Such forces may be increasingly important, however, with the presence of vertically integrated production, where firms export as part of a "global value chain" (GVC) and may gain knowledge from parent companies, partners, and competitors, or through reacting to the demands of foreign markets.⁹ Studies have indeed confirmed the existence of similar size and productivity premia for importers: firms that import their inputs are on average larger and more productive than firms that do not use foreign inputs.

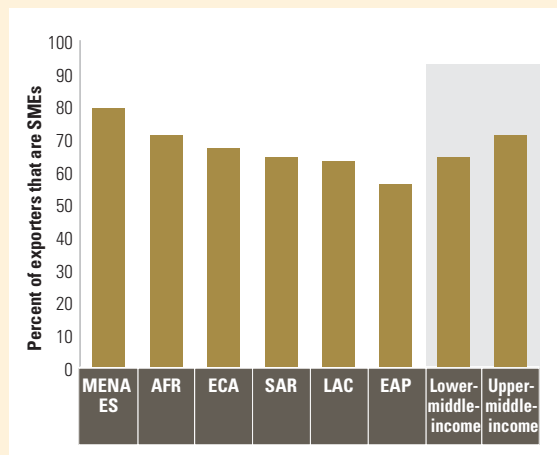
The presence of barriers to trade, either through non-tariff or tariff measures, is expected to reduce market competition and therefore average productivity in the market.¹⁰ Under the right conditions, trade—whether exporting, importing, or both—presents an opportunity for firms to capitalize on and often improve their competitive position. But when those conditions are distorted and resources are allocated inefficiently, many productive firms might not be able to access foreign markets and reap the scale and efficiency benefits from trade.

Indeed, empirical work shows that the MENA region may be failing to realize such gains fully. Given its capacity and proximity to Europe, the region's exports are estimated to be roughly only a third of their potential level.¹¹ The literature also suggests that the profile of the region's traders is characterized by a large number of firms engaging in low-level trade, with a few solitary "superstars" facing few competitors.¹² This section assesses whether these suggestions are supported by the MENA ES data. It focuses on the size and labor productivity premia of exporting and importing firms, and on certain constraints faced by both types of firms in the business environment.

Exporting firms in the region are numerous but small

One in four manufacturers in the MENA ES region directly exports goods abroad, a proportion appreciably higher than averages for lower-middle-income and upper-middle-income economies (14 and 18 percent respectively).¹³ This proportion varies considerably across the region. In Lebanon, Tunisia, and the West Bank and Gaza, exporters account for approximately 40 percent of all manufacturing firms, but this share is as low as 8 percent in Egypt and 5 percent in the Republic of Yemen. Although exporters are numerous in the MENA ES economies, they tend to be small firms. Nearly 80 percent of exporting manufacturers in the region employ fewer than 100 full-time employees, compared with 60 and 74 percent in lower-middle-income and upper-middle-income economies respectively (figure 5.1).

FIGURE 5.1: More of MENA ES exporters are small and medium-sized enterprises



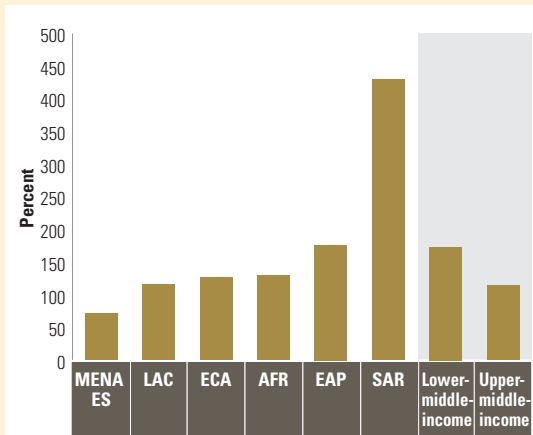
Source: Enterprise Surveys.

Exporter size and productivity premia are low compared with other regions

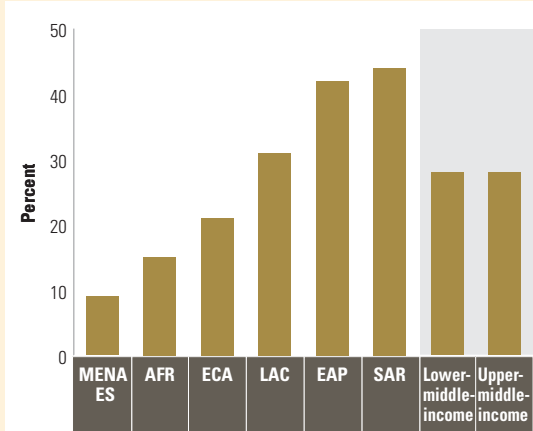
Reflecting the prevalence of small exporters, the so-called exporter size premium (figure 5.2, panel A)—the average size differential between exporting and non-exporting firms—is considerably smaller in the MENA ES region (71 percent more permanent full-time employees on average) than it is in all other regions in the world or in comparable income groups (see table A5.1). This low size premium is mirrored by a low labor productivity premium. Exporters

FIGURE 5.2: MENA ES exporters have lower size and productivity premia

PANEL A: Size premium of exporters vs. non-exporters



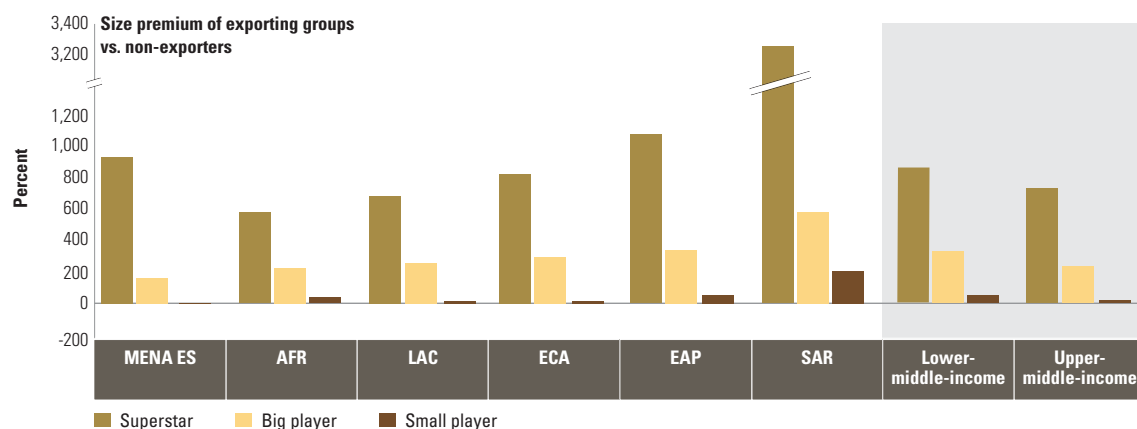
PANEL B: Labor productivity premium of exporters vs. non-exporters



Source: Enterprise Surveys.

Note: The figure for MENA ES is based on coefficients from table A5.1, columns 1 and 2. Comparable figures are based on identically specified regressions for regions (income groups) as indicated. Bars with patterned fill indicate that coefficients are not significant at a 10 percent level.

in both lower-middle-income and upper-middle-income economies are on average 28 percent more productive than non-exporters, while MENA ES and Sub-Saharan Africa (AFR) are the only regions where on average exporters are not significantly more productive than non-exporters (panel B).

FIGURE 5.3: The smaller size premium in the MENA ES region is dampened by big and small player exporters

Source: Enterprise Surveys.

Note: The figure for MENA ES is based on coefficients from table A5.1, column 3. Comparable figures are based on identically specified regressions for regions (income groups) as indicated.

A few “superstar” exporters account for nearly all of the exporter size and productivity premia in the region; the numerous small player exporters experience no such premia

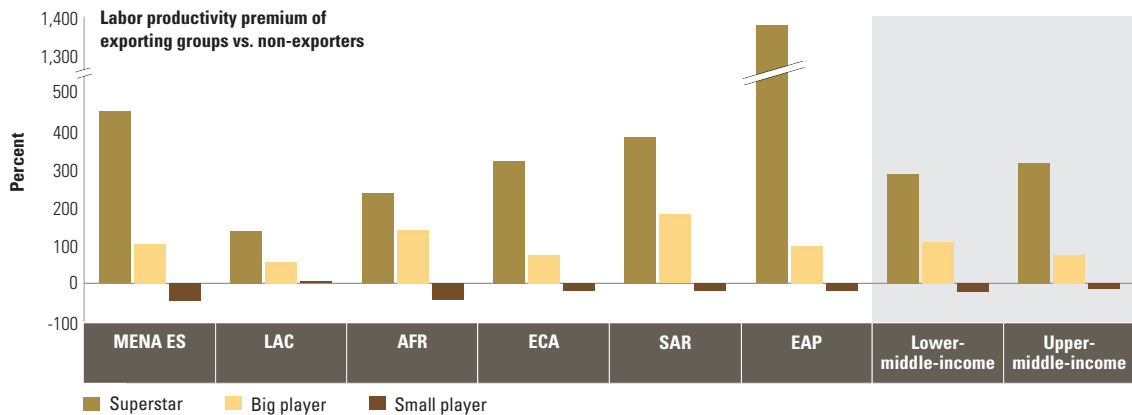
A striking picture emerges by differentiating exporting firms by their export sales volume into “superstar” exporters (the top 5 percent of firms), big player exporters (firms between the 50th and 94th percentile), and small player exporters (firms below the 50th percentile).¹⁴ Figure 5.3 shows the size premia for all three groups. In line with findings from a World Bank Group report,¹⁵ there is a wide gap between the superstar exporters and other exporting firms (and compared with non-exporters). Furthermore, the size premium for small player exporters in the MENA ES region is very marginally *negative*.

Looking at labor productivity, superstar exporters in the MENA ES region generate revenues per worker that are 4.5 times higher than non-exporters (and more than 3.5 times as big player exporters). Small player exporters are actually *less* productive than firms that do not export at all (figure 5.4). In other words, these firms generate less revenue per worker than their non-exporting peers. One reason for this negative productivity premium is that small player exporters are significantly less capital-intensive than other manufacturers, thus relying on more labor relative to their revenues.¹⁶ Another possible explanation is that in expectation of increased productivity thanks to

learning-by-exporting, some firms might be willing to accept entering the export market at a short-term cost for a long-term gain.

The relative abundance of SME exporters in the MENA ES economies coupled with all but the top-tier, superstar exporters, operating without an apparent ability or need to scale up their operations or improve their labor productivity may be linked to the subsidization and the selective lowering of export costs offered primarily to SMEs by export promotion agencies.¹⁷ Such strategies that focus on SME-based exporting may draw firms into foreign markets through subsidized cost reductions, rather than the underlying efficiency of those firms. Indeed, one report argues that it is important to understand the reason why these exporting SMEs remain comparatively small. If the reason is their lower productivity, policies focusing on helping them to export may be misguided. If they are prevented from growing by distortions, the focus should be on policies that help eliminate such constraints.¹⁸

This relative abundance of low-volume exporters is also consistent with potentially overvalued exchange rates, which may dampen exports. Pegged exchange rates—such as those in Lebanon, Morocco, and Jordan—as well as “crawl-like” ones in Egypt and Tunisia may limit export volume and hurt exporters’ international competitiveness if they keep tradable goods more expensive abroad.¹⁹ If some exporting firms—particularly smaller ones—are

FIGURE 5.4: Small player exporters are less productive than non-exporters

Source: Enterprise Surveys.

Note: The figure for MENA ES is based on coefficients from table A5.1, column 4. Comparable figures are based on identically specified regressions for regions (income groups) as indicated.

disadvantaged in international markets by overvalued exchange rates rather than their underlying productive capacity, they may similarly lack incentives to scale up their operations.

The much higher superstar exporter premia may also be explained by the presence of policies favoring large exporters and privileging relative capital intensity—for example, through lines of credit as well as land and energy subsidies—and in lieu of other subsidies such as those for R&D. One World Bank Group report addresses this issue more directly, noting, “Discretion and lack of transparency in the allocation of subsidies or credit lines fuel the impression that less deserving firms are often the beneficiaries. Successful exporters, large firms, or multinationals receive subsidies, protection, and privileges they do not need. Institutional processes that involve the

private sector in reviewing policies and identifying priorities have been largely absent.”²⁰

Table 5.1 provides some further context: superstar exporters begin with remarkably more employees at start-up (on average 111) and begin exporting much earlier in their lifecycle, on average after only three years of operation.²¹ In other words, these top-tier firms start larger and are in a position to enter international markets sooner, reinforcing evidence that it is a firm’s initial position in the market that allows it to retain its size as a dominant exporter.²²

Superstar exporters in the MENA ES economies have on average seen a three-fold increase in their size over their lifecycle; the same factor for big players is less than 2.5 times. In contrast, small players grow from a starting size of nearly 20 employees to just over 30, even after being

TABLE 5.1: Superstar exporters start larger, while small player exporters are far less trade-intensive and take longer to begin exporting

Exporter type	Exported directly (% sales)	Age		Employees		Foreign ownership	Percentage of firms in high-tech sectors
		When firm began exporting	As of 2012	At start-up	As of 2012		
Superstars	85	3	20	111	340	29	14
Big players	64	4	21	39	94	16	3
Small players	41	7	19	19	31	12	1

Source: Enterprise Surveys.

Note: Indicators show values after controlling for industry and economy fixed effects.

in operation for nearly 20 years, indicating a comparatively flat growth trajectory, despite being exporters. Moreover, superstars are more likely to be foreign-owned than other exporters: 29 percent of superstar exporters are at least 10 percent foreign-owned, compared with only 16 and 12 percent for big and small player exporters respectively. The large initial size of superstar exporters could also be explained by the strong presence of firms that use technology intensively in this category: 14 percent of superstar firms are active in high-tech sectors.

When barriers to entry to exporting are low, they allow for the efficient entry of new and productive exporters into the market, as well as the exit of less competitive firms. Table 5.2 shows several proxy measures for the cost of firms to export. The table shows that, on average, the time and cost to export is lower in the MENA ES economies than in peer economies. The exceptions are Lebanon, the West Bank and Gaza, and the Republic of Yemen, where exporting is more timely and costly. Likewise, there are often indirect costs to trading, for example, the quality of domestic infrastructure. One proxy for this is the percentage of products lost due to breakage or spoilage, which is high in Djibouti, Lebanon, the West Bank and Gaza, and the Republic of Yemen. Moreover, in large economies such as Egypt, internal distance from borders can add further time and cost.

Manufacturers in the region are heavily import-reliant

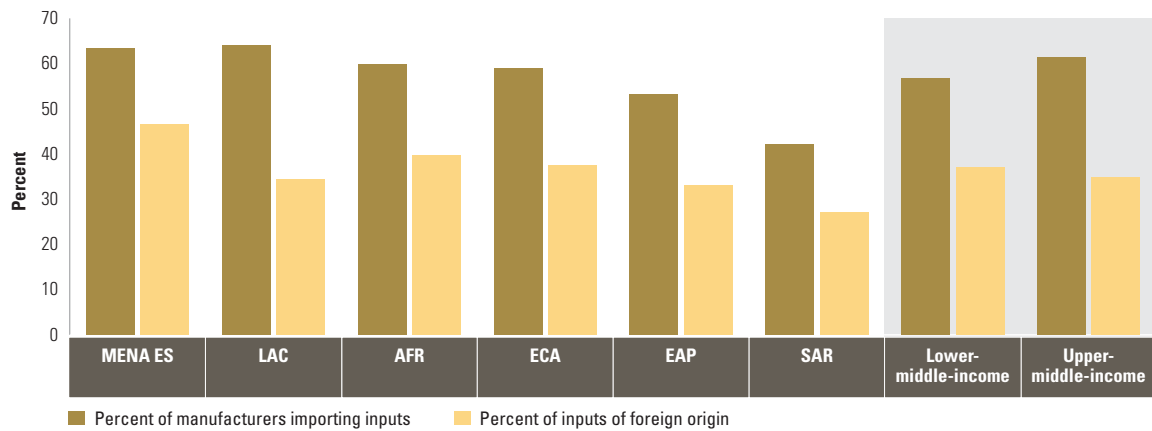
Export activity is only one part of the story: manufacturing firms frequently realize productivity and size gains from importing their inputs as well. Increasingly, there has been a focus on the role of these imports and firms' position in international trade flows.²³ Analysis of trade in the MENA region has noted that while trade levels are possibly below their potential, they are not particularly low; in fact, these levels seem to be bolstered by imports to the MENA ES economies, which import goods and services at an average of 57 percent of GDP.²⁴

The MENA ES data show that manufacturers are particularly reliant on imports, with 63 percent importing material inputs, trailing only manufacturers in the Latin America and the Caribbean (LAC) region (figure 5.5). Moreover, firms in the MENA ES region use foreign inputs more intensively: 46 percent of manufacturers' inputs are of foreign origin, above the average in peer economies, possibly indicating that firms are unable to find inputs of sufficient quality on the domestic market. This pattern holds despite relatively high restrictions on imports (see below). This may be due to a combination of the lack of domestic alternatives as well as policies overvaluing currencies, for example, due to pegged rates to hard currencies, such as the dollar peg in Lebanon or the peg to a euro-dollar basket in Morocco.²⁵

TABLE 5.2: Costs of exporting in the MENA ES region are comparable to peer economies

	De jure time to export (days)	De facto time to clear customs (days)	Cost to export (USD per container)	Percentage of products lost due to breakage/spoilage
Djibouti	20	10	886	1.6
Egypt, Arab Rep.	12	7	625	0.8
Jordan	13	5	825	0.8
Lebanon	22	5	1,080	1.2
Morocco	11	3	577	1.0
Tunisia	13	3	773	0.6
West Bank and Gaza	23	3	1,685	4.1
Yemen, Rep.	29	11	995	2.4
MENA ES	18	6	931	1.6
Lower-middle-income	26	9	1,665	1.2
Upper-middle-income	21	7	1,445	0.8

Source: Enterprise Surveys, Doing Business database for 2013.

FIGURE 5.5: The import reliance of manufacturers

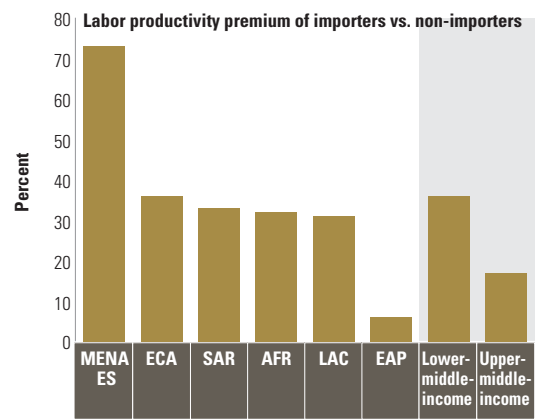
Source: Enterprise Surveys.

Importer size and productivity premia are high compared with other regions

Several works have examined the size and productivity premia related to importing intermediate inputs.²⁶ Indeed, MENA ES manufacturers that import inputs experience significant and comparatively large premia over non-importers in terms of both size and labor productivity. Firms that import their inputs are on average 55 percent larger in terms of the number of employees, compared with manufacturers that do not import (see table A5.2). Only in the South Asia region (SAR) is this size premium even greater. In addition, importing firms in the MENA ES region are nearly 75 percent more productive than non-importers, a premium that is also considerably larger than in peer economies (figure 5.6).

The importer size premium is driven by two-way traders, but the importer productivity premium is independent of export activity

Manufacturing firms that directly import inputs may export their final output as well. Comparing two-way traders with firms that only export, only import, or do not trade, it is clear that the size premium for manufacturing firms in the MENA ES region is driven by two-way traders. As in other regions, importing inputs alone has little association with larger size. Unsurprisingly, it is the larger firms that tend to be engaged in both importing and exporting, possibly within GVCs, and almost a quarter of them are at least 10

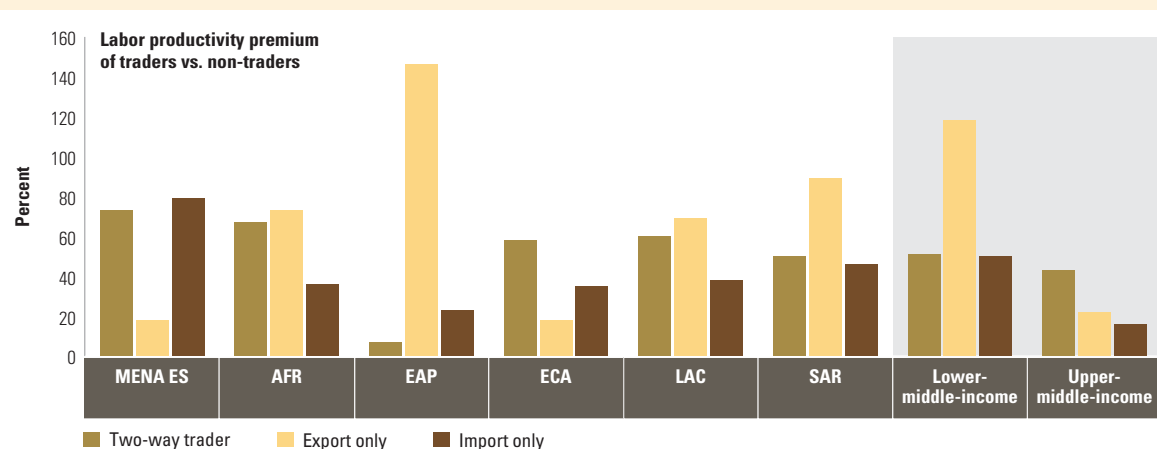
FIGURE 5.6: Manufacturers that import inputs are more productive than those that do not import

Source: Enterprise Surveys.

Note: The figure for MENA ES is based on coefficients from table A5.2, column 2. Comparable figures are based on identically specified regressions for regions (income groups) as indicated.

percent foreign-owned, compared with less than 10 percent of exporters only, importers only, or non-traders. This result holds even when superstar exporters are excluded (table A5.3, column 2).

Importers have a labor productivity premium whether or not they also export. Access to foreign inputs is strongly associated with higher labor productivity—revenue per worker (figure 5.7). For two-way traders, this association

FIGURE 5.7: Importing inputs drives productivity premium in the region

Source: Enterprise Surveys.

Note: The figure for MENA ES is based on coefficients from table A5.3, column 3. Comparable figures are based on identically specified regressions for regions (income groups) as indicated.

is driven largely by superstar exporters. Once these are excluded, the association with higher labor productivity is larger for firms that only import their inputs, again confirming that large and small player exporters in the region seem to be unable to reap the efficiency gains that emerge from exporting (table A5.3, column 4).

The business environment is not conducive to importing

While manufacturers in the MENA ES economies are comparatively import-reliant, and while those that import

tend to be larger and more productive than those that do not, the region maintains substantial restrictions on trade from abroad through higher tariffs and non-tariff restrictions.²⁷ Tariff rates vary substantially within the region (table 5.3), as do the average usage of foreign inputs and the time to clear customs. Average tariff rates are highest in Djibouti and Tunisia, economies where manufacturers use foreign inputs at comparatively high rates (63 and 55 percent respectively), though in Tunisia the offshore sector's low-tariff access to inputs and well-documented tariff evasion have played a role.²⁸ Moreover, waiting times at

TABLE 5.3: Restrictions on imports from abroad vary substantially

	Average manufacturing tariff rate (2008–12)		Percent of inputs that are of foreign origin	De jure time to import (days)	De facto time to clear imports through customs (days)	Cost to import (USD per container)
	Intermediates	Raw materials				
Djibouti	3.6	3.0	63.3	18	5.2	911
Egypt, Arab Rep.	4.5	2.4	28.8	15	9.2	755
Jordan	1.9	7.6	42.3	15	5.3	1,335
Lebanon	n.a.	n.a.	51.6	30	9.7	1,365
Morocco	11.6	19.9	47.7	15	7.6	950
Tunisia	11.5	15.4	55.3	17	7.4	858
West Bank and Gaza	n.a.	n.a.	56.6	38	17.0	1,295
Yemen, Rep.	3.2	6.1	26.5	25	8.0	1,623
Lower-middle-income	4.0	5.8	37.0	33	13.1	669
Upper-middle-income	4.2	6.4	34.9	21	9.3	762

Source: Authors' calculations based on UNCTAD Trade Analysis Information System (TRAIS); Enterprise Surveys, Doing Business database for 2013.

Note: n.a.—not available.

customs for manufacturers importing inputs directly are roughly on par with peer economies.²⁹ In addition, while costs to import are also comparable, they are generally more expensive than those to export shown in table 5.2.

Given this combination of factors, it is somewhat surprising that manufacturers in the MENA ES are so import-reliant. This pattern is consistent with a pattern of “under-export/over-import” previously noted in the region.³⁰ Furthermore, this import reliance may translate into higher input costs for the MENA ES region’s manufacturing, eroding the gains from more sales per worker (labor productivity). This can be a constraint on the growth of efficient firms, and may result in low value-added or what has been called “just-in-time production” rather than high value-added production.³¹

INCREASING FIRM PRODUCTIVITY THROUGH INNOVATION AND BETTER MANAGEMENT

Many firms in the MENA ES region compete in the international market but do not appear to achieve the maximum benefits from doing so. This may reflect an inability to improve their productivity continuously. One way to improve productivity is through innovation. A positive correlation between the introduction of a new or significantly improved product (“product innovation”) and firms’ performance has been established for European firms, but evidence for developing economies has been mixed.³² Similar studies do not exist for MENA economies.

Firms can also increase their productivity through other means, such as making better use of excess capacity (provided there is any) or by improving management or business practices. Studies show that there is a strong correlation between the quality of management practices and firms’ performance, and this also applies to developing economies.³³ Furthermore, lack of management skills has been shown to be one explanation for the low productivity of state-owned firms or politically connected firms in the absence of regulations that target their competitors.³⁴

To account for factors that may affect both firms’ productivity and the decision to innovate, this chapter uses a modified version of a well-known model devised by Crépon, Duguet, and Mairesse (the “CDM model”) that

links acquisition of knowledge, innovation, and labor productivity (see box 5.1 for more details).³⁵

Two in every five firms in the region innovate, but product innovation is dominated by the adoption of existing technologies

Innovation is often associated with groundbreaking technology: the type that advances the global production frontier, typically in high-tech sectors. Innovation is also a much broader concept, which includes the introduction of new products and processes (technological innovation) as well as new organizational and marketing methods (non-technological innovation)—see box 5.2 for examples. Moreover, most new products (as well as processes) are based on the adoption of existing technologies developed elsewhere, possibly with some adaptation to suit the needs of the local market. They are still considered to be an innovation, though, as long as they are, at the very least, new to the firm itself.

Comparable Enterprise Survey data on innovation are available only for the Eastern Europe and Central Asia (ECA) and MENA ES regions. These data show that in both regions, firms engage in technological and non-technological innovation at similar rates; on average, nearly 40 percent of firms engaged in at least one type of innovation. In neither region are many of the new or improved products truly new to the global market (figure 5.8). The adoption (and adaptation) of existing products and processes is particularly important for emerging markets and developing economies—including those in the MENA ES region—where firms have considerable room for improvement relative to the technological frontier.

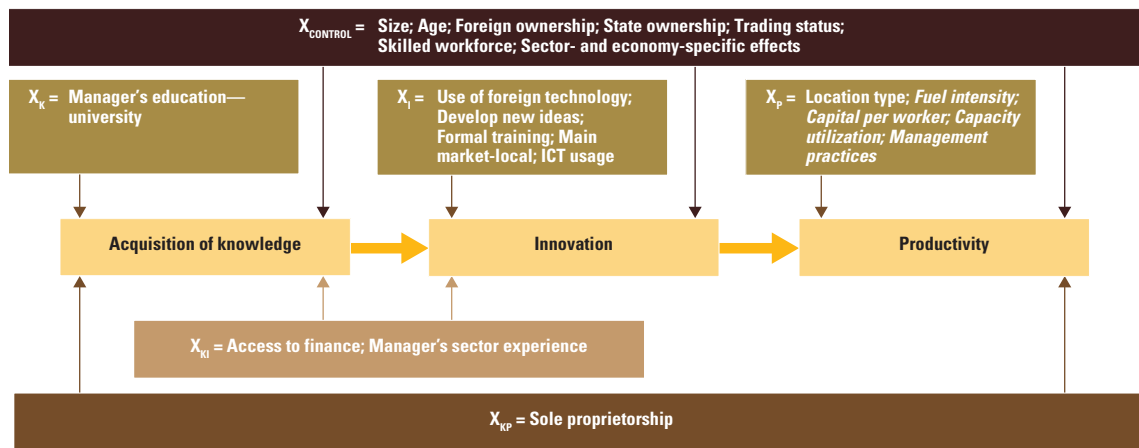
R&D and other forms of knowledge acquisition are dominated by high-tech sectors, but two-way trading seems to favor knowledge acquisition in lower-tech sectors as well

Firms can use a range of different approaches to acquiring knowledge. They can create (“make”) it themselves through in-house spending on R&D.³⁶ Firms can also “buy” this knowledge by contracting R&D with other companies and institutions or by purchasing or licensing patented technologies, non-patented inventions, and know-how. Acquisition of knowledge does not always lead

BOX 5.1: Estimating the impact of innovation on labor productivity

The impact of innovation on productivity is estimated using a modified version of a well-known three stage model by Crépon, Duguet, and Mairesse (the “CDM model”).^a The original model links productivity to firms’ innovation activities and, in turn, treats innovation as an outcome of firms’ investment in R&D. The model used

here treats innovation as an outcome of firms’ investment in the acquisition of knowledge, either created by the firm (R&D) or obtained from external sources. That is, it explains the decision to acquire knowledge; the decision to introduce a new product or process; and the firm’s labor productivity (figure B5.1).

FIGURE B5.1: Version of the CDM model used in the chapter

Source: Authors' representation of the model.

Note: Based on Crépon and others (1998). ICT = information and communication technology. Variables in italics are available for manufacturing firms only.

All stages are estimated simultaneously using an asymptotic least squares estimator (ALS). The recursive model accounts for the simultaneity and unobserved variable problems arising from estimating the effect of the acquisition of knowledge and innovation activities, which are likely to influence each other, on productivity.^b The model does not allow establishing causal relationships because the system does not permit the identification of true instruments. Instead, the model imposes exclusion restrictions grounded in economic theory and previous empirical work.

The first stage estimates the innovation input equation:

(1) $Knowledge_i^* = I[Knowledge_i^* > 0]$ where

$$Knowledge_i^* = X_{i,K} \beta_1 + X_{i,KI} \beta_2 + X_{i,KP} \beta_3 + X_{i,CONTROL} \beta_4 + \varepsilon_{i1}$$

This represents the probability of the spending on the acquisition of knowledge (including R&D) by firm i , where $Knowledge_i^*$ takes the value of 1 whenever the latent value of spending on the acquisition of knowledge reported by the firm, $Knowledge_i^*$, is larger than zero. $X_{i,K}$, $X_{i,KI}$, $X_{i,KP}$ and $X_{i,CONTROL}$ include variables listed in figure B5.1.

The second stage of the model determines the probability of a firm implementing innovation, taking into account its decision to acquire knowledge. The latent variable $Innovation_i^*$ derived from the first stage is used to explain the impact that the acquisition of knowledge has on innovative activities:

(2) $Innovation_i = I[Innovation_i^* > 0]$ where

$$Innovation_i^* = \gamma_1 Knowledge_i^* + X_{i,I} \gamma_2 + X_{i,KI} \gamma_3 + X_{i,CONTROL} \gamma_4 + \varepsilon_{i2}$$

In this equation, coefficient γ_1 denotes the impact of the acquisition of knowledge on the probability of a firm introducing an innovation. $Innovation_i$ refers to the occurrence of the various types of innovation. The probability of observing such an innovation is explained by $X_{i,KI}$, $X_{i,CONTROL}$ and $X_{i,I}$, which include variables listed in figure B5.1.

The final stage of the model relates the firm's innovative activities—or more precisely, the latent variable

(continued on next page)

(continued from previous page)

that determines whether or not to innovate—to labor productivity (measured as revenue per employee, converted into U.S. dollars, in log terms):

$$(3) \text{Productivity}_i = \xi \text{Innovation}_i^* + X_{i,P} \delta_1 + X_{i,KP} \delta_2 + X_{i,CONTROL} \delta_3 + \varepsilon_{i3}$$

The coefficient ξ reflects the impact of innovation on labor productivity. In addition to $X_{i,CONTROL}$ and $X_{i,KP}$, the augmented production function includes variables in vector $X_{i,P}$ (see figure B.5.1). For manufacturing firms, $X_{i,P}$ also includes their fuel intensity, capital per worker, and capacity utilization.

- a See Crépon and others (1998).
b The model also addresses issues relating to measurement errors in innovation surveys.

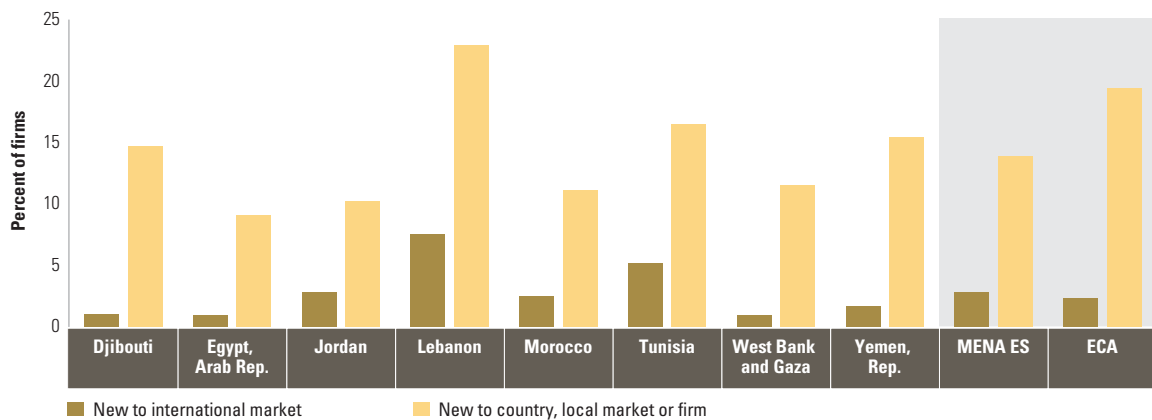
BOX 5.2: Types of firm-level innovation^a

Productivity-enhancing innovations are not limited to new products. Significant improvements in technical specifications, components and materials, incorporated software, user-friendliness, and other functional characteristics of existing goods and services count too. They can also entail new or significantly improved production or delivery methods, such as the automation of work that used to be done manually or the introduction of new software to manage inventories.

Moreover, innovations do not necessarily need to involve new technologies: they may also be in the form of organizational or marketing improvements. Examples of organizational innovation include introduction of a supply chain management system or decentralization of decision making, giving employees greater autonomy. Marketing innovations could be aimed at better addressing customers' needs, opening up new markets, or repositioning a firm's product in the market. Examples include the introduction of a new flavor for a food product to target a new group of customers or the introduction of variable pricing based on demand.

- a Based on OECD, European Commission and Eurostat (2005).

FIGURE 5.8: Product innovation at the global technological frontier and the adoption of existing technologies



Source: Enterprise Surveys.

Note: Self-reported innovation and degree of novelty. Comparable ES data on innovation are available only for ECA and MENA ES.

to successful innovation; conversely, innovation may not always require the acquisition of knowledge.

The percentage of firms that engage in R&D is similar in the MENA ES and ECA economies, but firms in the MENA ES region are less likely to engage in acquiring knowledge more broadly. The MENA ES region compares favorably with the ECA region in higher-tech manufacturing sectors, such as pharmaceuticals, and medium-low-tech sectors, such as basic metals, but lags statistically significantly behind in low-tech sectors, such as food products or textiles (figure 5.9).³⁷ Differences between different types of sectors are particularly large in Jordan, where almost a quarter of higher-tech firms engage in acquiring knowledge, but less than 5 percent do so in other manufacturing sectors. This could be related to their exposure to the international market: almost a quarter of higher-tech Jordanian firms are exporters, compared with less than 13 percent of firms in other manufacturing sectors.

In contrast, in Morocco and Tunisia, the gap between higher-tech manufacturing and lower-tech manufacturing and services is much lower. Both economies are characterized by greater integration into GVCs than their regional peers. In general, GVCs are considered to be crucial for knowledge transfer to local firms.³⁸ Tunisia, for example, has opted for an economic model oriented toward exports and industrialization supported by a pro-active policy of public investment in physical and human capital, and of attracting foreign direct investment (FDI). In Morocco, the clothing industry, for example, has become a key supplier for fast fashion supply chains, as have automobile parts manufacturers and the aeronautical industry.³⁹

Innovation benefits from firm-specific human capital: access to knowledge through foreign ownership, two-way trading, and ICT as well as access to finance

The analysis shows that there are a number of firm characteristics that are important determinants of firm innovation. First, a suitably skilled workforce (including strong management skills) is a key prerequisite for successful innovation. In the MENA ES region, firms that provide formal training to their employees or give them time to develop new approaches and ideas are more likely to introduce new products, processes, organizational or marketing methods, while the formal level of education

of employees does not seem to play an important role in that process (tables A5.4 and A5.5).⁴⁰ This may reflect both the general quality of education in the MENA ES region as well as a mismatch between the skills provided by formal education and those demanded by the private sector. Formal training helps workers learn the skills that they need for their particular tasks as well as new production techniques.

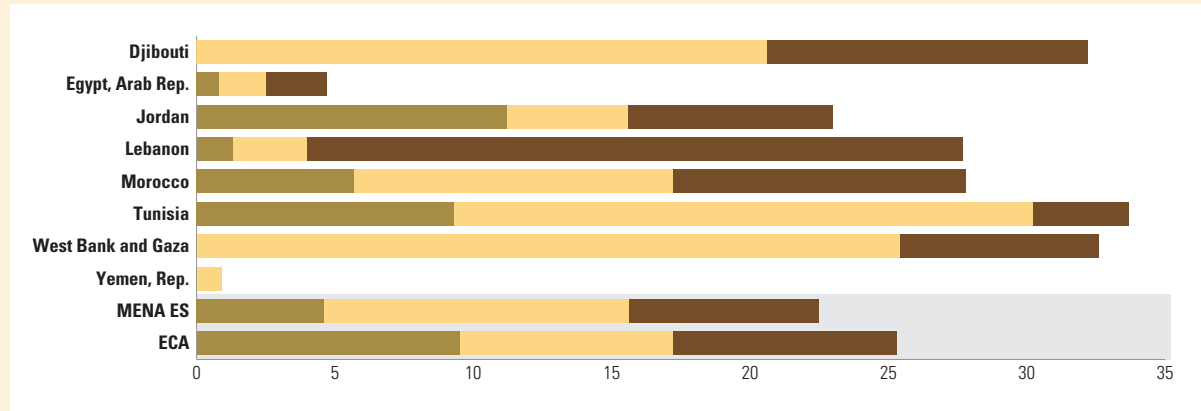
The formal level of education of managers, however, matters for the decision to acquire knowledge: firms in which managers have a university degree are much more likely to do so either through R&D or from external sources. Such managers may be more familiar with the external knowledge already available, more open to investing in R&D, or more supportive of implementing various ways of acquiring knowledge in their workplace (tables A5.4 and A5.5, column 1).

Second, in the MENA ES region, access to knowledge and information plays a crucial role in the ability of firms to innovate (tables A5.4 and A5.5). Most firms do not introduce innovation new to the technological frontier and often rely on existing knowledge of what their peers are doing. The results show that two-way trader status is positively and significantly associated with innovation directly and indirectly, and it is a possible channel for the labor productivity premium shown above. Two-way traders are more likely to license foreign technology as well as introduce technological innovations. Similarly, manufacturers with at least 10 percent foreign ownership are more likely to acquire knowledge, introduce new products, and implement technological innovations.

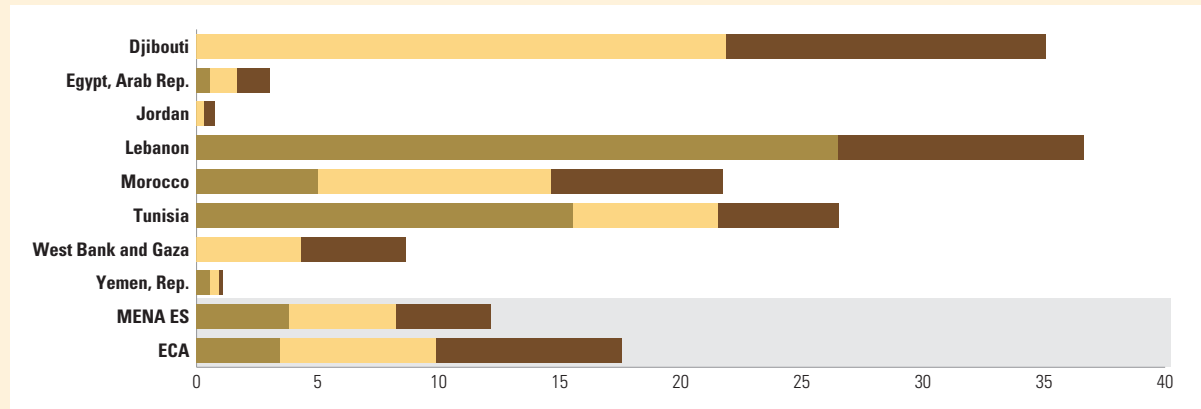
There are several reasons why foreign ownership and two-way trading—where, for example, firms are involved in GVCs—may be particularly important sources of information for innovation. First, to satisfy a GVC's product quality and process efficiency requirements, managers may need to adapt their production methods or acquire technology via licensing arrangements. Second, to ensure smooth delivery to foreign clients, improved delivery methods may be required. Third, by importing intermediate goods, firms may also import state-of-the-art technology that has not previously been available in the domestic market. This may require further training of workers, enhancing their technical skills—which may, in turn, enable firms to introduce their own new products.⁴¹

FIGURE 5.9 :The proportion of firms that acquire knowledge

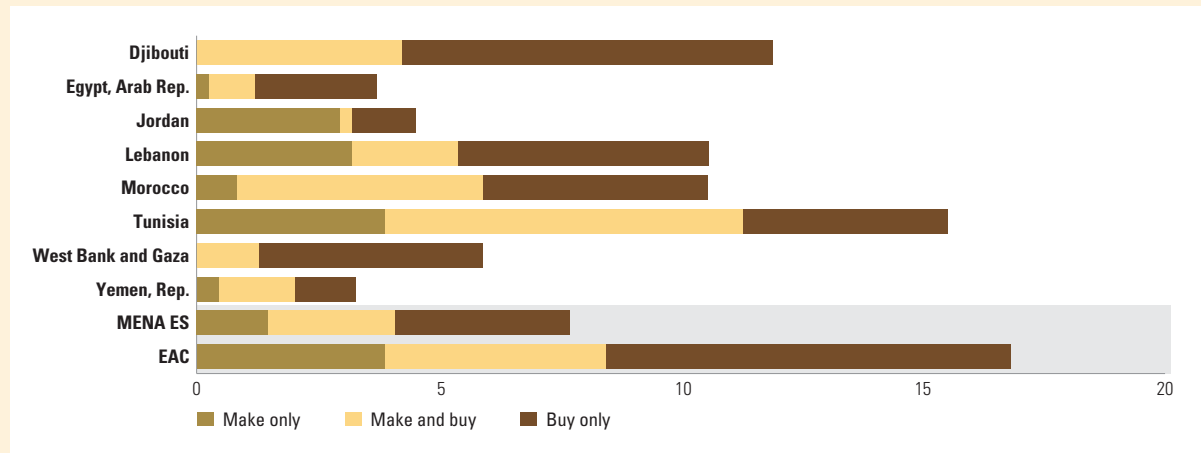
A: Percent of firms, high- and medium-high-tech industries



B: Percent of firms, medium-low-tech industries



C: Percent of firms, low-tech industries



Source: Enterprise Surveys.

Note: Based on International Standard Industrial Classification (ISIC), Rev 3.1. Higher-tech manufacturing sectors include pharmaceuticals (24), machinery and equipment (29), electrical and optical equipment (30–33), and transport equipment (34–35, excluding 35.1). Low-tech manufacturing sectors include food products, beverages and tobacco (15–16), textiles (17–18), leather (19), wood (20), paper, publishing and printing (21–22), and other manufacturing (36–37). Data represent cross-economy averages. Comparable ES data on innovation are available only for ECA and MENA ES.

Furthermore, firms that use email to communicate with their clients or suppliers are also significantly more likely to introduce both technological and non-technological innovations. This may attest to the importance of both modern organizational practices and supporting ICT infrastructure in facilitating innovation.

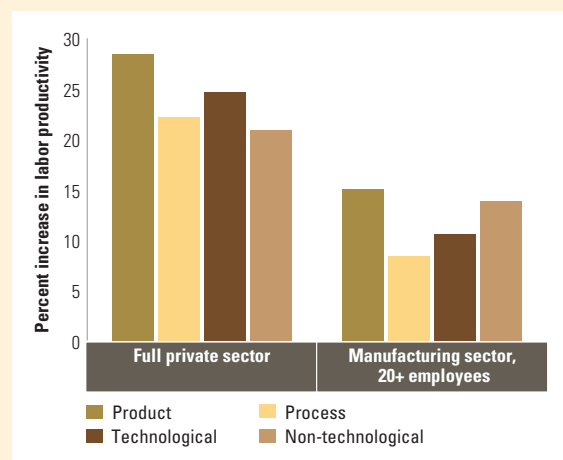
Finally, the results suggest that firms in the MENA ES economies—as in many other economies—are much more likely to introduce new products, processes, or both if they have access to finance in the form of a line of credit or a loan. Introduction of non-technological innovation is less affected by access to finance and foreign technologies (tables A5.4 and A5.5). Adapting external technologies, products, and processes to local circumstances can be costly, and firms may need sufficient financial resources to do so. While banks might not be willing or able to fund innovative firms at the technological frontier, they may fund firms that innovate by imitation, which is arguably less risky. They can also stimulate innovation by providing firms with working capital or short-term loans, which can free up internal resources that the firms can use to finance innovation.⁴²

Firm innovation is associated with higher labor productivity, but less than in other developing economies

Figure 5.10 shows that all types of innovation are associated with higher labor productivity in both the full private sector and in particular in manufacturing firms with more than 20 employees (tables A5.6 and A5.7). This correlation is highest for product innovation, which is associated with labor productivity that is 28 percent higher than that of firms that do not introduce new or significantly improved products. It is lower for process innovation, which is associated with labor productivity that is 22 percent higher compared with firms not undertaking this type of innovation. The correlations are up to 62 percent lower for manufacturing firms. The somewhat lower returns to process innovation may be due to the fact that firms in the MENA ES region are more likely to introduce new processes than new products,⁴³ and hence the benefits of engaging in process innovation are lower.

These returns are in line with those found for developed economies, but lower than those observed in developing economies, especially for the manufacturing sector.⁴⁴ This

FIGURE 5.10: Association between innovation and labor productivity



Source: Enterprise Surveys database and authors' calculations.

Note: This figure is based on coefficients from tables A5.6 and A5.7, columns 1–4. For a detailed description, see box 5.1.

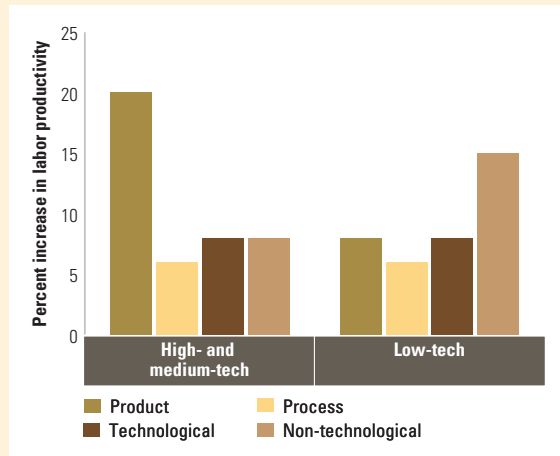
result may be related to limited competition, as well as the presence of politically connected firms in several MENA ES economies and the regulations protecting them,⁴⁵ which prevent innovative firms without political connections from obtaining a larger market share and higher labor productivity.

Non-technological innovations, which are probably less risky and costly than technological innovations, are also significantly associated with higher labor productivity (21 percent higher than in the private sector overall). Given that this is comparable to or higher than productivity yields associated with technological innovation, it is perhaps surprising that only 29 percent of firms in the MENA ES economies engage in either. This could be due to a lack of information on new organizational and marketing methods, skepticism about their effectiveness, or resistance to change within organizations.⁴⁶

High-tech firms benefit most from product innovation, while low-tech firms benefit most from non-technological innovation

There are also differences in returns to innovation within manufacturing (figure 5.11). In sectors with high- and medium-tech intensity, introducing a new product is associated with labor productivity levels that are almost 20 percent higher compared with firms that did not introduce

FIGURE 5.11: Association between innovation and labor productivity by technological intensity



Source: Enterprise Surveys.

Note: This figure is based on coefficients from table A5.8, columns 1–4. For a detailed description, refer to box 5.1. Bars with patterned fill indicate that coefficients are not significant at the 10 percent level.

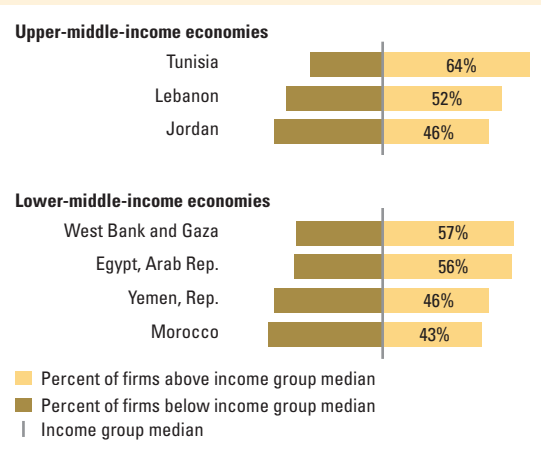
a new product (table A5.8). In manufacturing sectors with low-tech intensity, firms benefit more from introducing non-technological innovations; the latter are associated with 15 percent higher labor productivity levels.⁴⁷

This variation in estimated returns to innovation can be explained by differences in the probability of different types of innovations and the level of competitive pressures faced. In several MENA ES economies, more than one-fifth of low-tech firms are two-way traders and compete primarily in the international market.⁴⁸ They face great pressure to deliver the required products quickly and efficiently. As a group, low-tech firms are less likely to introduce new organizational or marketing methods, but those that do so successfully may manage to capture a larger market share as a result, thereby increasing their revenue per worker. Some innovations by firms in low-tech manufacturing sectors may be due to European firms moving production to Tunisia and Morocco from China in the period up to late 2014, as a result of rising wage costs and the increasing cost of fossil fuels during that period.⁴⁹

Poorly managed firms benefit more from improving their management practices than from innovation

The MENA ES included a subset of questions on management practices.⁵⁰ These questions look at core

FIGURE 5.12: Distribution of the quality of management practices compared with income-group median



Source: Enterprise Surveys.

Note: Djibouti is excluded, as the quality of management practices is available for only 12 firms. Comparable data are available for a comparison income group only in the ECA. For Egypt, Morocco, the West Bank and Gaza, and the Republic of Yemen, the comparison income group is the lower-middle-income group. For Jordan, Lebanon, and Tunisia, the comparison group is the upper-middle-income group.

management practices relating to operations, monitoring, targets, and incentives. They range from dealing with machinery breakdowns to factors determining the remuneration of workers. On the basis of firms' answers, the quality of their management practices can be assessed and given a rating (see box 5.3 for details).

There are firms with good and bad management practices in all MENA ES economies (figure 5.12). The share of manufacturing firms with good management practices in Tunisia, Lebanon, the West Bank and Gaza, and Egypt is higher than in their peer economies.⁵¹ Jordan, the Republic of Yemen and Morocco, on the other hand, stand out with a share of firms with bad management practices above their peer economies. With some exceptions, large manufacturing firms are on average better managed than their medium-sized counterparts.

The quality of management practices in the MENA ES economies is positively correlated with economic development (measured as GDP per capita, figure B5.3). It is not significantly associated with firm-level labor productivity, either on its own or in combination with different types of innovation (table A5.7). This is in contrast with results found elsewhere, including in the ECA region.⁵² Among

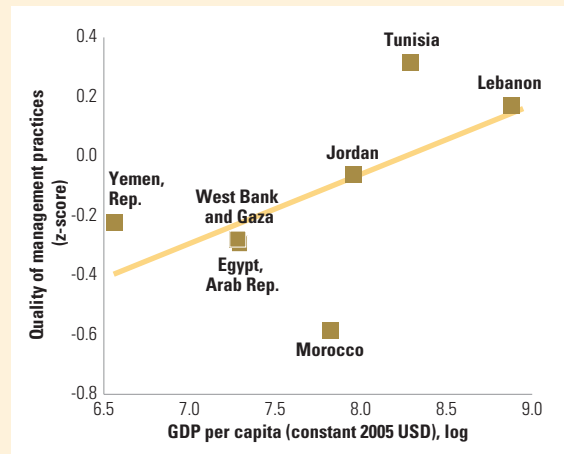
BOX 5.3: Management practices in the MENA region

The MENA ES includes a section on management practices in the areas of operations, monitoring, targets, and incentives. The operations question focuses on how the firm handles a process-related problem, such as machinery breaking down. The monitoring question covers the collection of information on production indicators. The questions on targets focus on the timescale for production targets, as well as their difficulty and employees' awareness of them. Lastly, the incentives questions cover criteria governing promotion, practices for addressing poor performance by employees, and the basis on which the achievement of production targets are rewarded. These questions were answered by all manufacturing firms with at least 20 employees. The median number of completed interviews with sufficiently high response rates was just below 115 per economy, with totals ranging from 12 in Djibouti to 1,130 in Egypt.^a

The scores for individual management practices (in other words, for individual questions) were converted into z-scores by normalizing each practice so that the mean was 0 and the standard deviation was 1. To avoid putting too much emphasis on targets or incentives, unweighted averages were first calculated using the z-scores of individual areas of the four management practices. An unweighted average was then taken across the z-scores for the four practices. Lastly, a z-score of the measure obtained was calculated. This means that the average management score across all firms in all economies in the sample is equal to zero. The management practices of individual firms deviating either left or right from zero, with those to the left denoting bad practices and those to the right indicating good practices.

There is a positive correlation between the average quality of management practices and log per capita GDP (see figure B5.3).

FIGURE B5.3: There is a positive correlation between the average quality of management practices and log per capita GDP



Source: Enterprise Surveys.

Note: Djibouti is excluded, as the measure of quality of management practices is available for only 12 firms.

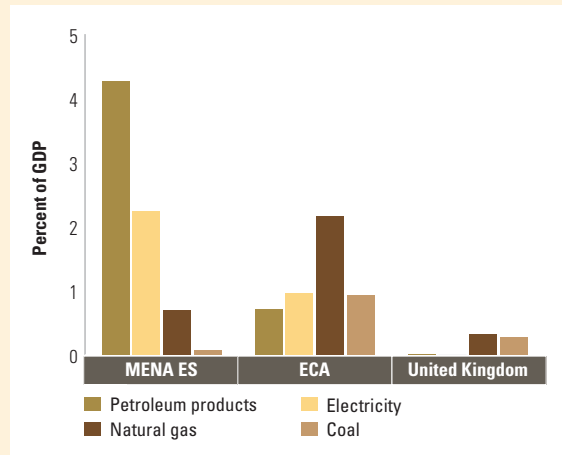
- a The questions on management practices came at the end of a long face-to-face interview. This resulted in an unusually large number of people responding “don’t know” or refusing to answer.

poorly managed firms, however, those that are somewhat better managed tend to have higher labor productivity, while the association with innovation is not significant. In contrast, for well-managed firms, management practices are not correlated with higher labor productivity, but innovations are (table A5.9). These results suggest that poorly managed firms might achieve higher returns from improving management practices than from being innovative. Well-managed firms, on the other hand, might benefit more from engaging in innovation than from further improving their management practices.

In economies with fewer energy subsidies, better managed firms use energy resources more efficiently

The MENA ES data also show that energy intensity, as measured by fuel intensity, is negatively correlated with labor productivity (tables A5.6 and A5.7). Theoretically, better management practices may either decrease usage of energy through more efficient production techniques or increase it through higher capital utilization. Empirical evidence shows that in the United Kingdom, better-managed firms use energy more efficiently.⁵³ Similar analysis applied to the MENA ES region does not reveal the same relationship (table A5.10, column 1). This may be due to a remarkable difference in the level of subsidization of energy consumption: the average of energy subsidies (the sum of subsidies for petroleum products, natural gas, and

FIGURE 5.13: Petroleum products, natural gas and electricity subsidies in the MENA ES region are much higher than in the United Kingdom



Source: Clements and others (2013) and authors' calculations.

coal) in seven MENA ES economies⁵⁴ in 2011 constituted 5 percent of GDP, compared with 0.6 percent of GDP in the United Kingdom (figure 5.13).

In the less-subsidized group of MENA ES economies—all but Egypt and the Republic of Yemen—higher-quality management practices are associated with a lower level of fuel spending per dollar of total revenue (table A5.10, column 3).⁵⁵ The estimate suggests that improving the management quality from the 25th to the 75th percentile is associated with a 32 percent decrease in firm's fuel intensity. More subsidized MENA ES economies do not follow this pattern (table A5.10, column 2) and, therefore, do not benefit in a similar way from improvements in management practices.

These results provide evidence of an indirect relationship between management practices and labor productivity in the MENA ES economies: better management practices are associated with lower energy intensity and lower energy intensity is associated with higher productivity. This is true only in economies with a relatively low level of energy subsidies. If anything, more subsidized economies do not benefit from better management practices and, as a consequence, they lack one of the ways to improve their productivity.

POLICY CONCLUSIONS

MENA ES economies generally perform worse on various competitiveness rankings compared with their middle-income peer economies in other regions, even though the labor productivity of private sector firms is similar in both groups.

Trade is not the issue per se: firms in the MENA ES region are more likely to export, import, or both than their counterparts elsewhere; but those firms are also more likely to be SMEs. The differences lie in the productivity premium: superstar exporters have similar productivity margins as elsewhere, but the bulk of exporters lag behind. In other words, many exporters may find themselves constrained or unwilling to expand, or they have an incentive to continue exporting despite being inefficient. The winners in terms of productivity gains, however, are importers, which is perhaps due to the access they get to foreign technology and supply chains. This is despite the obstacles that importers face in terms of higher tariffs, non-tariff restrictions on trade from abroad, and the time it takes for imports to clear customs.

Trade, access to information, and access to knowledge more broadly—through two-way trading, foreign ownership, firm-specific human capital, and ICT—are also important determinants of innovation in the MENA ES region. The percentage of firms that engage in any type of innovation is comparable with the ECA region, but labor productivity gains from innovation are smaller than those observed in other developing economies. Only well-managed firms see productivity gains from innovation; poorly managed firms would benefit more from improving their management practices.

Taken together, these findings suggest several measures that policy makers in the MENA ES economies should implement to reduce the differences in productivity gains.

First, firms would benefit from greater openness to international trade and in particular more effective customs and trade regulations, both when exporting and importing. The aim should be reducing entry costs for all firms; giving preference to certain groups of firms—including SMEs—may result in less efficient and dynamic firms entering the export market. Moreover, while trade costs in the MENA ES economies seem to be comparable with trade costs

elsewhere, additional factors such as internal transport costs are important for well-functioning export sectors.

Second, importing should not be viewed solely through the lens of trade deficits and foreign exchange reserves. Despite the obstacles that importers face in terms of higher tariffs, non-tariff restrictions on trade from abroad and time to clear customs, firms in the MENA ES region are import-reliant. Imports allow companies to source component parts of a better quality or at a lower cost than those available in the domestic market, as well as to acquire knowledge about new products and processes. Time- and cost-efficient access to high-quality inputs, either domestic or foreign, can thus be a means to encourage more high value-added production.

Third, FDI-specific restrictions that hinder foreign investment should be removed. Manufacturers with at least 10 percent foreign ownership are more likely to acquire knowledge, introduce new products, and implement technological innovations. Yet despite this, the World Bank's *Investing Across Borders* reports that relative to other regions, the MENA economies are fairly restrictive on foreign equity ownership in many sectors, with the exception of Tunisia, and it takes twice as long to start a foreign firm as it does to start a domestic firm.

Fourth, the governments should facilitate improvements in the skills of the workforce. Better communication and cooperation between the private sector and universities would be beneficial and should be encouraged, with adequate funding provided at secondary, vocational, and

university levels. Governments could encourage firms to provide training to their employees through dedicated training programs or training centers. Moreover, there is a need for more intensive training programs, particularly aimed at improving the management of SMEs.

Finally, there is an issue that is not discussed directly in the chapter due to data availability, but is related to many of its findings. Restrictions on firm entry and exit as well as restrictions that give undue advantage to incumbent firms, particularly state-owned or politically connected firms (such as privileged access to subsidized energy and state procurement contracts or state-supported non-tariff barriers to trade), should be removed.

There is now a wealth of evidence showing that such restrictions suppress productivity, aggregate growth, and employment growth. There are several reasons for this. Unconnected firms might shrink due to fewer profitable investment opportunities or stop growing to stay small enough to operate under the radar of their connected larger competitors; they might also be forced to exit the market. Furthermore, undue advantages for incumbent firms might discourage new and potentially more productive and innovative firms from entering. Such distortions have further knock-on effects: they may provide incentives for less efficient firms to enter export markets and gain or retain their market share, and prevent some more efficient ones from exporting or growing.

Endnotes

- 1 See Altomonte and Békés (2016).
- 2 See Altenburg and others (1998).
- 3 See Porter (2000) and UNCTAD (2005).
- 4 See World Economic Forum *Global Competitiveness Report* 2015–2016.
- 5 The labor productivity results discussed in the chapter disappear when total factor productivity is used instead: while the coefficients mostly keep their signs, the significance disappears. This could be due to the assumptions used in TFP estimation, relatively smaller sample size (not all manufacturing firms reported the capital measures), or higher-than-optimal capital intensity, resulting from energy subsidies. Further, it may take longer for trade and innovation to be reflected in total factor productivity improvements than in labor productivity improvements—it may take more time for firms to adjust capital and other non-labor inputs. Data availability does not allow us to determine the actual cause with certainty.
- 6 The comparison income group includes either upper-middle-income or lower-middle-income economies (according to the World Bank income classification, as of 2012) for which Enterprise Survey data are available, excluding MENA economies.
- 7 The firm-level literature on the profile of exporters is expansive, following the path of early works by Bernard and Jensen (1995, 1999); Bernard and others (2003, 2006, 2007). For recent surveys of the literature, see Tybout (2003); Wagner (2007, 2012); and Greenaway and Kneller (2007). It should be noted that productivity is most often based on revenue rather than quantity output. This distinction is important as firms may have higher revenue-based productivity not only based on their productive efficiency but also through commanding higher prices for the goods they sell or lower prices for their inputs. See Foster and others (2008).
- 8 See Melitz (2003) and Bernard and others (2007).
- 9 Bernard and others (2007).
- 10 Ibid.
- 11 See Behar and Freund (2011).
- 12 Jaud and Freund (2015, p. 57) find that while there are dominant superstar traders, there are few near-level trading firms. As they succulently characterize this situation, "...in MENA the largest exporter is alone at the top—Zidane without a team."
- 13 Throughout the chapter, exporters are defined as firms exporting more than 10 percent of their sales directly.
- 14 "Superstar exporters" here are defined as the top 5 percent of firms by their export sales value. "Big player" exporters are those accounting for between the 50th and 94th percentile. "Small player" exporters are those that fall below the median in terms of export value, by economy. Jaud and Freund (2015) define superstars as the top 1 percent; since that report works from administrative data and not a sample, a more conservative definition is used here to ensure sufficient coverage. Their approach necessarily includes all firms at the frontier and so the observed effect they find is higher than presented here.
- 15 Jaud and Freund (2015).
- 16 Even after taking relative capital intensity into account, this pattern remains.
- 17 Jaud and Freund (2015). Examples include Jordan Enterprise Development Corporation (JEDCO), whose export promotion program has a strong focus on SMEs, and the Investment Development Authority of Lebanon (IDAL) which focuses its export promotion on the agro-industry (agricultural and agro-industrial products) and therefore largely aims at relatively small firms.
- 18 Ibid, p. 51.
- 19 International Monetary Fund (2014).
- 20 World Bank (2009), p. 151.
- 21 Significant at a 10 percent level.
- 22 The ES data do not include productivity levels at the time the firm started operating. Moreover, it should be noted that by structure, only incumbent firms are considered, and so entry and exit effects are not considered.
- 23 See Seker (2012); Amador and di Mauro (2015).
- 24 See Behar and Freund (2011). Figures from WDI, Imports as a percentage of GDP. For Yemen and Djibouti the most recent year available is used: 2006 and 2007 respectively.
- 25 Jaud and Freund (2015).
- 26 See Amiti and Konings (2007); Seker (2012); Amin and Islam (2014).
- 27 Jaud and Freund (2015) directly attribute unrealized growth to these policies, "Closing MENA markets to competition with high tariffs and restrictive non-tariff measures (NTMs) has not helped domestic exporters grow." (p. XV).
- 28 World Bank (2014). According to the ES data, 96 percent these so-called offshore firms import inputs, compared with 70 percent of comparators. Offshore firms use an average of 75 percent foreign inputs, compared with 50 percent for other Tunisian firms in the ES.
- 29 Note that West Bank and Gaza do not control their borders and customs themselves.
- 30 Jaud and Freund (2015).
- 31 Ibid. They note: "In addition, even if individual firms are able to source high-quality inputs from abroad, transport costs and the increasing prevalence of "just-in-time" production imply that a lack of high-quality locally available inputs is likely to hinder the ability of even the most talented firms to succeed." p. 35.
- 32 See Mohnen and Hall (2013) for an overview.

- 33 In a management field experiment looking at large Indian textile firms, Bloom and others (2013a) find that improved management practices resulted in a 17 percent increase in productivity in the first year through improvements in the quality of products, increased efficiency and reduced inventories. For micro and small enterprises, McKenzie and Woodruff (2015) showed that micro and small firms with better business practices in marketing, stock-keeping, record-keeping and financial planning have higher labor productivity, survival rates and faster sales growth.
- 34 See Brown and others (2006); Estrin and others (2009); Bloom and Van Reenen (2010); Bloom and others (2012, 2013); McKenzie and Woodruff (2015); and Rijkers and others (2014).
- 35 See Crépon and others (1998).
- 36 R&D is the creative work undertaken on a systematic basis to increase a firm's stock of knowledge.
- 37 The differences are significant at 10 percent level. The shares of higher- and medium-low-tech firms in ECA and MENA ES are similar: 20.1 and 22.7 percent respectively. The definition of manufacturing sectors according to technological intensity can be found at <http://www.oecd.org/sti/ind/48350231.pdf>
- 38 See Saliola and Zanfei (2009).
- 39 See AfD, OECD and UNDP (2014).
- 40 Stone and Tarek Badawy (2011) find a similar result using a sample of seven MENA economies (Egypt, Lebanon, Libya, Morocco, Saudi Arabia, Syria and the Republic of Yemen).
- 41 See EBRD (2014), Box 3.2.
- 42 Ibid, Chapter 4 and Bircan and De Haas (2015).
- 43 Differences are significant at 10 percent level.
- 44 See Mohnen and Hall (2013) for an overview. Raffo and others (2008) found that a rise in product innovation increased labor productivity of manufacturing firms by 7.8, 24.6 and 36.8 percent in France, Brazil and Mexico respectively.
- 45 See, for example, Rijkers and others (2014), Diwan and others (2013).
- 46 See, for example, Atkin and others (2015).
- 47 Significant at a 1 percent level.
- 48 International market is the main market for 37.1 percent of firms in Tunisia, 34.3 percent of firms in West Bank and Gaza, 32 percent of firms in Morocco, and 21.1 percent of firms in Lebanon. In the remaining economies, comparable figures are below 8 percent.
- 49 Examples include lingerie manufacturer La Perla moving production from China to Tunisia and Turkey and ready-to-wear group Etam moving production to Morocco, Tunisia and Turkey (see Wendlandt, 2012).
- 50 See Bloom and others (2013b).
- 51 Comparable ES data on management practices are available only for ECA and MENA ES.
- 52 See EBRD (2014), Chapter 2, Bloom and Van Reenen (2010), Bloom and others (2012), Bloom and others (2013a), Bartz and others (2016).
- 53 See Bloom and others (2010).
- 54 Data on energy subsidies for West Bank and Gaza are not available.
- 55 The share of energy subsidies in GDP is below the relevant regional average in less subsidized economies and above it in more subsidized economies.

APPENDIX A5

TABLE A5.1: Exporter size and labor productivity premia

Dependent variable	(1)	(2)	(3)	(4)
	Log (PFTE)	Log (LP)	Log (PFTE)	Log (LP)
Direct exporter only (at least 10 percent of sales) (Y/N)	0.54*** (0.105)	0.09 (0.139)		
Superstar exporters (top 5th percentile by export value) (Y/N)			2.33*** (0.350)	1.71*** (0.332)
Big player exporters (50th to 94th percentile by export value) (Y/N)			0.96*** (0.128)	0.71*** (0.143)
Small player exporters (below 50th percentile by export value) (Y/N)			-0.08 (0.125)	-0.60*** (0.138)
At least 10 percent foreign ownership (Y/N)	0.43** (0.185)	0.11 (0.164)	0.35** (0.159)	0.07 (0.139)
Log (LP)	0.00 (0.033)		-0.07** (0.032)	
Log (PFTE)		0.00 (0.048)		-0.10** (0.049)
Constant	2.87*** (0.351)	9.64*** (0.191)	3.55*** (0.345)	9.95*** (0.193)
Observations	3,011	3,011	3,011	3,011
R-squared	0.26	0.227	0.329	0.289

Source: Enterprise Surveys.

Note: Simple OLS using survey-weighted observations (using Stata's svy prefix). Linearized Taylor standard errors clustered on strata are indicated in parentheses. PFTE = permanent full-time employees. LP = labor productivity. Labor productivity is measured as total revenue per permanent full-time employee, in 2012 USD. Variables omitted from the table: economy and sector fixed effects. Column 2 corresponds to marginal effects as presented in figure 5.4. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.2: Importer size and labor productivity premia

Dependent variable	(1)	(2)
	Log (PFTE)	Log (LP)
Import inputs (at least 10 percent foreign origin) (Y/N)	0.44*** (0.122)	0.55*** (0.132)
At least 10 percent foreign ownership (Y/N)	0.50*** (0.182)	0.02 (0.149)
Log (LP)	-0.01 (0.036)	
Log (PFTE)		-0.01 (0.050)
Constant	2.89*** (0.373)	9.52*** (0.195)
Observations	2,842	2,842
R-squared	0.262	0.277

Source: Enterprise Surveys.

Note: Simple OLS using survey-weighted observations (using Stata's svy prefix). Linearized Taylor standard errors clustered on strata are indicated in parentheses. PFTE = permanent full-time employees. LP = labor productivity. Labor productivity is measured as total revenue per PFTE, in 2012 USD. Variables omitted from the table: economy and sector fixed effects. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.3: Size and labor productivity premia by trader type

Dependent variable	(1)	(2)	(3)	(4)
	Log (PFTE)	Log (PFTE)	Log (LP)	Log (LP)
Two-way trading firm (Y/N)	0.86*** (0.147)	0.63*** (0.136)	0.55*** (0.167)	0.33* (0.185)
Direct exporter only (at least 10 percent of sales) (Y/N)	0.29 (0.229)	0.52** (0.249)	0.17 (0.266)	0.37 (0.249)
Import inputs only (at least 10 percent foreign origin) (Y/N)	0.35** (0.138)	0.05 (0.150)	0.58*** (0.151)	0.44*** (0.167)
At least 10 percent foreign ownership (Y/N)	0.40** (0.183)	0.05 (0.136)	0.02 (0.150)	-0.07 (0.148)
Log (LP)	-0.01 (0.036)	-0.03 (0.045)		
Log (PFTE)			-0.01 (0.052)	-0.07 (0.093)
Log (Age)		0.05 (0.046)		-0.05 (0.060)
Log (Number of employees at start-up)		0.57*** (0.044)		0.08 (0.105)
Log (Capital per employee)		0.00 (0.027)		0.24*** (0.043)
Constant	2.93*** (0.369)	1.71*** (0.425)	9.50*** (0.232)	7.74*** (0.475)
Observations	2,842	2,145	2,828	2,145
R-squared	0.286	0.57	0.275	0.372

Source: Enterprise Surveys.

Note: Simple OLS using survey-weighted observations (using Stata's svy prefix). Linearized Taylor standard errors clustered on strata are indicated in parentheses. Two-way trading firm is a firm that exports at least 10 percent of revenue and imports at least 10 percent of inputs. PFTE = permanent full-time employees. LP = labor productivity. Labor productivity is measured as total revenue per PFTE, in 2012 USD. Columns 2 and 4 exclude superstar exporters. Variables omitted from the table: economy and sector fixed effects. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.4: CDM, 1st and 2nd stages, full private sector

Dependent variable	Stage 1		Stage 2: Innovation		
	(1)	(2)	(3)	(4)	(5)
	Spending on knowledge acquisition (Y/N)	Product (Y/N)	Process (Y/N)	Technological (Y/N)	Non-technological (Y/N)
Spending on knowledge acquisition (Y/N)		0.19* (0.110)	-0.13 (0.134)	-0.00 (0.106)	0.09 (0.110)
Log (Age)	-0.18* (0.100)	0.09* (0.052)	0.03 (0.064)	0.07 (0.050)	0.06 (0.050)
Log (PFTE)	0.52*** (0.068)	-0.16** (0.070)	0.10 (0.086)	-0.03 (0.068)	0.04 (0.069)
At least 10 percent foreign ownership (Y/N)	0.47** (0.234)	0.11 (0.142)	0.07 (0.168)	0.16 (0.138)	0.12 (0.138)
At least 25 percent state ownership (Y/N)	0.76 (0.957)	-0.44 (0.473)	-0.59 (0.603)	-0.54 (0.462)	-0.51 (0.437)
Direct exporter (at least 10 percent of sales) (Y/N)	0.14 (0.178)	0.05 (0.100)	0.13 (0.116)	0.15 (0.096)	0.07 (0.097)
Percent PFTE with university degree	0.01*** (0.003)	-0.01** (0.002)	-0.00 (0.003)	-0.00* (0.002)	-0.00 (0.002)
Percent PFTE with secondary education only	0.00 (0.003)	-0.00*** (0.001)	-0.00 (0.002)	-0.00 (0.001)	-0.00 (0.001)
Years of manager's experience in the sector	-0.00 (0.007)	0.01** (0.003)	0.01 (0.004)	0.01 (0.003)	-0.01** (0.003)
Line of credit or loan from a financial institution (Y/N)	0.28 (0.183)	0.35*** (0.094)	0.51*** (0.114)	0.53*** (0.093)	0.20** (0.093)
Foreign technology license (Y/N)		0.39*** (0.111)	0.60*** (0.115)	0.64*** (0.109)	0.21* (0.112)
Employees receive time to develop new ideas (Y/N)		1.15*** (0.085)	1.51*** (0.089)	1.39*** (0.083)	1.60*** (0.083)
Employees receive formal training (Y/N)		0.67*** (0.094)	0.38*** (0.100)	0.56*** (0.091)	0.71*** (0.090)
Main market: local (Y/N)		-0.23*** (0.083)	-0.24*** (0.091)	-0.20*** (0.077)	-0.16* (0.081)
Email usage (Y/N)		0.60*** (0.096)	0.42*** (0.105)	0.43*** (0.088)	0.67*** (0.095)
Sole proprietorship (Y/N)	0.03 (0.180)				
Manager has a university degree (Y/N)	0.83*** (0.185)				

Source: Enterprise Surveys.

Note: This table reports regression coefficients for the first and second stage of the model described in box 5.1. The results are estimated using asymptotic least squares (ALS). Standard errors are reported in parentheses below the coefficient. PFTE = permanent full-time employees. Variables omitted from the table: Percent PFTE with university degree (don't know), percent PFTE with secondary education (don't know), sector and economy fixed effects, and the intercept. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.5: CDM, 1st and 2nd stages, manufacturing firms with 20 or more employees only

Dependent variable	Stage 1		Stage 2: Innovation		
	(1)	(2)	(3)	(4)	(5)
	Spending on knowledge acquisition (Y/N)	Product (Y/N)	Process (Y/N)	Technological (Y/N)	Non-technological (Y/N)
Spending on knowledge acquisition (Y/N)		-0.06 (0.184)	-0.26 (0.207)	-0.30 (0.206)	0.18 (0.182)
Log (Age)	0.03 (0.163)	0.17* (0.086)	0.08 (0.100)	0.11 (0.098)	0.05 (0.083)
Log (PFTE)	0.32*** (0.119)	-0.14 (0.092)	0.05 (0.105)	-0.01 (0.106)	0.06 (0.089)
At least 10 percent foreign ownership (Y/N)	0.97** (0.391)	0.49* (0.269)	0.35 (0.306)	0.72** (0.303)	0.04 (0.263)
At least 25 percent state ownership (Y/N)	0.80 (0.995)	-0.02 (0.625)	-1.46 (1.119)	-0.27 (0.712)	-0.77 (0.644)
Direct exporter only (at least 10 percent of sales) (Y/N)	0.65 (0.694)	0.24 (0.338)	0.33 (0.398)	0.41 (0.399)	-0.15 (0.322)
Import inputs only (at least 10 percent foreign origin) (Y/N)	1.96*** (0.516)	0.18 (0.407)	0.71 (0.467)	0.67 (0.465)	-0.37 (0.398)
Two-way trading firm (Y/N)	1.73*** (0.579)	0.51 (0.392)	0.85* (0.454)	1.07** (0.456)	-0.08 (0.380)
Percent PFTE with university degree	0.01 (0.007)	-0.00 (0.004)	-0.01* (0.005)	-0.00 (0.005)	0.00 (0.004)
Percent PFTE with secondary education only	-0.00 (0.004)	-0.01*** (0.003)	-0.01*** (0.003)	-0.01** (0.003)	-0.00 (0.002)
Years of manager's experience in the sector (Y/N)	0.01 (0.012)	0.01 (0.006)	0.01 (0.007)	0.01* (0.007)	-0.00 (0.006)
Line of credit or loan from a financial institution (Y/N)	0.79*** (0.300)	0.43** (0.213)	0.70*** (0.236)	0.78*** (0.238)	0.13 (0.208)
Foreign technology license (Y/N)		0.45*** (0.168)	0.76*** (0.177)	0.57*** (0.170)	0.28 (0.175)
Employees receive time to develop new ideas (Y/N)		0.90*** (0.138)	1.56*** (0.144)	1.30*** (0.140)	1.59*** (0.141)
Employees receive formal training (Y/N)		0.92*** (0.148)	0.45*** (0.157)	0.80*** (0.148)	0.60*** (0.149)
Main market: local (Y/N)		0.02 (0.152)	0.15 (0.168)	0.04 (0.147)	-0.07 (0.159)
Email usage (Y/N)		0.46*** (0.161)	0.28 (0.183)	0.22 (0.150)	0.39** (0.166)
Sole proprietorship (Y/N)	0.16 (0.336)				
Manager has a university degree	0.93*** (0.312)				

Source: Enterprise Surveys.

Note: This table reports regression coefficients for the first and second stage of the model described in box 5.1. The results are estimated using asymptotic least squares (ALS) on a sample of manufacturing firms with at least 20 employees. Standard errors are reported in parentheses below the coefficient. Two-way trading firm is a firm that exports at least 10 percent of revenue and imports at least 10 percent of inputs. PFTE = permanent full-time employees. Variables omitted from the table: Percent PFTE with university degree (don't know), percent PFTE with secondary education (don't know), sector and economy fixed effects, and the intercept. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.6: CDM, 3rd stage, full private sector

Dependent variable: Log (LP)	Stage 3			
	(1)	(2)	(3)	(4)
	Product	Process	Technological	Non-technological
Innovation (Y/N)	0.25*** (0.030)	0.20*** (0.026)	0.22*** (0.026)	0.19*** (0.024)
Capital or main business city (Y/N)	0.19*** (0.044)	0.20*** (0.044)	0.19*** (0.044)	0.19*** (0.044)
Log (Age)	-0.04* (0.023)	-0.03 (0.022)	-0.04* (0.022)	-0.02 (0.022)
Log (PFTE)	-0.00 (0.017)	-0.01 (0.017)	0.00 (0.017)	-0.02 (0.018)
At least 10 percent foreign ownership (Y/N)	0.05 (0.074)	0.09 (0.071)	0.06 (0.071)	0.07 (0.071)
At least 25 percent state ownership (Y/N)	0.44* (0.250)	0.50** (0.243)	0.48** (0.242)	0.43* (0.242)
Direct exporter (at least 10 percent of sales) (Y/N)	0.15*** (0.055)	0.16*** (0.053)	0.14*** (0.054)	0.17*** (0.054)
Percent PFTE with university degree	0.01*** (0.001)	0.01*** (0.001)	0.01*** (0.001)	0.01*** (0.001)
Percent PFTE with secondary education only	0.00*** (0.001)	0.00*** (0.001)	0.00*** (0.001)	0.00*** (0.001)
Sole proprietorship (Y/N)	-0.33*** (0.041)	-0.37*** (0.042)	-0.34*** (0.041)	-0.35*** (0.041)

Source: Enterprise Surveys.

Note: This table reports regression coefficients for the third stage of the model described in box 5.1. The results are estimated using asymptotic least squares (ALS). Standard errors are reported in parentheses below the coefficient. PFTE = permanent full-time employees. LP = labor productivity. Labor productivity is measured as total revenue per PFTE, in 2012 USD. Variables omitted from the table: percent PFTE with university degree (don't know), percent PFTE with secondary education (don't know), sector and economy fixed effects, and the intercept. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.7: CDM, 3rd stage, manufacturing firms with 20 or more employees only

Dependent variable: Log (LP)	Stage 3			
	(1)	(2)	(3)	(4)
	Product	Process	Technological	Non-technological
Innovation (Y/N)	0.14*** (0.048)	0.08** (0.039)	0.10** (0.041)	0.13*** (0.041)
Management practices	-0.04 (0.035)	-0.04 (0.035)	-0.04 (0.035)	-0.04 (0.035)
Log (Capital per employee)	0.27*** (0.019)	0.27*** (0.019)	0.27*** (0.019)	0.27*** (0.019)
Capacity utilization	0.00* (0.001)	0.00* (0.001)	0.00* (0.001)	0.00* (0.001)
Capital or main business city (Y/N)	0.03 (0.088)	0.03 (0.088)	0.03 (0.088)	0.03 (0.088)
Log (Age)	-0.04 (0.041)	-0.02 (0.039)	-0.02 (0.039)	-0.01 (0.039)
Log (PFTE)	0.01 (0.033)	-0.00 (0.033)	0.00 (0.032)	-0.03 (0.035)
At least 10 percent foreign ownership (Y/N)	-0.01 (0.100)	0.04 (0.097)	0.00 (0.099)	0.01 (0.098)
At least 25 percent state ownership (Y/N)	0.15 (0.413)	0.28 (0.421)	0.19 (0.412)	0.24 (0.415)
Direct exporter only (at least 10 percent of sales) (Y/N)	0.11 (0.160)	0.14 (0.157)	0.13 (0.158)	0.15 (0.158)
Import inputs only (at least 10 percent foreign origin) (Y/N)	0.14 (0.088)	0.14 (0.087)	0.15* (0.086)	0.15* (0.087)
Two-way trading firm (Y/N)	0.23** (0.113)	0.27** (0.109)	0.25** (0.112)	0.26** (0.109)
Percent PFTE with university degree	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)
Percent PFTE with secondary education only	0.00*** (0.001)	0.00** (0.001)	0.00** (0.001)	0.00** (0.001)
Fuel intensity (fuel cost as a fraction of sales)	-0.47*** (0.087)	-0.47*** (0.087)	-0.47*** (0.087)	-0.47*** (0.087)
Sole proprietorship (Y/N)	-0.09 (0.078)	-0.11 (0.079)	-0.10 (0.078)	-0.11 (0.079)

Source: Enterprise Surveys.

Note: This table reports regression coefficients for the third stage of the model described in box 5.1 for the sample of manufacturing firms with at least 20 employees. The results are estimated using asymptotic least squares (ALS). Standard errors are reported in parentheses below the coefficient. PFTE = permanent full-time employees. LP = labor productivity. Labor productivity is measured as total revenue per PFTE, in 2012 USD. Two-way trading firm is a firm that exports at least 10 percent of revenue and imports at least 10 percent of inputs. Variables omitted from the table: percent PFTE with university degree (don't know), percent PFTE with secondary education (don't know), sector and economy fixed effects, and the intercept. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.8: CDM, 3rd stage, manufacturing firms with 20 or more employees only, by technology intensity

Dependent variable: Log (LP)	Stage 3			
	(1)	(2)	(3)	(4)
	Product	Process	Technological	Non-technological
High- and medium-technology intensity				
Innovation (Y/N)	0.18** (0.076)	0.06 (0.062)	0.08 (0.064)	0.08 (0.054)
Low-technology intensity				
Innovation (Y/N)	0.08 (0.060)	0.06 (0.046)	0.08 (0.052)	0.14*** (0.055)

Source: Enterprise Surveys.

Note: This table reports regression coefficients for the third stage of the model described in box 5.1 for the sample of manufacturing firms with at least 20 employees by technology intensity. The results are estimated using asymptotic least squares (ALS). Standard errors are reported in parentheses below the coefficient. PFTE—permanent full-time employees. LP = labor productivity. Labor productivity is measured as total revenue per PFTE, in 2012 USD. Variables omitted from the table in addition to those shown in table A5.7: percent PFTE with university degree (don't know), percent PFTE with secondary education (don't know), sector and economy fixed effects, and the intercept. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.9: CDM, 3rd stage, manufacturing firms with 20 or more employees only, by management quality above or below median

Dependent variable: Log (LP)	Stage 3			
	(1)	(2)	(3)	(4)
	Product	Process	Technological	Non-technological
Firms with management quality above median				
Innovation (Y/N)	0.12* (0.063)	0.11** (0.052)	0.09* (0.052)	0.13** (0.051)
Management practices	-0.01 (0.081)	-0.01 (0.081)	-0.01 (0.081)	-0.02 (0.081)
Firms with management quality below median				
Innovation (Y/N)	0.13** (0.065)	0.06 (0.052)	0.09 (0.060)	0.08 (0.060)
Management practices	0.14* (0.074)	0.16** (0.073)	0.15** (0.073)	0.15** (0.073)

Source: Enterprise Surveys.

Note: This table reports regression coefficients for the third stage of the model described in box 5.1 for the sample of manufacturing firms with at least 20 employees where the quality of management practice is above or below the MENA ES weighted median. The results are estimated using asymptotic least squares (ALS). Standard errors are reported in parentheses below the coefficient. PFTE = permanent full-time employees. LP = labor productivity. Labor productivity is measured as total revenue per PFTE, in 2012 USD. Variables omitted from the table in addition to those shown in table A5.7: percent PFTE with university degree (don't know), percent PFTE with secondary education (don't know), sector and economy fixed effects, and the intercept. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

TABLE A5.10: Management practices and fuel intensity

Dependent variable: Fuel intensity (fuel cost as a percent of revenue)	(1)	(2)	(3)
	All economies	More subsidized	Less subsidized
Management practices	-0.41 (0.304)	0.39 (0.439)	-0.87** (0.373)
Log (Age)	-0.13 (0.241)	-0.15 (0.432)	-0.53* (0.316)
Log (Sales)	-0.86*** (0.313)	-1.33*** (0.473)	-0.57 (0.402)
Log (PFTE)	0.45 (0.331)	1.40* (0.725)	0.11 (0.393)
Log (Capital stock)	0.61*** (0.192)	0.34 (0.273)	0.72*** (0.215)
Percent PFTE with university degree	-0.01 (0.014)	-0.02 (0.018)	0.00 (0.020)
Constant	4.68 (2.942)	10.34** (4.302)	2.82 (4.105)
Observations	2,498	1,542	956
R-squared	0.217	0.204	0.276

Source: Enterprise Surveys.

Note: This table reports regression coefficients for the sample of manufacturing firms with at least 20 employees using OLS regression on survey-weighted observations (using Stata's svy prefix). Standard errors are reported in parentheses below the coefficient. PFTE = permanent full-time employees. Variables omitted from the table: percent PFTE with university degree (don't know), sector and economy fixed effects. ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively.

REFERENCES

- AfD (African Development Bank), OECD (Organization for Economic Co-operation and Development), and UNDP (United Nations Development Programme). 2014. *African Economic Outlook 2014: Global Value Chains and Africa's Industrialization*. Paris.
- Altenburg, Tilman, Wolfgang Hillebrand, and Jörg Meyer-Stamer. 1998. "Building Systemic Competitiveness: Concept and Case Studies from Mexico, Brazil, Paraguay, Korea and Thailand." German Development Institute, Reports and Working Papers 3/1998, German Development Institute, Berlin.
- Altomonte, Carlo, and Gabor Békés, eds. 2016. *Measuring competitiveness in Europe: Resource allocation, granularity and trade*. Bruegel Blueprint Series, Volume XIV. <http://bruegel.org/wp-content/uploads/2016/01/Blueprint-XXIV.pdf>
- Amador, João, and Filippo di Mauro, eds. 2015. *The Age of Global Value Chains: Maps and Policy Issues*. VoxEU eBook. <http://www.voxeu.org/sites/default/files/GVCs-ebook.pdf>
- Amin, Mohammad, and Asif Islam. 2015. "Use of Imported Inputs and the Cost of Importing: Evidence from Developing Countries." *Applied Economics Letters* 22 (6): 488–92.
- Amiti, M., and J. Konings. 2007. "Trade Liberalization, Intermediate Inputs, and Productivity: Evidence from Indonesia." *American Economic Review* 97 (5): 1611–38.
- Arnold, Jens, Giuseppe Nicoletti, and Stefano Scarpetta. 2008. "Regulation, Allocative Efficiency and Productivity in OECD Countries: Industry and Firm-level Evidence." OECD Economics Department Working Paper No. 616, Organization for Economic Co-operation and Development, Paris.
- Atkin, David, Azam Chaudhry, Shamyra Chaudry, Amit K. Khandelwal, and Eric Verhoogen. 2015. "Organizational Barriers to Technology Adoption: Evidence from Soccer-ball Producers in Pakistan." NBER Working Paper No. 21417, National Bureau for Economic Research, Cambridge, MA.
- Bartz, Wiebke, Pierre Mohnen, and Helena Schweiger. 2016. "The Role of Innovation and Management Practices in Determining Firm Productivity: Evidence from Transition Economies." EBRD Working Paper No. 188, European Bank for Reconstruction and Development, London.
- Behar, Alberto, and Caroline Freund. 2011. "The Trade Performance of the Middle East and North Africa." Middle East and North Africa Working Paper Series No. 53, World Bank, Washington, DC.
- Bernard, Andrew B., and J. Bradford Jensen. 1995. "Exporters, Jobs, and Wages in U.S. Manufacturing: 1976–1987." *Brooking Papers on Economic Activity: Microeconomics*: 67–119.
- . 1999. "Exceptional Exporter Performance: Cause, Effect or Both?" *Journal of International Economics* 47(1): 1–25.
- Bernard, Andrew B., J. Eaton, J. Bradford Jensen, and S. Kortum. 2003. "Plants and Productivity in International Trade." *American Economic Review* 93 (4): 1268–90.
- Bernard, Andrew B., J. Bradford Jensen, and Peter K. Schott. 2006. "Trade Costs, Firms and Productivity." *Journal of Monetary Economics* 53 (2006): 917–37.
- Bernard, Andrew B., J. Bradford Jensen, S. Redding, and Peter K. Schott. 2007. "Firms in International Trade." *Journal of Economic Perspectives* 21 (3): 105–30.
- Bircan, Çağatay, and Ralph De Haas. 2015. "The Limits of Lending: Banks and Technology Adoption across Russia." EBRD Working Paper No. 178, European Bank for Reconstruction and Development, London.
- Bloom, Nicholas, and John Van Reenen. 2010. "Why Do Management Practices Differ across Firms and Countries?" *Journal of Economic Perspectives* 24 (1): 203–24.
- Bloom, Nicholas, Christos Genakos, Ralf Martin, and Raffaella Sadun. 2010. "Modern Management: Good for the Environment or Just Hot Air?" *The Economic Journal* 120 (544): 551–72.
- Bloom, Nicholas, Helena Schweiger, and John Van Reenen. 2012. "The Land that Lean Manufacturing Forgot? Management Practices in Transition Countries." *Economics of Transition* 20 (4): 593–635.
- Bloom, Nicholas, Benn Eifert, A. Mahajan, David McKenzie, and J. Roberts. 2013a. "Does Management Matter? Evidence from India." *Quarterly Journal of Economics* 128(1), 1–51.
- Bloom, Nicholas, Erik Brynjolfsson, Lucia Foster, Ron Jarmin, Itay Saporta-Eksten, and John Van Reenen. 2013b. "Management in America." Center for Economic Studies Paper No. CES-WP-13-01, U.S. Census Bureau, Washington, DC.
- Brown, J. David, John S. Earle, and Almos Telegdy. 2006. "The productivity effects of privatization: Longitudinal estimates from Hungary, Romania, Russia, and Ukraine." *Journal of Political Economy* 114(1): 61–99.
- Clements, Benedict, David Coady, Stefania Fabrizio, Sanjeev Gupta, Trevor Alleyne, and Carlo Sdradevich, eds. 2013. *Energy Subsidy Reform: Lessons and Implications*. Washington, DC: International Monetary Fund.
- Crépon, Bruno, Emmanuel Duguet, and Jacques Mairesse. 1998. "Research, Innovation and Productivity: An Econometric Analysis at the Firm Level." *Economics of Innovation and New Technology* 7 (2): 115–58.

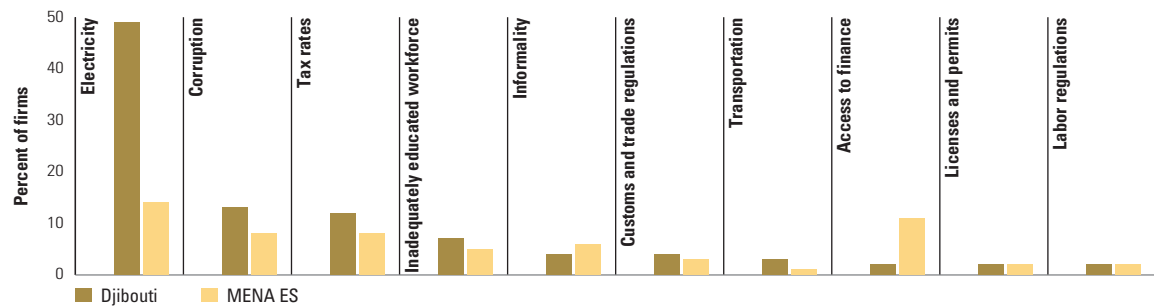
- Diwan, Ishac, Philip Keefer, and Marc Schiffbauer. 2015. "Pyramid Capitalism: Cronyism, Regulation, and Firm Productivity in Egypt." CID Working Paper No. 291, Center for International Development, Harvard University.
- EBRD (European Bank for Reconstruction and Development). 2014. *Transition Report 2014: Innovation in Transition*. London: EBRD.
- Estrin, Saul, Jan Hanousek, Evžen Kočenda, and Jan Svejnar. 2009. "The effects of privatization and ownership in transition economies." *Journal of Economic Literature* 47(3): 699-728.
- Foster, Lucia, John C. Haltiwanger, and Chad Syverson. 2008. "Reallocation, Firm Turnover and Efficiency: Selection on Productivity or Profitability?" *American Economic Review* 98 (1): 394-425.
- Greenaway, David, and Richard Kneller. 2007. "Firm heterogeneity, exporting and foreign direct investment." *Economic Journal* 117(517): F134-F161.
- Hsieh, Chang-Tai, and Peter J. Klenow. 2009. "Misallocation and Manufacturing TFP in China and India." *Quarterly Journal of Economics* 124 (4): 1403-48.
- International Monetary Fund. 2014. *Toward New Horizons: Arab Economic Transformation Amid Political Transitions*. IMF, Washington, DC.
- Jaud, Mélise, and Caroline Freund. 2015. *Champions Wanted. Promoting Exports in the Middle East and North Africa*. Directions in Development. Washington, DC: World Bank.
- McKenzie, David, and Christopher M. Woodruff. 2015. "Business Practices in Small Firms in Developing Countries." Policy Research Working Paper 7405, World Bank, Washington, DC.
- Melitz, Marc J. 2003. "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity." *Econometrica* 71 (6): 1695-1725.
- Mohnen, Pierre, and Bronwyn H. Hall. 2013. "Innovation and Productivity: An Update." *Eurasian Business Review* 3 (1): 47-65.
- OECD (Organization for Economic Co-operation and Development), European Commission and Eurostat. 2005. *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*. Third edition. OECD, European Commission, and Eurostat.
- Porter, Michael E. 2000. *The Current Competitiveness Index: Measuring the Microeconomic Foundations of Prosperity*. *Global Competitiveness Report 2000*. New York/Oxford: Oxford University Press.
- Raffo, Julio, Stephane Lhuillery, and Luis Miotti. 2008. "Northern and southern innovativity: a comparison across European and Latin American countries." *The European Journal of Development Research* 20(2): 219-239.
- Rijkers, Bob, Caroline Freund, and Antonio Nucifora. 2014. "All in the Family: State Capture in Tunisia." Policy Research Working Paper 6810, World Bank, Washington, DC.
- Saliola, Federica, and Antonello Zanfei. 2009. "Multinational Firms, Global Value Chains and the Organization of Knowledge Transfer." *Research Policy* 38(2), 369-81.
- Schiffbauer, Marc, Abdoulaye Sy, Sahar Hussain, Hania Sahnoun, and Philip Keefer. 2015. *Jobs or Privileges: Unleashing the Employment Potential of the Middle East and North Africa*. World Bank, Washington, DC.
- Seker, Murat. 2012. "Importing, Exporting, and Innovation in Developing Countries." *Review of International Economics* 20 (2): 299-314.
- Stone, Andrew, and Lina Tarek Badawy. 2011. *SME Innovators and Gazelles in MENA—Educate, Train, Certify, Compete!* MENA Knowledge and Learning Quick Notes Series No. 64502. Washington, DC: World Bank.
- Tybout, J. 2003. "Plant and Firm Level Evidence on 'New' Trade Theories." In *Handbook of International Trade*, eds. E. K. Choi and J. Harrigan, 388-435. Oxford: Blackwell.
- UNCTAD (United Nations Conference on Trade and Development). 2005. *Improving the Competitiveness of SMEs through Enhancing Productive Capacity. Proceedings of Four Expert Meetings*. New York and Geneva: United Nations. http://unctad.org/en/Docs/iteteb20051_en.pdf
- UIS (UNESCO Institute for Statistics). 2015. "Summary Report of the 2013 UIS Innovation Data Collection." Information Paper No. 24, UNESCO Institute for Statistics.
- Wagner, Joachim. 2007. "Exports and Productivity—A Survey of the Evidence from Firm-level Data." *The World Economy* 30 (1): 60-82.
- . 2012. "International Trade and Firm Performance: A Survey of Empirical Studies since 2006." *Review of World Economics* 148 (2): 235-67.
- Wendlandt, Astrid. 2012. "Out of Love with China, Fashion Factory Moves." Reuters, March 22. <http://www.reuters.com/article/2012/03/22/us-china-fashion-idUSBRE82L0SC20120322> (accessed October 18, 2015).
- World Bank. 2009. *From Privilege to Competition: Unlocking Private-Led Growth in the Middle East and North Africa*. World Bank, Washington, DC.
- . 2014. *The Unfinished Revolution: Bringing Opportunity, Good Jobs, and Greater Wealth to All Tunisians*. World Bank, Washington, DC.
- World Economic Forum. 2013. *The Global Competitiveness Report 2013-2014: Full Data Edition*. Geneva: World Economic Forum.



ENTERPRISE SURVEY—ECONOMY FICHES

DJIBOUTI

FIGURE 1: Ranking of the top business environment obstacles for firms in Djibouti



Firms in Djibouti are heavily dependent on generators for electricity

Nearly half of firms in Djibouti choose electricity as their top obstacle in the business environment (figure 1). Firms cope with an unreliable electricity supply by using power from generators, represented by the 69 percent of firms in Djibouti who own or share a generator, much higher than the MENA ES average of 36 percent (figure 2). Probably due to the high prevalence of generators, firms report fewer power outages in a typical month: on average just under two, compared with a MENA ES average of almost 15 per month (figure 3). In addition to an unreliable supply of electricity in the business environment, firms face issues with corruption as well as tax rates: respectively, 13 percent and 12 percent of firms indicate that these are top obstacles.

FIGURE 2: Firms owning or sharing a generator

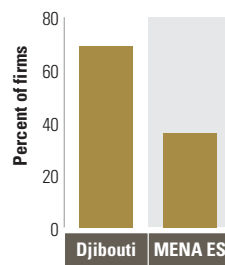
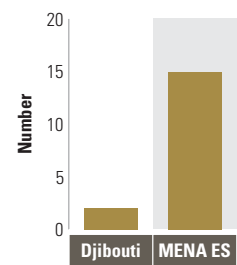


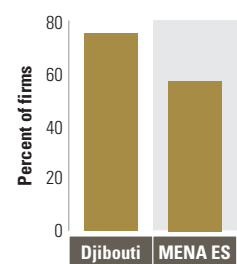
FIGURE 3: Electrical outages in a typical month



Within the MENA ES region, Djibouti has the largest percentage of firms reporting that they do not need a loan

Djibouti's financial sector has grown dramatically since the early 2000s, and today it is quite robust when compared with its peers. The increase in the number of banks in operation, the introduction of Islamic financial instruments, and the opening of accounts for small savers have increased bank deposits. Almost 92 percent of firms in Djibouti have a checking or savings account, well above the MENA ES average of 80 percent. In terms of access to credit, about 12 percent of working capital needs are financed by banks. This is higher than the other MENA ES lower-middle-income economies, with the exception of Morocco. Djibouti also stands out in that 75 percent of firms indicate that they do not need a loan (figure 4). This is the highest percentage in the region. Indeed, only 2 percent of firms rank access to finance as their top business environment obstacle.

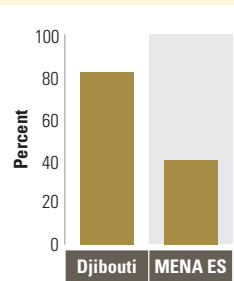
FIGURE 4: Firms not needing a loan



The majority of jobs in Djibouti’s private sector are in services

Djibouti’s economy differs from its MENA ES peers, as the majority of the private sector is composed of the services sector. With an economy dominated by its deep-water port, 82 percent of jobs in Djibouti’s formal private sector covered by the survey are in transport and related services sector. This is much higher than the average of 40 percent across all MENA ES economies (figure 5). With an estimated unemployment rate of over 50 percent, job creation remains a challenging national priority. Among MENA ES economies, Djibouti has the highest share of firms (14 percent) indicating that labor regulations are a major or very severe obstacle to the operations of their establishment.

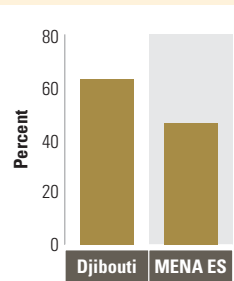
FIGURE 5: The proportion of jobs in the services sector



Compared with the MENA ES region, firms in Djibouti are more reliant on foreign inputs

Manufacturing firms in Djibouti are relatively more reliant on inputs of foreign origin, which is a result of the country’s lack of natural resources and harsh climate. On average, 63 percent of manufacturing inputs are of foreign origin, well above the average for all MENA ES economies (46 percent, figure 6). This is despite the fact that its import tariff rates are among the highest in the region. In terms of innovation across all business sectors, almost a third of firms in Djibouti introduce new processes, higher than elsewhere in the MENA ES region. The majority of process innovations occur through upgrading existing machinery and equipment, as well as software.

FIGURE 6: The proportion of inputs that are of foreign origin



Djibouti has the highest proportion of firms with women in top management positions in the MENA ES region

When compared with the rest of the world, the MENA ES region lags behind in terms of women’s participation in the workforce, firm ownership and top management positions. Within this group, Djibouti stands out in terms of having a relatively large percentage of firms with a woman top manager: 14 percent (figure 7), which was much higher than the MENA ES region average of 5 percent. Djibouti also has the highest percentage of firms with majority female ownership: 7 percent, which is almost twice the regional average (4 percent).

FIGURE 7: Firms with a woman top manager

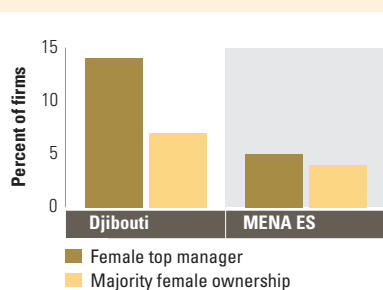
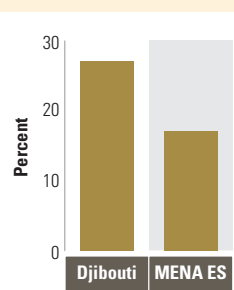


FIGURE 8: Permanent full-time employees that are women

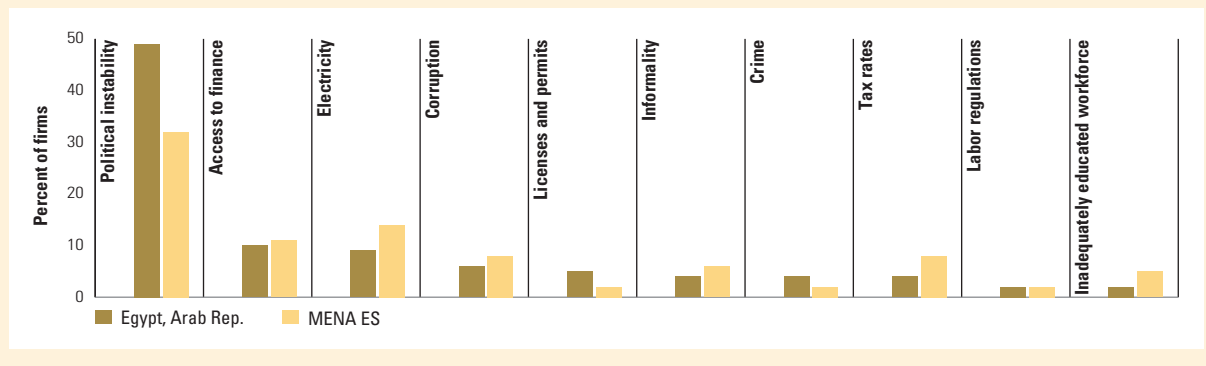


The proportion of permanent full-time employees that are women is also higher than the MENA ES average (figure 8). The relatively strong participation of women in the local workforce and firm management may be partly the result of the preponderance of the services sector in Djibouti’s economy, since services firms are typically more open to women.

The Economy Fiches summarize the economy-specific findings of the report “What’s Holding Back the Private Sector in MENA?” Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

ARAB REPUBLIC OF EGYPT

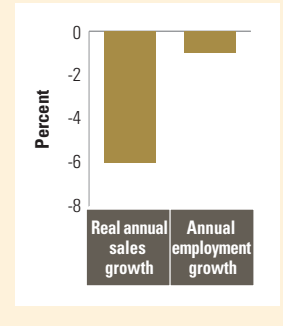
FIGURE 1: Ranking of the top business environment obstacles for firms in Egypt



Political instability is the top obstacle reported by Egyptian firms

Nearly half of Egyptian firms choose political instability as their top obstacle, which was higher than the MENA ES average (figure 1). The uncertain business environment that followed the 2011 uprising and developments in the summer of 2013 was reflected in firms' economic performance: between 2009 and 2012, the typical firm in Egypt saw revenues decline by 6.4 percent per year and employment by more than one percent per year (figure 2). Access to finance is named as the top obstacle by one in every ten firms—not surprising, given that fewer than 60 percent of firms have a checking or savings account and only 6 percent of them have a bank loan or a line of credit. Electricity issues emerge in third place, linked to a major deterioration in electricity supply reliability in 2012, the reference year for the survey. Although named as the top obstacle by only 6 percent of firms, corruption is widespread: 17 percent of firms report being exposed to at least one bribe request.

FIGURE 2: Sales and employment growth



Access to finance remains a key issue for Egyptian firms

Banks account for only 2 percent of firm finance in Egypt, well below the MENA ES average of 12 percent. The low prevalence of bank finance is mirrored by a high share of disconnected firms—those that did not apply for a loan because they have sufficient capital (figure 3). The fact that 40 percent of formal private sector firms do not have a checking or savings account (figure 4) and therefore do not use the financial system even for payment services suggests that the disconnect is structural. Anecdotal evidence suggests that Egyptians themselves characterize their economy as a cash economy. This is in line with the strong role typically ascribed to Egypt's informal economy—estimates from the Egyptian Center for Economic Studies suggest that it constitutes around 40 percent of GDP and 66 percent of total non-agricultural private sector employment.

FIGURE 3: Degree of connection to the banking sector

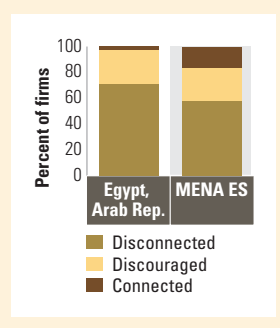
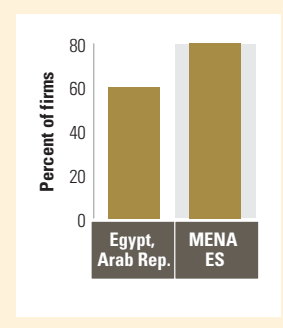
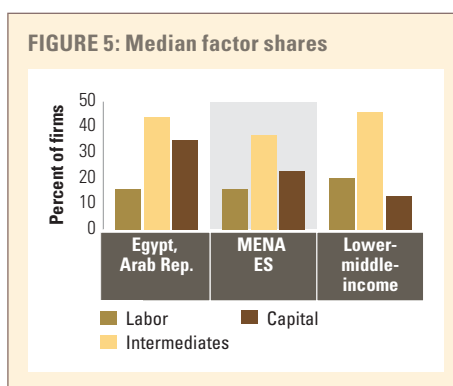


FIGURE 4: Firms with a checking or savings account



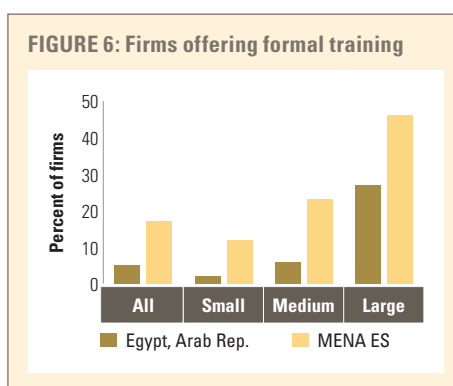
Egyptian manufacturers have high capital intensity and the use of capital seems inefficient

Egyptian firms have labor productivity levels on par with firms in lower-middle-income economies. Where they lag behind is in total factor productivity (TFP), which measures the efficiency of use of not only labor, but also capital and intermediate inputs. When comparing the median factor shares of the three main inputs used by manufacturers—their labor, intermediate inputs, and capital costs—Egyptian manufacturers are more capital-intensive than the average manufacturer in MENA ES as well as in their peer economies (figure 5). Among the MENA ES economies, only Tunisian manufacturers are more capital-intensive. This can partly be explained by the presence of energy subsidies, which distort production structures by promoting energy- and capital-intensive industries.



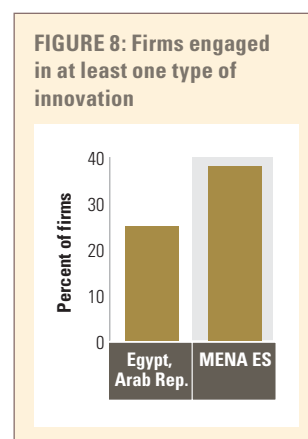
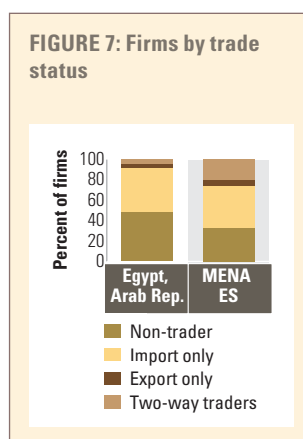
Compared with larger firms, SMEs in Egypt are less likely to provide training to their employees

Egypt is suffering from a mismatch between labor supply and demand, particularly in the area of technical and vocational skills. Post-secondary vocational education and training are often perceived as low status and low quality, without systematic engagement of employers in developing the programs and curricula. Moreover, only 5 percent of Egyptian firms offer formal training, far lower than the MENA ES average of 17 percent. The difference is driven primarily by the low percentage of SMEs providing formal training for their employees—only 2 and 6 percent of them do so, compared with 12 and 23 percent in the MENA ES region on average respectively (figure 6). Lack of skilled workers affects fast-growing firms in particular, and as such, has important implications for aggregate growth and productivity.



Due to the large domestic market, fewer firms are engaged in international trade

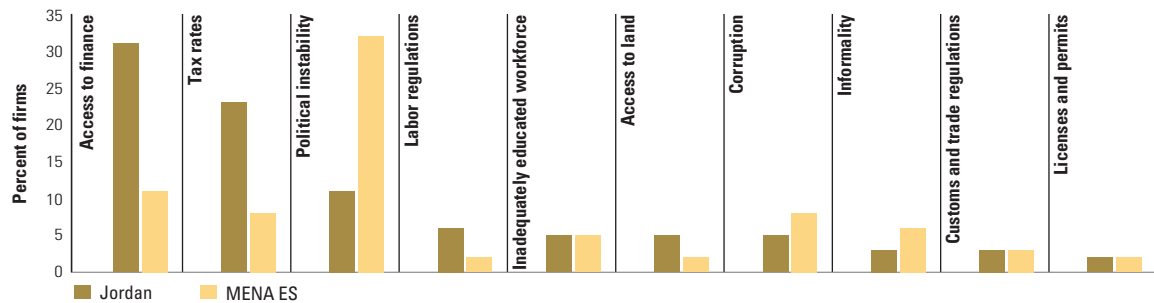
Given the large size of its domestic market, it is not surprising that Egypt has one of the highest proportions of non-trading firms in the MENA ES region. Almost half of all manufacturing firms do not engage in either export or import activities (figure 7). Moreover, only a quarter of firms in Egypt are engaged in at least one type of innovation, compared with more than two-thirds in the MENA ES region (figure 8). This may be due to the fact that the Egyptian market is vast and underserved, which means that firms do not need to compete for customers and hence do not feel the pressure to innovate. Moreover, only 3 percent of firms engage in knowledge acquisition, either through R&D or other sources. Compared with other MENA ES economies, this proportion is particularly low in high- and medium-high-tech manufacturing sectors.



The Economy Fiches summarize the economy-specific findings of the report “What’s Holding Back the Private Sector in MENA?” Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

JORDAN

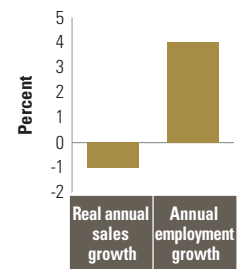
FIGURE 1: Ranking of the top business environment obstacles for firms in Jordan



Access to finance is the top obstacle reported by Jordanian firms

Almost a third of all Jordanian firms report access to finance as the top obstacle to their operations (figure 1), the highest proportion among the MENA ES economies. Cyclical factors might partly explain this result. In 2012, the reference period of the survey, Jordan experienced several adverse shocks. Reductions in gas supply from Egypt forced Jordan to resort to more expensive fuel imports, putting pressure on the current account and reserves as well as the budget. Public debt increased from 71 percent of GDP in 2011 to 82 percent in 2012, potentially crowding out the private sector. These adverse shocks also decreased firms' propensity to invest and hence reduced their demand for credit. Tax rates are the top obstacle for nearly a quarter of all firms, possibly linked to an increase in the time it takes to prepare, file, and pay taxes. Political instability is in third place. Jordan faces security challenges mostly as a result of spillovers of regional turmoil. These problems notwithstanding, firms in Jordan experienced a relatively small drop in sales and robust growth in employment between 2009 and 2012 (figure 2).

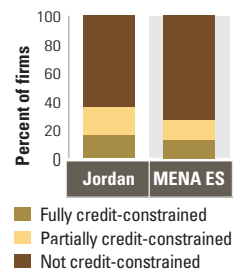
FIGURE 2: Sales and employment growth



Jordanian firms are among the most credit-constrained in the MENA ES region

MENA ES data indicate that problems of access to finance seem to go beyond cyclical considerations and their potential impact on demand for and the supply of credit. While Jordan has comparatively deep financial and banking sectors, with private sector credit to GDP accounting for about 70 percent of GDP from a peak of around 90 percent of GDP in 2007, bank finance accounts for only 10 percent of SME financing in Jordan. The banking sector's exposure to the government and public sector entities increased since 2010. Data indicate that loans to SMEs account for about 10 percent of total loans, which could explain the divergence between measures of financial depth and financial access. Only 64 percent of firms—second lowest after the Republic of Yemen—are not credit-constrained, compared with 73 percent in the MENA ES region (figure 3). Moreover, more than a third of Jordanian firms report being discouraged from applying for a loan due to terms and conditions. Jordan also ranks last in terms of the *Doing Business* measure for ease of getting credit (185 out of 185, tying with the Republic of Yemen).

FIGURE 3: Degree of credit constraint



Women’s employment in Jordan is below the MENA ES average

The proportion of women among the full-time permanent employees in the MENA ES region is very low by international standards, and Jordan compares relatively poorly with other economies in the region. Only 8 percent of the workforce in a typical Jordanian firm is composed of women, compared with an average of 17 percent for MENA ES economies (figure 4). Jordan also stands out among the MENA ES economies as having the lowest percentage of firms that provide training to their employees—only 3 percent of Jordanian firms do so, compared with the MENA ES average of 17 percent (figure 5).

Jordanian manufacturing firms are competitive by regional standards

At 68th place, Jordan was the highest ranked MENA ES economy in the World Economic Forum *Global Competitiveness Report 2013–2014*. Jordan’s manufacturing firms are relatively well integrated into international trade, with 26 percent of them both importing and exporting, compared with the averages of 20 percent in the region (figure 6) and 13 percent in upper-middle-income economies. The firms benefit from relatively low manufacturing tariff rates on both intermediates and raw materials. In addition, the reported number of days to clear imports through customs is also among the lowest in the MENA ES region (figure 7).

Among the MENA ES economies, the proportion of firms engaged in at least one type of innovation is the lowest in Jordan

About a fifth of Jordanian firms are engaged in at least one type of innovation (the lowest proportion in the MENA ES region) and less than 5 percent of them acquire knowledge by engaging in R&D and purchasing or licensing patented technologies, non-patented inventions, and know-how. There are, however, large differences across sectors. In higher-tech industries, almost a quarter of firms acquire knowledge (figure 8) and more than half introduce new products, processes, and organizational or marketing methods (figure 9), on par with the MENA ES average. In other sectors, less than 5 percent of firms acquire knowledge, and the proportion of firms engaged in at least one type of innovation also lags behind the MENA ES average. These discrepancies could be driven by differences in trade integration: among firms in high- and medium-high-tech industries, more than 60 percent are exporters and more than 90 percent import their inputs. In the medium-low and low-tech industries, roughly 40 percent of the firms are exporters and about half import their inputs.

FIGURE 4: Permanent full-time employees that are women

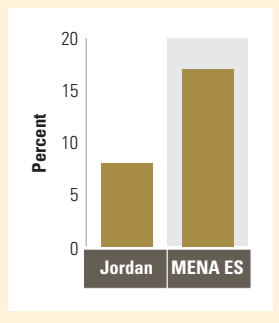


FIGURE 5: Firms offering formal training

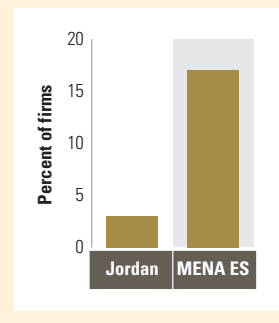


FIGURE 6: Firms by trading status

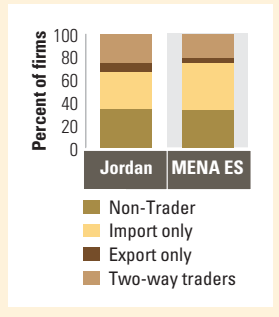


FIGURE 7: Days to clear imports through customs

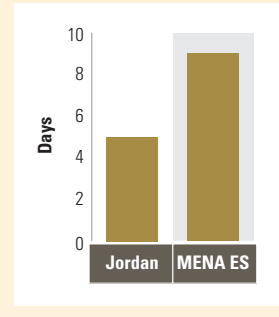


FIGURE 8: Firms engaged in knowledge acquisition

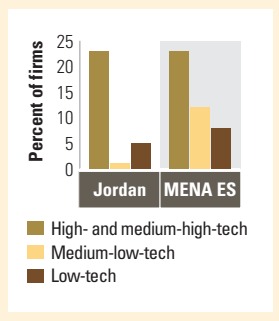
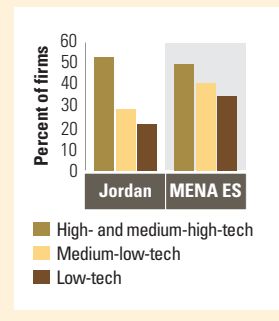


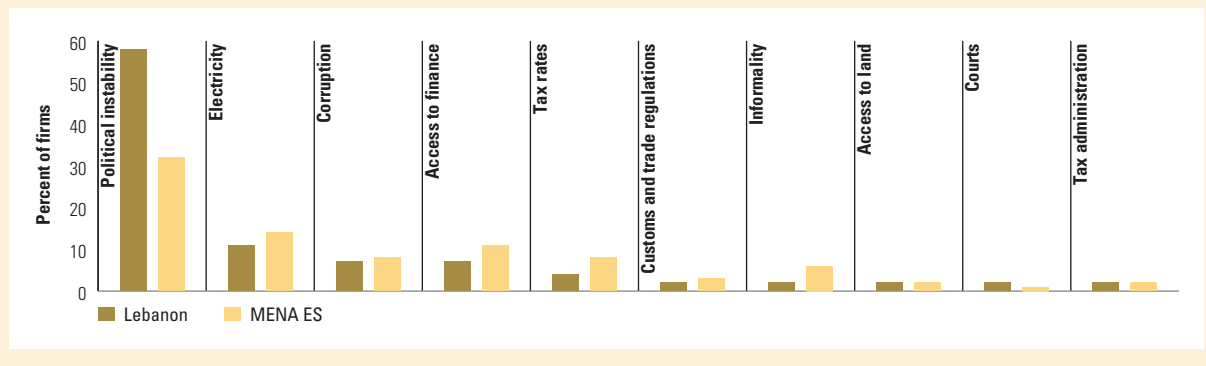
FIGURE 9: Firms engaged in at least one type of innovation



The Economy Fiches summarize the economy-specific findings of the report “What’s Holding Back the Private Sector in MENA?” Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

LEBANON

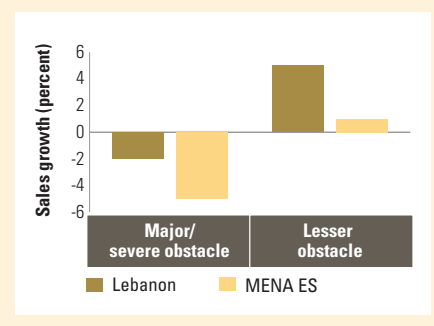
FIGURE 1: Ranking of the top business environment obstacle for firms in Lebanon



Political instability is the top obstacle reported by Lebanese firms

Lebanese firms perceive political instability as the most important obstacle (figure 1). This probably refers to negative spillovers from the conflict in Syria, as well as more generally to the country’s confessional governance and the consequent inertia in structural reforms and weakening of institutions. The country has not had a President since May 2014, and Parliament has voted twice to extend its own term. The four-year term scheduled to end in 2013 is now foreseen to end in 2017. In this difficult political and economic environment, the performance of firms has come under pressure. In a question that considers obstacles independently from each other, political instability is identified as a major or severe obstacle by 91 percent of firms in Lebanon. Those firms performed worse in terms of sales growth over the survey reference period 2009 to 2012 than firms that identify political instability as a lesser obstacle (figure 2).

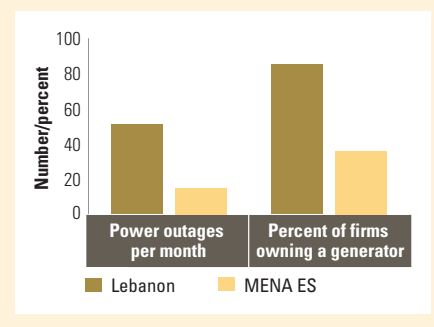
FIGURE 2: Political instability and sales growth



Electricity remains a key issue for Lebanese firms

For 11 percent of Lebanese firms, electricity is the most important obstacle (figure 1). Political divisions have forestalled reform of the energy sector, preventing much needed investments in generating capacity and transmission. Moreover, tariffs have not been adjusted since the 1990s, implying substantial fiscal transfers to the state-owned Electricité du Liban (EdL). As a result, firms suffer from frequent power outages. Firms experience on average 51 power outages per month, far exceeding the MENA ES average (figure 3). The poor quality of electricity supply forces firms to rely on expensive electricity from generators. Not surprisingly, they are much more prevalent in Lebanon—where 85 percent of firms own or share one—than in the other MENA ES economies.

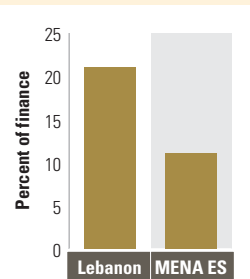
FIGURE 3: Quality of electricity supply



Bank finance plays an important role for financing working capital and fixed capital

Lebanon has one of the highest levels of financial depth among the MENA ES economies, reflecting persistent, large-scale deposit inflows that result from its traditional role as a financial hub for the region and a large and loyal diaspora. Overall, financial intermediation seems to be working well in Lebanon. Banks account for 21 percent of firm financing, exceeding the MENA ES average by a wide margin (figure 4). There is a mixed picture for the collateral framework. On the one hand, Lebanese banks are more willing to lend unsecured than banks in an average MENA ES economy; on the other hand, banks rarely lend against movable collateral. Only 4 percent of loans are secured by machinery and equipment or receivables, compared with a MENA ES average of 14 percent. A reform of the secured transactions framework could further improve access to finance for Lebanese firms.

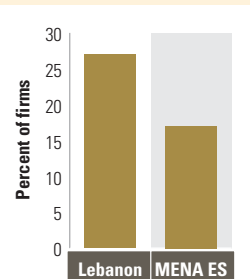
FIGURE 4: Firm finance coming from banks



Workforce skills do not seem to be a major constraint for Lebanese firms

Less than 1 percent of firms in Lebanon consider workforce skills as the most important obstacle, while 15 percent see it as a serious impediment to operations. This relatively good outcome may reflect the fact that Lebanon has one of the highest tertiary school enrollment ratios in the region. Moreover, it is one of the MENA ES economies with the highest training intensity. About 27 percent of firms offer formal training, compared with a MENA ES average of 17 percent (figure 5). Moreover, Lebanon has the second highest share of firms with women’s ownership in the MENA ES region at 43 percent, outperformed only by Tunisia (50 percent). This compares with a regional average of 25 percent. When considering the percentage of firms with a woman top manager, Lebanon (4 percent) lags well behind Tunisia (8 percent) and below the regional average (5 percent).

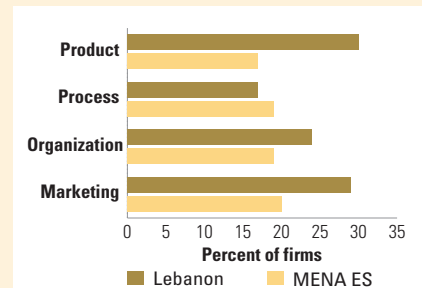
FIGURE 5: Firms providing formal training



Lebanese firms are among those most likely to engage in at least one type of innovation across the MENA ES economies

Lebanon has the highest proportion of firms engaged in innovation in the MENA ES region, with half of them introducing at least one type of innovation. Lebanese firms are more likely to introduce new products than firms in any other MENA ES economy (figure 6). They also exceed the MENA ES average for the proportion of firms engaged in marketing and organizational innovations. In terms of involvement in international markets, Lebanon’s firms are outperforming most economies in the region. Only 20 percent of manufacturing firms do not engage in any trade activities, compared with 33 percent in the MENA ES region on average. Lebanon has a strikingly high share of domestically owned exporters (95 percent compared with a regional average of 85 percent). This could be explained by the traditionally very high political and security uncertainty in the country, which leads domestic firms to seek stable markets for their products and foreign investors to stay away.

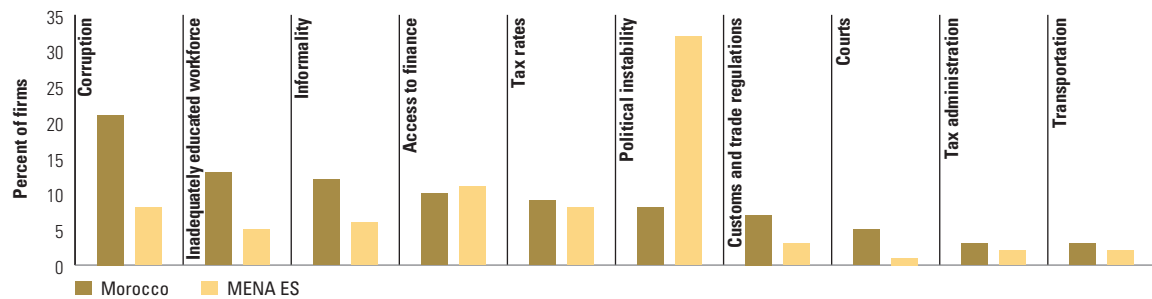
FIGURE 6: Different types of innovation



The Economy Fiches summarize the economy-specific findings of the report “What’s Holding Back the Private Sector in MENA?” Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

MOROCCO

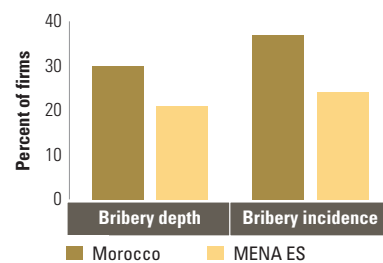
FIGURE 1: Ranking of the top business environment obstacle for firms in Morocco



Corruption is the top obstacle reported by Moroccan firms

Morocco is one of the few economies in the MENA ES region where political instability does not rank highly as a top obstacle. Instead, Moroccan firms perceive corruption as the most important impediment to the business environment (figure 1): 21 percent of firms identify corruption as the top obstacle, compared with the MENA ES average of only 8 percent. Indeed, Morocco has one of the highest reported bribery depths in the MENA ES region, at 30 percent (compared with a MENA ES average of 21 percent). Bribery depth reflects the percentage of transactions where a firm is asked or expected to pay a bribe when soliciting public services, permits, or licenses. Bribery incidence—the percentage of firms experiencing at least one bribe payment request—is, at 37 percent, above the MENA ES average of 24 percent. Morocco also compares poorly with other lower-middle-income economies, where the averages for bribery depth and incidence are 16 and 21 percent respectively. An inadequately educated workforce ranks second as top obstacle in Morocco, and practices of competitors in the informal sector emerge in third place. Indeed, 47 percent of firms in Morocco report that they are competing against unregistered or informal firms, which is significantly higher than the regional average of 16 percent and trailing only the Republic of Yemen.

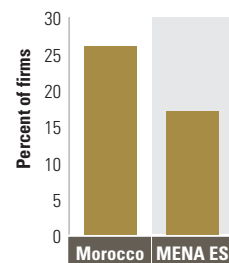
FIGURE 2: Bribery depth and incidence



Morocco lacks an adequately educated workforce

Of surveyed firms in Morocco, 13 percent identify an inadequately educated workforce as the top business obstacle. Morocco has one of the lowest tertiary school enrollments in the region, with only the Republic of Yemen and Djibouti performing worse. In Morocco, gross enrolment at the tertiary level is only 16 percent of the total tertiary age population, which compares poorly to 30 percent in the MENA ES region as a whole. Moreover, the quality of education lags behind and often does not correspond to the business needs of the private sector. At the same time, Morocco is one of the MENA ES economies where the intensity of training provided by firms is one of the highest, with 26 percent of firms offering formal training compared with a regional average of 17 percent (figure 3). This formal training provision remains well below the lower-middle-income average of 37 percent.

FIGURE 3: Firms offering formal training



Financial intermediation in Morocco compares well with other economies in the MENA ES region

Morocco has one of the highest levels of financial depth among MENA ES economies, despite being a lower-middle-income economy, and is one of only two economies in the region that have fully functioning credit bureaus. Overall, financial intermediation seems to be working well in Morocco. Twenty-one percent of working capital and investment is financed through banks (figure 4), the highest proportion among MENA ES economies and by far exceeding the lower-middle-income average of 12 percent. The high prevalence of bank finance is mirrored by the highest share of not credit-constrained firms (those that either did not need a loan or whose loan was approved in full): 87 percent, compared with the average of 73 percent in the MENA ES region (figure 5).

Moreover, a low share of firms are discouraged from applying for a loan due to unfavorable terms and conditions such as complex application procedures, unfavorable interest rates, high collateral requirements, or insufficient size of loan and maturity. In fact, the share of discouraged firms in Morocco is the lowest among all MENA ES economies, as only 10 percent indicate being discouraged from applying for a loan while this proportion ranges from 13 percent in Djibouti to 49 percent in the Republic of Yemen. Morocco also has one of the lowest collateral ratios (the ratio of the value of collateral to the value of the loan) in the MENA ES region at 166 percent. The higher regional average of 208 percent is driven by the very high collateral ratios of the Republic of Yemen (281 percent), Egypt (272 percent) and Tunisia (252 percent).

Moroccan firms engage more frequently in marketing than in other types of innovation

Morocco has one of the highest shares of foreign-owned manufacturing exporters in the MENA ES region (27 percent in Morocco compared with 15 percent in the MENA ES region on average, figure 6). This can, at least partly, be explained by the country's political stability, its capacity to attract foreign investors, and its proximity to Europe. In terms of innovative activities, Moroccan firms engage most frequently, at 28 percent each, in process and marketing innovation, which is well ahead of the regional averages of 19 and 20 percent respectively. Moreover, a higher proportion of firms in Morocco report engaging in R&D or buying external knowledge (10 percent) than in the MENA ES region on average (7 percent) (figure 7). This could be explained by greater integration of Moroccan firms into GVCs than their regional peers (with the exception of Tunisia) as well as the higher share of foreign ownership.

FIGURE 4: Use of banks as financing source

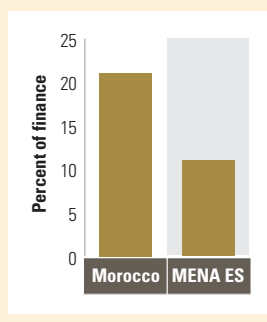


FIGURE 5: Not credit-constrained firms

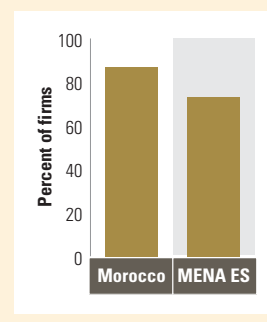


FIGURE 6: Foreign ownership of exporting manufacturing firms

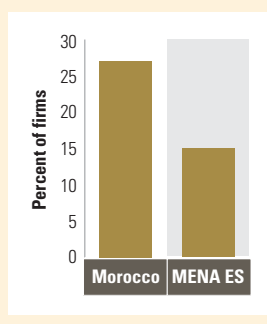
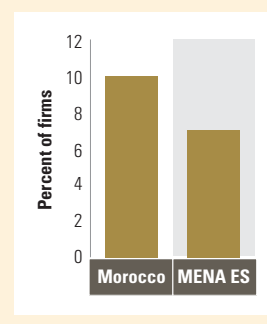


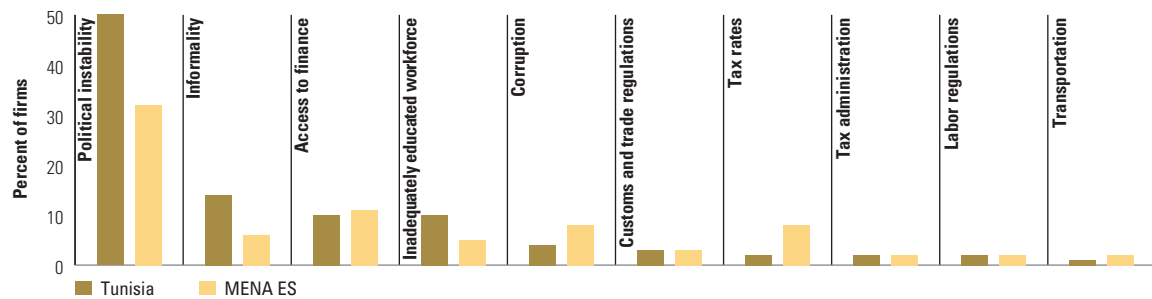
FIGURE 7: Firms engaged in R&D (inhouse or contracted)



The Economy Fiches summarize the economy-specific findings of the report "What's Holding Back the Private Sector in MENA?" Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

TUNISIA

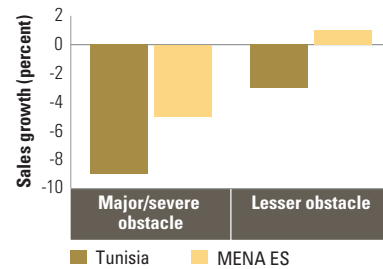
FIGURE 1: Ranking of the top business environment obstacle for firms in Tunisia



Political instability is the top obstacle reported by Tunisian firms

Tunisian firms perceive political instability as the most important obstacle to business activity, with half of all firms identifying this issue as their top obstacle (figure 1). Many firms suffered from the uncertain business environment that followed the Jasmine revolution in 2011, notably the uncertainty about policy directions. Economic performance was at a low and most firms saw their sales contract significantly in this difficult environment. Considered independently of the other obstacles, political instability is identified as a major or severe obstacle by 60 percent of firms in Tunisia. Those firms saw their sales decline most dramatically over the survey reference period 2009 to 2012, by 9 percent, compared with a decline in sales of 3 percent for the firms that identify political instability as a lesser obstacle (figure 2). Informality ranks second as top obstacle in Tunisia, where 45 percent of firms report competing against unregistered or informal firms. Access to finance emerges in third place, despite Tunisian firms relying more heavily on external financing than firms in any other MENA ES economy, with only 59 percent of working capital and investment financed through internal sources.

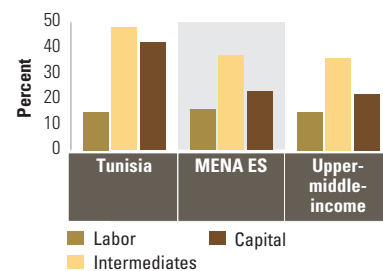
FIGURE 2: Political instability and sales growth



Tunisian manufacturers have high capital intensity and the use of capital seems inefficient

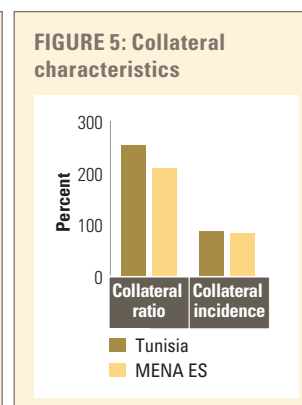
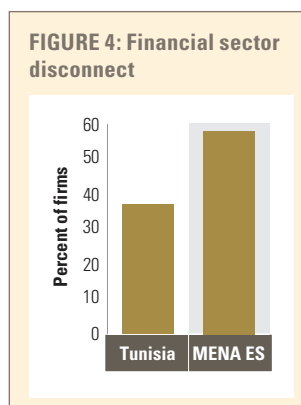
Manufacturing firms in Tunisia are significantly more capital-intensive than firms in upper-middle-income economies on average (figure 3). When comparing the median factor shares of three main inputs used by manufacturers, that is, their labor, intermediate inputs, and capital costs, Tunisian manufacturers stand out as the most capital-intensive in the MENA ES region. This can partly be explained by the presence of energy subsidies, which distort production structures by promoting energy and capital-intensive industries. Indeed, while Tunisian manufacturers have labor productivity levels comparable to those of manufacturers in upper-middle-income economies, their TFP lags behind, indicating that capital is used inefficiently.

FIGURE 3: Median factor shares



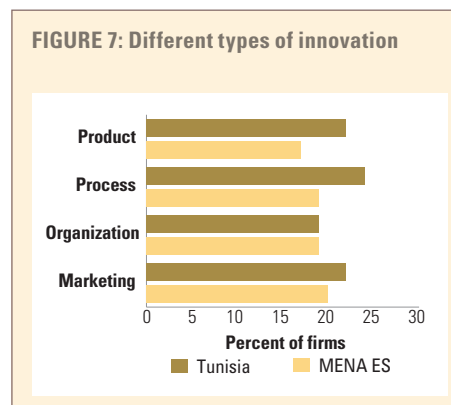
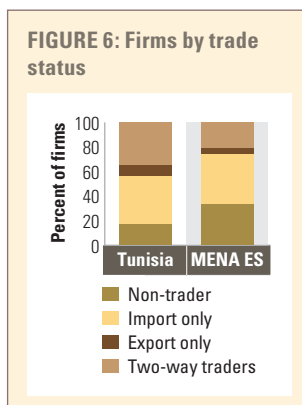
Tunisian firms have a lower degree of financial disconnect, but high collateralization of loans is hampering access to finance

Despite ranking third, access to finance is identified as top obstacle by only 10 percent of Tunisian firms. This compares favorably with the averages of both the MENA ES region (11 percent) as well as upper-middle-income economies (16 percent). Tunisian firms report a relatively low degree of disconnect of the private sector from financial markets, with 37 percent of firms disconnected in Tunisia compared with 58 percent of firms in the MENA ES region on average (figure 4). Disconnected firms are those that did not apply for any loan in the survey reference year and explicitly state that they did not need a loan thanks to sufficient capital. Tunisian financial institutions rely heavily on the use of collateral as guarantees for loans. Both the collateral ratio (the ratio of the value of collateral to the value of the loan) and the collateral incidence (the share of loans that are collateralized) are high, the former being above any other MENA ES upper-middle-income economy at about 252 percent, and the latter (at 87 percent) being above the MENA ES average of 83 percent (figure 5). These two measures of collateral requirements also compare poorly with upper-middle-income averages (190 percent for the collateral ratio and 75 percent for the collateral incidence).



Tunisian firms are competitive by regional standards

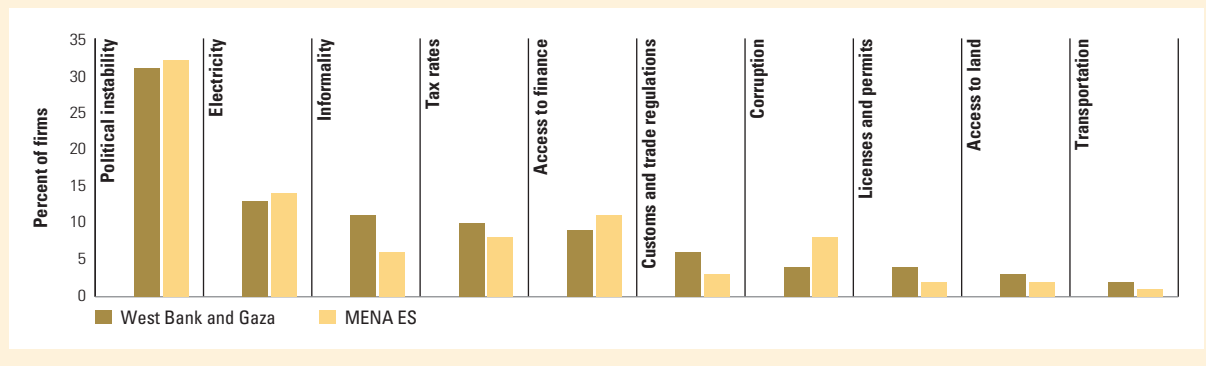
Tunisia has the highest proportion of two-way traders—firms that both export and import—in the MENA ES region, with 35 percent of firms exporting 10 percent or more of their sales directly and importing 10 percent or more of intermediate inputs (figure 6). This can partly be explained by the importance of the offshore industry in Tunisia, which comprises fully export-oriented firms that benefit from tax exemptions, duty free access to inputs and equipment, and streamlined customs procedures. Given this special status, these firms tend to be well integrated into GVCs. Moreover, a higher percentage of Tunisian firms are engaged in innovation than in the MENA ES region on average (figure 7). The proportion of firms undertaking process innovation is particularly high at almost a quarter of all firms—this may be related to the knowledge transfer from their GVC partners.



The Economy Fiches summarize the economy-specific findings of the report “What’s Holding Back the Private Sector in MENA?” Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

WEST BANK AND GAZA

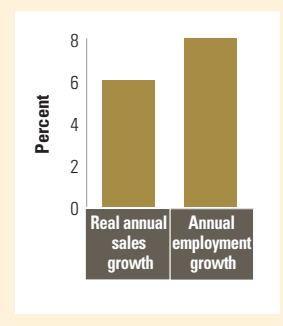
FIGURE 1: Ranking of top business environment obstacles for firms in the West Bank and Gaza



Political instability is the top obstacle reported by firms in the West Bank and Gaza

Roughly one in three firms in the West Bank and Gaza report political instability as the top obstacle in the business environment, in line with the average in the MENA ES economies (figure 1). Electricity and practices of the informal sector are the second and third ranked top obstacle. Despite persistent instability, firms in the West Bank and Gaza experienced robust growth rates in the period 2009–2012, in terms of both sales revenues, which increased at nearly 6 percent per year, and employment, with an annual growth rate of nearly 8 percent (figure 2). Although not ranked as the top obstacle, corruption is considered a major or very severe obstacle to their operations by half of all firms. In addition, over half of all firms consider both access to finance and electricity as major/very severe obstacles to their current operations. The current and future economic outlook, however, is much more uncertain as overall donor aid and disbursements have decreased, Israeli-Palestinian peace talks remain stalled, and fiscal pressures on the Palestinian Authority continue to grow. Given continuing political instability in the West Bank and Gaza and the uncertain economic outlook, policies are needed to promote private sector growth.

FIGURE 2: Sales and employment growth



The unreliable provision of electricity is particularly acute in Gaza

Firms in the West Bank and Gaza report losses due to power outages of above 6 percent of annual sales, larger than losses reported by any other MENA ES economy's firms (figure 3). The supply of electricity is particularly unreliable in Gaza, where losses due to power outages average over 22 percent of annual sales and firms experience nearly 29 outages per month, compared with reported losses of just above 1 percent and almost two power outages each month in the West Bank (figure 4). The blockade of the Gaza strip, political infighting, perpetual fuel shortages, a crumbling infrastructure, and perpetual conflict and insecurity all result in the very unreliable supply of electricity in Gaza.

FIGURE 3: Losses due to electrical outages

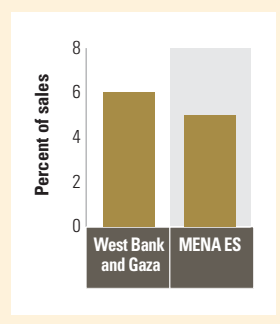
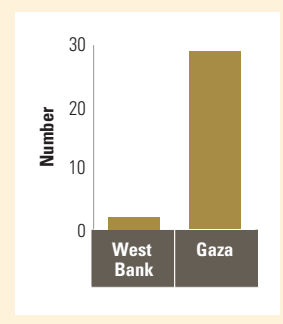


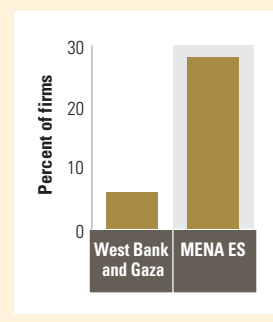
FIGURE 4: Electrical outages in a typical month



Many firms in the West Bank and Gaza are disconnected from financial services

The majority of firms' working capital is financed by internal funds and supplier credit. Banks account for only 3 percent of working capital financing in the West Bank and Gaza, which is well below the MENA ES average of 10 percent. Almost three-quarters of firms did not apply for a loan as they have sufficient capital and are thus classified as disconnected from the financial sector, the second highest share of firms in the MENA ES. The fact that almost 30 percent of formal private sector firms do not have a checking or savings account and therefore do not use the financial system even for payment services suggests that the disconnect is structural. Indeed, only 6 percent of firms indicate having a loan or line of credit (figure 5). Despite the low prevalence of business loans, the West Bank and Gaza does stand out in terms of client-friendly collateral practices. The share of movable collateral, such as machinery and equipment or receivables, is the highest among the MENA ES economies. At the same time, the average collateral ratio is the second lowest among the MENA ES economies.

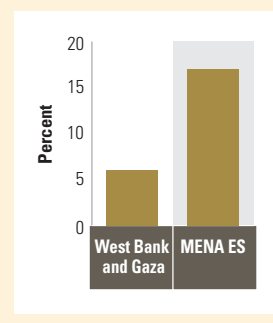
FIGURE 5: Firms with a bank loan or line of credit



Women's participation in the private sector lags behind other MENA ES economies

The West Bank and Gaza has some of the lowest rates of women's participation both in the workforce and in firm ownership or management among the MENA ES economies. Of permanent full-time workers, only 6 percent are women, lower than the MENA ES average of 17 percent (figure 6). In addition, only 13 percent of firms have women's participation in ownership and 1 percent of firms have a woman top manager; the comparable averages for the MENA ES region are 25 percent and 6 percent. Commonly cited reasons for this lack of women's participation include a dearth of opportunities as well as social, cultural, and institutional norms. Due to persistent conflict and instability, additional concerns of personal safety and mobility restrictions further inhibit women's participation in the formal private sector.

FIGURE 6: Permanent full-time workers that are women



Firms in the West Bank and Gaza spend less on R&D

In the West Bank and Gaza, exporters account for approximately 40 percent of all manufacturers and more than half of those firms' inputs are of foreign origin (figure 7). Nonetheless, importers face by far the longest customs waiting times in the MENA ES region: 17 days. In addition, compared with the MENA ES region as a whole,

FIGURE 7: Degree of foreign engagement in manufacturing

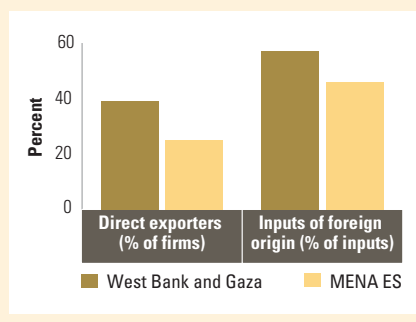
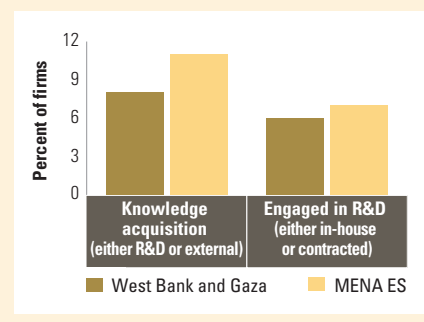


FIGURE 8: Different types of knowledge acquisition

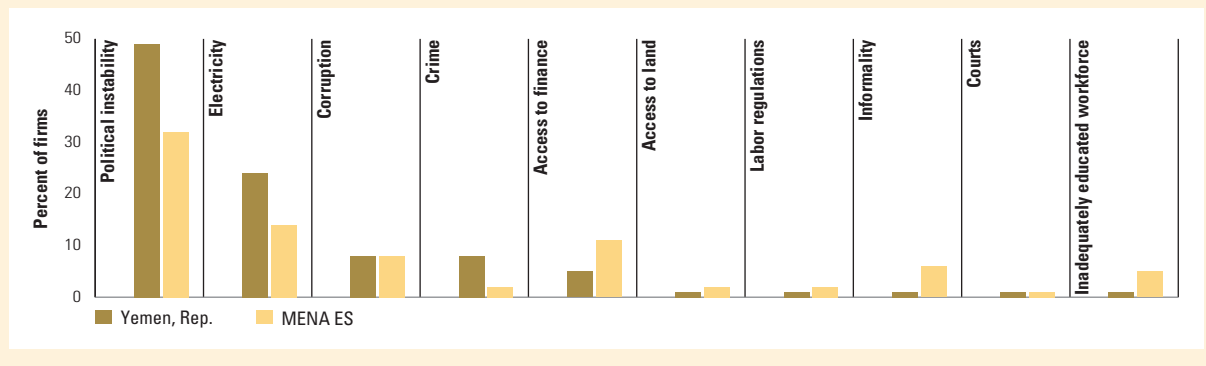


a slightly lower percentage of firms in the West Bank and Gaza are spending on R&D or the acquisition of external knowledge (figure 8). Almost a third of higher technology manufacturing firms do so, on par with Tunisia and Djibouti.

The Economy Fiches summarize the economy-specific findings of the report "What's Holding Back the Private Sector in MENA?" Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

REPUBLIC OF YEMEN

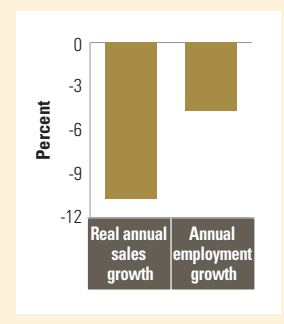
FIGURE 1: Ranking of top business environment obstacles for firms in the Republic of Yemen



Political instability is the top obstacle reported by firms in the Republic of Yemen

The ES fieldwork took place between March 2013 and July 2014, during a period of instability in the Republic of Yemen, which deteriorated into civil war in early 2015. Unsurprisingly, nearly half of all firms identify political instability as their top obstacle in the business environment (figure 1). Nearly a quarter of firms indicate electricity as their top obstacle. Although not ranked as the top obstacle, corruption is considered a major or very severe obstacle by 97 percent of firms; among all economies with ES data, this is the highest percentage. In addition, over 60 percent of all firms consider crime as a major/very severe obstacle to their current operations; and 17 percent of firms experience losses due to theft and vandalism, the highest percentage among MENA ES economies. Not surprisingly, following this deterioration of the business environment, private sector activity over the period contracted. A typical firm, between 2009 and 2012, saw sales revenues strongly decline by nearly 11 percent per year and an employment contraction of 5 percent per year (figure 2).

FIGURE 2: Sales and employment growth



Electricity remains a key issue for firms in the Republic of Yemen

After political instability, electricity is the second most-often cited top obstacle to firms in the Republic of Yemen. Private sector firms experience nearly 40 power outages in a typical month and lose over 16 percent of their annual sales as a result of these power outages (figure 3). Closely linked to this, the private sector reports heavy reliance on private generators: eight in 10 firms in the Republic of Yemen own or share a generator (figure 4), and overall, 39 percent of the private sector's power provision comes from these generators.

FIGURE 3: Electrical outages and losses

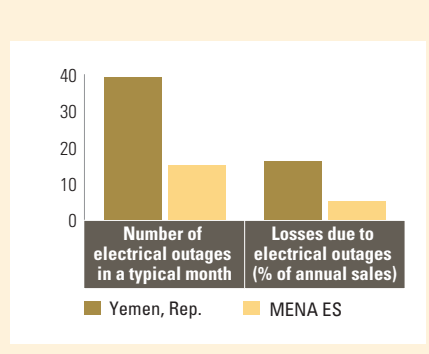
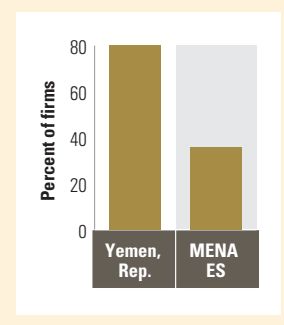


FIGURE 4: Firms owning or sharing a generator



Firms in the Republic of Yemen remain largely disconnected from the financial sector

The Republic of Yemen has the highest share of credit-constrained firms—those that were rejected (or partially approved) on loan applications and/or were discouraged from applying due to unfavorable terms and conditions—among MENA ES economies (figure 5). This is driven by a high share of firms that are discouraged from applying for loans. Moreover, only 1 percent of financing is sourced from banks, the lowest proportion among all MENA ES economies. The fact that over 50 percent of formal private sector firms do not have a checking or savings account (figure 6) and therefore do not use the financial system even for payment services suggests that the disconnect is structural.

FIGURE 5: Degree of credit constraint

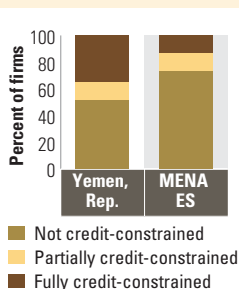
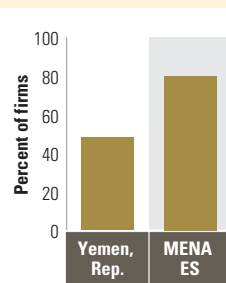


FIGURE 6: Firms with a checking or savings account



Republic of Yemen manufacturers are the least integrated into global markets

Well behind the MENA ES average, only 37 percent of the Republic of Yemen manufacturers import at least a tenth of their material inputs or supplies from abroad (figure 7). In contrast, this rate is on average over 60 percent in the MENA ES region. Manufacturers are even less integrated on the exporting side. Only 5 percent of the economy’s manufacturers export at least 10 percent of their sales abroad, a fifth of the MENA ES average. Not surprisingly, the Republic of Yemen has the lowest proportion of two-way trading manufacturing firms (those that import and export), indicating that this sector is quite removed from GVCs. In addition, Republic of Yemen firms face longer waiting times to clear customs when directly exporting, compared with firms across the MENA ES region (figure 8).

FIGURE 7: Degree of foreign engagement in manufacturing

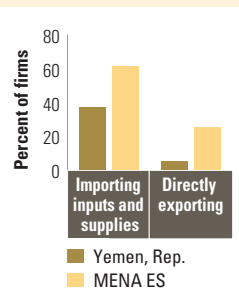
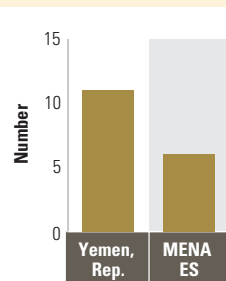


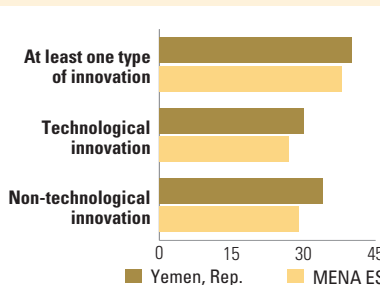
FIGURE 8: Days to clear direct exports through customs



Innovation rates in the Republic of Yemen are comparable with MENA ES averages

More than 40 percent of firms in the Republic of Yemen engage in at least one type of innovation (figure 9). These are introductions of new or significantly improved products or processes (technological innovations) or new or significantly improved organizational or marketing methods (non-technological innovations). Most of the innovations are new to the firm rather than new to the Republic of Yemen or to international markets. In the Republic of Yemen, firms primarily introduce new marketing and organizational methods rather than new products and processes; but firms also report technical innovation at rates slightly above the MENA ES average.

FIGURE 9: Firms engaged in innovation



The Economy Fiches summarize the economy-specific findings of the report “What’s Holding Back the Private Sector in MENA?” Note that annualized sales and employment growth statistics are calculated using the reference years 2009 and 2012; these reference years are used due to when the Enterprise Survey was administered. The findings, interpretations, and conclusions expressed in this fiche are entirely those of the authors. They do not necessarily represent the views of the European Bank for Reconstruction and Development/European Investment Bank/World Bank and its affiliated organizations, or those of their Executive Directors or the governments they represent.

GLOSSARY OF TERMS AND ACRONYMS

AFR	Sub-Saharan Africa. For a full list see pages 135–137
Big player exporters	Firms between the 50th and 94th percentile by their export sales volume
Business environment	The various domains that affect the day-to-day experiences of firms. Examples include accessing finance, meeting regulatory requirements, infrastructure, corruption, etc.
Collateral incidence	The share of outstanding loans that are collateralized
Collateral ratio	The average ratio of the value of the collateral to the value of the loan
Collateral ratio index	The inverse of the collateral ratio, calculated from bank-specific information, reflecting the prevalent requirements applied by the bank to its client. It is presented as a measure reflecting the environment in the area where the bank is located, by providing a weighted average based on the relevance of the branches of banks located in a circle with radius of 10km centered on the specific firm.
Competitiveness	At the firm level, competitiveness can be thought of as the ability to sustain market position by supplying quality products on time—at competitive prices—and the ability to adapt quickly to changes in the external environment. It requires continuous increases in productivity, by shifting from comparative advantages, such as low cost labor, to competitive advantages—competing on cost and quality, delivery, and flexibility.
Connected firms	Firms that applied for a loan, regardless of whether their application was approved or rejected
Credit-constrained firms	Firms that had a loan application rejected or were discouraged from applying in the first place. They can be fully or partially credit-constrained.
DEC	Development Economics Vice Presidency, the research arm of the World Bank Group
Disconnected firms	Firms that did not apply for any loan, as they had sufficient capital
Discouraged firms	Firms that did not apply for any loan, due to terms and conditions
EAP	East Asia Pacific. For a full list see pages 135–137
EBRD	European Bank for Reconstruction and Development
ECA	Eastern Europe and Central Asia. For a full list see pages 135–137
EIB	European Investment Bank
Enterprise Survey	A survey that asks firms in the formal private sector questions about the business environment and their economic inputs and output
ES	Enterprise Survey
Exporter productivity premium	Average labor productivity differential between exporting and non-exporting firms
Exporters	Firms that export at least 10 percent of their sales
Factor share	The ratio of total input costs to overall revenues. Factor shares are included for total employment costs (including wages, bonuses, and social security payments), the total cost of raw materials and intermediate inputs, and the replacement cost of machinery, vehicles, and equipment (capital).
FDI	Foreign direct investment
Firms	Firms are the respondents to the Enterprise Survey. A firm is a business in the private sector that meets the eligibility criteria for the survey.
Formal private sector	Firms registered with a government authority and the firm has at least 1 percent of private ownership
Formal training	Training that has a structured, defined curriculum offered to employees; this type of training does not include employee orientation
Fully credit-constrained firms (FCC)	Firms that have no source of external finance and typically applied for a loan and were rejected or did not apply for a loan due to unfavorable terms and conditions
GVC	Global value chain
Higher-tech manufacturing	High- and medium-high-tech intensity manufacturing (ISIC Rev. 3.1) sectors include chemicals (24), machinery and equipment (29), electrical and optical equipment (30-33), and transport equipment (34-35, excluding 35.1). See http://www.oecd.org/sti/ind/48350231.pdf

IBRD	International Bank for Reconstruction and Development
ICT	Information and communication technology
ILO	International Labour Organization
IMF	International Monetary Fund
Importer productivity premium	Average labor productivity differential between importing and non-importing firms
Importer size premium	Average size differential between importing and non-importing firms, where size is measured as number of permanent full-time employees
Importers	Firms that import at least 10 percent of their inputs
Informal firms	Unregistered firms
Innovation	Introduction of new or significantly improved products and processes, as well as new or significantly improved organizational and marketing methods
ISIC	International Standard Industrial Classification (UN)
Jobless growth	When the broader economy is growing yet new job creation is very limited
Knowledge acquisition	Includes contracting R&D with other firms and institutions, or by purchasing or licensing patented technologies, non-patented inventions, and know-how
Labor productivity (LP)	Total annual sales divided by the number of full-time permanent employees (expressed in 2012 USD)
Labor productivity growth	Growth in labor productivity between 2009 and 2012, annualized and expressed in constant 2012 USD. The growth measure is calculated by dividing the difference in labor productivity in the two periods by their average.
LAC	Latin America and the Caribbean. For a full list see pages 135–137
Large firm	A firm with at least 100 full-time employees
Lower-middle-income	Using ES data as a benchmark, the average across lower-middle-income economies where ES data are available. For a full list see pages 135–137
Low-tech manufacturing	Low-technology intensity manufacturing (ISIC Rev. 3.1) sectors include food products, beverages and tobacco (15-16), textiles (17-18), leather (19), wood (20), paper, publishing, and printing (21-22), and other manufacturing (36-37). See http://www.oecd.org/sti/ind/48350231.pdf
Major obstacle	Firms are asked to rate an individual business environment obstacle on a 5 point scale. If the firm chooses a 4 or a 5, then that obstacle is a “major obstacle” for the firm.
Management practices	Core management practices relating to operations, monitoring, targets, and incentives
Marketing innovation	Introduction of new or significantly improved marketing methods
Medium-sized firm	A firm with 20–99 full-time employees
Medium-low-tech manufacturing	Medium-low-technology intensity manufacturing (ISIC Rev. 3.1) sectors include building and repairing of ships and boats (35.1), rubber and plastics products (25), coke, refined petroleum products, and nuclear fuel (23), other non-metallic mineral products (26), and basic metals and fabricated metal products (27–28). See http://www.oecd.org/sti/ind/48350231.pdf
MENA	Middle East and North Africa. For a full list see pages 135–137
MENA ES	The eight economies in the MENA region that are the focus of this report: Djibouti; Egypt, Arab Rep.; Jordan; Lebanon; Morocco; Tunisia; the West Bank and Gaza; and the Republic of Yemen
Movable collateral	Collateral based on machinery, equipment, or receivables as underlying assets
Movable collateral incidence	The share of collateralized loans where either machinery and equipment or receivables were pledged as collateral
Not credit-constrained firms	Firms that have no difficulties in accessing credit or do not need credit. This category includes firms that did not apply for a loan as they have enough capital (on their own or from other sources) and firms that applied for a loan and the loan application was approved in full.
Non-technological innovation	Introduction of new or significantly improved organizational or marketing methods
OECD	Organisation for Economic Co-operation and Development
Organizational innovation	Introduction of new or significantly improved organizational methods
Other services	Services firms, excluding retail firms

Partially credit-constrained firms (PCC)	Firms that have external financing but were discouraged in applying for a new loan due to terms and conditions. Also included are firms that have external financing and applied for a new loan that was only partially approved.
PFTE	Permanent full-time employee
Process innovation	Introduction of new or significantly improved processes
Product innovation	Introduction of new or significantly improved products
R&D	Research and development
SAR	South Asia. For a full list see pages 135–137
Sector	The business activity of a firm. The ES classifies firms as manufacturing, retail, or other services.
Small firm	A firm with fewer than 20 full-time employees
Small player exporters	Firms below the 50th percentile by their export sales volume
SMEs	Small and medium-sized enterprises
Superstar exporters	Top 5 percent of firms by their export sales volume
Technological innovation	Introduction of new or significantly improved products or processes
Top manager	The most senior-level manager of the firm, who is making the key decisions on a day-to-day basis
Top obstacle	The obstacle from a list of 15 possible business environment obstacles, which firms choose as the biggest obstacle to their establishment
Transition matrix from census data	The transition matrix estimates the probability of firms moving from one size category to the other. Based on census data, it accounts for both entry and exit of firms over the period.
Transition matrix from ES data	The transition matrix estimates the probability of firms moving from one size category to the other. The survey includes firms existing in 2012 and excludes firms that exited the market in 2009-2012. The transition matrix is thus biased, as it does not account for the exit of firms.
Two-way traders	Firms that are both importers and exporters
UN	United Nations
UNDP	United Nations Development Programme
Upper-middle-income	Using ES data as a benchmark, the average across upper-middle-income economies where ES data are available. For a full list see pages 135–137
USD	United States dollars
Wage-size effect	A finding in the literature that larger firms tend to pay their employees more compared with smaller firms
WBL	<i>Women, Business and the Law Report</i>
WDI	World Development Indicators
Young firm	A firm that is 5 years old or younger
Youth employment	Workers below 30 years of age

ALL ES ECONOMIES

Country name	Survey year	Fiscal year	Income	Region
Afghanistan	2014	2012/2013	Low income	SAR
Albania	2013	2011	Upper-middle-income	ECA
Angola	2010	2009	Upper-middle-income	AFR
Antigua and Barbuda	2010	2009	High income: non-OECD	High income: non-OECD
Argentina	2010	2009	Upper-middle-income	LAC
Armenia	2013	2011	Lower-middle-income	ECA
Azerbaijan	2013	2011	Upper-middle-income	ECA
Bahamas, The	2010	2009	High income: non-OECD	High income: non-OECD
Bangladesh	2013	2012	Low income	SAR
Barbados	2010	2009	High income: non-OECD	High income: non-OECD
Belarus	2013	2011	Upper-middle-income	ECA
Belize	2010	2009	Upper-middle-income	LAC
Benin	2009	2008	Low income	AFR
Bhutan	2009	2008	Lower-middle-income	SAR
Bolivia	2010	2009	Lower-middle-income	LAC
Bosnia and Herzegovina	2013	2011	Upper-middle-income	ECA
Botswana	2010	2009	Upper-middle-income	AFR
Brazil	2009	2007	Upper-middle-income	LAC
Bulgaria	2013	2011	Upper-middle-income	ECA
Burkina Faso	2009	2008	Low income	AFR
Burundi	2014	2013	Low income	AFR
Cabo Verde	2009	2008	Lower-middle-income	AFR
Cambodia	2013	2012	Low income	EAP
Cameroon	2009	2008	Lower-middle-income	AFR
Central African Republic	2011	2010	Low income	AFR
Chad	2009	2008	Low income	AFR
Chile	2010	2009	High income: OECD	High income: OECD
China	2012	2011	Upper-middle-income	EAP
Colombia	2010	2009	Upper-middle-income	LAC
Congo, Democratic Rep.	2013	2012	Low income	AFR
Congo, Rep.	2009	2007	Lower-middle-income	AFR
Costa Rica	2010	2009	Upper-middle-income	LAC
Côte d'Ivoire	2009	2007	Lower-middle-income	AFR
Croatia	2013	2011	High income: non-OECD	High income: non-OECD
Czech Republic	2013	2011	High income: OECD	High income: OECD
Djibouti	2013	2012	Lower-middle-income	MENA
Dominica	2010	2009	Upper-middle-income	LAC
Dominican Republic	2010	2009	Upper-middle-income	LAC
Ecuador	2010	2009	Upper-middle-income	LAC
Egypt, Arab Rep.	2013	2012	Lower-middle-income	MENA
El Salvador	2010	2009	Lower-middle-income	LAC
Eritrea	2009	2008	Low income	AFR
Estonia	2013	2011	High income: OECD	High income: OECD
Ethiopia	2011	2011	Low income	AFR

continued on next page

Country name	Survey year	Fiscal year	Income	Region
Fiji	2009	2008	Upper-middle-income	EAP
Gabon	2009	2007	Upper-middle-income	AFR
Georgia	2013	2011	Lower-middle-income	ECA
Ghana	2013	2012	Lower-middle-income	AFR
Grenada	2010	2009	Upper-middle-income	LAC
Guatemala	2010	2009	Lower-middle-income	LAC
Guyana	2010	2009	Lower-middle-income	LAC
Honduras	2010	2009	Lower-middle-income	LAC
Hungary	2013	2011	Upper-middle-income	ECA
India	2014	2012/2013	Lower-middle-income	SAR
Indonesia	2009	2008	Lower-middle-income	EAP
Israel	2013	2012	High income: OECD	High income: OECD
Jamaica	2010	2009	Upper-middle-income	LAC
Jordan	2013	2012	Upper-middle-income	MENA
Kazakhstan	2013	2011	Upper-middle-income	ECA
Kenya	2013	2012	Low income	AFR
Kosovo	2013	2011	Lower-middle-income	ECA
Kyrgyz Republic	2013	2011	Lower-middle-income	ECA
Lao PDR	2012	2011	Lower-middle-income	EAP
Latvia	2013	2011	High income: non-OECD	High income: non-OECD
Lebanon	2013	2012	Upper-middle-income	MENA
Lesotho	2009	2007	Lower-middle-income	AFR
Liberia	2009	2007	Low income	AFR
Lithuania	2013	2011	High income: non-OECD	High income: non-OECD
Macedonia, FYR	2013	2011	Upper-middle-income	ECA
Madagascar	2013	2012	Low income	AFR
Malawi	2014	2013	Low income	AFR
Mali	2010	2009	Low income	AFR
Mauritania	2014	2013	Lower-middle-income	AFR
Mauritius	2009	2007	Upper-middle-income	AFR
Mexico	2010	2009	Upper-middle-income	LAC
Micronesia, Fed. Sts.	2009	2008	Lower-middle-income	EAP
Moldova	2013	2011	Lower-middle-income	ECA
Mongolia	2013	2011	Lower-middle-income	EAP
Montenegro	2013	2011	Upper-middle-income	ECA
Morocco	2013	2012	Lower-middle-income	MENA
Myanmar	2014	2012	Low income	EAP
Namibia	2014	2013	Upper-middle-income	AFR
Nepal	2013	2012	Low income	SAR
Nicaragua	2010	2009	Lower-middle-income	LAC
Niger	2009	2008	Low income	AFR
Nigeria	2014	2013	Lower-middle-income	AFR
Pakistan	2013	2011/2012	Lower-middle-income	SAR
Panama	2010	2009	Upper-middle-income	LAC
Paraguay	2010	2009	Lower-middle-income	LAC
Peru	2010	2009	Upper-middle-income	LAC
Philippines	2009	2008	Lower-middle-income	EAP

continued on next page

Country name	Survey year	Fiscal year	Income	Region
Poland	2013	2011	High income: OECD	High income: OECD
Romania	2013	2011	Upper-middle-income	ECA
Russian Federation	2011	2010	High income: non-OECD	High income: non-OECD
Rwanda	2011	2010	Low income	AFR
Samoa	2009	2008	Lower-middle-income	EAP
Senegal	2014	2013	Lower-middle-income	AFR
Serbia	2013	2011	Upper-middle-income	ECA
Sierra Leone	2009	2007	Low income	AFR
Slovak Republic	2013	2011	High income: OECD	High income: OECD
Slovenia	2013	2011	High income: OECD	High income: OECD
South Sudan	2014	2013	Lower-middle-income	AFR
Sri Lanka	2011	2010	Lower-middle-income	SAR
St. Kitts and Nevis	2010	2009	High income: non-OECD	High income: non-OECD
St. Lucia	2010	2009	Upper-middle-income	LAC
St. Vincent and the Grenadines	2010	2009	Upper-middle-income	LAC
Sudan	2014	2013	Lower-middle-income	AFR
Suriname	2010	2009	Upper-middle-income	LAC
Sweden	2014	2013	High income: OECD	High income: OECD
Tajikistan	2013	2011	Low income	ECA
Tanzania	2013	2011/2012	Low income	AFR
Timor-Leste	2009	2008	Lower-middle-income	EAP
Togo	2009	2008	Low income	AFR
Tonga	2009	2008	Upper-middle-income	EAP
Trinidad and Tobago	2010	2009	High income: non-OECD	High income: non-OECD
Tunisia	2013	2012	Upper-middle-income	MENA
Turkey	2013	2011	Upper-middle-income	ECA
Uganda	2013	2012	Low income	AFR
Ukraine	2013	2011	Lower-middle-income	ECA
Uruguay	2010	2009	High income: non-OECD	High income: non-OECD
Uzbekistan	2013	2011	Lower-middle-income	ECA
Vanuatu	2009	2008	Lower-middle-income	EAP
Venezuela RB	2010	2009	Upper-middle-income	LAC
Vietnam	2009	2008	Lower-middle-income	EAP
West Bank and Gaza	2013	2012	Lower-middle-income	MENA
Yemen, Rep.	2013	2012	Lower-middle-income	MENA
Zambia	2013	2012	Lower-middle-income	AFR
Zimbabwe	2011	2010	Low income	AFR

Sources: Enterprise Surveys, income/region categories are from the World Bank lending group definitions for 2012.



Djibouti, Arab Republic of Egypt, Jordan, Lebanon, Morocco, Tunisia,
West Bank and Gaza, Republic of Yemen



European Bank
for Reconstruction and Development



European
Investment
Bank

The EU bank



WORLD BANK GROUP