Hashemite Kingdom of Jordan
Development Policy Review

Improving Institutions, Fiscal Policies and Structural Reforms
for Greater Growth Resilience and Sustained Job Creation

(In Two Volumes) Volume II: Individual Chapters

June 30, 2012

Poverty Reduction and Economic Management Department
Middle East and North Africa Region

Document of the World Bank
## CURRENCY EQUIVALENTS
(Exchange Rate Effective June 30, 2012)
JD1 = US$1.412

## FISCAL YEAR
January – December

## ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACC</td>
<td>Anti-Corruption Commission</td>
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<tr>
<td>AE</td>
<td>Architectural and Engineering</td>
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<td>AWG</td>
<td>Arab World Geographer</td>
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<td>BOT</td>
<td>Build-Operate-Transfer</td>
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<td>BPO</td>
<td>Business Process Outsourcing</td>
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<td>CROs</td>
<td>Contract Research Organizations</td>
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<td>CSS</td>
<td>Center for Strategic Studies</td>
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<td>DFZC</td>
<td>Development and Free Zones Commission</td>
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<td>DPR</td>
<td>Development Policy Review</td>
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<td>EU</td>
<td>European Union</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FTA</td>
<td>Free Trade Agreement</td>
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<td>GAFTA</td>
<td>Greater Arab Free Trade Agreement</td>
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<td>GAM</td>
<td>Greater Amman Municipality</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>HCAC</td>
<td>Healthcare Accreditation Council</td>
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<td>HR</td>
<td>Human Resources</td>
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<td>HRM</td>
<td>Human Resource Management</td>
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<td>IAEP</td>
<td>International Assessment of Educational Progress</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IM</td>
<td>Intensive Margin</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>JD</td>
<td>Jordanian Dinar</td>
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<td>JEDCO</td>
<td>Jordan Enterprise Development Corporation</td>
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<td>JEP</td>
<td>Jordan Export Promotion Activities</td>
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<td>JGATE</td>
<td>Jordan Garments, Accessories &amp; Textiles Exporters Association</td>
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<td>JIB</td>
<td>Jordan Investment Board</td>
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<td>JICA</td>
<td>Japan International Cooperation Agency</td>
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<td>JTC</td>
<td>Jordan Telecommunication Company</td>
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<td>KACE</td>
<td>King Abdullah Centre for Excellence</td>
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<td>LMIC</td>
<td>Lower Middle Income Countries</td>
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<td>MENA</td>
<td>Middle East and North Africa</td>
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<td>MFN</td>
<td>Most Favored Nation</td>
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<td>MNSPR</td>
<td>Middle East and North Africa Region, Poverty Reduction and Economic Management Department</td>
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<tr>
<td>MoIT</td>
<td>Ministry of Industry and Trade</td>
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<td>MoPSD</td>
<td>Ministry of Public Sector Development</td>
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<td>NAF</td>
<td>National Aid Fund</td>
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<td>NES</td>
<td>National Employment Strategy</td>
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<td>NPLs</td>
<td>Non-Performing Loans</td>
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<tr>
<td>PHA</td>
<td>Private Hospital Association</td>
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<td>PhRMA</td>
<td>Pharmaceutical Manufacturers Association of America</td>
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<td>PR</td>
<td>Proportional Representation</td>
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<td>QAIA</td>
<td>Queen Alia International Airport</td>
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<td>QIZ</td>
<td>Qualifying Industrial Zone</td>
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<td>SMEs</td>
<td>Small Medium Enterprises</td>
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<td>SSL</td>
<td>Social Security Law</td>
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<td>ST&amp;I</td>
<td>Science, Technology and Innovation</td>
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<td>SVAR</td>
<td>Structural Vector Autoregressive</td>
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<td>TFP</td>
<td>Total Factor Productivity</td>
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<td>TIMSS</td>
<td>Third International Mathematics and Science Study</td>
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<td>TRIPS</td>
<td>Trade-Related Aspects of Intellectual Property Rights</td>
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<td>WBI</td>
<td>World Bank Institute</td>
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<td>WITS</td>
<td>World Integrated Trade Solution</td>
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<td>World Trade Organization</td>
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Development Policy Review

Table of Contents

ACKNOWLEDGEMENTS ................................................................................................................................. vi

CHAPTER 1 - GROWTH AND EMPLOYMENT: LESSONS FROM THE PAST 30 YEARS ........................................ 1
1.1. Introduction ............................................................................................................................................... 1
1.2. Jordan Growth Trends and Drivers ........................................................................................................ 1
  1.2.1 Growth Patterns from historic and comparative perspective ............................................................... 1
  1.2.2 Growth Drivers: The Important Role of FDI and Productivity Growth .......................................... 3
1.3. Growth and Unemployment: Why Such a Weak Linkage ...................................................................... 10
  1.3.1 Jordan’s labor market structure .......................................................................................................... 10
  1.3.2 Growth and unemployment in the last decade .................................................................................. 13
  1.3.3 The Role of Rapid Labor Supply Growth .......................................................................................... 15
  1.3.4 The Role of Firm Productivity Growth .............................................................................................. 15
  1.3.5 The Role of Distortions Related to Public Sector Employment Policies ........................................... 17
  1.3.6 The Role of Other Factors ............................................................................................................... 18

CHAPTER 2 - IMPROVING INSTITUTIONS AND STATE ORGANIZATIONS FOR BETTER POLICY MAKING AND IMPLEMENTATION ................................................................. 19
2.1. Introduction ................................................................................................................................................ 19
2.2. The Policy Process .................................................................................................................................. 19
  2.2.1 First Stage: Policy design ................................................................................................................... 20
  2.2.2 Second Stage: Implementation ............................................................................................................ 22
  2.2.3 Third Stage: Impact Evaluation and Accountability ........................................................................... 25
2.3. Some Solutions: Increasing Accountability in Jordan – through More External and Internal Accountability and Greater Voice ............................................................................................................... 26
  2.3.1 Better Policy Making - through Greater External (i.e. Political) Accountability ................................... 28
  2.3.2 Improved Implementation – through Greater Internal (i.e. within Government) Accountability and More Bureaucratic Empowerment ............................................................................. 32
  2.3.3 More Effective Impact Evaluation and Accountability - through Greater Voice to Civil Society Organizations ............................................................................................................................... 33

CHAPTER 3 - STRENGTHENING MACROECONOMIC STABILITY THROUGH FISCAL REFORMS ............. 35
3.1. Introduction ................................................................................................................................................ 35
3.2. Jordan Fiscal Policy: Stylized Facts ......................................................................................................... 35
3.3. Fiscal Policy: A Major Source of Macroeconomic Stability .................................................................. 38
3.4. Fiscal Reforms to Improve Macroeconomic Stability ............................................................................. 45

CHAPTER 4 - THE CHALLENGE OF TRANSFORMING THE ECONOMY AND CREATING JOBS ..................... 48
4.1. Introduction ................................................................................................................................................ 48
4.2. Jordan’s Growth Strategy ......................................................................................................................... 48
4.3. Can Jordan’s Growth Strategy deliver on jobs? ...................................................................................... 56
4.4. Reform to Accelerate Growth and Reduce Unemployment .................................................................... 60
CHAPTER 5 - TRADE COMPETITIVENESS AND EXPORT PROMOTION ............................................................... 61
5.1. Introduction ..................................................................................................................................................... 61
5.2. Jordan’s Trade Competitiveness: Performance and Challenges ................................................................. 61
  5.2.1 Sources of Export Growth ......................................................................................................................... 62
  5.2.2 Changes in export destinations ................................................................................................................... 64
  5.2.3 Changes in export sophistication ............................................................................................................... 66
  5.2.4 Quality of exported products (unit values) ............................................................................................... 67
  5.2.5 Export survival relative to comparative advantage .................................................................................... 68
  5.2.6 Performance in Services Trade ................................................................................................................. 69
5.3. Impact of Trade Agreements .......................................................................................................................... 71
  5.3.1 Estimation Strategy ..................................................................................................................................... 71
  5.3.2 Results ......................................................................................................................................................... 72
5.4. Impact of Export Promotion Programs ........................................................................................................ 73
  5.4.1 Overview of JEDCO’s Main Programs ........................................................................................................ 73
  5.4.2 Who Benefits? .......................................................................................................................................... 75
  5.4.3 Is Export Promotion Effective in Jordan? ................................................................................................. 77
5.5. Conclusion and Policy Implications .............................................................................................................. 82

CHAPTER 6 - ENABLING BUSINESS ENVIRONMENT ................................................................................ 84
6.1. Introduction ..................................................................................................................................................... 84
6.2. Jordan’s lackluster performance in higher added-value activities ............................................................... 84
  6.2.1 Aggregate Evidence .................................................................................................................................. 84
  6.2.2 The lack of creative destruction at the firm level ......................................................................................... 86
6.3. Relating firm dynamics to employment creation ......................................................................................... 89
6.4. Jordan’s business regulations relative to international peers ..................................................................... 90
6.5. A possible explanation: policy implementation uncertainty ......................................................................... 93
6.6. Policy recommendations .............................................................................................................................. 102

CHAPTER 7 - INDUSTRIAL POLICY ........................................................................................................ 105
7.1. Introduction ..................................................................................................................................................... 105
7.2. What is the role of industrial policy in Jordan? ............................................................................................. 105
7.3. What should be the role of industrial policy? ............................................................................................... 107
7.4. What are the pitfalls implementing industrial policy and how to address them? ..................................... 109
7.5. Is Jordan well positioned to implement and sustain these design features? ............................................ 111

CHAPTER 8 - CREATING AN ENABLING ENVIRONMENT FOR PRIVATE SECTOR INNOVATION ........... 114
8.1. Introduction ..................................................................................................................................................... 114
8.2. Current innovation policy in Jordan: an overview ....................................................................................... 114
8.3. What is ‘innovation’? ................................................................................................................................... 115
8.4. Comprehensive ‘innovation policy’ as a major contributor to productivity and economic growth ........... 116
8.5. Innovation ‘paradox’ in Jordan ..................................................................................................................... 117
  8.5.1 Dispersed innovation efforts: excessive volume of content ........................................................................ 118
  8.5.2 Innovation governance: scope and process woes ...................................................................................... 120
  8.5.3 Scope of the ST&I system and the processes of innovation governance .................................................. 120
8.6. The lack of a systematic innovation policy effort for the private sector in Jordan .................................. 121
  8.6.1 Lack of pressure on SMEs to compete ........................................................................................................ 122
  8.6.2 Current innovation support for the private sector in Jordan ..................................................................... 124
  8.6.3 Skills development and entrepreneurial training ....................................................................................... 125
  8.6.4 Jordanian innovation funding .................................................................................................................. 126
  8.6.5 Tapping into global value chains: technology acquisition and the importance of networks .................. 128
8.7. Recommendations ....................................................................................................................................... 129
ANNEX 1: THE INNOVATION MAP - AN ILLUSTRATIVE CHECKLIST

List of Boxes

Box 1.1: Trade integration reforms and the rise in textiles and clothing and pharmaceutical sectors in the 2000’s .............................. 9
Box 3.1: Monetary policy and banking regulation are sound in Jordan .......................................................................................... 40
Box 4.1: Jordan Education Attainment ................................................................. 49
Box 5.1: Literature on the effects of export promotion at the micro level .......................................................................................... 78
Box 8.1: Oasis 500 – a company at the forefront of entrepreneur support and training in Jordan .............................................. 126
Box 8.2: Credit Guarantee System Kafalat Lebanon .................................................................................................................... 128

List of Tables

Table 1.1: Employment elasticity in Jordan, 1990s versus 2000-2008 ................................................................................. 16
Table 1.2: Employment Elasticity with Respect to Industry Value Added .......................................................................................... 17
Table 2.1: The Hypothetical Effect of W on Income Per Capita in Jordan ................................................................................. 31
Table 3.1: Jordan Fiscal Outcomes- Stylized Facts .................................................................................................................... 35
Table 3.2: Macroeconomic Indicators ................................................................................................................................. 39
Table 4.1: ICT Exports by Selected Countries and Opportunities ................................................................................................. 53
Table 4.2: Cost comparison between Jordan and other countries for selected procedures ................................................................. 55
Table 5.1: Jordan’s Key Trade Agreements ......................................................................................................................... 71
Table 5.2: Number of Times Firm Benefited from Exhibition Support ............................................................................................ 75
Table 5.3: Number of Exhibition, by year ................................................................................................................................... 75
Table 6.1: Economic performance indicators for selected emerging economies ........................................................................... 85
Table 6.2: Doing Business Rankings 2011 for selected emerging economies .................................................................................. 91
Table 6.3: Share of firms who “disagree” that implementation of rules is “consistent and predictable” .................................................. 95
Table 6.4: Averages and dispersion (Coefficients of Variation) of firms’ waiting days for regulatory services ........................................... 97
Table 6.5: Regression results show that higher policy implementation uncertainty induces senior managers to spend more time with government officials and report bribes as more commons ......................................................................................................................... 99
Table 6.6: Management time dealing with government officials (left), share of firms reporting bribes (right) ......................................................................................................................... 100
Table 6.7: Regression results for Jordan show that policy implementation uncertainty reduces competition and firm growth ......................................................................................................................... 101
Table 7.1: Major consumer electronics firms in China by ownership type .......................................................................................... 109
Table 8.1: Arab Knowledge Report 2009, Innovation Results .................................................................................................. 118
Table 8.2: The World Bank Knowledge Economy Index ......................................................................................................... 118
Table 8.3: R&D spending in Jordan ................................................................................................................................. 119
Table 8.4: Results on Innovation Policy in Jordanian Enterprise Survey .......................................................................................... 123
Table 8.5: How important are the sources of information mentioned below for innovation (in relation to your firm only?) ......................................................................................................................... 124
Table 8.6: Why does your firm not engage in innovation related activities? .................................................................................. 125
List of Figures

Figure 1.1: GDP Growth: Jordan, MENA Average................................................................. 2
Figure 1.2: Evolution of Jordan’s GDP per Capita ........................................................... 2
Figure 1.3: GDP per capita, Jordan versus Turkey (US$) .................................................. 2
Figure 1.4: GDP per capita, Jordan versus Croatia (current US$) .................................... 2
Figure 1.5: Difference in GDP per capita growth, Jordan versus Turkey ...................... 3
Figure 1.6: Difference in GDP per capita growth, Jordan versus Croatia ...................... 3
Figure 1.7: GDP Growth: Difference between Jordan and East Asia’s average ............ 3
Figure 1.8: FDI represents a very high share of total investment since the early 2000s ... 5
Figure 1.9: Growth correlates strongly with changes in the investment rates .......... 5
Figure 1.10 Jordan’s GDP growth and oil prices .......................................................... 5
Figure 1.11: FDI inflows to Jordan and oil prices .......................................................... 5
Figure 1.12: Gross Fixed Capital Formation, total versus real estate (million Jordanian Dinars) .......................................................... 6
Figure 1.13: Share of Different Sectors in Gross Fixed Capital Formation (%) .......... 6
Figure 1.14: Growth covariance, Jordan-Saudi Arabia ................................................. 7
Figure 1.15: Primary fiscal balance (million JD) ........................................................... 7
Figure 1.16: Jordan GDP and Total Factor Productivity Growth (%) ......................... 8
Figure 1.17: Labor Productivity Decomposition (annual growth rates in %) .............. 10
Figure 1.18: Labor productivity growth within sectors (annual growth rates) ............ 10
Figure 1.19: Jordan: Economic Active Population, Male versus Female .................. 11
Figure 1.20: Jordan’s working age population compared to other countries (2009) ... 11
Figure 1.21: Average nominal wages (JD per month) .................................................. 13
Figure 1.22: Average wages by sector, 2009 ................................................................. 13
Figure 1.23: Average wages by job group, 2009 .......................................................... 13
Figure 1.24: Private sector real wage index, 2005-2008 (2006=100) ......................... 13
Figure 1.25: Growth and Employment, 2000-2010 ..................................................... 14
Figure 2.1: The Policy Process ....................................................................................... 20
Figure 2.2: Legal framework vs. actual implementation measures .............................. 22
Figure 2.3: Discretion and arbitrariness ...................................................................... 24
Figure 2.4: Accountability measures for Jordan, Chile and Poland .............................. 25
Figure 2.5: The Policy-Process Accountability Framework ......................................... 27
Figure 3.1: Composition of Current Expenditures ....................................................... 36
Figure 3.2: Government Spending and Revenues (%GDP) (1989-2010) ...................... 37
Figure 3.3: Share of Foreign Grants in Total Revenues ............................................... 38
Figure 3.4: Domestic Revenue to Recurrent Expenditure .......................................... 38
Figure 3.5: Jordan Real Growth and Budget Deficit (1989-2010) ............................ 41
Figure 3.6: Jordan Fiscal Policy Pro-Cyclicality (1989-2010) ..................................... 41
Figure 3.7: Volatility of Growth and Budget Deficit .................................................. 42
Figure 3.8: Accumulated Impulse Response Function of GDP on Fiscal Variables ..... 43
Figure 3.9: Accumulated Impulse Response Function of Fiscal Variables on GDP ..... 44
Figure 3.10: Accumulated Impulse Response Function of Fiscal Balance/GDP on GDP ............................................................... 45
Figure 4.1: Average Level of Labor Productivity vs Skill Content – Size of bubble is employment share (parenthesis) 2010 ................................................................. 51
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Chapter 4 - The Challenge of Transforming the Economy and Creating Jobs – Ndiamé Diop and Derek Chen
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Chapter 6 - Enabling Business Environment – Marc Schiffbauer
Chapter 7 - Industrial Policy – Marc Schiffbauer
Chapter 8 - Creating an Enabling Environment for Private Sector Innovation – Marjo Koivisto and Kurt Larsen
Chapter 1 - Growth and Employment: Lessons from the Past 30 Years

1.1. Introduction

This chapter looks back at thirty years of growth experience and concludes that Jordan’s quest for a robust, sustainable growth has remained elusive. By the Growth and Development Commission’s measure of success, namely, an average growth rate of 7 percent over 30 years, Jordan’s growth record cannot be dubbed “successful”. The country has experienced spells of high growth (e.g., in the early 1980s and in 2000-2008) but it has always faced the challenge of sustaining them. Jordan’s spurts of high growth are short-lived. The economy is highly vulnerable to shocks and its capacity to bounce back is weak.

The underlying weakness of growth resilience is linked to the drivers of growth in Jordan. Foreign Direct Investments (FDI) from the Arab neighbors (in particular the Gulf countries) play a key role as growth engine. Remittances and foreign grants play an indirect complementary role through their effects on public finances (public investment) and private investments. A predominant share of these financial inflows comes from oil-rich neighboring Arab countries and the bulk of the investments are allocated to the real estate sector. The narrow origin and sectoral allocation of capital fuel volatility, in relation with booms and busts cycles in oil-rich countries linked to the vagaries of oil price. In the last decade, total factor productivity (TFP) growth has become an important driver of growth. TFP is however vulnerable to crises as it declines with overcapacities in the private sector.

Over the last decade, growth has created employment but the unemployment rate has remained high. The last part of this chapter shows how this is linked to the sectoral pattern of growth and the distortions in the labor market that favor public over private sector jobs. The job challenge is however all the more daunting that labor supply growth in Jordan is high (2.7 percent annual growth), implying that employment growth below 3 percent can hardly reduce unemployment in Jordan.

1.2. Jordan Growth Trends and Drivers

1.2.1 Growth Patterns from historic and comparative perspective

Market-oriented reforms and an exceptionally favorable external environment in 2000-2008 propelled Jordan’s economic growth to 6.7 percent over the last decade. This performance was better than MENA’s average, which stood at 4.5 percent in that period. As Figure 1.1 shows, Jordan has consistently outperformed MENA in terms of GDP growth since the late 1990s in spite of high oil prices, which increased growth in the resource-rich countries. The only exception was during the recent global financial crisis in 2009-2010 when growth fell much more sharply in Jordan, stopping the accelerated growth spells observed since 2004. This sharp decline in growth since 2009 is a sign of Jordan’s weak growth sustainability, due to its strong ties to the Gulf economies (see below).

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¹ The Commission on Growth and Development, composed of twenty-two leading practitioners from government, business and the policymaking arenas worked for four years and gathered the best understanding there was about the policies and strategies that underpinned rapid and sustained economic growth and poverty reduction. Thirteen countries, which grew by an annual average growth rate of 7 percent were identified as successful cases.

² It is necessary to analyze growth with a long time horizon in order to capture the important influence of oil cycles on growth in Jordan.
Jordan has however a long way to go to make up for its lost ground and catch up with the best growth performers in the world. Following a severe fiscal crisis in 1989, Jordan’s GDP per capita dropped for a decade and the country descended from an upper middle income to lower middle income status according to the World Bank’s income classification (Figure 1.2). Only after 20 years did Jordan revert back to an upper middle income status in 2010. Furthermore, as figures 1.3 to 1.7 illustrate, Jordan faces formidable challenges to catch up with the best growth performers in Europe and Central Asia and East Asia. In 1980, Jordan and Turkey had similar GDP’s per capita. In 2010, Turkey’s GDP per capita was 2.2 times higher than Jordan’s ($10,000 versus $4,500). The divergence between Jordan and Croatia until 2004 is even starker. The two countries had similar GDP per capita (around $2000) in 1992.³ Eighteen years later, Croatia’s GDP per capita is 3 times higher. Jordan would have to grow much faster than Turkey and Croatia for a prolonged period to catch up with them.

Over the last decade, Jordan did grow on average faster than Turkey and Croatia, by 1.7 and 3.1 percentage point margins respectively (Figure 1.5 and Figure 1.6). However, when observed in per capita terms, the difference in growth vanishes. This means that for Jordan to catch up with these countries, it needs an even higher growth in per capita terms, since its population growth is higher (+2.9 percent in Jordan versus 1.3 percent in Turkey and -0.17 percent in Croatia).

³ The story holds when GDP per capita is measured in constant 2000 US $ even the countries do not start with similar GDP per capita in constant US $ terms.
Jordan’s catch-up challenge is even more daunting when compared with East Asia (Figure 1.7). Vis-à-vis East Asia, Jordan is actually not converging in growth, but diverging in growth with a shortfall of about 2.5 percentage points vis-à-vis East Asia (Error! Reference source not found. Figure 1.7). Catching up with East Asia in per capita terms would mean a per capita GDP growth rate 5 percentage points higher than its average rate in the 2000s. Thus, Jordan has a long way to go to match the best performers around the world such as Malaysia, Thailand, Indonesia, Singapore and Korea. It will take a generation of sustained good performance to catch up and become a high income country.

**Figure 1.7: GDP Growth: Difference between Jordan and East Asia’s average**

Source: World Development Indicators, World Bank

### 1.2.2 Growth Drivers: The Important Role of FDI and Productivity Growth

Large FDI inflows and substantial improvements in productivity have been the driving force behind growth since 2000. In the 2000’s, FDI contributed significantly to capital formation and growth, in contrast to the previous two decades, during which FDI inflows were insignificant. However, more than 50 percent of FDI originates from the oil-rich Arab exporters of the region and the bulk of it is invested in real estate. The narrow origin and sectoral allocation of FDI has created a strong sensitivity to oil-driven business cycles and an important “covariance” risk for Jordan. At the same time, the very existence of
large capital inflows has undermined fiscal discipline, taking away the power of fiscal policy to counter this risk (see below). Throughout the last decade, Jordan’s fiscal policy was unable to protect the country from large shocks. Yet, because the capital account is open and the country is highly exposed to capital inflows and oil price shocks, prudent macroeconomic management is crucial to maintain stability.

The rise in productivity growth is a novelty in Jordan’s growth process since the beginning of the millennium. In the previous two decades, productivity growth was negative and growth driven solely by primary production factors (labor and capital). The rise in productivity is an important development in that it is not merely a one-time boost in productivity driven by greater capital utilization. Rather, it reflects a real improvement in the efficiency and organization of production in the private sector, linked to greater openness to trade and FDI, privatization of backbone services (telecom, transport, port, etc.) and other structural reforms such as improvements in intellectual property rights in the pharmaceutical sector. This rise in aggregate productivity is entirely driven by within-sector productivity progress. Thus there exists a large potential for further productivity increase from the movement of labor from low to high productivity sectors (see next chapter). As seen below, in the years 2000, there was little in the way of structural shifts from high to low productivity sectors.

The role of FDI inflows and capital formation

From almost zero contribution to growth in the previous decades, FDI emerged as an important driver of growth in Jordan in the last decade. Net FDI inflows tripled to US$2.8 billion in 2008 compared to US$0.9 billion in 2000, and averaged 10.1 percent of GDP over the decade. This compares with 2.4 percent of GDP for MENA, 3.1 percent of GDP in ECA and 3.2 percent of GDP on average in East Asia. For Jordan, FDI was a key component of capital formation, accounting for 44 percent on average over the decade (42 percent in 2000-2008). By comparison, FDI represented 7.3 percent of gross fixed capital formation in lower middle income countries and 6.1 percent in non-GCC MENA between 2000 and 2008. Moreover, Jordan’s large FDI inflow is behind the doubling of gross capital formation between 2000 and 2008 (US$1.7 to US$3.4 billion or 24 percent of GDP). In turn, large increases in capital formation fueled GDP growth which, as Figure 1.9 shows, fluctuates strongly with the investment rate.4

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4 FDI inflows average 10.6 percent of GDP in the period 2000-2008, among the highest in the region.
5 The preeminence of FDI in Jordan’s growth process in the last decade contrasts with the 1990s, during which FDI played no role as domestic investment was financed by domestic savings.
The rapid increase in FDI reflects two main factors, the rise in oil prices and excess savings in Arab oil exporters and privatizations. More than 50 percent of FDI to Jordan come from regional oil exporters, in particular countries of the Gulf and Iraq. The rise in oil prices and excess savings in these countries since 2003 has led to massive FDI outflows, a portion of which benefitted Jordan [footnote: what share]. Figure 1.11 shows the strong correlation between oil prices and FDI flowing to Jordan.

Source: World Development Indicators, World Bank

At least a part of FDI inflows to Jordan is linked to the comprehensive privatization program implemented in 2000-2008. According to a recent World Bank report, privatized firms made over $1 billion in capital investment during 2000 – 2007, which equates to 11.4 percent of overall foreign direct investment (FDI). The privatizations included the Jordan Telecommunications Company (JTC) (2000, 2002); the Arab Potash Company (2003); the Jordan Phosphate Mines Company (2005); seven aviation sector businesses, including Royal Jordanian Airlines (2000 – 2007); and three power sector companies (2007). In addition, two major public-private partnership transactions were concluded: a management

contract for the Port of Aqaba container terminal and a build-operate-transfer (BOT) transaction to develop a new passenger terminal at Queen Alia International Airport (QAIA).  

Although FDI contributed positively to overall growth, the narrow sectoral allocation to the real estate sector has a negative repercussion on the sustainability of growth in Jordan. Indeed, it is well known that to the extent that FDI takes place in sectors where some production inputs (such as land) are scarce (the case of real estate), it may lead to a sustained increase in the relative prices of these inputs, which in turn may be detrimental to competitiveness and growth.

Figure 1.12: Gross Fixed Capital Formation, total versus real estate (million Jordanian Dinars)  

Figure 1.13: Share of Different Sectors in Gross Fixed Capital Formation (%)  

Source: Department of Statistics, Hashemite Kingdom of Jordan.

Furthermore, the narrow sectoral allocation of FDI and its sensitivity to oil-driven business cycles generate an important “covariance” risk for Jordan. Figure 1.14 illustrates the positive and significant covariance of GDP between Jordan and Saudi Arabia in the years 2000s and the 1980s. The covariance was negative in the 1990s because capital inflows (FDI, but also foreign grants and remittances) were literally stopped for geopolitical reasons: in August 1990 after Iraq’s invasion of Kuwait, some 300,000 Jordanians were forced to return home, significantly reducing remittances (by 7.4 and 7.7 percent in 1990 and 1991 respectively). Trade was also disrupted, with negative effects on GDP. In the second half of the 1990s, sanctions placed on Iraq in the 1990s reduced bilateral trade between the two countries by 75 percent. Jordan was forced to resort more to domestic savings in order to finance capital formation and growth.

The very existence of large inflows from the Gulf has also undermined fiscal discipline in Jordan, taking away the power of fiscal policy to counter these risks. There is an established literature showing that capital inflows may cause a reduction in “precautionary” savings. This seems to operate in Jordan which has typically undertaken a pro-cyclical fiscal policy over the last 30 years. For instance, in the first half of 1980s, GDP growth averaged 7.4 percent. Subsequently however, as the regional economies entered into recession in the wake of a sharp fall in oil prices, Jordan’s growth plummeted to -14 percent. Because the earlier rapid growth fueled an unsustainable level of public and private consumption, Jordan’s fiscal and current account deficits reached a crisis “proportion” by 1987. Jordan had to request its first stand-by arrangement at the IMF, to stabilize the economy. In the 1990s, the sharp reduction in capital inflows forced Jordan to improve its fiscal discipline.

7 In recent months, a lively debate about the transparency of the privatization process has sparked in Jordan. A few transactions have been singled out as having been associated with corruption.  
8 See Agenor and Montiel (2008). In Jordan, the availability of foreign inflows made possible the financing of large fiscal and current account deficits, delaying important structural reforms to reduce distortions in the economy.
Throughout the last decade, Jordan’s fiscal situation worsened and fiscal policy proved unable to protect the country from large shocks. Fiscal policy has been largely pro-cyclical, expanding in booms and contracting in recessions—a pattern that has made it a major source of macroeconomic instability. For instance, while GDP growth averaged 8.1 percent in 2004-2008, the primary fiscal deficit excluding grants stood at 6.6 percent of GDP and the overall deficit excluding grants averaged 9.3 percent. In 2011, the sharp decline in growth coincided with a very large fiscal deficit (11.2 percent of GDP), preventing the government from undertaking countercyclical fiscal policy to restore growth. Because Jordan’s capital account is open and the country is exposed to shocks, prudent macroeconomic management is crucial to reduce volatility.9

The Role of Productivity Growth

Since the early 2000’s, total factor productivity has become an engine of growth in Jordan, a very positive development. Jordan’s total factor productivity (TFP) grew by an average of 2.76 percent per year in 2000-2008, in sharp contrast to the previous two decades, during which TFP growth was negative. The rise in total factor productivity is a sign of progress towards a more efficient and technologically advanced economy. It also contributed to the gradual process of convergence seen over the period 2004-2008. In contrast, the decline in TFP in the previous two decades was linked to the heavy control of the state on business, the pervasiveness of inefficient state-owned enterprises, the heavy regulation of factor markets and limited trade openness.

9 Dell’Ariccia et al. (2007) document a number of country cases in which the implementation of prudent macroeconomic policies was an important factor in improving the growth benefits of financial integration, while minimising potential risks.
The positive growth of TFP can be linked to structural reforms. Jordan embarked more decisively in trade liberalization reforms and privatization in 2000. In a speech to the World Economic Forum in Davos in early 2000, King Abdullah stated, “we have taken the initiative to make free markets the only norm of resource allocation.” Accordingly, the trade and investment regimes were significantly liberalized. Of particular importance were the reforms of property rights undertaken as part of the WTO adhesion (2000), reinforced with the signing of a Free Trade Agreement (FTA) with the EU (1997) and the United States in 2001. The FTA with the US followed the signing of an earlier “Qualifying Industrial Zone” agreement with the US that gave Jordanian exports from “qualified zones” quota-free and duty-free access to the U.S. market under advantageous rules of origin. Although non-tariff measures remain, Jordan has become one of the most open economies in MENA with a trade-to-GDP ratio above 100 percent and low tariffs (see Chapter 6). Figure 1.16 shows how the flows of foreign investments affected the dynamics in the textiles and pharmaceutical sectors.
Trade integration reforms were crucial in creating an environment for the development of the manufacturing sectors, chiefly the pharmaceutical and textiles sectors. Jordan took advantage of its WTO accession (2000) and the FTA signed with the US to enact several laws to make its national legislation consistent with the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). According to the Pharmaceutical Manufacturers Association of America (PhRMA), the US-Jordan FTA has made Jordan’s market more appealing for pharmaceutical research and development, as well as for sales and licensing agreements. The benefits include expanded data protection, elimination of exclusions from patentability for biotechnology inventions, and limitations on compulsory licensing. These reforms allowed many European firms to benefit from a first mover advantage in the EU market by starting production of soon-to-expire protected drugs in Jordan. The renowned global pharmaceutical players have established production sites or expanded their commercial activities in Jordan, including Astra-Zeneca, Sanofi-Aventis, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Janssen-Cilag, Merck Sharp & Dohme, Novartis, Organon, Roche, Pfizer, and Schering-Plough. Jordan’s pharmaceutical sector has attracted new investments, gained new export markets and engaged in innovative research. According to the International Intellectual Property Institute, Pfizer doubled the number of its local employees, Sanofi-Aventis and Novartis tripled their local labor forces, and Merck increased its employment in Jordan by 500 percent between 2000 and 2004.

In the textile sector, the Qualifying Industrial Zone (QIZ) agreement allowed Jordan to build a textile industry almost from scratch. The Qualifying Industrial Zone agreement signed with the US gave Jordanian exports quota-free and duty-free access to the U.S. market under advantageous rules of origin. Thanks to these incentives, investments in the sector skyrocketed and Jordan’s apparel and textile exports rose dramatically from US$50 million per year before 1999 to US$1 billion in 2010. Although the sector’s competitiveness has diminished following the abolition of quotas on China and other large exporters within the framework of the Multi-Fiber Agreement, it remains an important sector for the economy. As everywhere around the world, the textile and clothing industry is a significant and cost-effective source of low-skilled employment, as it is labor-intensive and does not require heavy investment in assets. However, the majority of the 60,000 workers in this sector in Jordan are foreigners. The extent to which the Government should continue to support this sector is hotly debated in Jordan, in light of the country’s goal of becoming a knowledge-based economy and the misalignment of the sector with Jordan’s comparative advantage. This is discussed further in Chapter 2.

Labor productivity also increased sharply, driven by within-sector productivity growth rather than labor movement from low to high productivity sectors in spite of large productivity gaps across sectors. Labor productivity growth in an economy can be achieved in one of two ways (see McMillan and Rodrik 2011). First, productivity can grow within economic sectors through capital accumulation, technological change, or reduction of misallocation across firms. Second, labor can move across sectors, from low-productivity sectors to high-productivity sectors, increasing overall labor productivity in the economy (structural change). Figure 1.17 identifies the sources of labor productivity growth in Jordan in 1994-2008. In the last decade, the entire rise in labor productivity was driven by within sector productivity growth. In fact, the contribution of labor movements across sectors was negative. Although at a fine sectoral level one detects the emergence of a few new sectors (such as ICT, medical tourism, etc.), the economic structure of Jordan has hardly changed over the last decade. Jordan’s emerging sectors remain very small in total value-added.
A sectoral breakdown of labor productivity growth shows that the financial, mining, health, ICT, manufacturing (PhRMA), wholesale trade and transportation sectors have experienced the highest annual productivity growth (above 5 percent in 2000 to 2008). In contrast, the tourism, real estate and retail trade sectors experienced a decline in productivity. Between these two extremes, the agriculture, water, electricity, and construction sectors experienced moderate increases in productivity, while government services productivity almost stagnated.

1.3. Growth and Unemployment: Why Such a Weak Linkage

1.3.1. Jordan’s labor market structure

Respective size of the active and inactive population

Jordan has as much a problem of unemployment as a problem of very low active population. Of Jordan’s 3.5 million working age population (out of 6 million), less than 1.5 million are economically

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10 This section draws on the background work prepared as part of Jordan’s National Employment Strategy 2012.
active and more than 2 million are inactive (i.e., not even actively searching for work). Only 15 percent of women aged 14 to 65 are economically active, versus 65 percent for men. This level of inactivity is extremely low by international standards. Of those who are economically active, about 1,220 million are employed and 180,000, or 13 percent, are unemployed. It is estimated that there are around 300,000 foreign workers with permits while unofficial estimates suggest that the number exceeds 500,000.

The inactive population, overwhelmingly female with low levels of education, is relatively evenly distributed by age, with about 70 percent under the age of thirty, which means they could still enter the labor market. Thirty percent of the inactive population comprises students. The rest include “stay at home females” (54 percent) and early retirees (16 percent). These two sub-populations hold the key for reducing the overall rate of economic inactivity. The NES discusses the factors behind the high inactivity of these categories and proposes reform options to reduce it over the medium to long term.11

Key characteristics of the employed and unemployed

The employed population in Jordan is predominantly male with mid-level education. Of the 1.2 million working Jordanians, 84 percent are male, and 61 percent have a high school education or below. The proportion of workers with university degrees has steadily risen, however, from 17.6 percent in 2000 to 23.7 percent in 2009. Females employed by the public sector and the private sector represent 65 percent and 13 percent, respectively, of all employees. Females are attracted to public sector jobs in the social fields (mainly health and education) and by the fringe benefits including job security, shorter working hours, and health insurance (which most small private firms do not provide) and social security benefits.

11 For “stay at home females”, cultural factors and low level of education play a key role. For early retirees, low social security retirement age (45 years in the 2001 Social Security Law and 48 since the adoption of a new Social Security Law in 2010) combined with 15 and 18 year vesting periods for females and males and negligible penalty for retiring early are the main factors. These generous benefits led to an explosion of early retirement from 29 percent of total retirements in 1999 to 79 percent in 2009. The average year of retirement dropped from 57 years in 1999 to 50 years in 2009.
(which until the adoption of the new Social Security Law in 2010, firms with fewer than 5 workers did not provide). There is evidence that private firms avoid hiring pregnant or married women because of maternity benefits enforced through the labor law (10 weeks of wage) and the new social security law (0.75 percent payroll contribution paid by the employer)- See NES 2012.

**The unemployed population in Jordan is overwhelmingly young and educated.** 49 percent are below the age of 25 and 89 percent are below the age of 40. In absolute numbers, they are mostly males, but the unemployment rate is 46 percent for young females compared to 23 percent for young males. Over 75 percent of unemployed males have a high school education or below. The opposite is true for females; over 75 percent of unemployed females have diplomas or higher. The unemployment of university degree holders is relatively new in Jordan and is on the rise, signaling a mismatch between specializations and skills supplied and those demanded by the market (NES 2012).

**A key component of the labor market in Jordan is constituted of foreign workers.** According to the Ministry of Labor, foreign workers with work permits increased from 111,000 in 2000 to 335,000 in 2009 then declined slightly to 297,000 in 2010 as a result of layoffs in the aftermath of the global economic crisis. Estimates of the number of undocumented foreign workers (i.e., without a working permit) range from 150,000 to 250,000, bringing the total to a range of 450-550,000 workers.

Male foreign workers in Jordan come mostly from other Arab countries (73 percent) and have low educational attainment (more than 90 percent have an elementary education or below). They work mostly in the agricultural sector (27 percent); social services (26 percent); manufacturing (20 percent), trade, restaurants, and hotels (13 percent); and construction (11 percent). Female foreign workers (about 55,000 registered in 2009) are mostly Asian. A majority of them are domestic workers and a significant share of them works in textiles and clothing.

**Wage structure**

**The average wage in Jordan was JD 365 per month in 2009.** The distribution of wages reflects a very wide base of low wages, with the majority of workers making less than JD 300 per month (Figure 1.21). The financial intermediation sector pays the highest wages, with an average wage of JD 700, while hotels and restaurants pay the lowest at JD 255 (see Figure 1.22). In terms of job specialization, the wage distribution ranges from an average of JD 1,136 for lawmakers and managers to an average of JD 232 for those in elementary occupations (e.g., drivers, deliverymen, etc.). With the exception of wages for lawmakers and managers, the relative differences between wages of the job specialization are fairly small (Figure 1.23).

**In 2007-2008, the minimum wage was increased from JD 110 to JD 150.** This increase, combined with a JD20 raise in public sector salaries led to a 15 percent jump in wages (Figure 1.23). Figure 1.24 suggests that the private sector absorbed the cost partly by freezing real wage increases above the minimum wage. The minimum wage was further increased recently to JD 190. About 68 percent of working males earn less than JD 200 per month. A key challenge for Jordan for reducing the number of “working poor” is to increase participation rates since a wage earner today has a larger number of dependents than she/he would have if the rate of economic participation was higher. Increasing minimum wage in a context of sluggish aggregate demand and slow growth can also undermine firm profitability and competitiveness and may encourage informality as firms attempt to escape the increase in their labor costs.

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12 According to SSC statistics, 27.1 percent of covered workers earn less than JD 200 per month and 55.6 percent earn less than JD 300. SSC records are biased upwards as they represent those working in the formal sector (medium and large firms); those in the informal and micro enterprises earn less and are underrepresented in SSC records.
1.3.2. Growth and unemployment in the last decade.

Annual growth reached 6.7 percent annually in 2000-2008, “generating” a net employment growth of 2.9 percent annually. In absolute terms, 457,000 net jobs were created. Yet, unemployment dropped only slightly, from 14.9 percent to 13.6 percent. A closer scrutiny of the data shows that 42 percent of the jobs were created in the public sector and 58 percent in the private sector. Among those created in the latter, more than half were captured by foreign workers. Job creation for Jordanian citizens in the private sector stood at a mere 28 percent of all the jobs created in 2000-2008.
In the private sector, job growth was highest in “foreign worker-intensive sectors”, including tourism and hospitality (8.4 percent annually in 2005-2009), construction (6.6 percent) and retail trade, textiles and clothing. Job creation in the above sectors was high but real wages were stagnant or declining (textiles).  

In contrast, job growth was below average in the telecom and ICT-enabled services, non-textile manufacturing, mining and other industries (energy, water, etc.). In other words, apart from the financial sector, job opportunities in the private sector were lowest in these skill-intensive sectors which educated Jordanians predominantly “target” when seeking jobs.

![Figure 1.25: Growth and Employment, 2000-2010](image)

*Source: WDI and Department of Statistics, Jordan*

The higher growth in salaries and wages combined with job security, shorter working hours and generous benefits have led to massive queuing for public sector jobs. In 2000-2009, public administration/defense/security has posted an annual average growth in real wage of 6.5 percent. This is the second highest annual growth in real wages, after telecommunications (9 percent). This perverse incentive may explain public sector job queuing found by World Bank (2008). In 2010, about 218,000 applicants were queuing for openings in the public sector according to the Civil Service Bureau. The queuing phenomenon reflects large distortions between public and private sectors wages and compensation. In 2010, the average monthly wage in the public sector was JD412 compared to JD338 in the private sector; the public sector pays about 70 percent of private sector wages for managerial and technical levels and about 150 percent of the private sector for unskilled and semi-skilled levels! (Jordan National Employment Strategy, 2012).

At the same time, the low productivity growth is a sign of misallocation of resources and other malfunctioning, which may explain the high turnover rate at the highest end of the skill spectrum (World Bank 2012). Indeed, it has been difficult for the administration to retain qualified higher-level staffs that often end up migrating to the Gulf.  

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13 Foreign workers captured a significant share of the jobs created in these sectors. Foreign workers, who accounted for 13 percent of total labor force in 2009, are concentrated in construction (35 percent of workers in this sector), textiles and clothing (30 percent), hotels and restaurants (28 percent), wholesale and retail trade (12 percent). While these sectors absorbed a large number of jobs, they experienced the least growth in real wages over the last decade.


15 A significant number of Jordanians in the Gulf hold important civil service positions and in a variety of occupations.
In any case, the distribution of jobs between public and private sectors is unsustainable: (i) a large number of educated people are under-employed in the public sector and a large number of people in the private sector are frustrated with few job opportunities or stagnant or declining real wages; (ii) the public sector, including administration, defense and security already employs 38 percent of the labor force and is bloated. It is thus imperative to enhance the scope for job creation in the private sector in the years to come. This requires a rapid growth of skill-intensive sectors which hold high hopes for employing educated Jordanians.

1.3.3 The Role of Rapid Labor Supply Growth

*Over the last 10 years, Jordan’s labor force grew at an annual growth rate of 2.7 percent.* Against this backdrop, Jordan’s respectable 2.9 percent annual growth in employment was not enough to absorb the new entrants and significantly reduce the stock of unemployed in the labor market, leaving the overall unemployment at high levels. In the ECA and EAP regions, labor force growth stood at a mere 0.8 percent per annum between 2000-2009, implying that most countries in these regions need only a fraction of the employment growth realized by Jordan to reduce unemployment.

*Jordan’s working age population has increased significantly in the last decade (reflecting high fertility rates in the 1980s) and is predicted to continue growing fast in the next decade.* From 3.4 million in 2009 (or 57 percent of the population), the working age population is expected to reach 4.4 million in 2020 (or 67 percent of the population). Assuming a labor force growth rate of around 2.7 percent per annum, in order to reduce unemployment, employment growth would need to be greater than 3 percent.

1.3.4 The Role of Firm Productivity Growth

*Job creation in Jordan in the last decade would have been higher if the elasticities of employment to growth had not declined significantly due to increased productivity and efficiency in many sectors of the economy.* Employment elasticities show how growth in economic output and growth in employment evolve together over time. Table 1.1 shows the estimated employment elasticities with respect to GDP for Jordan, in the period 1991-2009.

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16 We use the following multivariate log-linear regression model with country dummy variables, Di, interacted with log GDP for generating the point elasticity: \[ \ln E_i = \beta_0 + \beta_1 \ln Y_i + D_i + \beta_2 D_i + u_i \]

Where \( E_i \) represents employment in country \( i \); \( Y_i \) represents output or GDP in country \( i \); and \( D_i \) represents the country dummy variable for country \( i \). The elasticity of employment with respect to GDP in country \( i \) is the coefficient estimate of \( \beta_1 \).
Table 1.1: Employment elasticity in Jordan, 1990s versus 2000-2008

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>1.39***</td>
<td>1.48***</td>
<td>1.46***</td>
</tr>
<tr>
<td>Bahrain</td>
<td>0.53***</td>
<td>0.71***</td>
<td>0.37***</td>
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<td>0.64***</td>
<td>0.66***</td>
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<tr>
<td>Iran, Islamic Rep.</td>
<td>0.87***</td>
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<td>0.66***</td>
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<tr>
<td>Iraq</td>
<td>0.17**</td>
<td>0.13</td>
<td>0.22***</td>
</tr>
<tr>
<td>Jordan</td>
<td>0.71***</td>
<td>1.16***</td>
<td>0.53***</td>
</tr>
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<td>Kuwait</td>
<td>0.56***</td>
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<tr>
<td>Libya</td>
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<td></td>
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<tr>
<td>Malta</td>
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<tr>
<td>Tunisia</td>
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<td>United Arab Emirates</td>
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<td>1.30***</td>
<td>0.68***</td>
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<td>West Bank and Gaza</td>
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<td>0.91***</td>
<td>0.69***</td>
</tr>
<tr>
<td>Yemen, Rep.</td>
<td>0.83***</td>
<td>0.76***</td>
<td>1.08***</td>
</tr>
<tr>
<td>Average</td>
<td>0.74</td>
<td>1.00</td>
<td>0.65</td>
</tr>
<tr>
<td>No. of obs</td>
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<td>141</td>
<td>165</td>
</tr>
</tbody>
</table>

*, **, *** denotes significance at the 90, 95 and 99 percent confidence level, respectively

The employment elasticities of growth vary greatly by sector in Jordan (Table 1.1). But before interpreting the results of Table 1.2, it is important to note that, from a firm and sectoral perspective, a high employment intensity of growth is not necessarily a good thing. A high employment intensity of growth implies that increased output is associated with a large number of additional units of labor. This implies that labor productivity has not improved as much. On the other hand, a low employment intensity of growth, on its own, may not be a bad thing. Because if output growth is associated with more or less the same units of labor, it implies that labor productivity has increased and in a competitive factor market, real wages should have increased as well.

Not surprisingly, low productivity sectors have a higher propensity to create jobs when they expand than higher productivity sectors. Sectors with the highest employment elasticity are construction, real estate, education, public administration and transport. Construction and real estate stand out as the most job-creating sectors of the economy. On the other hand, a large number of sectors have become job-destroying in recent years (labor shedding while the sector output expands). These include mining, retailing and hotels.

Because high productivity sectors have a lower propensity to create jobs when they expand, it is imperative that these sectors experience a robust growth to mop up the available skilled labor in the market. Indeed, sectors such as pharmaceutical (chemicals), information and communication technologies, financial intermediation, health (including health tourism which is a high value-added sector) have all low elasticity of employment to output growth. Yet it is these sectors that hold high hopes for bringing the country to a knowledge-based status and for employing Jordan’s large pool of skilled
labor. For Jordan to capturing these positive externalities, these sectors need to grow much faster than in the last decade as shown in Chapter 2.

### Table 1.2: Employment Elasticity with Respect to Industry Value Added

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Agriculture</td>
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<tr>
<td>Mining</td>
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<td>Textiles</td>
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<td>Chemicals</td>
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<td>Construction</td>
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<td>Retail</td>
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<td>Real Estate</td>
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<tr>
<td>Health</td>
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<td>0.3421***</td>
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<tr>
<td>Others</td>
<td>1.3809***</td>
<td>1.6272***</td>
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</tbody>
</table>

Note: *, ** and *** denote significance at 90, 95 and 99 percent confidence level, respectively

Source: World Bank Staff based on Department of Statistics Data

### 1.3.5 The Role of Distortions Related to Public Sector Employment Policies

The role of the Government as the country’s largest employer is an important factor hindering job creation in the private sector. The public sector provides 38 percent of total employment and has been among the largest source of job creation over the last decade as seen above. Government jobs are attractive; they pay well compared to the low level of productivity in the public administration. As shown by the Employment Strategy Report (2012) and the Department of Statistics figures, the average monthly wage in the public sector was JD412 compared to JD338. But this average conceals large differences across specific categories of workers. For instance, the public sector pays about 70 percent of private sector wages for managerial and technical levels and about 150 percent of the private sector for unskilled and semi-skilled levels. With this gap in wage, it is no surprise that about 218,000 applicants are queuing for openings in the public sector according to the Civil Service Bureau.

Survey evidence suggests that more than 50 percent of the unemployed are unwilling to take available jobs at prevailing wages (World Bank 2009). The World Bank study shows that it is not the beneficiaries of the National Assistance Fund (NAF) who are generally not employed, nor the pension system -whose unemployment is low above 40, that explains this. The pension system however allows beneficiaries to retire at 45 with only a small reduction in the pension. It thus clearly creates disincentive for work. Workers who are laid off are entitled to a lump-sum severance payment. Although data are not available for Jordan, severance pay policies are considered unlikely to create significant disincentives to accepting employment because the total received in severance pay is unrelated to the duration of unemployment. The World Bank study shows that it is RW + Income support from families that are important.

17 The difference would be even higher if adjusted by productivity level (e.g., if the comparison was done using number of hours effectively worked) since the public sector has typically a lower productivity than the private sector.
18 These applicants have passed the exams and are waiting for job openings in the public sector.
Thus Jordanian job seekers, most of whom have at least a high school diploma, have relatively high reservation wages, based on expectations of obtaining public sector or foreign jobs and of income support from families. Distortions created by the public sector and the proximity of the Gulf countries where wages are highest for skilled individuals reduce the availability of skilled labor in the domestic private sector. Public sector reform would usefully support Jordan’s strategy to boost growth in high value-added sectors of the economy.

1.3.6 The Role of Other Factors

While growth remain crucial for employment growth, a number of structural factors are important as well. This is particularly true for female employment. The World Bank-supported Employment Strategy rightly emphasizes that importance of integrating growth-enhancing policies with policies related to education, vocational training and social welfare. Indeed, employment is not necessarily generated in the sectors that spillover positive externalities in the economy (e.g., real estate); nor it is generated sometimes in the right places given socio-cultural norms. For instance, women’s geographic mobility may not be easy. One local girl met in Mafraq has a Masters in Accounting. She has been looking for a job for 2 years without any luck. There is a perception of no jobs in Mafraq. One needs to go to Amman (where 55 percent of the jobs created between 2007 and 2010 were), but that it is hard culturally to move to another city for a single girl in Jordan. Another factor is the availability and cost of daycare alternatives (see World Bank-support Employment Strategy). This acts as a disincentive for married women to join the labor force. Moreover, maternity leave costs used to create a bias against women employment, compared to men. A recent Social Security Law (SSL) has introduced a socialized patrol deduction in lieu of the direct payment of the employers. This is expected to improve the prospect for employing women in the future.

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20 It is notable that women’s participation is very low (16 percent), among the lowest in the world. For an analysis of the reasons behind this low participation rate, see Jordan’s Employment Strategy and World Bank 2009.
Chapter 2 - Improving Institutions and State Organizations for Better Policy Making and Implementation

2.1. Introduction

As argued in the previous chapter, enhancing growth resilience and stability is a priority in Jordan. This chapter shows that sustaining growth and reducing unemployment requires improving the quality of institutions in Jordan. An opinion poll of Jordanian citizens, conducted by the International Republican Institute in April, 2011, found large-scale dissatisfaction with the performance of both the government and Parliament. Only 11 percent of respondents said they were satisfied with the government, while 40 percent said they were not satisfied or not at all satisfied. Satisfaction with Parliament was even lower, with just 3 percent saying they were satisfied with its performance, compared to 61 percent who expressed disapproval. Moreover, the poll also indicated major skepticism about the government’s ability to implement what citizens perceived as the country’s main priorities: economic reform and fighting corruption.

In order for Jordan to effectively meet the needs of its citizens, it needs good institutions and organizations that provide the resources for and engender the right incentives in individuals in government and in the civil service to (1) choose the right policies and (2) implement these properly. International experience shows that strong institutions and performance-oriented incentive structures in the public sector lead to better development outcomes and improved citizen satisfaction ratings in government performance.

The reality of policymaking is that all policies, including the ones we focus on in this report (fiscal policy, trade, state support to industries, etc.) are strongly influenced by the background institutions and organizations of policymaking. Given their importance, these background institutions and organizations and, most important, their effect on the policy making process are systematically examined in this chapter. This chapter examines the key institutional weaknesses of Jordan and highlights the key reforms needed if Jordan is to sustain growth resilience and achieve its employment goals.

2.2. The Policy Process

All reform processes follow a basic three-step process: (1) a policy-design stage, (2) an implementation stage, and (3) an impact evaluation and accountability stage. Figure 2.1 provides a general illustration of this process. First, in the policy-making stage, (i) strategies are clarified, (ii) targets are identified, (iii) task ownership is assigned to implementing ministries, and (iv) oversight ownership is assigned to political actors, who represent the interests of the citizens. Second, in the implementation stage, the implementing ministry implements the new reform. Making sure that the ministry has the resources, organizational structure, and technical capacity that it needs to implement the reforms successfully is crucial at this stage. Equally important for success is to make sure that civil servants have the right incentives to work hard and with the interests of the citizens in mind. Third, during the impact evaluation and accountability stage, the effects of new reforms are monitored and evaluated – with the relevant actors and ministries held accountable for their performance. The results of these performance evaluations and accountability mechanisms then help to inform the next round of policy design – as the
policy process starts again – with the goal of rectifying past policy weaknesses and addressing new challenges.

**Figure 2.1: The Policy Process**

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*We use the above framework to analyze the weaknesses in Jordan's institutions, organizations, and individual incentives, and how these impact the policy process.* We proceed by first analyzing Jordan’s performance through all three stages of the policy process – policy-design, implementation, and impact evaluation and accountability. Next, we provide recommendations for how Jordan can improve in these areas – with a special focus on improving accountability.

### 2.2.1 First Stage: Policy design

Jordan’s performance in the policy design stage suffers from the following three problems:

- **Weak adherence to a comprehensive reform plan.** Instead, policies are inconsistent, which negatively affects results and private investment decisions.
- **A general public perception that past policies have failed** – which implies a poor selection of policies (and/or weak implementation).
- **The lack of genuine consultation in the policy design process.** Instead, decision making is overly centralized and broad ownership and support of policies is weak among stakeholders.

**Weak Adherence to a Comprehensive Reform Plan**

Unlike successful developing countries, such as China and South Korea in the past, Jordan does not appear to have developed a comprehensive development plan, anchored in broad ownership. Instead, one government decides on one policy and the next government, less than two years later, may change the policy – and in the extreme case may even reverse course. These inconsistent policies may negatively impact private sector expectations and hence economic outcomes.

*For example, in 2007, the Ministry of Labor announced plans to curtail the number of foreign workers admitted to the country, but these policies were later abandoned by the next government, which freed up the entry of foreign workers.* This ‘off-again, on-again’ approach to foreign labor policy resulted in
unexpected losses for the private sector (especially the export-oriented / foreign labor reliant industries) and made it very difficult for the private sector to plan ahead for its labor demand in terms of quantity and quality. It has also made it very difficult for unskilled Jordanian youth to find jobs, and made it very difficult for the education and vocational training sectors to predict the future demand for Jordanians in jobs typically occupied by foreign workers. This lack of a strategic approach and a consistent policy has hurt both the private sector and Jordanian workers.

Public Perception that Past Policies Have Failed

There is a perception that the economic situation is getting worse, in spite of 10 years during which the economy grew by 6.7 percent on average annually. Jordan’s Center for Social Research’s national poll of 2009 found that the rising cost of living still tops the public’s list of priorities and almost half of Jordanians describe a downward trend in their personal economic well-being.

The government’s performance is also perceived as low. More recently, the University of Jordan’s Center for Strategic Studies (CSS)’s 2011 public opinion poll found low government performance ratings on issues related to fighting nepotism and cronyism, poverty reduction, unemployment, and reducing corruption.

Lastly, corruption is perceived as getting worse. Jordan’s ranking on Transparency International’s Corruption Perception Index illustrates a consistent deterioration over the past four years, from 47 in 2008 to 56 in 2011, signifying weakened public confidence in the integrity of government organizations.

A Lack of Genuine Consultation in the Policy Making Process

The perception of policy failures, outlined above, may be the result of a lack of consultation in the policy design process. For most non-security policies, decision making is largely confined to the cabinet and the highest rank of the bureaucracy. There is a noticeable lack of decision-making in the bureaucracy at all managerial ranks, except at the very top.

For example, over the past decade, the public procurement system in the central government has been highly centralized. Financial reporting followed a system of controls based on multi-level reviews and committees that were centered in high levels, following rigid formats prescribed by detailed rules and regulations. This centralized system of decision-making overburdened the relatively small pool of effective decision-makers. This may have contributed to Global Integrity’s most recent de jure and de facto ratings for public procurement in Jordan as ‘very weak’ relating to the effectiveness of the public procurement process and citizen access.

In addition, although some attempts to consult the public have been made, these have not resulted in genuine civil society input into the policy design process. The Jordanian government has attempted to engage in a broad consultative process, with the Economic and Social Development Plan of 2004-2006, which assembled 500 stakeholders from Parliament, government and civil society; the National Agenda of 2005; and the “We Are All Jordan” program, which assembled 700 representatives from the public sector, private sector and civil society to identify specific priorities for national development. Moreover, based on the National Agenda and the “We Are All Jordan” programs, the Ministry of Planning and International Cooperation developed its forward looking socio-economic development agenda (EDP). Nevertheless, it is not clear that these deliberations have taken full root, as progress on developing and institutionalizing key performance indicators from the National Agenda has been limited.21

2.2.2 Second Stage: Implementation

In addition to problems in the policy making stage, Jordan faces several implementation problems. This is illustrated by an implementation gap between its legal framework and the strength of the actual implementation ranking it received from the Global Integrity Index (see Figure 2.2).

Figure 2.2: Legal framework vs. actual implementation measures

![Comparison to 65 diverse countries](http://report.globalintegrity.org)

Source: Global Integrity Index

In particular, Jordan suffers from the following:

- Blurred ministerial mandates and insufficient coordination among ministries
- Frequent changes in government and ministerial leadership
- Discretion and arbitrariness in implementation
- Weak technical capacity

**Blurred Ministerial Mandates and Not Enough Coordination among Ministries**

**Implementation of policies over the past decade has been hindered by organizational redundancies in various ministries.** A recent mapping of public sector organizations, developed by the Ministry of Public Sector Development (MoPSD), reveals a large number of overlapping organizational mandates – compared to other countries. This leads to inadequate accountability, as it is not clear which ministry (or sub-division within a ministry) is responsible for the delivery of a certain service. (We discuss accountability further in section 3 of this chapter below).

**In addition to blurred mandates, the current government structure in Jordan is characterized by limited cooperation and coordination among public sector organizations.** For example, during the beginning of the 2000s, Jordan did not have any permanent, sector-based sub-committees to coordinate and oversee the implementation of policies that spanned the mandates of more than one ministry.

**Frequent Changes in Government and Ministerial Leadership negatively impact the implementation of reforms.**
The policy choices made by a minister determine the directions (or missions) of the ministry – which analytical work will be undertaken, which sub-departments will be financed, etc. In most cases, whenever the minister changes, the direction of the organization changes. Hence, given that instilling a new direction in a ministry takes time – as does implementing a policy – if there are frequent changes in ministers, the organization may often lack direction and policies may not be implemented completely.

In Jordan, frequent changes in ministers are quite common. During the last decade, the average term of a Jordanian government was less than 1.5 years. Moreover, given frequent cabinet reshuffles, the average term of a single minister at a ministry may have been even shorter. These ministerial changes often result in policy changes and thus changes in direction for the ministry. For example, as was mentioned above, in 2007, the Ministry of Labor announced plans to curtail the number of foreign workers admitted to the country. But, these policies were later abandoned by the next government, which freed up entry of foreign workers. In addition to the negative impact that inconsistent policies have on private sector expectations and economic outcomes, changes in policy direction also negatively impact the ability of the ministry to implement new policies – because of the time needed to modify staff, procedures, etc.

Moreover, frequent turnover in government has disrupted the government’s ability to adopt and consistently implement reforms. Frequent changes in government have minimized the incentive for ministers to engage in long-term, difficult, and potentially politically contentious reform efforts, most of which are the much-needed deep structural reforms that will ultimately push Jordan forward towards its desired trajectory of increased competitiveness and efficiency. Indeed, a recent assessment of the impact of cabinet shuffles on development projects in Jordan suggests that reforms that have taken place at the grassroots, school and departmental levels were more resilient than reforms at the ministerial level because of greater immunity against the political environment.22

Discretion and Arbitrariness in Implementation

Discretion and arbitrariness in the implementation of policies and regulations have negatively impacted the success of public sector service delivery. A review of Jordan’s rankings, compared to those of Chile, highlights lower rankings on measures relating to discretion and arbitrariness in decision-making (see Figure 2.3). Measures relating to favoritism of government officials signify a level of potential corruption that impacts public confidence in political organizations. Chapter 7 discusses in detail the impact of uncertainty in implementation of business regulation on private sector dynamism.

Weak Technical Capacity

A major shortcoming over the past decade in implementation (and policy design) has been the absence of functional or technical specialists who could provide analytical support and advice. With the National Agenda document, the Government also recognizes that “Jordan’s continued economic, social, and political improvement depends greatly on the quality and effectiveness of its public administration”.

The incentive structure of Jordan’s civil service does not encourage a service and performance culture needed to ensure successful reform implementation. Incentive structures play a significant role in much-needed civil service reform efforts and help to build and sustain technical capacities. Incentives often include measures that create competition and accountability, such as merit-based pay and promotion, evaluations, and transparent work environments.

In Jordan, the public sector is characterized by negative or perverse incentives that create capacity erosion through non-merit based recruitment and promotion practices. Moreover, the average civil service salary of JD 348 is less than half the average salary per employee at Jordan’s financially independent agencies. This fact makes it difficult to retain qualified higher-level staff, which has resulted in significant migration of these workers to Gulf countries. Consequently, the efficiency of Jordan’s public administration is largely hampered by sub-optimal allocation of human resources and skills. In order to improve public sector performance, the incentives that drive this performance need to be changed. Performance needs to be the main criteria on which promotions are made in the civil service, not seniority.

Human resource management reforms are needed to further improve public sector performance. A main message of the Ministry of Public Sector Development (MoPSD)’s current strategic framework for 2010-2013, from February 2010, is that the overarching strategic principle for the government’s public sector reform strategy is to make sure that the public sector has the “right number of people with the right skills in the right jobs, and performing well.” Therefore, MoPSD is working to strengthen human resource management (HRM), as proposed by the existing regulations, through HR planning, training, selection and recruitment to help incentivize efficient public sector performance. More work on this front

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Figure 2.3: Discretion and arbitrariness

![Figure 2.3: Discretion and arbitrariness](image)

Source: World Competitiveness Index, WEF

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23 A significant number of Jordanians in the Gulf hold important civil service positions and in a variety of occupations.
24 Jordan MOPSD Strategy 2010-2013
is required in order to adequately address the mismatch between public and private sector jobs and incentives for better public sector performance, needed to ensure effective policy implementation.

2.2.3 Third Stage: Impact Evaluation and Accountability

While Jordan ranks well in comparison to other MENA countries, Jordan’s level of accountability is low by international standards. Compared to Chile and Poland, Jordan scores much lower on indices measuring accountability of the executive, legislative, and judiciary, and the budget processes (see Figure 2.4). To ensure accountability, civil society agents need information – i.e. there must be transparency – and there needs to be an environment in which alternative actors and ideas can freely compete and participate in the decision-making process – i.e. there must be contestability.

As the policy chain illustrates (Figure 2.1), a good policy process utilizes evaluation mechanisms to inform and feed into the design of future government priorities. The chain is thus intended to act as a virtuous circle, utilizing results and feedback to inform policy makers. This feedback will help provide better clarity to policy strategies and help build momentum for reform sustainability by ensuring adequate targeting of policies. In order for this chain to function properly, the impact of implemented policies must be sufficiently evaluated and civil society organizations must be empowered to provide input and, most importantly, hold the political leaders and civil servants accountable for their performance.

In particular, Jordan needs to do more in the following areas:

- Impact Evaluation and Transparency
- Contestability

Impact Evaluation and Transparency

Several organizations have been set up by the government to evaluate policies and performance, but more needs to be done by the government and, most important, by civil society organizations. Some examples of independent evaluating and monitoring organizations include the Audit Bureau, the King Abdullah II Center of Excellence (which conducts assessments of ministries and institutions’ performance
and service quality) and the Government’s Performance Administration Unit (attached to the Prime Ministry), which measures public sector performance.

In addition, in 2006, Jordan passed the Financial Disclosure Law, which stipulates that certain government officials must disclose their assets in a sealed envelope that is to be opened by the Chief Justice in case of complaint. The Jordanian Parliament also passed an Access to Information Law in 2007, a first in the Arab World, although this is somewhat restricted by the State Secret and Documents Law.

Nonetheless, these legislative efforts have been less effective than expected, in part because of other laws that undermine their impact and also because of the limited capacity of implementing agencies. For example, the Anti-Corruption Commission has been slow to act – the first report of this organization was published in August 2011. In addition, existing laws providing for secrecy and confidentiality have reduced the effectiveness of the Anti-Corruption Commission (ACC), and the ACC has lacked the prerogative to audit the records of public shareholding companies. The effectiveness of the Access to Information Law has been undermined by the following factors: (i) existing laws providing for confidentiality; (ii) exceptions allowing for the non-disclosure of a wide variety of information; (iii) no provision for proactive disclosure of information; (iv) oversight bodies lacking independence of government; (v) access rights applying only to citizens who demonstrate an interest in the information sought; and (vi) the lack of protection to good faith disclosures or sanctions for willful obstruction of access.25

Contestability

The National Agenda, established in 2005, acknowledged the importance of enhancing public participation in the decision-making process and strengthening the role of civil society organizations.26 Furthermore, the agenda rightly articulates the significant need for higher levels of contestability.

The weakness of civil society and the general absence of effective political parties have made constructive resistance less effective than it has been in many other developing countries. Recent governance indicators rank Jordan as ‘very weak’ in measures of the strength of civil society organizations. For instance, there have been notable reversals in indicators measuring civil liberties and political rights. In the annual Freedom House rankings, Jordan declined from rank 4 in 2001 (partly free) to rank 6 in 2010 (not free).27 Over the last year, however, a freer civil society has grown more vocal in the broader regional context of the Arab Spring. Nevertheless, more needs to be done to strengthen the voice of citizens.

2.3. Some Solutions: Increasing Accountability in Jordan – through More External and Internal Accountability and Greater Voice

Three main sets of actors are important for the success of the policy process in Jordan: (1) political actors, (2) civil servants, and (3) citizens. To increase accountability, Jordan must work to establish the institutional rules and norms and strengthen state organizational capacity such that:

- Political actors have the right incentives to choose the right policies and make sure that the civil servants implement these properly – even when they are under pressure from special interest groups

25 See Jordan First Programmatic Development Policy Loan (2012).
27 Freedom House utilizes a scale of 1 to 7, with 1 being most free.
to not choose the right policies or to turn a blind eye when civil servants do not implement the right policies;

- **Civil servants** have the right incentives to do their jobs diligently and honestly – as well as the technical capacity to understand what needs to be done and the resources and organizational structure to actually go out and do it; and,

- **Citizens** are empowered to monitor and hold their political representatives and civil servants accountable for their performance.

*These three groups of actors are linked by the policy-process accountability framework* (Figure 2.5). In broad terms, citizens (in blue) elect and hold accountable political actors (in red), who are given responsibility to manage the civil servants in the state ministries (in green). The civil servants provide services to the citizens. If these services fall short of expectations, citizens can either (1) complain directly to the civil service or (2) hold their political representatives accountable for any short-comings with the civil service.

![Figure 2.5: The Policy-Process Accountability Framework](image)

In this concluding section, we present three main recommendations for how to improve the policy process in Jordan by increasing accountability. The three main themes are:

- Better Policy Making - through Greater External (i.e. Political) Accountability
- Improved Implementation - through Greater Internal (i.e. within Government) Accountability and More Bureaucratic Empowerment; and
- More Effective Monitoring and Evaluation - through Greater Civil Society Engagement in the Policy-Process
2.3.1 Better Policy Making - through Greater External (i.e. Political) Accountability

*For better policy-making, it is crucial to ensure that political leaders have the incentives to promote the general interests of the population.* In Jordan, external accountability can be increased through the continuation of the political reform process. This point was emphasized by His Majesty King Abdullah in his speech opening the 16th Parliament’s second ordinary session on October 26, 2011:

- Our priority today is political reform. Now, we need to build the legislative foundations on which political life can develop: new laws on election and political parties, independent election commission and constitutional court, as well as other legislation to implement the constitutional amendments. It is our frank opinion that this legislative framework … is a necessary step to protect our democratization process, by expanding the base of participation and representation.
- All these steps will bring us closer to the ultimate goal of parliamentary government. Until the political party system matures and can play its rightful role in Parliament, we need to adopt an inclusive consultative approach to government formation, so that citizens can trust that, through their elected representatives, they are truly participating in the process of forming governments, monitoring them, and holding them accountable. …
- As for governments formed by political parties, this issue rests in the hands of the citizens and voters, and it is very much conditional to the ability of political parties to freely compete. We want all political forces to shoulder the responsibility and participate in the decision-making process, and we are firm in our belief that a national constructive opposition is a fundamental pillar of the state.

*As the King stated, greater political competition and greater external accountability are crucial for effective parliamentary government and effective policy design.* Several theories exist on how political institutions of a country can impact external (i.e. political) accountability.

*More effective political competition generally leads to more external accountability – as more political actors with sufficient resources compete for the support of those individuals constitutionally-designated to select their political leaders.* In trying to obtain the support of those individuals, political actors attempt to provide those individuals with benefits in exchange for their support and, thus, are more accountable to those individuals.

*Political competition, however, is not sufficient to engender external accountability to benefit the entire population.* The size of the group of individuals constitutionally-designated to select political leaders is also important. According to the Selectorate theory (Bueno de Mesquita et. al. 2003), political institutions determine the size of the group of individuals whose support political leaders need to maintain themselves in power – i.e. the proportion of the population that leaders are ultimately accountable to. This is referred to as the size of the leader’s winning coalition, W. Political leaders maintain the support of their winning coalition through a combination of (1) providing private goods to their supporters (jobs, government contracts, etc.) and (2) providing public goods, i.e. policies that benefit society at large (policies to improve growth, improve development outcomes, etc.). When the political institutions are such that W is small, a political leader is accountable only to a small number of individuals. In this case, it is more efficient to provide private goods directly to that small group of individuals. By contrast, when political institutions are such that W is large, a political leader needs to keep a large number of individuals happy. In this case, providing private benefits to such a large group is almost impossible. Moreover, given finite resources, as the size of W increases, the value of the private goods that each supporter receives decreases. After a certain level of W, it is no longer efficient to focus on providing private goods to one’s supporters. Instead, it becomes more efficient to focus one’s limited resources on the provision of public goods, which can reach and benefit many individuals simultaneously. In other words, the
incentives for making policies that benefit the public at large are increasing in the size of the winning coalition, i.e. when political leaders are accountable to a larger proportion of the population.28

Hence, to engender greater external accountability, it is crucial to (1) promote greater political competition and (2) increase the size of the winning coalition needed to maintain political leaders in power.

To test the Selectorate Theory, the authors also develop a rough measure of accountability, the W-score, which combines both the degree of political competition and the size of the winning coalition. The W-score is a 5 point measure that runs from 0 (low accountability) to 1 (high accountability). The authors then regress growth and development outcome variables on the W-score and control variables, such as income, and find that the W-score is statistically significant and in direction predicted by the theory for 27 out of the 31 variables examined.

Jordan, currently, has a W-score of .25, which indicates very low accountability. If, however, Jordan were to follow through with some of its political reform proposals, its W-score could increase dramatically. This then could greatly increase the incentives of political leaders to take the concerns of a greater proportion of the population into account when designing policy. Some of the main political reform proposals and their potential impacts on external accountability include the following:

Changes to the Electoral System and the Political Parties framework could greatly increase political competition and external accountability.

Electoral institutions affect both the number and strength of political parties (which impacts political competition) and the representativeness of the legislature – both of which impact external accountability. Jordan’s current electoral system for the national Chamber of Deputies is based on the single non-transferable vote (SNTV) electoral formula – an archaic system used in very few other countries. Under SNTV, candidates compete for all intents and purposes on their own, regardless of their party affiliation. The outcome is an increase in independent candidates, who do not benefit from party-label economies of scale and who thus must shoulder higher campaign costs. This leads to greater levels of clientalism and corruption. For the government, however, SNTV produces political representatives who are more pro-government (as they strive to maintain access to state resources to distribute to their supporters) and weakens the power of major political parties – thereby reducing competition and accountability.

In addition to the SNTV electoral formula, another problematic aspect of Jordan’s current electoral system is that many aspects of the electoral procedure are set by government decree right before an election, rather than by law. For example, the government determines how many seats are assigned to each electoral district right before an election. The government thus has the power to allocate more seats to districts where it may perceive it has more support, which in turn could give it an advantage in maintaining support for its policies. This procedure reduces political competition and thereby accountability – as other political actors, whom the government may perceive as threats, are disadvantaged.

Finally, the government recently began dividing multi-member electoral districts into sub-districts. Voters can vote for any candidate in the district, but candidates compete against only those other candidates on the same sub-district list. As the government controls which candidates are placed on which lists, they can favor certain candidates over others and prevent that all of the seats in a district go to

28 Note that the Selectorate Theory contains many parts and extensions. In this analysis, we focus on the general “size of the winning coalition” part of the theory and how this impacts external accountability.
suspect candidates by placing them all on the same sub-list. This again negatively impacts political competition and accountability.

**Early draft Electoral and Political Parties laws proposed several important positive changes.** First, the total number of seats in the Chamber would be fixed by law instead of being determined by the government at each election. Second, the sub-districting procedure first used in 2010 and outlined above would be discontinued. Third, the electoral formula used to translate votes into seats would switch from SNTV to a two-tiered, proportional representation (PR) system – similar to the systems used in many European countries.

**Moving to a proportional representation system should increase both the strength of parties and the representativeness and accountability of the Chamber.** First, the number of seats that a party receives is in rough proportion to the total votes won by all candidates of that party. This increases the power of parties, which, along with the economies of scale of campaigning as a member of a political party, reduces the incentive for individual candidates to run as independents – which should have a beneficial impact on cronyism. Political competition through parties enhances external accountability, because – unlike independent representatives, who may disappear after supporting bad policies – political parties are perpetually-lived organizations, which citizens can hold to account for bad policies by withdrawing support at the next election. Moreover, political parties, through internal disciplinary action, help prevent egregious behavior by party-members, lest the party label be soiled by the bad actions of any of its members. Hence, stronger party competition is good for external accountability. And, moving to a PR electoral system from the current SNTV system (which would strengthen political parties) should result in an increase in external accountability.

**Such an increase should also result in an increase in Jordan’s W-score.** If, through these reforms to the electoral system and the political parties framework, Jordan were able to create an environment where “relatively stable and enduring political groups regularly compete for political influence and positions” (Marshall and Jaggers 2007, 25), Jordan’s W-score could increase from .25 to .50.

Moving towards full Parliamentary government, in which the Prime Minister and the government are directly elected by and accountable to the Chamber of Deputies, would greatly increase external accountability in Jordan.

**In his speech, King Abdullah stated that full parliamentary government was the ultimate goal of the reform process in Jordan.** If such constitutional changes were made, the impact these would have on Jordan’s external accountability would be dramatic. Currently, the link between the government and the Chamber of Deputies and the link between the Chamber and the citizens of Jordan is not as strong as in other countries. If the government was to become directly accountable to the Chamber – and the Chamber made more representative and accountable to the citizens – this would increase the likelihood that the government would take the concerns of the Chamber and the citizens into account when setting policy. In such an institutional environment, a government could be punished for unfavorable policies or bad policy making outcomes and hence has more of an incentive to get those policies right.

**The impact these changes could have on Jordan’s W-score would be dramatic.** It could increase by .5 points. If this effect is combined with the previous effect of the modified electoral system and political parties framework, the total increase in the W-score could be .75 points.

**The potential benefits of Jordan’s W-score increasing from .25 to .50 or even to 1.00 are enormous.** In 2010, Jordan’s GDP per capita was approximately 2,500 in constant 2000 US dollars. Based on cross-country regression analysis, Bueno de Mesquita et. al. (2008) find that for every .25 increase in W, the percentage increase in per capita income is 74 percent. Hence, if Jordan had a W-score of 0.50 in 2010
(instead of .25), its GDP per capita might have been 74 percent higher, or 4,356 USD. If, instead, Jordan had a W-score of 1.00 in 2010, its GDP per capita might have been closer to 13,000 USD. (See Table 2.1). Of course, many economic and other factors must be taken into account when attempting to predict levels of GDP per capita, but the empirical results presented by Bueno de Mesquita et. al. (2008) demonstrate the potential gains from better policy-making as a result of greater external accountability.

Table 2.1: The Hypothetical Effect of W on Income Per Capita in Jordan

<table>
<thead>
<tr>
<th>W-score</th>
<th>2010 Per Capita Income (2000 Constant Dollars)</th>
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<td>0.25</td>
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<td>0.50</td>
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</tbody>
</table>

Decentralization (if combined with real power for local leaders, the required financial resources, and the right institutions for selecting local leaders) could also increase external accountability and improve policy-making in Jordan.

Decentralization of policy-making to the local level (if combined with real control over service delivery and a source of local-level financing, which is independent of the central government) could greatly improve policy-making in Jordan. This happens as political leaders at the local level are given more power over the running of their political units, while at the same time being made more accountable to the citizens. Local political leaders thus have a greater incentive to take citizens concerns into account when developing policies. Moreover, citizen monitoring of the behavior of their political leaders and the outcomes of the policies decided on is usually easier and more extensive at the local level as compared to the national level, given the closer proximity of the political actors to the citizens.

In Jordan, the new municipal law and municipal elections to be held in 2012 could have a very positive impact on policy-making and service delivery. According to the law, the municipalities will receive more revenue and become more independent. For example, the prime minister will no longer have the power to dismiss mayors and municipal council members.

However, in addition to ensuring that the municipalities have the authority and resources required, Jordan must also make sure that the right institutions for selecting municipal mayors and council members are in place, so that political leaders are accountable to their local constituents. That is, the size of the winning coalition needed to support a local leader and the level of competition among political actors must be sufficient to ensure external accountability. If the local municipalities are made so small that the size of the winning coalition necessary to maintain a leader in power is quite small, local elected officials may become captured by town elites or a particular tribe or ethnic group in such a way that external accountability is actually reduced rather than enhanced. As is the case at the national level, special attention needs to be given to institutional design, in order to engender external accountability and better policy-making at the local level.
2.3.2 Improved Implementation – through Greater Internal (i.e. within Government) Accountability and More Bureaucratic Empowerment

*Whereas greater external accountability helps ensure that political leaders keep the interests of the citizens in mind when making policy, greater internal accountability helps ensure (along with more bureaucratic empowerment) that civil servants have the right incentives and the means to provide quality services to the citizens.* Here, we list several recommendations for increasing internal accountability and bureaucratic empowerment.

The incentive framework within the public sector needs to be strengthened.

**Performance needs to be the criteria on which promotions are made in the civil service, rather than seniority.** Elements to strengthen the human resource management (HRM) framework towards results-orientation and merit-based recruitment should be furthered. The overarching public sector reform strategy provides a good basis for outlining the strategic elements of the HRM strategy. MoPSD’s work on strengthening existing regulations should be continued to help address the mismatch that exists between public and private sector jobs and improve incentives for better public sector performance.

**To help incentivize better public sector performance,** a network of human resources directors has proven a useful tool in many other countries and can help to improve coordination, dissemination and vetting of ideas relating to HRM reform. This would be helpful in launching a culture of HRM in the public sector and to implement core reforms. Furthermore, countries like Singapore which have instilled a strong performance-oriented culture in the public sector have utilized a merit-based personnel assessment system which supports civil service performance management and provides incentives, including promotion and performance bonuses for good performers.

Prioritization for human resource management reform should focus on:

a. Strengthening and reinforcing a shift towards performance and results-orientation in the public sector to improve government services.

b. Delegation needs to be encouraged in order to improve performance with decisions being made at appropriate levels in order to be effective.

**Improve coordination mechanisms to help policy implementation.**

**To further strengthen the propensity for improved implementation of policies in Jordan, use of a selected number of working groups to develop and drive specific reforms or reform processes will help to improve technical level implementation.** These working groups should be multi-sector; they should develop and propose both work programs and deliverables; and should be overseen by a group of Permanent Secretaries, overseen by a cabinet public sector sub-committee.

**Some of the existing coordination problems may be caused by a lack of proactive communication** about the objectives and advancements of the reform activities of the government, which sometimes do not even appear to be known to government insiders. It would be useful to fundamentally rethink and professionalize the communication strategy that underpins any policy process and follow through with both internal and external formalized communication channels.
2.3.3 More Effective Impact Evaluation and Accountability - through Greater Voice to Civil Society Organizations.

Lastly, in order for external and internal accountability to work in practice, citizens must have access to information and be free to organize and provide feedback to their political leaders and civil servants:

Jordan should further broaden and formalize pre-existing evaluation mechanisms.

Over the last three years, 81 agency and services surveys have been commissioned by the King Abdullah II Centre for Excellence (KACE), along with mystery shopper tests and customer and employee satisfaction surveys. The reports on individual agencies are currently not shared with service delivery coordination agencies such as MoPSD. In fact, KACE produces only a consolidated report, which is shared with other Government agencies. Broadening the KACE surveys to ensure that line agencies such as MoPSD, in addition to the 81 agencies surveyed receive the detailed survey results of their services will certainly help to guide future reform implementation. These results contain customer improvement suggestions and feedback, and can be valuable sources of input for respective agencies on improvements and simplification of forms, processes, workflow, and roles.

Civil society initiatives should be institutionalized to influence policy.

In this regard, the Government of Jordan should seek to formalize some relations with civil society by the creation of informal “user groups” providing support and feedback on new services as these are being developed and tested before they get to be approved and rolled out. Furthermore, Jordan’s complaints hotline is an important initiative that warrants more emphasis as it can provide a wealth of data to help inform the policy process and target the most problematic services.

To improve effective and representative channels and networks of communication between the state and society and the public and private sectors, Jordan should promote greater information-sharing by reinforcing the availability of data and assessments more widely to the public. Initiatives such as this can be powerful tools to promote accountability and improved service delivery and are “quick-wins” in many regards. Strengthening the Access to Information Law to meet international standards will help to foster better citizen-State engagement and ensure that the policy process is linked to an effective accountability framework based on better information and knowledge sharing.

Furthermore, adoption of a government-wide public consultation policy can help to institutionalize the culture of government-citizen interaction and citizen engagement in decision making. Many countries have adopted a government-wide public consultation policy which enforces a comprehensive consultation process on draft laws and regulations and which has proved to be a valuable instrument to help strengthen government-citizen interaction and improve the quality of government policies on key development areas.

For example, in Switzerland, the Consultation Procedure Act\(^\text{29}\) sets out the requirement for public participation in the law-making process. In Canada, the process has been implemented in the form of a code of conduct rather than a formal legal measure, which sets out good practice guidelines on the consultation process and which has been widely enforced as a strongly suggestive prerequisite on draft laws and regulations. Linked to this process is an online platform, the Consulting with Canadians website,\(^\text{30}\) which ensures the transparency of the consultation process and provides citizens access to pre- and post-versions of a consulted law or government policy.

\(^{29}\) Federal Act on the Consultation Procedure (CPA,SR 172.601)

In conclusion, Jordan needs to do much more to strengthen state organizational capacity and establish institutional rules and norms that facilitate better policy design and implementation. If it can succeed in increasing internal and external accountability and strengthening the scope for civil society engagement in the government decision-making process, it can develop and implement policies that lead to greater growth and development for all Jordanians and those which are anchored in broad and strong ownership among stakeholders.
Chapter 3 - Strengthening Macroeconomic Stability through Fiscal Reforms

3.1. Introduction

In addition to improving institutions (Chapter 2), Jordan needs to improve its fiscal policy to enhance macroeconomic stability, a key condition for a resilient, sustainable and job-creating growth. This chapter examines in detail Jordan’s fiscal policy since the early 1990s, identifies its key shortcomings and outlines policy options to address them. It shows that the composition of spending, the pervasiveness of tax exemption and the pro-cyclicality of fiscal policy combined tend to engender macroeconomic volatility. This in turn undermines growth by reducing the incentive to invest in Jordan. Policy options to address these include decisive fiscal adjustment measures combined with a strengthening of the institutional underpinning of fiscal policymaking.

3.2. Jordan Fiscal Policy: Stylized Facts

Between 1990 and 2010, expenditure trends in Jordan were characterized by rapid growth in current expenditures (which kept pace with nominal GDP growth) and volatile capital investments. Failure to tackle structural public sector and social safety net reforms in Jordan has had significant implications on public spending and fiscal consolidation programs as large wage bills, increasing subsidies and other transfers exerted pressure on fiscal deficits and reduced the available fiscal space used for public capital investment. As a result, Jordan has not been able to reduce the share of current expenditures as a share of GDP. The share of current public expenditures to GDP has remained fairly constant throughout the past 20 years with an average of around 29 percent (Table 3.1).

Table 3.1: Jordan Fiscal Outcomes- Stylized Facts

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<td>1.4</td>
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<tr>
<td>Public Debt</td>
<td>39.3</td>
<td>6.7</td>
<td>6.9</td>
<td>5.9</td>
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</table>

Note: Wage Bill= civil servants and military personal wages and allowances + social security + pension compensations
The inelasticity of current expenditures as a share of GDP is the result of an increasing wage bill and fluctuations in consumption subsidies. Compensation of employees, military spending and consumption subsidies combined have offset the substantial decline in debt service. Indeed the overall wage bill increased at a higher rate than real growth in the Kingdom (6 percent compared to 5.3 percent) especially starting 2006. On the other hand, consumption subsidies especially those on fuel and food (wheat and barley) - including direct cash transfers - fluctuated essentially with international prices and to a lesser extent as a result of government decisions to the include or exclude oil-related commodities such as different types of gasoline products (92 and 95 Octane, etc.), kerosene and cooking gas to its items of subsidized goods. The overall outcome was a failure to reduce recurrent spending and therefore create the necessary fiscal space required to implement a more counter-cyclical fiscal policy during economic down-turns. The only positive development has been that debt servicing has declined steadily over the past 20 years. This was due to a significant drop in gross debt to GDP from a high of 221 percent in 1990 to 67 percent in 2010.

![Figure 3.1: Composition of Current Expenditures](image)

Capital expenditure on the other hand has proven to be more volatile. The share of capital expenditure to GDP has fluctuated from an average high of 9.2 percent in 1990-1995 to a low of 6.8 percent in the period 2005-2010 Figure 3.2. Investment spending is typically pro-cyclical in Jordan with important cuts occurring during periods of low economic growth. Rather than reducing recurrent spending, successive governments have resorted to decreasing capital expenditure as the primary policy tool for implementing fiscal consolidation programs.

Domestic revenues have failed to keep up with the growth in public expenditures. Over the past 20 years, the share of domestic revenues in GDP decreased from 29.9 percent in 1990-1995 to 26.6 percent in 2005-2010. As a result, domestic revenues have failed to cover recurrent public expenditure since 1997 and Figure 3.2). The implications on Jordan’s fiscal deficit were chronic with the average primary balance excluding grants peaking in the first half of the 2000s at 8.3 percent, up from the 2.7 percent registered in the first half of the 1990s (Table 3.1). This outcome is attributed to (i) a narrow taxation base, (ii) forgone revenues from significant number of exemptions on goods and services, and (iii) weak fiscal discipline coupled with pro-cyclical fiscal policies.

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31 Military spending as it appears in the budget reflects mainly recurrent spending in the form of compensation for personnel including wages and pension schemes.
32 Includes civil servants, military personnel and pension contributions.
33 Figure 1 indicates a sharp increase in subsidies starting 2003 as the oil subsidy was introduced.
Like most other economies, domestic revenues in Jordan are cyclical in nature. The general sales tax (GST) is the primary revenue stream for Jordan, constituting around 29.7 percent of average of total domestic revenues 34 (37.1 percent for the period 2000-2010). Other important revenues are customs and non-tax fees - mainly land registration and revenues stamps - with a share of domestic revenues of respectively 14.3 and 15.3 percent on average. By nature, these revenues are cyclical, following the business cycle. Their strong correlation with economic growth and their significant weight in domestic revenues is an additional constraint for Jordan to implement a countercyclical fiscal policy especially in the absence of strong institutionalized automatic stabilizers 35.

Extensive tax exemptions have been distortive to the revenues base. The government has resorted to tax exemptions extensively in the past decade to stimulate foreign investments and subsidize some domestic sectors, and as a mechanism to enlarge the social safety net and appease popular discontent in periods of high inflationary pressure. In the absence of an overall framework or strategy that defines specific guidelines for administering these exemptions, these exemptions have become distortive to the domestic revenues base in Jordan and have accentuated the primary deficits.

The exemptions typically used in Jordan are numerous and diverse in nature. Among the most popular and recurrent over the past decade are:

- A GST and / or custom exemption. That is, a reduction in the rate or a zero rate on consumption goods, commodities, and intermediate goods for industries and manufacturing.
- A GST exemption – a reduction in the rate or a zero rate on end-user or intermediate services.
- Corporate tax and customs exemptions for private firms bringing in foreign direct investment, especially for real estate and infrastructure projects. This is usually subject to large investment thresholds and job creation for Jordanians.
- Different tax exemptions provided in the special economic zones.

Jordan is an important recipient of grants from the Gulf countries and the US thanks to its political stability and diplomacy. As Figure 3.3 shows, the share of foreign grants in Government revenues is very high, averaging x percent with important peaks in 2003 and 2004 (28 percent) and in 2011 (22 percent).

34 The General Sales Tax in Jordan is similar to a Value Added Tax.
35 Automatic stabilizers and institutional set-up for countercyclical fiscal policies are discussed in the last section of the report.
This dependence on external grants creates a permanent fiscal policy risk, since they fluctuate tremendously. For instance, external grants dropped from 14 to 7 percent of total government revenues between 2008 and 2009, causing a dramatic widening in government’s borrowing requirement.\(^{36}\) The fluctuations in foreign grants generate additional uncertainty for fiscal policymakers on top of the uncertainty related to economic activity.

*Foreign grants not only strongly exposes Jordan to changes in the political and economic fortunes of its partners, they seem to relax the country’s budget constraint through a “moral hazard” phenomenon.* In other words, the availability of large foreign grants made possible the financing of large fiscal deficits, thus delaying important fiscal reforms. Figure 3.4 shows that over the last decade, only once did domestic revenues cover fully current expenditures. Except in 2006, domestic revenues have always fallen short of current spending, not to mention total spending (i.e., including capital spending). The persistence of this shortfall is a sign of a moral hazard, whereby foreign grants are counted upon to fill the gap and help finance capital spending. There is an established literature showing that capital inflows (including foreign grants) tend to contribute to a reduction in “precautionary” savings.\(^{37}\)

![Figure 3.3: Share of Foreign Grants in Total Revenues](image1)
![Figure 3.4: Domestic Revenue to Recurrent Expenditure](image2)

### 3.3. Fiscal Policy: A Major Source of Macroeconomic Stability

*Macroeconomic stability is the cornerstone of successful efforts to increase private sector development and economic growth (see growth commission report 2008).* Without macroeconomic stability, domestic and foreign investors may stay away and resources will be diverted elsewhere. There is ample evidence that private investment (decision to invest) depends not only on the conventional factors (past growth of economic activity, real interest rates, and private sector credit), but also on macroeconomic instability and uncertainty (see, for example, Ramey and Ramey 1995). The evolution of Turkey over the last 5 decades illustrates the importance of macroeconomic stability for growth. As shown by Ismihan et al (2002), chronic macroeconomic instability during in 1963-1999 has seriously deterred capital formation and undermined long-term growth. In sharp contrast, since 2002, the improved macroeconomic stability helped Turkey post a robust economic growth and enhance its competitiveness. Jordan’s own economic


\(^{37}\) See Agenor and Montiel (2008).
evolution over the last three decades illustrates the importance of macroeconomic stability for growth as well.

The main source of macroeconomic instability in Jordan is fiscal policy. Indeed, over the last decade, the monetary policy stance has been consistent with low and stable inflation and the real exchange rate has remained stable (Box 3.1). In contrast, fiscal policy has been overly pro-cyclical for a country so exposed to capital inflows and oil price shocks as Jordan. To illustrate, while GDP growth averaged 8.1 percent in 2004-2008, the primary fiscal deficit excluding grants stood at 6.6 percent of GDP on average (the overall deficit excluding grants averaged 9.3 percent). In 2009-11, when the global financial crisis hit Jordan, there was no fiscal space to buffer the shock and the fiscal deficit reached 11.2 percent. The Government resorted to reducing growth-enhancing capital spending rather than recurrent expenditures, perhaps compromising medium-term growth.

Table 3.2 shows where Jordan wanted to be in 2012 and 2017 on the macroeconomic front when the National Agenda was draft in 2005. The last column of the table shows the macroeconomic situation in 2011. The objective for 2012 was to grow by 8 percent. In 2011, growth stood at 2.3 percent. But the large achievement gap in fiscal performance is more pertinent here, because growth dropped sharply almost everywhere in the world in 2009-2010. On the fiscal front, the objective was a deficit of 3.6 percent of GDP. It reached 6.9 percent of GDP in 2011. The debt ratio, which the Government managed to reduce significantly between 2004 and 2009 through automatic stabilizers, use of privatization receipts and debt rescheduling, rose from 58 percent in 2009 to 65 percent in 2011.38

Table 3.2: Macroeconomic Indicators

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<tr>
<td>Average Annual GDP Growth</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>Public debt ratio (% GDP)</td>
<td>91</td>
<td>63</td>
<td>36</td>
<td>65</td>
</tr>
<tr>
<td>Fiscal Deficit – excluding grants (% GDP)</td>
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<td>3.6</td>
<td>1.8</td>
<td>6.9</td>
</tr>
<tr>
<td>Gross Fixed Capital Formation (% GDP)</td>
<td>21</td>
<td>21</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>National Savings (% GDP)</td>
<td>13</td>
<td>23</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Net Exports (Exports - Imports, bil. USD)</td>
<td>-2.4</td>
<td>-1.7</td>
<td>-0.9</td>
<td>-6.9</td>
</tr>
<tr>
<td>Unemployment</td>
<td>12.5</td>
<td>9.3</td>
<td>6.8</td>
<td>13.1</td>
</tr>
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</table>


38 The chapter 4 of this report describes in more detail Jordan’s fiscal policy and its interactions with economic growth.
Box 3.1: Monetary policy and banking regulation are sound in Jordan

Monetary policy is sound and the banking sector well regulated. The Central Bank (CBJ) reacts swiftly to changes in key macro-financial indicators and has sound and pragmatic approach to liquidity management. For instance, a sharp decline in FDI (-29 percent) and tourist revenues (-18 percent) in the first half of 2011 led the CBJ to raise its policy interest rate in June 2011 by 0.25 bps. At the same time, it continued to implement measures to support the private sector to bolster private sector growth and restore overall growth. These include (i) maintaining reserve requirements rate at 7 percent since October 2008, down from 10 percent before the global financial crisis, and further releasing those requirements for banks that lend to SMEs at a rate 1 point lower than the prime rate; (ii) stopping all issuances of certificate of deposit and limiting the issuances of Treasury Bills and Bonds; and (iii) lowering the CBJ window interest rate. As a result liquidity in the banking system remains comfortable with M2 increasing by 9.7 percent in November 2011 (y.o.y). The banking sector is well regulated and supervised. Semi-annual stress-testing of banks, with a particular focus on credit and concentration risk, are performed. The sector’s macro-prudential indicators remain sound —banks remain profitable and well capitalized, deposits continue to be the major funding base, and liquidity ratios remain relatively high. The banking system has proven resilient to the global financial crisis, regional and domestic unrests and slower economic growth. Despite the economic slowdown, credit has continued to grow (+6 percent in the half of 2011).

Fiscal policy has been a major source of macroeconomic instability in Jordan. A stable macroeconomic policy environment is characterized by (1) a fiscal stance consistent with fiscal solvency, (2) a monetary policy consistent with a low and stable rate of inflation, and (3) a robust exchange rate regime that avoids both systematic currency misalignments and excessive volatility in the real exchange rate. Analysis shows that Jordan’s monetary and exchange rate policies managed to ensure low and stable inflation and rising foreign exchange reserves. Between 2000 and 2010, inflation\(^{39}\) average 3.7 percent and the Jordan’s foreign exchange reserves increased from US$4 to US$12 billion (equivalent to respectively 8.7 and 9.9 months of exports of goods). Calculations made by the IMF show no misalignment of the currency peg from its equilibrium (IMF 2010 Article IV report). The major source of macroeconomic volatility seems to stem instead from fiscal policy. Between 2000 and 2010, real GDP increased by 6 percent on average annually. During that period, the primary fiscal deficit excluding grants averaged 6.8 percent. Jordan has adopted a pro-cyclical fiscal policy stance throughout the years 2000 and this has made the country extremely vulnerable to shocks.

Volatility has significant implications on long term economic growth and can be minimized in a country like Jordan by considering a counter-cyclical fiscal policy. The economic literature has established close linkages between policy uncertainty, policy volatility, and long term economic growth. In some instances, the implications of these policy disturbances can have long-lasting effects\(^{40}\). Policy uncertainty can lead to different outcomes depending on the degree of persistence in policies and on the probability and frequency of changes in macro-fiscal policies. Volatility in this case distorts market prices, changes future expectations, impacts the marginal productivity of capital and therefore influences both investment and savings decisions and consequently economic growth.

Moreover, the magnitude of the negative correlation between policy uncertainty and growth is related to the type of macro-fiscal measures adopted; be it tackling public expenditures, addressing tax policies or taking actions on monetary policies. Therefore it is not only sufficient to minimize uncertainty about future policy choices but the macroeconomic tools used to achieve this objective are also important. Hence, Jordan, a small open economy and an oil importer with a pegged exchange rate since 1994, must pay special attention to fiscal policy as a crucial instrument to reduce macroeconomic imbalances and minimize volatility. Moreover, it needs a fiscal policy that allows for the creation of the fiscal space

\(^{39}\) Measured by the Consumer Price Index.
\(^{40}\) Refer to papers such as Bernanke (1983), Tabellini (1990), Aizenman and Marion (1993).
needed for both growth and welfare purposes. Only a counter-cyclical fiscal policy can achieve these objectives in Jordan as shown in the report.

Pro-cyclical fiscal policies have been adopted in Jordan for the past 20 years. Examining the trend of real GDP growth and primary fiscal deficits before grants between 1990 and 2010 reveals a strong positive correlation between the fiscal deficit and the business cycle. A correlation estimated at 7.7 percent. This mainly reflects the expansionary fiscal policy adopted by the GoJ during the time of economic boom. However the expansion was not in terms of public investment but through increases in recurrent government spending especially consumption subsidies and wages. These measures, adopted primarily to avoid popular criticism exerted in times of inflationary pressure and sticky unemployment rates, lead to chronicle deficits that increased from an average of 2.7 percent in 1990-1995 to an average of 5.9 percent in 2006-2010 (peaking at 8.3 percent in 2001-2005) (Table 2.1). Additionally, the ratio of the yearly change in public expenditure to the yearly change in domestic revenues was 1.5 on average in the past twenty years (Figure 3.5, Figure 3.6). As this average is larger than unity, this ratio depicts further the expansionary aspects of Jordanian fiscal policy and its pro-cyclicality. A feature that was accentuated over the last decade (1.8 was the average ratio in 2000-2010, compared to 1.3 in 1990-2000).

The primary budget balance has been characterized by increased volatility over the last 20 years. This came after increased reliance on pro-cyclical fiscal policies that resulted in deepening the vulnerabilities of the Kingdom to external shocks. Despite efforts of fiscal consolidation plans, pro-cyclical policies has widened primary deficits excluding grants and therefore prevented the build-up of the fiscal spaces needed to smooth the effects of a downturn in the business cycle and mitigate the implications of external shocks. The implications of such fiscal policies were accentuated in the years 2000-2010.

Volatility, both in budget deficit and output growth, was deepened during that period especially as Jordan faced four significant exogenous shocks: (i) the second Iraq war in 2003 that resulted in the loss

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41 Inflation averaged 2.2 percent yearly in the period 1990-2010 and 3.7 percent yearly in the period 2000-2010.
42 Primary budget deficit excluding grants.
43 In absolute value terms.
44 Volatility in this report is measured as the square root of the difference with the mean.
of the preferential oil price contracts, (ii) the large inflows of Iraqi migrants into Jordan who considerably increased aggregate demand, coupled with strong purchasing means, and therefore created large domestic inflationary pressure, (ii) the global food and fuel prices crises in 2008 that considerably added to the inflationary pressure in the domestic market, and (iii) the global financial crisis in 2009 that indirectly impacted the Kingdom through lower regional demand on Jordanian goods and services. These external shocks have revealed the fragility of fiscal policy as a tool to safeguard economic growth in Jordan and calls for the adoption of more counter-cyclical measures that could sustain high levels of growth over the long run.

To determine the extent to which discretionary fiscal policy affects economic activity, we employ a Structural Vector Autoregressive model (SVAR) using quarterly data from 1999 to 2010. The VAR follows the approach proposed by Blanchard and Perotti (2002) and Perotti (2002), which consists in isolating the structural shocks in a VAR system by imposing restrictions based on economic theory and institutional features that constrain the behavior of policy makers. The model hence simulates the effect of a change in the fiscal deficit on Jordan’s GDP, as well as the effects of an increase in current expenditure, public investment, and tax revenues.

Using estimated SVAR coefficients, impulse response functions allows to examine the feedback effects of real GDP on fiscal policy outcomes, notably the primary fiscal deficit, at the first stage and the primary recurrent expenditures, capital spending, and tax revenues at the second stage. By doing so, the report tries to determine empirically the pro-cyclicality or anti-cyclicality of the Jordanian fiscal policy, and sheds light on its future implications.

The upward trend for the primary fiscal deficit highlighted in Figure 3.8 signals strongly the pro-cyclicality of fiscal policies in Jordan. Indeed primary fiscal deficits seem to widen gradually as GDP increases signaling the adoption of an expansionary fiscal policy in times of high growth. The implications of such pro-cyclical policies could be significantly detrimental to Jordan in the medium to long term. The simulations indicate that the deficit continues to widen, as a result of an output increase, for up to 3 years (t+12). It is only after the thirteenth quarter when a narrowing of the deficit starts to be observed. This empirical finding indicates that pro-cyclical fiscal measures adopted in Jordan are often hard to reverse and contribute to the widening of the structural primary deficit, increasing the country’s dependence on foreign grants. The most common fiscal measures that are politically very difficult to reverse and often adopted for the past 20 years in Jordan are the successive wage increases and reviews of pension contributions.
Looking at the response of public spending to output shocks, Figure 3.8 indicate that capital and current expenditures both follow, to different extents, a pro-cyclical pattern in the medium term. The pro-cyclicality of public investment is a common trend that prevails in most developing countries (see Kaminsky et al 2004, Calderon and Schmidt-Hebbel 2008, and Gutierrez and Revilla 2010. Indeed in periods of high economic growth, domestic revenues tend to automatically increase easing constraints on financing public investments and consequently leading to a rise in government capital spending. Recurrent expenditures also showed a positive correlation with output fluctuation; with expansionary policy measures such as an increase in subsidies and cash transfers in times of growth. However and despite the upward trend observed in Figure 3.8, the magnitude of the pro-cyclicality of primary recurrent expenditures is much smaller than capital spending. In effect, recurrent spending displays relatively some rigidity and insensitivity towards output fluctuations. The rigidity is mainly due to the fact that the public wage bill (including military and pension contribution) constitute a significant share of the current expenditures, a share that is not influenced by the business cycle.

Impulse simulation of the impact of GDP on tax revenues shows a surprising result (Figure 3.8) indicates that tax revenues are counter-cyclical in the short term: Indeed, a one percent increase in GDP decreases tax revenues for the first 8 quarters before gradually increasing thereafter. This finding can be explained by (i) the distortions created to the tax base as a result of the tax policy that provided various exemptions even during upturn periods of the business cycle; and (ii) the collection process and the lags it encompasses especially corporate taxation where lags for collecting taxes from firms can reach more than one year. It should be noted that the SVAR model uses share of tax revenues to GDP as covariate rather than the nominal values. This means that the results in Figure 3.8 actually indicate that GDP is growing at a larger rate than tax revenues. Continued reforms in collection procedures and a thorough review of the tax exemptions are therefore needed to maximize the returns from economic growth and consequently reduce forgone tax revenues.

Capital expenditure is an important growth enhancing countercyclical policy instrument that is mostly effective in the medium term (Figure 3.9). It can be utilized to counterbalance the slowdown in economic activity driven by any decline in external or domestic demand. The observed trend is in line with the economic literature that uncovers a positive impact of capital spending – to be more precise infrastructure spending - on output, growth and productivity (Agenor, Nabli and Youssef 2005). However, the size of the impact of public investment on GDP depends on (i) the leakages into savings and imports (Diop and Ben Abdallah 2009) and (ii) on the quality of public expenditures and institutional procedures. The first source of leakage is a consequence of Jordan being a small open economy that is reliant on imports for production inputs and consumption, and that is susceptible to further financial market constraints (pressure on real interest rate). However, the second source is a public administration issue, as discussed earlier, related to potential bottlenecks at the various phases of the country’s public investment
management system leading to negative implications on the public investment efficiency. Dabla-Norris et al (2010) identifies four phases of the later system (i) strategic guidance and project appraisal, (ii) project selection and budgeting, (iii) project implementation, and (iv) project evaluation and audit. Reforms under these 4 areas have proven to be very much needed in the past decade as to increase the efficiency of fiscal stimulus in Jordan. Indeed Figure 3.9 indicates that the positive impact of capital spending seems to manifest itself with 4 quarters lags; and reaches its peak only after 3 years. Such time lag in the output response to fiscal policy can be reduced in Jordan with the implementation of the required reforms especially those related to project selection & budgeting (including quality of spending)\textsuperscript{45} and project evaluation.

![Figure 3.9: Accumulated Impulse Response Function of Fiscal Variables on GDP](image)

*Primary recurrent expenditure in Jordan was also found to have a positive impact on GDP.* From Figure 3.9, we see that the magnitude of this impact is nevertheless small when compared to capital spending. This positive impact is mainly due to two major components of recurrent expenditures: wages and salaries and goods and services purchased by government. On the one hand a rise in wages and salaries increases either private consumption which is directly translated into an increase in output\textsuperscript{46}, or private savings that eventually are manifested by an increased demand for investment goods leading also to growth in GDP. On the other hand a rise in public spending on goods and services also boosts consumption directly. Public spending on goods and services also boosts output through two channels: (i) a straightforward increase in public consumption and (ii) an increase in productivity especially if such expenditure is linked to maintenance spending which raises the quality of service provisions and increases the profitability of infrastructure investments (Diop and Ben Abdallah 2009).

*The impact of tax revenues and fiscal balance on GDP are in line with economic theory.* A rise in tax revenues gradually increases output as government accumulates further receipts to be used for additional spending. The magnitude of this impact is actually determined by the secondary effects that are linked to the nature of spending and therefore whether these additional revenues have been used to finance public investment or recurrent expenditures. As Figure 3.9 shows, the impact comes with around 3 to 4 quarters lags and therefore in the upcoming fiscal year’s budget cycle.

*Finally, an increase in the primary deficit has a negative impact on GDP.* This impact is accentuated, as Figure 3.10 indicates, with time. Indeed, sustained increases in deficits and a lack of fiscal consolidation plans deepen output losses as the fiscal space gets narrower and public debt increases. In the case of Jordan the impulse simulations indicate that loosened fiscal discipline can have steep negative

\textsuperscript{45} Reviewing the economic returns of projects and sectors to which public funds have been allocated.

\textsuperscript{46} It should be noted that subsidies and transfers in Jordan, the third component of primary recurrent spending, are mostly linked to consumer goods and therefore have an impact on GDP similar (in terms of mechanism) to the one exerted by an increase in wages and salaries.
consequences on economic activity. Indeed, the pro-cyclical fiscal policies adopted throughout the past
decade reduced the ability of the Kingdom to weather the downturns of business cycles. Hence the above
impulses are further empirical evidence that fiscal policy in Jordan seem to have amplified output
fluctuations.

**Figure 3.10: Accumulated Impulse Response Function of Fiscal Balance/GDP on GDP**

![Accumulated Impulse Response Function of Fiscal Balance/GDP on GDP](image)

**Fiscal policy has also exacerbated fluctuations in the private sector growth.** With an average size of
13.2 percent, the public sector has always constituted a significant share of Jordan’s total output in the
past decade. In addition to direct contributions, important linkages have been created between the public
sector and some of the other sectors mainly Construction and Transport, Storage and Communications.
Indeed, the public sector is one of the largest clients for the goods and services produced by those sectors;
making them very much vulnerable to fluctuations of government policies. The pro-cyclicality of the
fiscal policy has hence dictated a kind of “boom and bust” approach towards the private sector who
during the time of economic upturn benefited significantly from government contracts. However as the
cycle turned, many private sector firms have suffered as a result of government budget cuts and
consequently lost important income streams. This is particularly the case with ICT firms who used to
supply the public sector with many services especially in the field of education and contractors who
suffered as a result of the severe cuts in capital spending especially in 2009 and 2010.

In support of this claim, a negative correlation coefficient has indeed been calculated between fiscal
deficits and the value added of the Construction and Communications sectors (respectively at -0.787
and -0.683). This result indicates the damaging effect of a cyclical fiscal policy on private sector
development and consequently on growth. To reduce this dependence on government financing, the
Jordanian private sector needs to focus more on exports to regional and international markets and
therefore to create niches and upgrade into higher value added products. To do this, competitiveness,
innovation and access to credit issues needs to be addressed. We discuss these issues in the following
chapters.

### 3.4. Fiscal Reforms to Improve Macroeconomic Stability

**In Jordan, popular pressure for public spending is high, and this seems to relate to at least two factors:**
(i) a moral hazard problem created by easy access to foreign grants and (ii) political economy factors (as
elsewhere) in a context of fragile and frequently changing governments with short-term focus. Political
economic factors are now widely recognized as crucial to understanding persistent high budget deficits
and pro-cyclicality bias in fiscal policy (see Figure 3.6.).
4.1 Addressing the Moral Hazard Problem of “Easy” Foreign Grants

Reducing dependence on foreign grants requires decisive fiscal adjustment. For instance, one of the key sources of fiscal savings is subsidy. In 2011, they represented 22.4 percent of total revenues or 5.9 percent of GDP (the equivalent of foreign grants received that year). Subsidies are regressive. Overall, the top income quintile receives at present over seven times more in subsidies that the bottom income quintile. Every dinar transferred to the bottom two income quintiles through price subsidies costs the budget 6.3 dinars (IMF 2012). The leakage of benefits is especially pronounced in the case of gasoline, where top income quintile households receive 32 times more in subsidies. However, even in the cases of electricity, LPG, kerosene and bread, the leakage of subsidy benefits to higher income groups is substantial. Well designed safety net programs can substantially reduce this leakage of benefits to higher income groups and help protect the poorest households at much lower fiscal cost.

Another avenue of fiscal reform is to contain Jordan’s spiraling wage bill (including the military spending), i.e., make sure they grow at lower rates than the GDP. Indeed the overall wage bill increased at 6 percent per annum since 2006, against 5.3 percent for GDP. This rapid growth reflects successive wage increases administered to civil servants and military personnel in the past five years; along with the generous education and health services, and pension and retirement packages offered to employees of the defense sector. Given the large size of the public sector in the economy (one-third of GDP and 38 percent of total employment), increases in the wage bill are bound to have significant impact on fiscal outcomes.

Finally, fiscal adjustment should aim at reducing Jordan’s large tax exemptions. The latter have increased significantly in the past decade (although no official estimate exists). They have been used as instrument to stimulate foreign investments and subsidize some domestic sectors in bad times (e.g., real estate), and as a mechanism to enlarge the social safety net through reduced sales tax on products deemed important socially. There is a need to assess the amount of tax expenditures generated by these exemptions and to devise an overall framework or strategy or specific guidelines for granting and administering them.

4.2 Improving the Institutional Underpinning of Fiscal Policy

Fiscal adjustment is, however, not enough to ensure fiscal sustainability in Jordan. The political economy factors that undermine fiscal management need to be addressed. This requires reforming fiscal institutions to foster fiscal discipline without undermining the Parliament’s democratic control on the budget. Indeed, a key strategy is to somewhat reduce the “politicization” fiscal policy (just as monetary policy was depoliticized by granting independence to the central bank) while enhancing fiscal transparency.

International experience provides many examples of instruments that can be used to enhance the institutional context for fiscal policymaking. One option is to require that fiscal commitments be made clear via fiscal targets set out in a medium-term fiscal framework, with clear and transparent procedures for implementation. The key advantage of this approach is that budgets take into account the consequences of policies and help ensure adequate funding of medium-term programs. It has some flexibility since fiscal deviations can be corrected gradually but the Government is obliged to clearly explain departure from a prudent path and take corrective actions to avoid sanction from the Parliament. This approach was adopted by New Zealand and Australia.

47 An ongoing Bank policy note is focused on identifying and examining the welfare distribution of various fiscal consolidation measures, considered by the Government.

48 The wage bill includes civil servants, military personnel and pension contributions.
Another avenue is to adopt fiscal rules. There is evidence that when backed by sufficient political will, fiscal rules foster fiscal discipline (IMF 2009, Guichard et al. 2007). Fiscal rules are particularly suitable to situations where political commitment is weak or where governments change frequently. Fiscal rules have been adopted by a large number of countries. According to the IMF, in 1990, only seven countries worldwide had a fiscal rule; by 2009, they were in place in 21 developed countries, 33 emerging markets and 26 low-income countries (IMF 2009). Chile and Poland are known examples where fiscal rules worked. But fiscal rules present many shortcomings. For instance, rules can be harmful to the quality of fiscal adjustment, for instance, when growth-enhancing public investment is cut to respect an expenditure cap (Blanchard and Giavazzi 2003). Jordan’s situation illustrates this. The country has a debt law that stipulates that the public net debt to GDP should not pass 60 percent as a rule. In 2010, a short-lived fiscal adjustment of 3 percentage of GDP was achieved by cutting public investment while current spending increased; when political will is absent, rules can also motivate creative accounting and off-budget operations, undermining transparency and the democratic control of the budget; finally, if enforcement mechanisms are weak, rules cannot play their role of constraining policymakers.49

Finally, a third potential instrument to foster fiscal discipline is to establish an independent fiscal body insulated from political pressure. For practical purposes, fiscal policy would be delegated to an unelected but accountable body. Two types of fiscal body exist, depending on the scope of the mandate and the way they function: (i) independent fiscal authorities, which, similar to central banks, have the mandate to achieve fiscal objectives (such as to lower medium-term deficits or create fiscal sustainability), with delegated authority over requisite instruments (taxes); (ii) fiscal councils, mandated to carry out budget formulation or monitoring.

In brief, many options to address the weak institutional underpinning of fiscal policy exist. Unfortunately, Jordan’s experience with its debt law (a fiscal rule) has not been favorable. To more effectively ensure fiscal sustainability, advances in political and governance reforms are crucial.

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49 Again in the case of Jordan, the general provisions of such a law stipulate that the specific debt limit rule article would come into force only if it is specifically and separately approved by the Council of Ministers. Such an approval has never materialized. So de facto, the 60 percent debt limit is not binding legally.
Chapter 4 - The Challenge of Transforming the Economy and Creating Jobs

4.1. Introduction

Improved institutions and fiscal policies will need to be complemented by sound growth strategy and structural reforms if growth is to reduce unemployment significantly. In 2000-2008, growth was mainly underpinned by FDI to real estate and construction sectors which are intensive in foreign labor. The unemployment rate for Jordanians remained high. In recent years, the Government has been emphasizing promoting private investments in skill-intensive sectors where Jordan has a comparative advantage and has demonstrated real capacity for exports. High hopes are placed on growth of these sectors to reduce massive public sector queuing and the unemployment rate of educated Jordanians.

This chapter examines the Government’s de facto growth strategy and simulates the impact of different sectoral growth scenario on employment. It finds that the current growth strategy which consists of improving the business environment while addressing specific market failures that impede growth in sectors where the country has comparative advantage is sensible. Simulations of different sectoral growth scenarios indicate that robust, above average growth of skill-intensive sectors would reduce unemployment by 2016. However, unemployment would still hover around 10-11 percent. Thus, continuation of cross-cutting growth policies will be crucial to ensure permanent discoveries of new activities and to promote growth in all sectors. Specifically, structural reforms should aim at improving the business environment for all firms in an equal manner, strengthening Jordan’s trade promotion programs, improving the transparency and accountability framework of industrial policies, and adopting a modern and more comprehensive, private sector-led approach to innovation.

4.2. Jordan’s Growth Strategy

In the long run, Jordan’s aim is to become a competitive, knowledge-based economy (KE). The country’s resource endowment justifies this. Jordan imports 98 percent of its energy resources. Water is scarce. Agricultural land is limited. The country has no natural resources except potash and phosphate. The At the same time, the country has a strong human capital base, a large endowment in engineers (more than 80,000), a substantial highly-skilled diaspora (500,000 educated Jordanians abroad) and a large pool of IT-savvy young generation of potential entrepreneurs (see below). However, as shown below, moving to knowledge-based economy is a daunting challenge given that the sectors that can drive the process as still small in terms of output and employment.
Box 4.1: Jordan Education Attainment

Jordan’s indicators in the area of education are above regional and upper middle-income averages. Historical investments in education have yielded a primary completion rate of 100 percent and a ratio of female to male tertiary enrollment of 111 percent. The country’s higher education setup is large and diverse, involves both public and private provision of education services, and has a few pockets of excellence. The illiteracy rate is 8.9 percent, the third lowest illiteracy rate in the Arab world; the primary gross enrollment ratio has increased from 71 percent in 1994 to the 98.2 percent in 2006; the transition rate to secondary school has increased from 63 percent to 79 percent over the same period; and the transition rate to higher education has varied between 79 percent and 85 percent of secondary school graduates over the past five years. The country enjoys a large endowment in engineers (more than 80,000); a substantial highly-skilled diaspora (500,000 educated Jordanians abroad); an IT-savvy young generations more attuned to innovation than their elders; the region’s largest proportion of bilingual Arabic-English speakers. Jordan’s performance in international assessments has improved since the early 1990s. In the 1991 International Assessment of Educational Progress (IAEP), out of 20 participating countries, Jordan finished ahead of only Brazil and Mozambique in the mathematics and science tests for 13-year-olds. In the 1999 Third International Mathematics and Science Study (TIMSS), out of 38 countries, Jordan finished ahead of six (Iran, Indonesia, Chile, Philippines, Morocco and South Africa) in mathematics and ahead of eight (Iran, Indonesia, Turkey, Tunisia, Chile, Philippines, Morocco and South Africa) in science. Although the TIMSS and the IAEP are not strictly comparable, there was a marked positive change. In 2003, Jordan’s TIMSS science scores improved to 475 from 450 in 1999, an increase of 25 points. In 2007, Jordan continued to improve, surpassing several countries which had a similar or slightly higher performance in 1999. In fact, between 1999 and 2007, no other country improved as much in science as did Jordan.

Prioritization of education reform on a policy level has also been supported by high public expenditure rates dedicated to funding the education sector. In 2001, public expenditures on education represented 5.6 percent of GDP and 17 percent of total government expenditures. Public education expenditure as percent of GDP averaged 6.5 percent of GDP and 20 percent of the budget during the period of 1995-2005. This is higher than the regional average of 5.3 percent of GDP, and one of the highest rates of public expenditure on schooling in MENA, after the Palestinian Territories and Tunisia. A 2008 benchmarking analysis conducted by the Jordan Investment Board and Ministry of Education illustrates Jordan’s public spending on education as exceeding even that of countries such as Romania, India, Ireland and the UAE.

Nevertheless, major challenges still exist to produce “employable” workers with the skills and proficiencies that are versatile enough to respond to the mismatch between job opportunities created by economic growth and the abilities of the Jordanian labor force. Analysis of recent PISA results indicates that given its endowments (such as school, student, and household characteristics), Jordan should likely be performing even better in terms of cognitive skill development. Jordan will need to continue improvements in the quality of education to match the best international standards compared with countries such as Korea and Malaysia and become fully adapted to the Jordanian private sector economy. These reforms will require greater attention to establishing a system of accountability that monitors performance of teachers and schools and establishes links between performance and rewards. Furthermore, the focus should be shifted towards results, thus incentivizing better performance in this sector.

The country’s growth strategy is traditionally based on trade openness and continuous improvements of the business environment through reforms of business regulations, enhancements of key infrastructures and strengthening the education system. In recent years, the Government has emphasized the need to promote investments and innovation in specific sectors in view of “redirecting the economy towards sectors and activities based on knowledge anchored on its vast pool of talent and expertise”. To that effect, following a very large number of sectoral studies (more than 30 in the last 6 years), a few sectors in which Jordan has comparative advantage were identified as holding high hopes for accelerating the economy’s structural transformation. These sectors include information and communication technology services (ICT), the pharmaceutical sector, business services (including auditing, accounting, legal and architectural services), financial services, education services, and health services (including health tourism). The strong externalities (or social benefits) associated with growth in these strategic sectors, not captured fully by markets, provides a rationale for public support. Thus while
emphasizing improvements in the business environment, trade and education reforms as well as infrastructure development benefiting all sectors, additional effort is deployed to remove the sector-specific obstacles and overcome the market failures that prevent the rapid expansion of specific sectors.

The choice of the targeted sectors was based on two key factors. First was Jordan’s comparative advantage proxied by the skill-intensity of the sectors in the country. Figure 20 shows that ICT, the pharmaceutical sector, business services, financial services, education services and health services present the highest levels of skill-intensity in the economy. The share of workers with tertiary education in total employment varies between 45 percent in pharmaceutical industries and 82 percent in education services. It is hoped that growth in the skill-intensive sectors will contribute to enhancing the employment of skilled individuals which, all else being equal, should reduce overall unemployment. In 2010, these six sectors collectively represented about 20 percent of Jordan’s GDP.50

The second factor was the tradability status and the potential for growth through exports. The chosen strategic sectors have all seen rapid growth in the past decade (8 percent on average in 2000-2008), largely driven by exports. To the extent that they expand their market shares in regional and international markets, their contribution to the balance of payment and foreign reserves of Jordan will be significant. Box E.1 describes in more details the performance and prospects in most of these sectors.

It is noteworthy that not all the skill-intensive sectors display high levels of labor productivity. As shown in Figure 4.1, while ICT, banking, pharmaceutical and, to a lesser degree business services are clearly above the country’s average level of labor productivity, education and health services display a low level of productivity (despite their high skill content). This reflects the large presence of the public sector as a provider of these services and the government tendency to recruit massively in public schools. In fact, among the skill-intensive sectors, education and health are the only ones with large levels of employment (11.8 percent and 4.3 percent of total employment respectively). The other four sectors represent a very small share in total employment: 2.8 percent for business services, 2 percent for banking and other financial services, 1.3 percent for ICT and 0.5 percent for pharmaceutical (Figure 4.1).

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50 According to Jordan’s recent input-output table, the size of each of these sectors in terms of their share in total value-added is the following: Education: 6.1 percent, Information and communication technology (ICT) services: 5.4 percent, Financial services: 4.7 percent, Health services: 2.3 percent, Business services: 2.1 percent and Pharmaceuticals: 1 percent. ICT services are composed of “post and telecom: 5.1 percent and information and communication technology (also called ICT-enabled services): 0.3 percent.
We examine below the potential of few of the prominent sectors being promoted before examining the extent to which a strategy focused only on the high productivity sectors can reduce unemployment. This review is largely based on Jordan 2020 Vision, a private sector-led initiative aimed at leveraging economic development via reaching sustainable growth rates by the year 2020.

**Pharmaceutical Sector**

Pharmaceutical is the sector in manufacturing that hold high hopes for Jordan’s gradual convergence to knowledge-based status. The sector grew by 5-6 percent annually in the years 2000’s. Pharmaceutical industry in Jordan is a pioneer exporting sector due to its high quality and excellent reputation. The sector exports its products to more than 60 countries thanks to its high quality, excellent reputation, and its affordable price. About 81 percent of production is exported to foreign markets, in fact 90 percent to other Arab countries, and mainly Saudi Arabia and Algeria. Jordan pharmaceutical companies have joint ventures and subsidiaries in 8 Arab and foreign countries. The pharmaceutical companies are primarily engaged in production of branded generics ranging from many dosage forms such as solids, semi-solids, liquids, aerosols as well as producing various under licensed products for multi-national companies. Close to 90 percent of the total revenues is derived from branded generics, whereas under licensed products contribute majority of the revenues of the remaining revenues.

The sector has very desirable externalities for Jordan: it is highly intensive in skilled labor and can help absorb Jordan’s large number of engineers in related fields. It is also among the industries that can increase significantly the country’s specialization in high tech industries. Thanks to its large exports of

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51 We focus on three most prominent sectors (and for which reliable data exist), namely the pharmaceutical sector, the health tourism sector and the ICT sector. The list of sectors the Government aims to promote is much longer. It includes architecture and engineering, stone and marble, processed food manufacturing, higher education services and, since recently, green technology. Although the potential of these sectors has been analyzed in a number of studies, the data is spotty. For more information on these sectors, see Jordan 2020 Sector Strategy Initiative.
pharmaceutical products, Jordan enjoys a much higher share of high tech products in its export basket (11.5 percent versus 5.4 percent respectively) but this share has been declining overtime due to the rapid rise of exports of textiles products (Diop and Ghali 2012).

Trade integration reforms were crucial in creating an environment for the development of the manufacturing sectors, chiefly the pharmaceutical and textiles sectors. Jordan took advantage of its WTO accession (2000) and the FTA signed with the US to enact several laws to make its national legislation consistent with the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). According to the Pharmaceutical Manufacturers Association of America (PhRMA), the US-Jordan FTA has made Jordan’s market more appealing for pharmaceutical research and development, as well as for sales and licensing agreements. The benefits include expanded data protection, elimination of exclusions from patentability for biotechnology inventions, and limitations on compulsory licensing. These reforms allowed many European firms to benefit from a first mover advantage in the EU market by starting production of soon-to-expire protected drugs in Jordan. The renowned global pharmaceutical players have established production sites or expanded their commercial activities in Jordan, including Astra-Zeneca, Sanofi-Aventis, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Janssen-Cilag, Merck Sharp & Dohme, Novartis, Organon, Roche, Pfizer, and Schering-Plough. Organon, Roche, Pfizer, and Schering-Plough Jordan’s pharmaceutical sector has attracted new investments, gained new export markets and engaged in innovative research. The pharmaceutical sector’s growth prospect is good.

The Jordan 2020 Vision initiative has established a clear action plan for improving the performance of the pharmaceutical sector by 2020:

- Diversify the export markets which they serve by opening new non-traditional markets, including through joint ventures in targeted countries;
- Enter into joint ventures with international firms to produce market new product types under license;
- Enhance the research and development efforts and skills in Jordanian pharmaceutical companies to increase the level of local value added input and create valuable intellectual property. Research and development efforts can be focused on areas which show international promise as well as on new product categories which address regional diseases or drug delivery techniques/technologies (e.g., nano-technology);
- Improve marketing strategies;
- Obtain international certification for good manufacturing practices (GMP and good laboratory practices (GLP) to become more attractive as joint venture partners and/or technology licensees;
- Identify and publish investment opportunities which would help strengthen the sector's overall competitiveness; investment niches include glass packaging, bottle cap manufacturing; more contract research organizations (CROs) for toxicological, clinical and compound synthesis studies as well as the production of active and inactive ingredients

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52 Source: America.gov website.

53 According to the International Intellectual Property Institute, Pfizer doubled the number of its local employees, Sanofi-Aventis and Novartis tripled their local labor forces, and Merck increased its employment in Jordan by 500 percent between 2000 and 2004.
The ICT sector

The ICT sector has been growing at a fast pace in Jordan throughout the last decade, and its magnitude is estimated around 9.5 percent of GDP (2009). The sector has four main components (i) Telecom services (fixed telephony, mobile telephony, and data); (ii) IT services; (iii) Internet content, and (iv) Gaming. The fast growth has led to the quadruple of the sector’s revenues and a diversification of products. Indeed the revenues have increased from US$560 million in 2000, out of which a dominant 89.3 percent share was produced by telecom, to US$2.2 billion in 2010 with telecom share dropping to 59 percent and increase in the sector products exports (Figure 4.2). The ICT sector has seen the creation of about 65 new small companies every year between 2007 and 2010 according to the business association Intaj.

Figure 4.2: ICT Sector Revenues by Source

Source: Intaj (2011)

Innovative content, technological developments and government support has pushed the ICT sector in the Kingdom to become an export oriented sector. The Arab countries, especially the GCC (more than 30 percent of total ICT exports), alongside the USA (22 percent) have been the major destination markets for the Jordanian ICT products (see Figure 4.2). However, Jordan can tap further into the regional market and exploit such potential as it remains a fairly small player. The access to the Saudi market is a revealing example where the Jordanian exports to Saudi Arabia are less than 1.5 percent of total IT spending in this country. Other examples are listed in Table 4.1.

Table 4.1: ICT Exports by Selected Countries and Opportunities

<table>
<thead>
<tr>
<th>Country</th>
<th>US$ Mln</th>
<th>Share of total (%)</th>
<th>Country</th>
<th>IT yearly spending (US$ mln)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>48</td>
<td>22</td>
<td>Qatar</td>
<td>400</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>47</td>
<td>21</td>
<td>Saudi Arabia</td>
<td>4000</td>
</tr>
<tr>
<td>Iraq</td>
<td>29</td>
<td>13</td>
<td>Kuwait</td>
<td>&gt;700</td>
</tr>
<tr>
<td>UAE</td>
<td>16</td>
<td>7</td>
<td>UAE</td>
<td>&gt;1000</td>
</tr>
<tr>
<td>Palestine</td>
<td>9</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Intaj (2011)

Diversifying products and strengthening the linkages with other sectors are essential for enhancing the productivity of the sector, sustaining its high growth and consequently increase its contribution to employment. Despite the increasing size of this sector in the economy and the increasing public interest in
transforming Jordan into an ICT hub, the ICT sector has not contributed significantly to employment. According to Intaj (2012), this sector has contributed to only 1.2 percent of national employment. The fact that this sector is a high value added sector and not a labor intensive one, makes it even more important to maintain high growth levels by exploring further domestic or regional opportunities, and create backward and forward linkages with other sectors of the economy that by nature do create more jobs. In effect, the opportunities are being taken forward with Jordanian ICT products now reaching traditional sectors such as health and education but also expanding on business processes outsourcing and new sectors like gaming.

To unleash the growth potential of the ICT sectors, the Jordan 2020 Initiative had identified the following key areas of reforms:

- Education – create the capacity needed by the sector for growth;
- Investment in infrastructures – ensure that the sector can function competitively;
- Regulation – create a context for investment, enterprise and growth;
- Communications – to enable business in Jordan to engage with global markets and enable the Government to modernize through e-government and technology development.

**Health Tourism**

*Private health services have grown by an average 9.5 percent per year in the years 2000’s.* This reflects the valuable reputation for excellence the country’s health sector has gained and which has propelled the Kingdom to become a prime international destination for medical services. Ranked 1st in the MENA region and 5th on a global level (World Bank 2008), the sector shows promising potentials for growth in the future. According to the private hospital association, 234000 patients (both in and out patients) from 102 countries were treated in Jordanian private hospitals, medical centers and private clinic in 2010. These constituted around 23 percent of total patients treated in the Kingdom. The sector has generated US$1.2 billion dollars in revenues in 2010 (4.5 percent of GDP). A growing number of foreign patients visit Jordan each year for medical treatment, making this service one of the nation’s leading sources of income from foreign exchange. The average visitor to Jordan for medical treatment spends US$5,500 per stay, which compares with the $515 spent by a conventional tourist. Patients also usually arrive with family members and often extend their stay and expenditure through additional tourism and leisure activities. The majority of foreign patients come from the traditional neighboring markets, such as Yemen and Libya.

*Additionally, the medical tourism sector has showed significant employment creation capacities.* The average annual growth rate of employment in the medical services reached 12 percent, with women constituting 48 percent of the labor in the sector (PHA 2012). The department of statistics estimates 7800 new jobs were created by the health sector in general in 2010 alone, around 6.7 percent of the total new job created in Jordan. A potential that can contribute significantly in enhancing labor productivity and domestic investments, and benefiting from with backward and forward linkages with other sectors to create much needed employment especially for the highly skilled labor force and the youth.

The comparative advantages of the sector can be summarized by the following:

- Good Medical Infrastructure: Jordan currently has 102 operating hospitals out of which 59 are private hospital, 30 are public, 11 royal medical services (military) and 2 universities hospital;
- High-Quality Human Resources: availability of well educated and trained physicians, nurses and pharmacists (mostly trained in the US, UK and Europe). Currently the percentage of physicians reached up to 25 doctors per 10000 individuals compared to 26 per 10000 in the US (Private Hospital Association - PHA 2012);
• Affordability of Services: Jordan offers competitive prices for medical services that are estimated at 25-40 percent cheaper than the US and Europe, and 5-10 percent cheaper than India, Singapore and Thailand (PHA 2012);

• Internationally Accredited Services: most hospitals in Jordan adopt local or international quality assurance programs. Seven hospitals obtained JCI international accreditation. Additionally, the Jordanian Healthcare Accreditation Council (HCAC) was established to provide local accreditation and oversee the quality of the services provided in the Kingdom;

• Complementary factors: the growing pharmaceutical sector, the availability of high quality tourism and recreational services (hotels, spa and wellness centers), the easiness in accessing financial services (banking and insurance), and the strong governmental support are all complementary factors that help the development of the sector.

Table 4.2: Cost comparison between Jordan and other countries for selected procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Jordan</th>
<th>USA</th>
<th>UK</th>
<th>Thailand</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angioplasty</td>
<td>8,000</td>
<td>50,000</td>
<td>21,000-27,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Angiography</td>
<td>700</td>
<td>3,000</td>
<td>2,000</td>
<td>1,100</td>
<td>800</td>
</tr>
<tr>
<td>Hip Replacement</td>
<td>11,000</td>
<td>40,000</td>
<td>20,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Knee Replacement</td>
<td>9,000</td>
<td>40,000</td>
<td>18,000</td>
<td>9,000</td>
<td>11,000</td>
</tr>
<tr>
<td>CABG</td>
<td>11,000</td>
<td>1,000,000</td>
<td>35,000</td>
<td>11,000</td>
<td>13,000</td>
</tr>
<tr>
<td>Lasik</td>
<td>1,000</td>
<td>3,000</td>
<td>2250-2900</td>
<td>750</td>
<td></td>
</tr>
</tbody>
</table>

Source: USAID, Jordan Economic Development Program (SABEQ) and International Medical Tourism Congress Jordan.

As part of the country’s 2020 vision supported by USAID, the key weaknesses and reform needs of the sector were identified. These include:

• Weak coordination between the public and private sectors in attracting foreign patients, due to the lack of a comprehensive and clear strategy to promote Jordan as a premier medical center in the region;

• Ineffective supporting agencies/activities such as the Association of Private Hospitals and tour agencies, in addition to the Office of Arab Patients located at the Queen Alia Airport, which was established to facilitate the entry and stay of Arab patients;

• Lack of an overall healthcare promotional strategy due to the absence of a body that represents the sector and works on promoting its services abroad, both in traditional markets and in new non-traditional ones;

• Stiff competition with the Dubai Healthcare City, expected to be operational by 2010, was identified as a threat. Dubai is bound to be a stiff competitor for Jordan and, given wage gap between the two countries, Jordan may lose some of its human capital if no plan to retain them is devised;

• Many countries in the region are seeking to enhance their medical services, which in turn will increase the level of competition between medical service providers in the region.

Education services

*Jordan’s higher education setup is large and diverse, involves both public and private provision of education services, and has a few pockets of excellence.* The number of international students attending Jordanian universities and colleges has risen by nearly 9 percent each year over the ten years to 2003, reaching a total of 19,669 students in 2004 (update). Foreign students spend an average of $13,000 per year, including tuition, over their nine month stay in Jordan. Between US$500 and $1,100 per month is spent on living expenses. 75 percent of Jordan’s foreign students are from the Arab World, primarily
Palestine, Kuwait, Oman, Syria and Saudi Arabia; If the growth of this sector reaches an average of 10.5 percent, the result will be about 100,000 international students studying in Jordan by the year 2020, contributing around JD 929 million at current prices. An examination of the World’s Top 500 Universities in 2003 reveals that none of the World’s Top 500 universities are from Arab countries. There is therefore currently an opportunity for Jordan to emerge as an educational hub in the region.

**International student penetration in Jordan (one international student for every 303 residents of Jordan) is higher than the U.S. (one for every 495 residents of USA).** Regionally, Jordan comes after the UAE (one for every 159 residents) and Lebanon (one for every 271 residents). Egypt comes last (one for every 6,380 residents). While Lebanon surpassed Jordan in both student penetration and economic significance, the high living costs in Lebanon and the strict regulations that countries are applying to graduates from Lebanon reduce its competitiveness. A greater threat to Jordanian university competitiveness, in attracting international students and even Jordanian and international faculty, is the UAE.

**Business services**

*The provision of architectural and engineering (AE) services is Jordan’s largest source of professional skilled services, both in terms of output and added value.* About 70 percent of workers in this sector are engineers. Females make up about 30 percent of this workforce. It has close links with other productive sectors, such as construction. As a sector that is intrinsically creative and innovative, it is a key part of the country's drive to modernize and embrace a dynamic, knowledge and skills-based economy in the 21st century.

*The AE services sector in Jordan has experienced steady and continuous growth at an impressive average of 20.6 percent over 2000-2008.* About 80 percent of the AE services sector is dedicated to servicing the local market, and the remaining amount is exported to about 30 countries, split fairly evenly between the regional and global markets. While regional markets present large export potential, the more sizable and sophisticated markets to enter are those in the U.S. and Europe. Jordan can easily become the AE services hub of the Middle East, by emphasizing its quality and well-priced service provision and by leveraging regional, bilateral and global trade agreements, all of which will help attract FDI in this sector.

**4.3. Can Jordan’s Growth Strategy deliver on jobs?**

*A priori, robust growth in the skill-intensive sectors should contribute to enhancing employment of skilled individuals.* However, whether this growth will be enough to reduce the unemployment of skilled individuals depends on the extent to which these sectors can suck up large pools of skilled unemployed as they grow, i.e., the elasticity of employment to growth. Employment elasticities show how growth in economic output and growth in employment evolve together over time. Once estimated, the elasticities determine the growth rate of value-added for any level of employment growth.54

*For policymakers and job seekers, a high elasticity of employment is highly desirable.* However, from a firm perspective, high employment elasticity implies that increased output is associated with a large number of additional units of labor. This may mean that labor productivity has not improved as much. On the other hand, a low employment intensity of growth, on its own, may not be a bad thing. Because if output growth is associated with more or less the same units of labor, it implies that labor productivity has increased and in a competitive factor market, real wages should increase as well. In highly competitive markets, increases in productivity are often the only way for firms to remain competitive.

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54 For a given labor supply growth, they can thus be used to determine the growth in value added required to impact unemployment (see below).
As shown in Chapter 3, Jordan’s aggregate employment elasticity in 2000-2009, estimated at 0.53, is less than half its level in 1991-1999, when it was 1.16. In other words, while there was a 1 to 1 relationship between GDP growth and employment growth in the 1990s, in the last decade, a 1 percent increase in national output in the 2000s increased employment by only 0.5 percent. This decrease in Jordan’s employment elasticity and the consequent improvement in aggregate labor productivity are in line with the experience of the other MENA countries, where the average employment elasticity fell from 1.00 in 1991-1999 to 0.65 for the 2000-2009.

The employment elasticities of growth vary greatly by sector in Jordan. Not surprisingly, low productivity sectors have a higher propensity to create jobs when they expand than higher productivity sectors. Construction and real estate stand out as the most job-creating sectors of the economy. The other sectors with high employment elasticity are public administration, education, and transport. On the other hand, sectors such as pharmaceutical (chemicals), information and communication technologies, financial intermediation, health (including health tourism) all have low elasticity of employment to output growth. Because these sectors have a lower propensity to create jobs when they expand, it is imperative that they experience robust growth to mop up the available skilled labor in the market.

Using the sectoral employment elasticities estimated in Chapter 3, it is possible to project employment growth resulting from different assumptions of sectoral value-added growth. Our baseline scenario is the replication of the growth scenario of 2003-2008. In other words, in the baseline scenario, we assume that all 19 industries that constitute Jordan’s GDP grow at the same rate as they did in 2003-2008. The subsequent scenarios single out the six targeted sectors and assume that they grow faster than the rest of the economy. In 2000-2009, banking intermediation registered an average annual growth rate of 16.7 percent, ICT 9.5 percent, health 9.5 percent, chemicals (which includes pharmaceuticals) 5.5 percent, education 3.5 percent and business services 1.4 percent.

The scenarios are as follows:
- Projection 1 (baseline) - Employment in all 19 industries are projected using the average annual value-added growth rates from 2003 to 2008.
- Projection 2 (1.5x VAGR) - Employment in the 6 targeted industries are projected using 1.5 times the average annual real value added growth rate from 2003 to 2008; remaining low-productivity industries are projected using baseline projections (as in projection 1).
- Projection 3 (2x VAGR) - Employment in the 6 targeted industries are projected using 2 times (or double) the average annual real value added growth rate from 2003 to 2008; remaining low-productivity industries are projected using baseline projections (as in projection 1).
- Projection 4 (3x VAGR) - Employment in 6 targeted industries are projected using 3 times (or triple) the average annual real value added growth rate from 2003 to 2008; remaining low-productivity industries are projected using baseline projections (as in projection 1).

Figure 4.3 shows how the trend in labor force growth compares with employment growth under each of the above scenario. Clearly, if Jordan replicates the same growth performance as in 2003-2008, unemployment will remain significant by 2016: 350,000 individuals or 13.7 percent of the labor force, would remain unemployed in 2016. If the six targeted sectors grow at 1.5 times the rate they did in 2003-2008 while the rest of the economy performs as it did in the benchmark period, 290,000 individuals or

55 Jordan’s input-output table (IO), highly disaggregated (89 sub-sectors) was constructed for 2010 only. Unfortunately, for the estimation of the employment elasticities, which required multiple years sectoral data (we used the years 1992-2009), we could not use the IO. We instead used more aggregated sectors as defined by DOS. For instance, we had to proxy the employment elasticity for pharmaceutical by using the sector “chemicals” (which includes pharmaceuticals but also other sub-sectors). Similarly, “Banking” could not be singled out, thus the broader category “finance” is used. Finally, as elaborated in Chapter 3, the employment elasticity for ICT, which was negative in 2005-2008 (because of the restructuration of the sector) was assumed to be similar to the national average (0.5) since it is unlikely to be negative in the projection years.
11.5 percent of the labor force would remain unemployed by 2016 (from about 13 percent today). If the 6 targeted sectors grow twice as fast as in the base period, 200,000 unemployed will remain (7.9 percent of the labor force). Jordan’s unemployement gap would only be closed by 2016 under the highly unrealistic scenario in which the 6 targeted sectors grow 3 times as much as they did in 2003-2008.

Figure 4.3: Employment Growth under Different Sector Growth Scenarios (2009-2016)

Figure 4.3 replicates the same growth scenarios as above but focuses on employment growth of Jordanians workers assuming the foreign labor content of the 19 sectors remain constant. It is worth noting that under this assumption, even if the six targeted sectors hardly employ non-Jordanians, the largest number of jobs will still be created in the low-skill, labor-intensive sectors which employ a large number of foreign workers. Figure 4.4 shows that only by 2020 would the Jordanian employment gap be closed under the (unrealistic scenario 4). It appears clearly that reducing unemployment for Jordanians is a much bigger task than reducing total unemployment in Jordan.\textsuperscript{56}

\textsuperscript{56} It is difficult to predict the changes in the employment growth of Jordanians because statistics on migration are of poor quality and a large number of Jordanians prefer to queue for government jobs and may not be captured as job seekers by labor surveys. The simulations in Figure 4-4 are just meant to provide an idea of how the labor market for Jordanian could look like under specific assumptions.
Assuming that Jordan’s targeted sectors can grow even 1.5 times as much as they did in the past should not be taken lightly. Indeed, international competition is stiff and a large number of dynamic countries are putting together reforms to help the same sectors grow. Thus, focusing solely on promoting the Government’s targeted sectors (or “knowledge-intensive sectors”) is unlikely to solve Jordan’s unemployment problem. Policymakers should not neglect addressing specific issues in “traditional, labor intensive” sectors where Jordan has a comparative advantage (e.g., tourism, retail trade and textiles and closing). For instance, over the last decade, labor-intensive sectors absorbed a large number of jobs, but experienced stagnant or negative growth in real wages. Without creating distortions in the market, specific reforms to improve working conditions may help attract educated and skilled Jordanians in these sectors (beside, the observance of minimum working standards is desirable as a human right).

Furthermore, although the growth strategy’s focus on tradable sectors where Jordan has comparative advantage is sound, there are some “implementation” risks worth noting. In many countries, failures have come from a lack of a level playing field among the firms within the targeted sectors, state capture and “rent-seeking behavior” on the part of potential beneficiaries of government support and the absence of an accountability framework to reward success and sanction failure (example by rapidly stopping government support). Furthermore, it should be emphasized that just as some sector-specific interventions (e.g., supporting the establishment of venture capital funds for investors in the ICT sector) can be an appropriate response to limited access to bank loans by entrepreneurs with good business plans but no collateral, general investment climate reforms that promote entry and competition are crucial to the permanent process of discovery of new profitable activities in all sectors. Thus the continuation of cross-sectoral policy reforms is crucial. Implementation “risks” can however be mitigated by strengthening public-private partnerships. On that front, the Government’s recent initiative, which consists of partnering with the private sector within a strategic competitiveness framework that identifies and attempts to overcome specific market failures and public good shortages, is sensible.\textsuperscript{57}

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\textsuperscript{57} This sector-by-sector competitiveness compact whereby the private sector identifies the key obstacles to their competitiveness and works with the Government to remove them is supported by a Technical Assistance Program of the World Bank and IFC.
4.4. Reform to Accelerate Growth and Reduce Unemployment

Growth and structural transformation of Jordan economy will requires maintaining macroeconomic stability as well as structural reforms. Macroeconomic stability is indeed necessary to increase public and private investments, thus economic growth (growth commission report, 2008). Today Jordan’s budget does not fully cover current spending, implying that there is no fiscal space to increase much needed capital spending. Furthermore, there is ample evidence that private investment decisions depend not only on the conventional factors (growth of economic activity, real interest rates, and private sector credit), but also on macroeconomic instability and uncertainty (see, for example, Aghion, Angelitta, Banerjee and Monova 2010 and Ramey and Ramey 1995). Chapter 3 focuses on fiscal policy and provides specific recommendations on how to reduce fiscal and macroeconomic instability in Jordan.

The challenge of maintaining macroeconomic stability is all the more daunting that it occurs in a context marked by important risks. These include regional political spillover risks, oil price risks, global slowdown risks and more importantly, a risk of weak domestic support for reforms. We show below how fiscal adjustment, strengthening the institutional underpinning of fiscal management and advancement in political and governance reforms are important to navigate this difficult context. Chapter 4 analyses in detail Jordan’s institutional framework for policymaking and provide specific recommendations.

Jordan should embark in further structural reforms to boost growth in high productivity growth sectors and employment. Essentially, these reforms are necessary to unleash the potential for private sector investment, trade and innovation. Young Jordanians, highly educated and IT-savvy, need no less than having home-based alternatives to jobs in the public sector or emigration to the Gulf. The Government can help by assisting in Jordan companies’ penetrating of markets with which the country has free trade agreements through more effective export promotion (Chapter 5), facilitating technological spillovers between domestic and foreign investors through a more coherent industrial policy (Chapter 6), by improving the business environment for all in an equal manner (Chapter 7), and by adopting a more modern and comprehensive approach to innovation (Chapter 8).
Chapter 5 - Trade Competitiveness and Export Promotion

5.1. Introduction

A key area of structural reform to boost growth is trade. Jordan is highly dependent on external markets compared to countries with similar level of development. Thus export competitiveness is crucial for growth and development. The Government has, over the past fifteen years, made great strides in liberalizing its trade and investment environment. Jordan’s accession to the WTO in April 2000 signaled its commitment to global integration. Upon accession to the WTO, Jordan substantially reduced its simple average tariff rate (based on Most Favored Nation, or MFN, tariff rates) from 23.8 percent in 2000 to 10.2 percent in 2011. In parallel, Jordan stepped up its efforts to promote exports through specific programs managed by the Jordan Enterprise Development Corporation (JEDCO). In addition, major improvements were achieved in key backbone services such as port services, telecommunications and transport through regulatory reforms and privatization of state-owned enterprises.

In addition, Jordan signed trade agreements with a number of bilateral and regional trade agreement, including the US (JUS FTA in 2001), EU (Euro-Med Agreement in 2002) and other European countries (EFTA in 2001), Singapore (2006), the Greater Arab region (GAFTA in 1998), as well as Agadir (2006) and, most recently, with Canada (2008)\(^{58}\). Those reforms all together have promoted the expansion of trade in Jordan, nearly doubling the annual growth rate, from an average 9.4 percent between 1990 and 1999 to an average 16.1 percent since 2000. But if Jordan has done relatively well in terms of merchandise exports, it performed poorly in terms services exports, notwithstanding the promising positive trends in ICT-enabled services and health tourism.

But Jordan can do better. It trails many countries in ECA and East Asia in terms of export growth; it has not fully reaped the benefits of most of its trade agreements; and export survival in new market is low, highlighting the short-lived impact of export promotions schemes. This chapter shows these results. It first evaluates Jordan trade competitiveness drawing on recent tools developed by the World Bank. Then is assesses the impact of Jordan’s various trade agreements. Finally, using a proper impact-evaluation technique, it assesses Jordan’s main export promotion and industrial upgrading programs.

5.2. Jordan’s Trade Competitiveness: Performance and Challenges

The framework used to assess Jordan’s competitiveness is derived from Cadot et al (2011), who define four principal factors for trade competitiveness (i) the intensive margin, i.e., the level and growth of existing exports to existing markets; (ii) the extensive margin, focused on diversification of both products and markets; (iii) the quality margin, focusing on the quality or sophistication of exports; (iv) the sustainability margin, including the participation and survival of firms in export markets. The trade competitiveness analytical framework is summarized below. For more details, see Cadot et al. 2011 and Brenton and Newfarmer (2007). Analysis of the decomposition of export points to some interesting findings for Jordan.

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\(^{58}\) These agreements are in various phases of implementation and a number of other agreements are under consideration with Turkey, COMESA, MERCOSUR and others
5.2.1 Sources of Export Growth

*Jordan’s export growth performance has been good since the late 1990s* (Figure 5.2). Average annual growth in export averaged 16.1 percent, much higher than resource-poor countries in MENA but lower than the rates reached in ECA and East Asia (19.6 and 18.3 percent respectively). Export growth was sharpest in 2001-04, thanks to the agreement with the USA in textile. Contrary to other net oil-importers of the region, Jordan’s export to GDP stalled since 2004, year after which real exports lagged behind real GDP growth. This is evident in Figure 5.3.

**Figure 5.2: Annual Growth Rate of Goods and Services Export**

**Figure 5.3: Export and Import as a % of GDP**

*Source: World Development Indicators, World Bank*

*Decomposition of export growth into intensive margin (IM) and extensive margin (EM) in both products and markets shows that Jordan recently picked up major markets but is not yet settled as major partner in those markets.* Turkey is in the opposite trend; it had reached more significant markets over those last ten years but has become a major supplier in its existing markets. Jordan’s IM and EM are
plotted jointly on an IM-EM space (Figure 5.4), together, for 1998 (in blue) and 2008 (in red). The IM indicates how big is Jordan in what it exports, and the EM measures how globally important is what Jordan exports. In other words, we investigate whether Jordan is a “big fish in a small pond” and a “small fish in a big pond.” Jordan’s share of exports in all products that the rest of the world also exports (IM) has very slightly risen over the last ten years, but appears to be moving towards new exports that are economically significant (EM). Jordan has now picked promising products but this shift delayed its specialization and its significance in its exports.

Figure 5.4: Intensive and Extensive in Products and Markets 1998-2008

Figure 5.4a. Intensive and Extensive in Products 1998-2008  Figure 5.4b. Intensive and Extensive in Markets 1998-2008

Source: Trade Indicators from World Integrated Trade Solution (WITS)

Figures 5.5a-b present the same IM-EM decomposition over 2000-05 and 2005-10 for Jordan. Interestingly contribution to growth of the intensive margin in blue (49 percent) is roughly equal to that of the extensive margin (51 percent) over 2000-05 while usually intensive margins dominates clearly, even for developing countries. This pattern in Jordan could be explained by the important amount of textile products that they used to export to other market and started exporting to USA. This importance of extensive margins remains over 2005-10 (48 percent) and patterns among intensive margins is quite different from the previous period. Within the extensive margin, it is the export of existing products to new markets that is most important, accounting for about 40 percent of total export growth over both periods. Finally, exports of new products have not been important to the recent growth of the aggregate exports of developing countries, contributing 10 percent of growth for both periods though this level is pretty high compared to other developing countries (usually around 4 percent).

5.2.2 Changes in export destinations

In 2010, the US (19 percent), Iraq (17 percent), India (16 percent) and Saudi Arabia (11 percent) were Jordan’s major export markets (Figure 5.6). Major shifts have occurred since in 2000, India was Jordan’s largest export market, with 22 percent of exports, followed by Saudi Arabia (12 percent) and Iraq (9 percent). The changes reflect the rapid increase in export of textiles to the US, following the US-Jordan FTA and QIZ agreements. Exports of phosphates and potash to India, still important, were relegated by the rise in textiles. Iraq’s share in Jordan’s export consistently rose from 9 percent in 2000 to 17 percent in 2010. Jordan has however not been able to consistently penetrated the EU markets even if (a small) trade creation occurred following the Euro-Med agreement (see below).
In the aggregate, regional markets remain however Jordan’s main export market, especially in 2000-2005. The region accounted for 60 percent of Jordan’s export growth in 2000-05, with Iraq explaining alone 20 percent of export growth in that period (red shade). In 2005-2010, growing export opportunities were driven new products (mostly Iron and Aluminum products) exported to Lebanon, Iraq, Syria and GCC. During this period, 20 percent of export growth was due to exports to the US but the products exported to the latter market shifted from leather products to textiles and clothing) compared to the first 5 years of the decade. Finally, Asia (India, China and Indonesia) is now the second largest source of export growth for Jordan (28 percent versus 18 percent over the first period). This reflects rapid growth in export of existing products to new markets there (fertilizer products)New markets were also penetrated in the EU (fertilizer exports to Italy, Spain and Nederland for) but exports flows remain small and it is not clear whether Jordan has secured these markets.
5.2.3 Changes in export sophistication

Jordan has crawled the technological ladder over the last decade, shifting from a low and medium-low industry over 2000-05 (apparels and edible vegetables) to medium-high tech industry (fertilizers and pharmaceutical products). A significant number of new markets have been reached (in particular in Asian countries) for those medium-tech products (red shade), especially fertilizer products and inorganic chemicals. However in 2005-2010, the only significant new exports were Iron and Aluminum, medium-low tech products shipped to regional markets (green shade). Surprisingly Jordan did not benefit from the rising demand for metal and mining products those last five years.
5.2.4 Quality of exported products (unit values)

Goods in the same product category vary widely in quality, proxied by unit values (nominal sales divided by quantity). When supply is competitive, higher prices are generally associated with higher quality and greater product differentiation. One way to increase the absolute amount of export per capita is to increase the value of export per unit. Hwang (2007) finds strong evidence of convergence in product quality: when countries introduce a new product, they are usually low in quality, but their unit prices tend to converge to the global frontier at a rate of about 5 percent per year. This convergence is unconditional. The variance in the unit price of goods signals opportunities for countries to upgrade quality, and grow faster. Because upgrading of quality is potentially a secure avenue to boost growth, it is imperative to assess not only what a country produces, but what the quality of exports looks like.

Figure 5.9 below show the unit value (US$ per ton) of each HS 6 digit products to each partner where the size is weighted by the share of each product in total Jordan exports. We first observe the diversification in product/market since we observe more point in the 2008 figures than in 2000. Second most import pairs product/partner are still for low unit values, in pharmaceutical and fertilizers industries. However Jordan managed to exports significantly those products to markets with high demand, and also to develop new pairs info higher until value, especially in HS 8 and 9.

Figure 5.9: a and b. Distribution of Unit Values, by product category

Source: Author calculation using Unit Values Database from CEPII

Analyzing data on unit prices of important export products against key competitors can provide a valuable assessment of the trends in Jordan’s quality competitiveness.

Figures 5.10a-f below show the price per unit trends for Jordan’s top pairs product-country export, against comparators. In this case, it highlights the fact that Jordan might be getting caught in the middle in terms of competition in garment export markets – it struggles to compete on price with low cost producers like Egypt but it is not yet able to reach the quality levels of Tunisia and Morocco.

There are caveats, as explained in Racine (2010): when (mirror) export values are measured inclusive of cost, insurance and freight, larger distances introduce larger biases. Products like oil whose prices are set internationally have a weaker association between unit values and quality. High unit values could reflect high costs or market power in specific locations. They may also vary with the processing stage of production, with downstream industries typically having higher unit values than upstream.
5.2.5 Export survival relative to comparative advantage

Attempts by developing countries to introduce new exports in new or incumbent markets are fraught with challenges. Exploring why countries succeed in penetrating foreign markets but fail to sustain those flows can help explain the varying export performance across countries. Empirical exercises with firm level data could shed light on whether firm characteristics such as age, size and type of ownership can influence export longevity. At a more aggregate level, Brenton et al. (2009) find that the size of initial export flow explains subsequent duration of flows, as do search and information costs and exchange rate volatility.

In Figures 5.11a-f below the survival rates of Jordan and comparators exports at the HS-6-digit level are assessed for the 8-year period 2000-2008. Jordan has 11202 country-product pairs in 2008. For
many of these pairs, trade takes place just once, or a single spurt of consecutive years. Some die and are then revived. So, the total number of export spells over the period is 32957. The median duration of the export spell is only 1 year, and the mean duration is 3.03 years.

The first graph (Kaplan-Meier survival function) shows that the probability of a Jordan export relationship surviving till the second year is less than 0.5, and maintaining a relationship for more than 2 years is less than 0.30. In comparison, the survival rate of Moroccan or Tunisian’s export relationships is much higher. The probability of a Turkish export relationship surviving beyond Year 1 is 0.7 (see Figure 5.11a-f below). The weak survival patterns for Jordan stand also after the first years, the rate of survival is more declining than for other comparators.

**Figure 5.11 a to f: Export Survival Rates, Jordan versus Comparators**

![Graphs showing export survival rates for Egypt, Jordan, Lebanon, Morocco, Tunisia, and Turkey](image)

*Source: Author calculation using Comtrade with World Integrated Trade Solution (WITS)*

### 5.2.6 Performance in Services Trade

*Service exports have been dynamic in most countries but there is large scope for further increasing export growth.* For a majority of developing countries, growth in export of goods is larger than growth in exports of services (this is particularly true for MENA resource-rich countries because of oil exports). Services are still dominated by Travel and Transport services, but other Commercial services such as ICT and Insurance/Finance and business services are experiencing the highest growth rates; however, since the initial level is low their shares do no increase significantly.
Countries with highest rate of growth in exports in those new commercial services (other than transport and Travel) have the highest increase in services export. Jordan did not perform in Services relatively to other region and to what it achieved in merchandise (Figure 5.12). One of the explanations there is that Jordan did not succeed in exporting new commercial services, even for ICT finance and assurance.

Figure 5.12: Trade Performance in Service, Jordan versus Comparators

![Figure 5.12: Trade Performance in Service, Jordan versus Comparators](image)

Source: Author calculation using Balance of Payment IMF database

Jordan performed poorly in those new commercial services, therefore the share of transport and travel is now higher and very huge compared to other Lower Middle Income Countries (Figure 5.13).

Figure 5.13: Changes in the composition of Exports, Jordan versus Lower Middle Income Countries (LMIC), 2000 versus 2008

![Figure 5.13: Changes in the composition of Exports, Jordan versus Lower Middle Income Countries (LMIC), 2000 versus 2008](image)

Source: Author calculation using Balance of Payment IMF database
5.3. Impact of Trade Agreements

Jordan has signed trade agreements with a number of trading partners in the region and beyond, including the US (USFTA in 2001), EU (Euro-Med Agreement in 2002) and other European countries (EFTA in 2001), Singapore (2006), the Greater Arab region (GAFTA in 1998), as well as Agadir (2006) and, most recently, with Canada (2008). While these trade agreements offer exporters in Jordan preferential access to a key export markets, Jordan has yet to reap the full benefits associated with them. When one focuses on observed export growth, the only trend that stands out clearly is the rapid expansion of apparel exports to the USA under the Qualifying Industrial Zone program and, later, the Jordan-US Free Trade Agreement.

Assessing the impact of trade agreements goes beyond observing trends in bilateral trade. Indeed, a large number of factors that affect trade alongside trade agreements should be controlled for. We do that below. Using a proper framework, we explore the extent to which regional and bilateral trade agreements have contributed to increasing Jordan’s exports and imports, and whether this has been done at the expenses of trade diversion.

5.3.1 Estimation Strategy

The four trade agreements signed by Jordan we will test here are PAFTA (1998) and AGADIR (2006) as well as the Euro-med agreement (2002), the EFTA (2002) and the BTA with USA (2001).

Table 5.1: Jordan’s Key Trade Agreements

<table>
<thead>
<tr>
<th>Agreement</th>
<th>Date Signed</th>
<th>Date of Entry into Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jordan-EU Association Agreement</td>
<td>24 Nov. 1997</td>
<td>1 May 2002</td>
</tr>
<tr>
<td>Jordan-EFTA Free Trade</td>
<td>21 June 2001</td>
<td>1 Jan. 2002</td>
</tr>
</tbody>
</table>

Trade agreements typically expand the level of trade with partner countries. The impact on national welfare is trickier. If liberalization promotes new trade development, or “trade creation”, then welfare increases, as is the case of unilateral liberalization. If, however, an agreement encourages, due to tariff-imposed price advantages, a shift of imports from more efficient non-member producers to less efficient member producers, i.e., if “trade diversion” results, then the economy would be less well off (the loss of tariffs is not fully compensated).

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61 These agreements are in various phases of implementation and a number of other agreements are under consideration with Turkey, COMESA, MERCOSUR and others
In order to empirically address these questions we estimate a standard panel gravity model where the aggregate import of countries is explained using bilateral fixed effects and year-specific importer and exporter fixed effects. These fixed effects control, among other things, for the traditional determinants of a gravity equation, such as distance, colonial links, common language, as well as GDP, population, and MFN tariffs of the exporter and the importer. We then introduce different types of dummies to capture the impact of the creation of trade agreements on intra-regional imports and imports from the rest-of-the world as in Carrère (2006) and Carrere and al (2011).

We also explore within this gravity setup how patterns of trade creation and trade diversion vary across bilateral pairs for Jordan and also for other MENA countries similar to Jordan, i.e., oil importers (or Resource Poor). For PAFTA, we also include results for Resource Rich countries. Hence we will also observe is trade creation occurs more through Jordan’s exports of to its partners or through Jordan’s imports from its partners. The equation is shown in Annex.

Bilateral import data for 17 MENA countries, 25 EU countries, USA and 239 partners is from United Nation’s Comtrade, and were obtained through the World Bank’s web platform: WITS. We use data for the period 1990-2009 (20 years) as in the 1980s Jordan regionalism was non-existent. We use total import data, but also data on non-oil imports. In a robustness check we also used data that substracts re-exports from bilateral import data, but results are almost identical to the ones reported in the next section. We use WTO notifications to capture the year of entry into force of the agreement, and these available in the appendix. Data on which countries are defined as resource poor or resource rich is from World Bank (2010).

5.3.2 Results

Figure 5.14 shows the estimated percentage rise in exports to a specific partner due to a specific trade agreement as \( (e^\beta - 1) \). We present in plain color solely the coefficients that are significant at 10 percent level, otherwise it stays unfilled. Coefficients for Jordan’s export are in red, and green for Jordan’s import, other pairs are in blue.

1. The impact of PAFTA on Jordan is mixed. The country benefited from PAFTA by increasing export to Resource Rich countries in PAFTA. However, increase in exports to Resource Poor PAFTA members was insignificant. This contrasts with other resource Poor countries of PAFTA, which have benefited from export creation to both resource Rich and Resources Poor as a result of the PAFTA Agreement.

2. The AGADIR Agreement has not brought trade gains for Jordan, since other Resource Poor countries have significantly increased their export to Jordan, generating trade diversion from the Jordan perspective (see in the table in annex).

3. Contrary to the conclusion derived from an observation of trade flows, the Euro-Med Agreement did impact positively Jordan. The country has increased its exports to the EU, just as other Resource Poor countries did. However, Jordan has experienced more trade creation in imports than other Resource Poor countries, even if the extent of it is limited.

4. Finally, Jordan-USA FTA has had a robust positive impact on Jordan’s export, with a large trade creation. On the other hand, the US exported less to Jordan and to other RP countries in the region following the signature of the FTAs.
5.4. Impact of Export Promotion Programs

To reap the potential benefits of greater market access through trade agreements, Jordan relied on export promotion and industrial upgrading directed to exporting and potentially exporting firms. The Jordan Enterprise Development Corporation (JEDCO) was established through decree of the council of ministers in June 2003 to legally replace the Jordan Export Development and Commercial Centers Corporation. JEDCO is the main official entity that carries out export promotion. It is overseen by a Steering Committee headed by H.E. Minister of Industry and Trade and comprised of representatives from both the public and private sectors. We evaluate below JEDCO’s main export promotion and industrial upgrading programs.

5.4.1 Overview of JEDCO’s Main Programs

Stemming from the Jordan’s Government desire to raise the competitiveness and pace of development of the country’s enterprises and economic projects, Jordan’s Upgrading and Modernization Program (JUMP) and the Jordanian Export Program Activities (JEPA) were integrated with JEDCO in 2006, thus providing complete and integrated services to private sector enterprises. This integration was a milestone activity aimed at facilitating enterprise modernization; development of enterprise efficiency and capacity, therefore, enabling enterprises to maximize the benefits of economic and trade agreements signed by Jordan, and enabling them to face the challenges of globalization and the penetration of non-traditional markets.

Jordan's Upgrading and Modernization Program (JUMP)

Jordan Upgrading and Modernization Program was established in 2004 as the first national program of its kind that provides technical and financial support to small and medium enterprises (SMEs). This support would allow SMEs to face globalization challenges and penetrate non-traditional markets. Besides, it aims to improve their competitive position locally, regionally and globally. In addition, it should maximize the benefits of preferential trade agreements that Jordan has signed with its partners.
Qualified enterprises receive a grant ranging from 10,000 to 100,000 Euros (they do not have to put up some money, i.e., this is not a matching grant) to finance their access to services aiming at sustaining their business. A qualified enterprise must: operate in the manufacturing sector; be a Jordanian registered company located within Jordan’s boundaries; employ 10 or more full-time Jordanian staff registered at the Social Security Corporation; have been in business for at least two years, with a good financial status and high potential for growth; and maintain annual financial accounts (balance sheet, income statement, and cash flow statement along with all appendices) audited by an approved bureau. A firm approaching JEDCO for JUMP assistance had to submit a proposal motivating its request for a grant.

The JUMP program was able to provide more than 1600 services in all fields – some examples are provided in the Annex - to around 640 firms in all regions of Jordan over the 2004-2009 period. JEDCO reports say that as a result, exports were doubled, sales increased by 75 percent, new job opportunities were created and more importantly these firms have sustained their business. However JEDCO reached those conclusions by simply asking 60 beneficiary firms how much sales, export, jobs they have realized with support of the program. One should note that the JUMP program does not explicitly focus on expanding exports and that SMEs that do not intend to export can have access to this program. Therefore, the impact of the program should in principle not be assessed solely on export-related outcomes. In practice, however, due to data limitations that will be the case below.

The second phase of the JUMP program is planned to start in early 2012 and will be financed by 15 million Euros from the European Union. It is expected to increase the number of the targeted segments (though keeping the same criteria for qualification) and to include startups, consortia and clusters.

The Jordan Export Promotion Activities (JEPA)

The Export Promotion Directorate is one of the core departments of JEDCO for promoting the country’s external trade. The Directorate recognizes the importance of close cooperation and relations in international trade as one of the primary forces behind export growth. Through its marketing plan, priority is given to sustaining and intensifying the numerous trade promotion activities listed in the Annex. Most of the activities are concentrated in financing the participation in fairs and exhibitions abroad.

While the JEPA program is open to firms of all sizes, SMEs have been the most important beneficiaries, representing 90 percent of beneficiaries. Qualified enterprises are invited to go abroad to exhibitions and their participation is financed by JEPA. The program was able to take 370 Jordan firms in the manufacturing sector to more than 40 exhibitions over the 2005-2010 period. Table 5.2 shows that most firms benefited from the financing of their participation in one exhibition only (146 firms) but a large number of firms received JEPA financing for their participation in multiple exhibitions. The number of firms sent to exhibitions by the JEPA program grew over the 2005-2010 period as shown in Table 5.3.

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63 The complete list of exhibitions is provided in the Annex.
Table 5.2: Number of Times Firm Benefited from Exhibition Support

<table>
<thead>
<tr>
<th>Number of exhibitions over 2006-2010</th>
<th>Number of Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>146</td>
</tr>
<tr>
<td>2</td>
<td>75</td>
</tr>
<tr>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>[5-10]</td>
<td>36</td>
</tr>
<tr>
<td>[10-15]</td>
<td>11</td>
</tr>
<tr>
<td>&gt;15</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 5.3: Number of Exhibition, by year

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Firms - Exhibitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>61</td>
</tr>
<tr>
<td>2006</td>
<td>199</td>
</tr>
<tr>
<td>2007</td>
<td>169</td>
</tr>
<tr>
<td>2008</td>
<td>203</td>
</tr>
<tr>
<td>2009</td>
<td>210</td>
</tr>
<tr>
<td>2010</td>
<td>355</td>
</tr>
</tbody>
</table>

The services provided by JUMP and by JEPA can be categorized as what JEDCO designates as “Business Upgrading, Development & Innovation Support” and “Export Development, Promotion & Export Services”. Additionally, JEDCO offers other support to firms for example through the recently launched JSMPS program which is similar to JUMP but designed for firms in the services sector. Moreover, several projects coordinate the link between firms with banks to facilitate access to finance, but also access to services that provide updated and specialized information and even projects in the field of advocacy and policy support. These projects will, however, not be considered in the evaluation below.

5.4.2 Who Benefits?

To describe the scope and beneficiary profiles of the JUMP and JEPA programs, we need to data on JUMP and JEPA beneficiary firms as well as on a control group of non-beneficiary firms. Figures 5.16 through Figures 5.18 based on a sample more than 3,311 industrial firms in the DOS firm census of 2006 together with including 370 firms that benefited from JEPA and 174 firms that benefited from JUMP.

The JEDCO programs are biased toward firms located in Amman. The share of firms located in Amman is overrepresented in the two programs. Specifically, more than 90 percent of beneficiaries locate in Amman while firms located in Amman represent solely 64 percent of manufacturing firms in Jordan. This fact raises concerns as to whether the JEDCO programs really help firms that need the most support given that firms in Amman have more and better networks and better access to financial support than firms in the rest of the country.

The JEDCO programs do not cover very small firms. As expected based on their eligibility criteria, the programs benefited firms that have the capacity to export and are large enough to absorb and use the support they receive. This is why those programs do not target firms under 10 employees and one can argue that this is wise. One difference between the two programs is that JUMP was targeted at SMEs while JEPA was accessible to all firm sizes. However in practice similar very large percentages of beneficiaries are SMEs with workforces ranging from 10 to 200 employees: 90 percent for JUMP and 85 percent for JEPA.

The two programs target differently experienced firms. While JEPA support tends to target more mature firms in Jordan with 10 to 20 years of experience (which represent 37 percent of beneficiaries) and firms with more than 20 years of experience (which represent 36 percent of beneficiaries), the JUMP program focused on very young firms since 65 percent of the beneficiaries had less than 10 years of experience.
The JEDCO programs exhibit a sectoral bias. Although both programs were open to firms in all sub-industries within manufacturing they are relatively heavily used by firms in the chemical industry which represent solely 5.5 percent of manufacturing firms in Jordan but 16 and 24 percent, respectively, of JUMP and JEPA beneficiaries. What is striking is that the textile industry is under-represented in JEPA with only 4.3 percent of the beneficiaries compared with 15.2 percent in JUMP. Finally while JEPA has more coverage of metal industries than JUMP the opposite is verified for the Machine and Equipment industry.

A simple comparison of means across 178 JEPA firms, 95 JUMP firms and 297 control firms shows that JEPA firms have better export outcomes than control firms and JUMP firms (Figure 5.15). This is expected given that JEPA targets larger and older firms that have potentially already developed their exports. Only those firms that benefited from JEPA experienced a huge increase in export values over the 2004-2008 period but at the same time they were more severely hurt by the 2009 crisis. Regarding firms in JUMP or firms that are both in JUMP and JEPA, their export growth is weaker though still higher than that of control firms.

Figure 5.15: Export Performance
5.4.3 Is Export Promotion Effective in Jordan?

Methodological issues

The literature assessing the effectiveness of export promotion has developed along two strands. One strand—the oldest and less related to our analysis—relies on cross-country evidence in search of effects on aggregate export performance. For instance, Rose (2007) uses a gravity equation to show that diplomatic representations had a positive effect on bilateral trade flows. Using aggregate export regressions Lederman, Olarreaga, and Payton (2010) show that, export promotion agencies have recently had some success in increasing aggregate exports, in particular agencies whose management involves the private sector.

Another strand—more recent and directly relevant to our analysis—has has looked for effects of export promotion programs at a more targeted level i.e., at the firm-level using quasi-experimental methods.64 A first major problem in evaluating the effect of a program such as JUMP and JEPA is that of attribution i.e, making sure that observed changes in firm-level outcome variables are caused by the programs and not by outside influences. Outside influences can confound the identification. For example, a positive impact of an export promotion program started in 2007 could be confounded by the negative impact of the global crisis of 2008-2009. Hence, a simple before-after comparison of outcomes for firms benefitting from the program would likely suggest a negative impact. In order to filter out these influences, it would be crucial to know how beneficiary firms would have performed in the absence of the program (presumably worse). But the data needed for this counterfactual does not exist, because firms cannot be both beneficiaries and non-beneficiaries of a program at once. This missing data problem is solved by using as a counterfactual the performance of firms that did not benefit from the program - the control group. Having a sample of beneficiary firms and control firms for one or more years before and after the program, difference-in-differences (DID) methods could be used to evaluate the impact of the program whereby one would compare the differences in outcomes instead of comparing the levels of outcomes. In this way one would be able to account for unequal performance levels of treatment and control groups not related to the program – such as the negative effects of the crisis in the above example.

A second major problem in evaluating the effect of an export promotion program - that DID methods do not address - that the assignment to the program is far from random. For example, firms located in the capital city with better connections are those informed about export promotion programs and may self-select into the program. Program beneficiaries may differ substantially from non-beneficiaries in characteristics that affect both their participation in the program as well as their performance. To estimate the causal effect of an export promotion program there is thus a need to control for observable program characteristics that may be correlated with both program participation and performance. Combining DID methods with propensity score matching addresses such need. The key assumption for the impact estimated by this method to be unbiased is that selection of firms into the program is based only on observable characteristics. We will follow a variant of this approach - weighted least squares regressions of differenced firm-level outcomes - for the evaluation of the JEDCO programs in this Section.65

The results from studies that evaluate export promotion programs at the micro level are mixed, depending, in part, on what performance variable is considered, e.g., export status, diversification, or intensive margin growth. Box 5.1 describes the findings from the main studies. The evidence so far

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64 A pedagogical reference to impact evaluation methods can be found in Khandker, Koolwal and Samad (2010) whereas a formal treatment can be found in Ravallion (2008), Blundell and Costa Dias (2009), and Imbens and Wooldridge (2009). Note that quasi-experimental methods are employed when evaluators need to estimate the impact of the program ex-post without prior data collection with an evaluation purpose.

65 Other econometric methods that we do not pursue in the JEDCO case are available to account for selection effects i.e., the non-random enrolment of firms into export promotion programs such as fixed effects and two-step instrumental variables of Heckman selection estimation methods.
suggests two remarks. First, export promotion seems to be more successful at affecting the performance of established exporters than at encouraging non-exporting firms to start exporting. This is in accordance with the literature on heterogeneous firms and trade, which suggests that exporters differ from non-exporters in terms of productivity and a host of other characteristics (see, e.g., Bernard, Jensen, Redding and Schott 2007). After all, one could hardly expect export promotion to change ducks into swans. Second, the evidence seems to be stronger for impacts at the extensive margin than at the intensive margin. This is somewhat natural, and perhaps even desirable, if the information hurdles to break into new markets (product- or destination-wise) are larger than to simply ramp up export volumes.

### Box 5.1: Literature on the effects of export promotion at the micro level

**Alvarez and Crespi (2000)** conduct a survey of 365 Chilean firms, of which 178 received export assistance in several forms, including access to a business information system and participation in international fairs. Using a two-step approach to control for selection, they show a significant impact only on the number of export destinations; neither product diversification nor overall export growth at the firm level are affected significantly.


**Görg, Henry and Strobl (2008)** use a propensity score matching difference-in-difference (PSM-DID) estimator on Irish data combining plant-level export variables with other characteristics to examine the impact of subsidies. They find that large enough subsidies encourage the export activity of already-exporting firms. However, they find little evidence that non-exporters are encouraged to start exporting by subsidies of any size once unobserved plant effects are controlled for by first-differencing.

**Volpe and Carballo (2008)** also use PSM-DID to explore the effectiveness of Peru’s export-promotion program, PROMPEX, using Peruvian firms’ customs data. They show that PROMPEX encouraged export growth at the extensive margin (destinations and products) but not at the intensive margin.

**Girma et al (2009)** use IV techniques on a large panel of Chinese firms to explore the effect of production subsidies on exporting activity. They obtain robust evidence of a positive impact at the intensive margin, but little evidence of an encouragement-to-export effect on initially non-exporting firms.

**Volpe and Carballo (2010)** explore the distributional effects of PROCHILE’s export promotion program using Chilean firms’ customs data and find stronger positive effects for small firms.

Against this background, **Cadot et al (2011)** explore the impact of Tunisia’s export promotion program, JEDCO, which consists of a matching grants provided to firms to implement an export business plan. Their results suggest that beneficiaries expand at the intensive and the extensive margin (markets and products). However, this expansion does not translate into higher exports for beneficiaries beyond the program enrolment year. Evidence suggests that although treated firms significantly diversified, they failed to transform this diversification into reduced exposure to price risk on their portfolio of export markets. They also show weak evidence of negative spillovers from treated to control firms.

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66 An exception to this finding is found in Girma, Gong, Görg and Yu (2009) who consider the special case of production subsidies awarded to Chinese firms.

67 See Volpe (2011) and references therein on the hurdles facing the internationalization of firms.
Data and Methodology Used

In order to apply the quasi-experimental impact evaluation methods described above which address selection bias problems and can obtain a credible estimate for the counterfactual of what would have happened to JEDCO beneficiaries if they had not received assistance, we need a sample with a large number of treated and untreated firms. In the case of Jordan as mentioned in Section 2, after merging the different databases received from DOS – the census with over 11307 firms (industry and services), the Customs transaction-level data for 5315 exporters, and the listing from JEDCO with complete information on solely 91 JUMP beneficiary firms and 242 JEPA beneficiary firms the final sample includes 545 firms in Jordan among which 168 benefited from JEPA, 71 benefited from JUMP and 36 benefited from both, and the other 144 are control firms.

Before presenting the results a few caveats are in order. First, the results for the JUMP program must be taken with caution due to the small number of beneficiaries we have: 71. Second, we evaluate the JEDCO programs based on export-related outcome measures even though export performance is not an explicit objective of the JUMP program which is oriented towards firm modernization. Third, a large number of firms benefited from the JEPA program for several years therefore it is not surprising if a more clear-cut and long-lasting effect is found after the first year of assistance since some firms continue to benefit from JEPA support to participate in trade exhibitions in the years thereafter.

Our estimation of the effects of JEDCO programs on Jordanian firms follows a variant of the propensity score matching difference-in-differences method. Specifically we estimate weighted least squares regressions whose dependent variables are first-differenced or longer-differenced firm-level export outcomes where the weights originate in the propensity score matching procedure, as described in the Annex. In essence this method controls for selection bias by comparing the change in outcomes for program beneficiaries relative to the change in outcomes for “observationally similar” control firms before and after the program. “Observationally similar” firms are defined based on a propensity score which is the probability that a firm receives the JEDCO assistance - through JUMP or JEPA - given a rich set of observable firm covariates, and based on a metric of proximity between propensity scores.

Results

Several observations stand out the estimated year-to-year effects of the JEPA and JUMP programs presented in Figure 5.16. The immediate effects of the JEPA program in the year of enrolment or year of treatment (‘TY’ in the graph) are positive and significant at the 1 percent level for all three outcome variables. The magnitudes of the effects are large: 85 percent more growth in total exports (measured in logarithms of values), 21 percent more growth in export destinations and 18 percent more growth in products (measured in logarithms of counts) for JEPA beneficiaries, compared to the control group. However, the effects on total export growth vanish after the treatment year, remaining significant in the second year only for the number of destinations and of products.
Figure 5.16: Year-to-Year Effects for JUMP and JEPA

Year-to-Year Effects for JEPA (Annex 8 Table 1a)  
Year-to-Year Effects for JUMP (Annex 8 Table 1b)

Note: Bar heights show the point estimates of the coefficients in Annex 8 Tables 1a and 1b. Insignificant effects are shown as empty bars.

Regarding the year-to-year effects of the JUMP program, the estimates show no impact on any export outcome in the year of treatment but a significant positive impact in the year after. This can be explained by the fact the firms coming to JUMP do not do so with the primary purpose of exporting but rather with the purpose of upgrading and modernizing, and these channels have consequences on the export dimension with a lag. Also the JUMP program lasts for several months therefore it usually finishes only in the year after treatment. The magnitudes of the effects in the year after treatment (‘TY+1’) are large: 79 percent more growth in total exports (measured in logarithms of values) 11 percent more growth in export destinations and 23 percent more growth in products (measured in logarithms of counts). However a surprising result is that the effects two years after treatment are negative and significant indicating weaker growth for JUMP beneficiaries when compared to control group. This could indicate that firms went too hastily on exporting to new markets or on exporting new products and experienced difficulties in remaining on such export paths. Also firms may have given up traditional but secure markets or products to develop those new ones and thus suffer after the treatment is complete.

Next, we report the evidence on the cumulative effects of the JEDCO programs in Figure 5.17, which indicate for how long the impact effect remains perceptible.

The effects of JEPA program on total exports of beneficiaries do not vanish on year after treatment because the positive and strong impact effect of the treatment year carries over Figure 5.17. But four years after the treatment, no effect remains on total exports neither on the number of products or destinations. One must note that this is not a very long lasting effect given that a large number of Jordanian firms return to JEDCO after the first year of support to obtain support to participate in other exhibitions. We tried to control for that by adding the number of additional exhibitions the firm realized after the first year of treatment.
The cumulative effects for the JUMP program show no persistence on total exports, not on destinations and products of beneficiaries relative to control firms.

To sum up, one year after benefiting from JEPA, the growth rates in Jordan firms’ total exports stop differing between the treatment and the control groups; whereas four years after benefiting from JEPA even the levels of total exports of beneficiary firms have converged back to similar levels as those of the control group.

The impact of the JUMP program on growth in total exports is positive one year after treatment but is negative two years after, then growth rates in total exports stop differing between the treatment and the control groups. Also, after two years, even the levels of total exports of JUMP beneficiary firms have converged back to similar levels as those of the control firms.

Our baseline results suggest that the benefits of the JEDCO programs were a positive but short-lived effect on total exports of treated firms. But to be able to address the question of whether the JEDCO program was worth it we also need to take into account the cost side and provide an indication of the economic benefits of JEDCO.

Next we describe a simple projection exercise of the additional exports caused by the JEDCO programs that is presented in detail in the Annex. For instance consider the benefits from the programs based on the estimated effect of JEPA and JUMP on total export growth two years after treatment. This implies that JEPA beneficiaries had a 202 percent higher total export growth than control firms and JUMP beneficiaries had a 155 percent higher total export growth than control firms. Since the average annual total export growth in 2003-2004 was 11 percent for firms in JEPA and 15 percent for JUMP, the estimated annual total export growth for a JEPA beneficiary in the year of treatment is 23.2 percent and for a JUMP beneficiary is 32.2 percent. What do these numbers imply in terms of additional total exports? Given average total exports in 2004 for firms that joined JEPA of 2,000 thousand JD, the growth

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68 The 23.2 percent number is obtained as the product of 11 percent and (1+202 percent).
rates above imply that two years after treatment, total exports for a typical JEPA beneficiary would be 3404 thousand JD while total exports for a typical control firm would be 2464 thousand JD. Given average total exports in 2004 of 308 thousand JD for firms that joined JUMP, the growth rates above imply that two years after treatment total exports for a typical JUMP beneficiary would be 561 thousand JD compared to 407 thousand JD for a control firm. The implied difference in total exports from the JEPA program is 940.1 thousand JD while that from the JUMP program is 153.9 thousand JD. Figure 5.18: shows those differences over time.69

Figure 5.18: Additional exports for typical JEPA beneficiary and JUMP beneficiary

We consider some explicit evidence of the diversification associated with JEPA and JUMP assistance to complement the results discussed above that growth in the number of destinations and in the number of products exported is significantly and persistently higher for JEPA firms relative to control firms (the effect for JUMP firms is weaker and non-persistent). To combine the destination and the product dimensions, we construct for each Jordanian firm two standard measures of concentration - a Herfindahl index and a Theil index of their export shares across product-destination cells in each year. We consider each of these measures as another firm-level export outcome that is a dependent variable in weighted least squares regressions shown in the Annex. The estimates indicate a clear increase in product-destination diversification over time for JEPA firms relative to control firms and no effect or even a short time concentration effect for firms in JUMP.

5.5. Conclusion and Policy Implications

- Export promotion activities (JEPA) have a stronger impact at the intensive margin than at the extensive margin for Jordanian firms. Future programs should focus more on established firms that know how to export. After all, export promotion cannot be expected to transform “ducks into swans”.

- Export promotion (JEPA) has a stronger impact in terms of geographical diversification than in terms of product diversification. Future orientation of the program should strive to identify specific markets (e.g., markets with which Jordan has signed an FTA) and assist established firms to penetrate them durably.

- For the JUMP program which primarily aims at modernizing and upgrading SMEs and is not directly designed for export promotion, the impact on the intensive margin of export growth

69 Whenever the estimated effects of a program were not statistically significant we considered a 0 difference between treated and untreated firms, hence the curves.
is weaker and less persistent, and the impact on the extensive margins is verified in terms of product diversification only.

- Even for the JEPA program, we find that the effect on total export growth rates is only transient. However, our results on the long-term impact of export promotion must be interpreted cautiously given that the later years of our sample period are special in that they were characterized by the financial crisis and ensuing collapse of world trade, which may not have affected all firms equally. In particular treated firms may have ventured into riskier markets.
Chapter 6 - Enabling Business Environment

6.1. Introduction

The second key area of structural reform to boost growth is the business environment. This chapter analyzes the weaknesses in Jordan’s business environment. It suggests that for many policy areas the lack of an effective policy implementation, rather than legal regulations per se, in fact hold back firm growth and specialization into higher added value activities. First, we rely on macroeconomic as well as microeconomic (firm level) evidence to show that Jordan lacks the economic dynamism and “creative destruction” (firm entry and exit) that led to technological upgrading in fast-growing East Asian or Eastern European economies.

Second, we focus on legal regulations and the way they are implemented across firms in Jordan. We find that Jordan improved its legal business environment in several areas even though legal reforms are still urgent in particular to improve firms’ access to finance; however, for many policy areas the challenge to achieve higher firm growth is not to change legal regulations but to implement existing ones consistently and predictable for all firms. Firms report large variations in officials’ implementation of regulations leading to substantial differences in the de facto business environment even for firms in the same industry. We provide empirical evidence to support the hypothesis that this policy implementation uncertainty indeed undermines pressure from domestic competition, firms’ innovative capacity, and ultimately employment growth.

6.2. Jordan’s lackluster performance in higher added-value activities

6.2.1 Aggregate Evidence

Most fast-growing emerging East Asian or Eastern European economies managed to achieve high sustained growth by successfully integrating into the global economy through a continuous process of foreign technology adoption. Firms in these countries gained access to superior foreign technologies through FDI or trade linkages and raised their competitiveness by successfully adopting foreign technologies to local conditions. A continuous process of foreign technology transfers in specific sectors helped these countries to sustain growth rates of 8 percent or higher counterbalancing potential losses in competitiveness from increasing wages and labor costs. Over decades, this development strategy produced internationally competitive domestic firms and jobs in high value added industries such as in the ICT sector in India or the consumer electronics, telecommunication, and more recently automobile sector in China.

Jordan performs well in attracting FDI and achieving high export shares suggesting that the country is potentially well placed to benefit strongly from foreign technology transfers. Table 6.1 summarizes selected performance indicators for several dynamic emerging economies over the last decade. It shows that Jordan’s investment share (gross capital formation) was about average among these high-growth emerging economies. Only India and in particular China achieved significantly higher investment rates. What is more, Jordan’s average shares of FDI inflows and exports relative to GDP are among the highest exceeding the ones of fast-growing India or China.
However, composition of FDI and exports suggests that investments are channeled into lower added value activities. Jordan did not manage to significantly specialize in higher value-added industries. The World Development Indicators report that high-technology exports account for only 1 percent of manufacturing exports in Jordan (Table 6.1). Likewise, the share of ICT in Jordanian commercial service exports accounts for only 12 percent of total service exports; this contrast with India (71 percent), Brazil (53 percent), Lebanon (52 percent), and China (43 percent). This is particularly striking given that the Jordanian government considers ICT services as a key sector to spur productivity growth and employ university graduates.

Table 6.1: Economic performance indicators for selected emerging economies

<table>
<thead>
<tr>
<th>Country</th>
<th>Real GDP per capita (US$)</th>
<th>Real GDP per capita (US$)</th>
<th>Share of gross capital form. in GDP</th>
<th>Share of FDI net inflows in GDP</th>
<th>Share exports in GDP</th>
<th>Share high tech in manufacturing exports</th>
<th>Share ICT in service exports</th>
<th>Share of firms using bank fin. for inv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>2.09</td>
<td>4001</td>
<td>17%</td>
<td>3%</td>
<td>14%</td>
<td>12%</td>
<td>53%</td>
<td>48% (99)</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>5.57</td>
<td>2122</td>
<td>32%</td>
<td>14%</td>
<td>51%</td>
<td>5%</td>
<td>20%</td>
<td>46% (07)</td>
</tr>
<tr>
<td>Chile</td>
<td>2.58</td>
<td>5544</td>
<td>21%</td>
<td>6%</td>
<td>30%</td>
<td>6%</td>
<td>21%</td>
<td>20% (06)</td>
</tr>
<tr>
<td>China</td>
<td>9.61</td>
<td>1482</td>
<td>41½</td>
<td>3%</td>
<td>31%</td>
<td>29%</td>
<td>43%</td>
<td>29% (03)</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2.19</td>
<td>4524</td>
<td>24½</td>
<td>5%</td>
<td>46%</td>
<td>41%</td>
<td>34%</td>
<td>15% (05)</td>
</tr>
<tr>
<td>Croatia</td>
<td>3.53</td>
<td>5841</td>
<td>28½</td>
<td>6%</td>
<td>42%</td>
<td>11%</td>
<td>14%</td>
<td>60% (07)</td>
</tr>
<tr>
<td>Dom. Rep.</td>
<td>3.58</td>
<td>3091</td>
<td>19½</td>
<td>4%</td>
<td>33%</td>
<td>0%</td>
<td>6%</td>
<td>13% (05)</td>
</tr>
<tr>
<td>India</td>
<td>5.54</td>
<td>584</td>
<td>31%</td>
<td>2%</td>
<td>18%</td>
<td>5%</td>
<td>71%</td>
<td>47% (06)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>3.77</td>
<td>945</td>
<td>25½</td>
<td>0%</td>
<td>32%</td>
<td>14%</td>
<td>35%</td>
<td>12% (09)</td>
</tr>
<tr>
<td>Jordan</td>
<td>3.73</td>
<td>2111</td>
<td>24½</td>
<td>11½</td>
<td>49%</td>
<td>1%</td>
<td>12%</td>
<td>9% (06)</td>
</tr>
<tr>
<td>Lebanon</td>
<td>3.37</td>
<td>5171</td>
<td>24½</td>
<td>12½</td>
<td>20%</td>
<td>0%</td>
<td>52%</td>
<td>54% (06)</td>
</tr>
<tr>
<td>Tunisia</td>
<td>3.64</td>
<td>2395</td>
<td>25½</td>
<td>4%</td>
<td>49%</td>
<td>5%</td>
<td>15%</td>
<td>52% (08)</td>
</tr>
<tr>
<td>Turkey</td>
<td>2.40</td>
<td>4646</td>
<td>19½</td>
<td>2%</td>
<td>28%</td>
<td>2½</td>
<td>9%</td>
<td>52% (08)</td>
</tr>
<tr>
<td>Average</td>
<td>3.97</td>
<td>3253</td>
<td>25½</td>
<td>5%</td>
<td>39%</td>
<td>12%</td>
<td>30%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Source: World Development Indicators. Costa Rica’s share of high-technology exports in manufacturing exports is especially high due to the major foreign investment of Intel (microchips).

The disaggregation of FDI stocks into economic sectors confirms the inadequate composition of private investments. Figure 6.1 documents that the high share of FDI in Jordan between 2000 and 2007 primarily originates from foreign investments in the construction and tourism sectors which created few high-skilled jobs. This contrasts sharply with China where the high share of FDI primarily directed towards the manufacturing sector.

70 Using more disaggregated (8 digit) product level data, Diop et al. (2011) find that the share of high-technology exports accounts for 11 percent. This finding, however, cannot be compared to the ones in Table 1 since this more detailed analysis is not available for the other countries.
6.2.2 The lack of creative destruction at the firm level

The process of creative destruction (firm entry and exit) that led to technological upgrading in fast-growing East Asian or Eastern European economies is attenuated in Jordan. This lackluster performance in higher value added activities reflects the economy’s limited dynamism. The lack of economic dynamism also becomes apparent when examining the characteristics of firms in Jordan which we document in the following. They are all symptoms of a discriminatory business environment that is not the same for all firms and hence distorts the process of creative destruction. This is manifested, inter alia, in lower entry (and exit) as well as in lower growth of young SMEs than in relevant comparator countries in other parts of the world.

Jordan has one of the lowest firm entry rates (per capita) among the selected emerging economies with available data. Figure 6.2 illustrates firm entry densities for selected dynamic emerging economies. The entry density is measured by the number of newly registered limited liability firms per 1,000 working-age people (between ages 15-64). The data are available for 80 countries. Only 26 out of these 80 countries had an entry density below the one in Jordan in 2009 (0.74). In our sample of emerging economies, only India, Egypt, and Indonesia had a lower entry density due to the countries’ high shares of rural population and non-registered (informal) firms. For instance, the working-age population in Croatia is comparable to the one in Jordan but the average number of newly registered firms in Croatia (8,908) between 2004 and 2009 was almost five times higher. The lack of firm entry reflects the lack of creative destruction which is one of the potential causes preventing technological upgrading.

Even though entry levels are still relatively low, the yearly number of newly registered firms increased noticeably in recent years. Following a new law in 1997, Jordan created a new entity in charge of modernizing business registrations which fully implemented electronic firm registrations in 2002. The yearly number of newly registered firms increased steadily thereafter: from 1,104 new firms (density of

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71 We exclude countries which are financial offshore centers (such as Costa Rica) since the number of new firms is biased upwards due to the large numbers of entrants in the financial sector.
0.37) in 2004 to 2,737 new firms (density of 0.74) in 2009. Jordan was one of the few countries where the number of newly registered firms did not decline in the aftermath of the financial crisis in 2009.

**Figure 6.2: Average entry density for selected emerging economies from 2004-2009**


The age of Jordanian firms appears to be about average among the emerging economies, partly reflecting its relatively recent economic transition. Figure 6.3 compares the average age of private domestically owned enterprises across selected countries. In general, a higher average firm age reflects lower firm turnover (low entry-exit rates). However, countries with more recent economic transitions are also expected to have younger firms due to a higher number of newly registered privatized firms. This might explain the higher average age of firms in Chile or Brazil.

**Figure 6.3: Average age of firms in selected emerging countries**

Source: ICAs in different years: Jordan’06 (461 private domestic firms), Brazil’09 (1,146), Bulgaria’07 (949), Chile’06 (955), Croatia’07 (557), India’05 (2,208), China’05 (4,589), Indonesia’09 (1,256), Turkey08 (1,097).
Enterprise survey results show that young, small incumbent firms stagnate in terms of employment growth: small firms stay small. Jordan has relatively many small firms despite comparatively low entry rates because firms tend to enter small but do not grow. Figure 6.4 illustrates the correlation coefficients between firm size and firm age across different countries. We account only for firms which had less than 20 employees when they were established in order to exclude privatized firms (the correlation coefficient is even negative in Jordan otherwise). Figure 6.4 reveals that the reason for the large number of relatively small firms in Jordan is low firm growth (instead of high entry or exit rates). Incumbent firms hardly grow when they become older which signals a lack of competition from young, small firms or new market entrants. This finding contrast sharply with the positive correlations between firm size and firm age in most other emerging economies.

Figure 6.4: Correlation coefficient between firm age and firm size among firms

Source: ICAs in different years. Size is measured by a firm’s value added. We only capture firms which had less than 20 employees when they registered in order to exclude firms established due to privatizations.

The comparison of Jordan and Brazil demonstrates that firms start out larger in Jordan, but grow more slowly over time, such that firms in Brazil are about twice as large after ten years. Figure 5.5 illustrates the distribution of firm size by different age groups in Jordan and Brazil. The higher average firm age in Brazil (Figure 6.3) might hint to a lack of economic dynamism. A closer look, however, shows that the opposite is true. Across all industries, firms start out larger when young in Jordan, but grow more slowly so that firms in Brazil are about twice as large by age ten.

Figure 6.5: Relation between firm age and size: Jordan versus Brazil

Source: ICAs in different years; private domestic firms only.
In the following (Sections 4 and 5), it is argued that the main factors leading to a lack of firm entry or growth of small firms are (i) limited access to finance and (ii) barriers to competition due to an unequal and discretionary enforcement of rules and regulations raising the uncertainty of new investments in particular for small firms or potential entrepreneurs that do not have the experience or political connections to deal with this additional uncertainty.

6.3. Relating firm dynamics to employment creation

International experiences suggest that the lack of economic dynamism in Jordan comes at a significant cost in terms of employment, in particular for skilled labor. Most studies for various developed and developing countries find that young small firms, in particular a few fast-growing SMEs, create most employment growth. In addition, most microeconomic studies find a positive relation between employment creation and innovation, in particular product innovation. Besides, innovation is a main factor boosting the demand for skilled labor in developing countries.

Young small firms are the engine of job creation. Most studies find that young small firms have higher employment growth rates than older and larger firms (e.g., Mansfield, 1962, Hall, 1987, and Hart and Oulton, 1996). Recent studies further refine the relation between employment growth and firm dynamics: they find that a small group of fast-growing young SMEs (often referred to as “Gazelles”) typically create most new private sector jobs (e.g., Bottazzi and Secchi, 2007 or Coad and Hoelzl, 2010). These young high growth SMEs are found in all industries; if anywhere, they tend to be over-represented in knowledge-intensive services (Henrekson and Johansson, 2010). It follows that the engine of job creation stalls (i) if there is only a small pool of young firms due to low firm entry rates or (ii) if the growth opportunities of young small firms are implicitly constrained due to privileged access to regulatory services, credit, etc. by old large incumbent competitors (e.g. because of their political connections).

Innovation increases the demand for skilled labor and enhances overall employment growth, in particular, if it comes in the form of product innovation. In this regard, it is useful to distinguish between product and process innovation. Product innovation is generally found to increase the overall labor demand. Process innovation is associated with productivity growth which might, however, compensate labor. In fact, the overall employment effects of process innovation are less clear-cut. Nevertheless, both types of innovation are found to increases the demand for skilled labor in developing countries. Likewise, empirical findings show that fast-growing young SMEs (Gazelles) are more innovative. For instance, Goedhuys and Sleuwaegen (2009) among others reveal that innovation has a limited impact on the sales growth of the average firm but is much more important for the fastest growing group of firms.

These findings suggest that a dynamic private sector, which enables foreign technology adoption or diversification into new products, is essential to create new jobs to absorb the large number of Jordan’s

72 Likewise, Davidsson and Delmar (2006) show that most of the growth of younger and smaller firms is organic, while for larger and older firms, employment growth mostly comes through acquisitions.
73 For instance, empirical studies for developed countries found that 5 to 10 percent of the firms deliver 50 to 80 percent of overall employment creation (e.g., Acs et al., 2008 or Coad and Hoelzl, 2010).
74 See, for example, van Reenen (1997), Blanchflower and Burgess (1998), Piva and Vivarelli (2004), or Fuentes and Gilechrist (2005). Moreover, Coad and Hoelzl (2010) and Vivarelli (2012) provide extensive literature surveys on the relation between innovation and job creation.
university graduates in the following years. The low rates of newly registered firms limit the potential for the emergence of high growth SMEs (Gazelles) in Jordan. At the same time, the lack of creative destruction and firm entry into higher value added activities (product innovation) constrains employment growth and the demand for skilled labor. Thus, the factors, that have been identified as main drivers of employment creation (for skilled labor) in other countries, are attenuated in Jordan.

What explains Jordan’s lackluster performance in higher value added activities given its relatively sound level of human capital? Do legal business regulations hold back firm entry and growth in new economic activities? To answer this question, the next section analyzes Jordan’s legal business regulations in more detail and puts them into perspective.

6.4. Jordan’s business regulations relative to international peers

Jordan improved its legal business environment since 2005. The government streamlined the number and costs of various regulatory procedures which is reflected in the evolution of the country’s Doing Business Indicators. For instance, the official legal costs to start a business have been reduced by 81 percent. Likewise, the costs (time) to obtain a construction permit has shrunk by 47 percent (22 days). Moreover, Table 6.2 documents that the number and costs of legal procedures to get access to electricity as well as the number and levels of tax payments are relatively low in Jordan as compared to international peers. Similarly, labor market regulations do not appear particularly restrictive as compared to its peers. The Doing Business Indicators (“Employing Workers”) show that the rigidity of working hours (e.g. measured by the legal premia for overtime work), difficulties or costs to reduce labor redundancies (e.g. severance pay), and minimum wages are comparable or below legal regulations in peer countries.

Nevertheless, legal reforms enabling broad-based access to bank finance, investor protection, and contract enforcement appear urgent. In particular, the official legal regulations to protect investor and enforcing contracts have not changed significantly since 2004. The latter indicates a problem of implementation in the judiciary system since ‘enforcing contracts’ measures the number of official procedures, time and costs to enforce a sale of goods dispute from the moment the plaintiff files the lawsuit until actual payment. Investor protection measures the strength of minority shareholder protections against misuse of corporate assets by managers for their personal gain. In other words, it is an inverse measure of the degree of accountability of a director vis-à-vis minority shareholders in larger firms. Therefore, it also measures the degree of discretion that allows managers to struck deals outside of corporate control mechanisms. While the low ranking in contract enforcement reveals room for discretion in the judiciary system, the low ranking of investor protection suggest similar room for discretion in the corporate sector. Thus, both indicators reflect high degrees of discretion in the system that can potentially be exploited to discriminate between firms or to gain privileges. This point is elaborated in more detail in the following section.

75 They include fees for obtaining a vocational license from GAM, registering with the chambers of industry or commerce, and other filing and registration fees for a representative firm with a start-up capital of about 15,000 JD.
76 The Doing Business Indicators measure the time and costs of official legal procedures for a representative domestic firm based in the capital or the largest business center of the country. Thus, comparing the business environment between Jordan, Brazil, and India compares the regulations for Amman, Sao Paolo, and New Delhi.
77 ‘Investor protection’ measures the strength of minority shareholder protections against misuse of corporate assets by directors for their personal gain.
78 The index is based on the extent of disclosure of information to minority shareholder, the personal liability of managers, and the ability of minority shareholder to sue managers.
Table 6.2: Doing Business Rankings 2011 for selected emerging economies

<table>
<thead>
<tr>
<th>Overall</th>
<th>Starting a business</th>
<th>Dealing with Construction Permits</th>
<th>Registering Property</th>
<th>Getting Credit</th>
<th>Protecting Investors</th>
<th>Paying Taxes</th>
<th>Trading Across Borders</th>
<th>Enforcing Contracts</th>
<th>Doing a Business</th>
<th>Getting Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>39</td>
<td>27</td>
<td>90</td>
<td>53</td>
<td>48</td>
<td>29</td>
<td>45</td>
<td>62</td>
<td>67</td>
<td>110</td>
</tr>
<tr>
<td>Tunisia</td>
<td>46</td>
<td>56</td>
<td>86</td>
<td>65</td>
<td>98</td>
<td>46</td>
<td>64</td>
<td>32</td>
<td>76</td>
<td>38</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>59</td>
<td>49</td>
<td>120</td>
<td>66</td>
<td>9</td>
<td>46</td>
<td>69</td>
<td>91</td>
<td>87</td>
<td>90</td>
</tr>
<tr>
<td>Turkey</td>
<td>71</td>
<td>61</td>
<td>155</td>
<td>44</td>
<td>78</td>
<td>65</td>
<td>79</td>
<td>80</td>
<td>51</td>
<td>120</td>
</tr>
<tr>
<td>Croatia</td>
<td>80</td>
<td>67</td>
<td>143</td>
<td>102</td>
<td>49</td>
<td>133</td>
<td>32</td>
<td>100</td>
<td>48</td>
<td>94</td>
</tr>
<tr>
<td>China</td>
<td>91</td>
<td>151</td>
<td>179</td>
<td>40</td>
<td>67</td>
<td>97</td>
<td>122</td>
<td>60</td>
<td>16</td>
<td>75</td>
</tr>
<tr>
<td>Jordan</td>
<td>96</td>
<td>95</td>
<td>93</td>
<td>101</td>
<td>150</td>
<td>122</td>
<td>21</td>
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<td>130</td>
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<td>Lebanon</td>
<td>104</td>
<td>109</td>
<td>161</td>
<td>105</td>
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<td>97</td>
<td>30</td>
<td>93</td>
<td>130</td>
<td>125</td>
</tr>
<tr>
<td>Dom. Rep.</td>
<td>100</td>
<td>140</td>
<td>105</td>
<td>105</td>
<td>76</td>
<td>65</td>
<td>94</td>
<td>45</td>
<td>93</td>
<td>154</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>121</td>
<td>122</td>
<td>141</td>
<td>46</td>
<td>98</td>
<td>168</td>
<td>138</td>
<td>73</td>
<td>129</td>
<td>121</td>
</tr>
<tr>
<td>Brazil</td>
<td>126</td>
<td>120</td>
<td>127</td>
<td>114</td>
<td>98</td>
<td>79</td>
<td>150</td>
<td>121</td>
<td>118</td>
<td>136</td>
</tr>
<tr>
<td>Indonesia</td>
<td>129</td>
<td>155</td>
<td>71</td>
<td>99</td>
<td>126</td>
<td>96</td>
<td>131</td>
<td>39</td>
<td>156</td>
<td>146</td>
</tr>
<tr>
<td>India</td>
<td>132</td>
<td>166</td>
<td>181</td>
<td>97</td>
<td>40</td>
<td>46</td>
<td>147</td>
<td>109</td>
<td>182</td>
<td>128</td>
</tr>
</tbody>
</table>

The Doing Business indicator ‘Getting Credit’ focuses on creditor rights, credit information, and collateral legislation which are all restrictive in Jordan. Moreover, international comparisons show the limited access to long-term finance; Table 6.1 reveals that the average share of firms using bank finance for investments was the lowest of all countries amounting to only nine percent. Access to long-term external finance is generally considered as an important factor promoting riskier investments in higher added value projects as it facilitates risk-sharing.

The collateral required in Jordan and other MENA countries is among the highest in the world excluding in particular small firms from access to credit. The high collateral requirements suggest an inefficient enforcement of collateral legislation. Figure 6.6 (left graph) as well as the low ranking of Jordan in the Doing Business Indicator ‘Getting Credit’ shows that collateral legislation in Jordan is restrictive and not much different from other MENA countries. Often land is the only asset that is recognized as appropriate collateral for bank loans while large fractions of firm owners are de facto excluded from (access to) land ownership. Keefer (2007) shows that banks in MENA often use collateral requirements as a credit-rationing tool instead of a mechanism allocating credit based on risk analysis. Similarly, access to credit information is very limited in Jordan as compared to regional or international peers (Figure 6.6, right graph). Jordan does not have an operating credit bureau which restricts banks information on potential creditors, in particular, on smaller firms where the information asymmetry is most pronounced. Thus, the limited access to credit constrains firm growth, in particular of small firms, which helps explain why small firms stay small in Jordan.
The restrictive access to credit can to some extent be explained by barriers to (foreign) entry that reduce competition and exclude firms from financial services. Jordan has a highly concentrated market in which the three largest banks hold 80 percent of banking assets. Barriers to entry arise from the lack of transparency in financial system, for instance, due to the restrictive access to credit information or collateral. Moreover, Jordan has a very low share of foreign ownerships in banking as compared to regional or international peers (Figure 6.7). The reform agenda rests on increasing competition by allowing new entrants (particularly foreign banks) and strengthening supervisory and regulatory institutions.

The legal business environment only partially explains Jordan’s lackluster performance in higher value added activities which is reflected in a lack of firm entry or growth of small firms. Table 6.2 and 6.3 show that, overall, business regulations in Jordan are about average as compared to more dynamic emerging economies in East Asia, Eastern Europe, or Latin America. The evidence so far suggests that they can at best only partly explain the low quality of investments.
6.5. A possible explanation: policy implementation uncertainty

The first part of the chapter has already documented that firm characteristics in Jordan reflect symptoms of a business environment that is not the same for all firms. These symptoms well describe Jordan’s discriminatory business environment that prevents firm entry, exit, and growth leading to a lack of creative destruction and technological upgrading. These symptoms cannot be satisfactorily explained by Jordan’s relatively unbiased legal business regulations (apart from access to finance) and hence must originate from the discriminatory implementation of these rules and regulations which we document in the following. In the following, it is argued that an unequal and discretionary implementation or enforcement of rules and regulations raise the uncertainty of potential new investments reducing their expected profitability. This creates a de facto business environment that discriminates in particular against smaller firms or potential entrepreneurs that do not have the experience or political connections to deal with this additional uncertainty.

The large share of (Amman based) firms who believe that rules and regulations will NOT be consistently and predictably applied might explain why legal reforms did not lead to riskier investments in higher value added products or technologies. Figure 6.8 demonstrates that 42 percent of all firms in Jordan report inconsistent and unpredictable policy implementations. A unique feature of the Jordanian sample is, however, the large difference in policy implementation perceptions between firms located in the greater Amman area and firms in the periphery (Irbid and Al-Zarqa). In particular, 63 percent of firms based in the greater Amman area report inconsistent and unpredictable policy implementations as compared to only 24 percent in peripheral areas. Notably, these regional differences in policy implementation perceptions are typically not observable in the other countries. Given that the greater Amman area accounts for most of Jordan’s economic activity, the widespread discontent with policy implementation should be regarded as symbolic for most of Jordan’s internationally competitive businesses. Figure 6.8 also reveals that the high share of Amman-based firms complaining about inconsistent policy implementation is among the highest in the region; since “consistent and predictable” can be interpreted in different ways, we only refer to countries in the region with a comparable (business) cultural background.

Figure 6.8: Share of firms who “disagree” that implementation of rules is “consistent and predictable”

Source: ICAs in different years (all firms). Survey question: “Do you agree that government officials’ interpretations of the laws and regulations affecting this establishment are consistent and predictable?” A unique phenomenon in the Jordanian data is the substantial difference between firm perception in Amman (business center) and the periphery; apart from Amman (242 firms) the survey only covers firms in Al-Zarqa (97) and Irbid (164).
The difference in perception of the quality of policy implementation between Amman and smaller municipalities is not straightforward to explain; reportedly, the majority of the handful of firms in smaller municipalities relies on closer personal relations with public officials implying privileged access to local administrations when needed. Table 6.3 shows that three-quarter of the firms based in peripheries conform to government policy implementation while almost two-third of firms in Amman report inconsistencies. The differences are not due to special economic zones (having streamlined implementation procedures) in peripheral regions. While firms located in qualifying industrial zones (QIZ) complain somewhat less about policy implementation (last two rows of Table 6.3), the discrepancy between Amman and the rest remains. Moreover, the sample does not cover firms located in Aqaba which hosted the only operating development zone in 2006. Interestingly, the quality of regulatory services is not systematically better in peripheral regions. Thus, regional differences might simply reflect different attitudes or access to the government (municipal administrations). Reportedly, however, surveillance of implementing agencies is stricter for firms based in Amman. Another possible explanation is that firms outside of Amman face lower competition implying that higher costs due to variations in regulatory services are less important. In fact, firms outside of Amman are, on average, smaller, less likely to export, and operate more often in the service sector.

Among the firms based in Amman, SMEs complain disproportionately about inconsistent policy implementation. Table 6.3 lists that 65 percent of the 129 Amman-based SMEs believe that the implementation of rules and regulations is not consistent and predictable.

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79 Firms outside of Amman wait, on average, six (three) days longer for an operating (import) license but five (three) days less for construction permits (imports to clear customs).
Table 6.3: Share of firms who “disagree” that implementation of rules is “consistent and predictable”

<table>
<thead>
<tr>
<th>Share of firms who “disagree” that implementation of rules is “consistent and predictable” across type of firms</th>
<th>Total</th>
<th>in Amman</th>
<th>outside Amman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>42%</td>
<td>63%</td>
<td>24%</td>
</tr>
<tr>
<td>[496]</td>
<td>[237]</td>
<td>[259]</td>
<td></td>
</tr>
<tr>
<td>Small (5&lt;employees&lt;20)</td>
<td>34%</td>
<td>64%</td>
<td>16%</td>
</tr>
<tr>
<td>[179]</td>
<td>[86]</td>
<td>[113]</td>
<td></td>
</tr>
<tr>
<td>Medium (20&lt;employees&lt;100)</td>
<td>50%</td>
<td>65%</td>
<td>29%</td>
</tr>
<tr>
<td>[156]</td>
<td>[114]</td>
<td>[82]</td>
<td></td>
</tr>
<tr>
<td>Large (100&lt;employees)</td>
<td>43%</td>
<td>56%</td>
<td>31%</td>
</tr>
<tr>
<td>[121]</td>
<td>[57]</td>
<td>[64]</td>
<td></td>
</tr>
<tr>
<td>Food sector</td>
<td>40%</td>
<td>55%</td>
<td>18%</td>
</tr>
<tr>
<td>[93]</td>
<td>[55]</td>
<td>[38]</td>
<td></td>
</tr>
<tr>
<td>Textiles &amp; Garments</td>
<td>51%</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>[95]</td>
<td>[48]</td>
<td>[47]</td>
<td></td>
</tr>
<tr>
<td>Chemicals</td>
<td>67%</td>
<td>71%</td>
<td>60%</td>
</tr>
<tr>
<td>[36]</td>
<td>[21]</td>
<td>[15]</td>
<td></td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>39%</td>
<td>54%</td>
<td>28%</td>
</tr>
<tr>
<td>[125]</td>
<td>[56]</td>
<td>[69]</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>33%</td>
<td>59%</td>
<td>19%</td>
</tr>
<tr>
<td>[115]</td>
<td>[41]</td>
<td>[74]</td>
<td></td>
</tr>
<tr>
<td>Construction &amp; Transport</td>
<td>44%</td>
<td>63%</td>
<td>25%</td>
</tr>
<tr>
<td>[32]</td>
<td>[16]</td>
<td>[16]</td>
<td></td>
</tr>
<tr>
<td>Foreign firms</td>
<td>31%</td>
<td>50%</td>
<td>24%</td>
</tr>
<tr>
<td>[52]</td>
<td>[14]</td>
<td>[38]</td>
<td></td>
</tr>
<tr>
<td>Domestic firms</td>
<td>43%</td>
<td>63%</td>
<td>24%</td>
</tr>
<tr>
<td>[442]</td>
<td>[222]</td>
<td>[220]</td>
<td></td>
</tr>
<tr>
<td>Located in QIZ</td>
<td>31%</td>
<td>75%</td>
<td>16%</td>
</tr>
<tr>
<td>[49]</td>
<td>[12]</td>
<td>[37]</td>
<td></td>
</tr>
<tr>
<td>Located outside QIZ</td>
<td>44%</td>
<td>62%</td>
<td>25%</td>
</tr>
<tr>
<td>[447]</td>
<td>[225]</td>
<td>[222]</td>
<td></td>
</tr>
</tbody>
</table>

Source: ICA 2006; number of firms with non-missing values [in brackets].

Firms in the internationally highly competitive chemical, textile, and garment sectors complain more often about unpredictable policy implementation suggesting that it implies a significant extra cost. Figure 6-9 illustrates that chemical firms in Jordan suffer disproportionately from inconsistent policy implementation relative to chemical firms in most other countries. Chemical products (pharmaceuticals) are an important export sector in Jordan. The bulk of firms in the sector specialize in generic products which face strong international competition. Thus, higher uncertainty and relatively minor changes in operating costs can create substantial differences in the international competitiveness of Jordanian firms in the sector.
Figure 6.9: Inconsistent policy implementation: Chemical sector

Source: ICAs varying years; number of chemical firms: Chile: 72, India: 295, Indonesia: 77, Jordan: 36, Brazil: 145.

There exist various anecdotes illustrating inconsistent and unpredictable policy implementations in Jordan. For instance, profits from web based ICT service exports (online sales) have been recently exempted from income taxes in the export exemption bylaw. Tax officials are allowed to request three different types of evidence to implement the exemptions for service exports from online sales: (i) the IP address of the buyer, (ii) the foreign money transaction, or (iii) direct evidence of usage of the exported service outside of Jordan. Thus, officials have a substantial amount of discretion since the latter is almost impossible to verify. In fact, the income tax exemptions for online sales profits have been granted to some firms but not to others. Moreover, government officials are required to estimate the amount of sales, foreign labor, etc. for (smaller) firms with incomplete bookkeeping or missing receipts leaving substantial room for discretion. In practice, it has often been reported that officials negotiate with these firms about the numbers they will report.

Indeed, firm survey results reveal large variations in government officials’ implementation of legal regulations across firms in Jordan relative to most other emerging countries. Table 6.4 summarizes the averages and dispersion of the number of days that firms had to wait for different regulatory services across countries. The average waiting time to obtain a construction permit, import license, or to clear customs for imports is among the lowest in Indonesia and Jordan which is consistent with the Doing Business results in Table 6.2. The firm survey results confirm that legal business regulations are, on average, relatively competitive in Jordan. However, there exist large variations across firms in Jordan: the coefficient of variation in waiting times for different regulatory services is higher than in most other emerging economies.

80 The comparison of average waiting times across countries might be regarded with caution for some regulatory services. For instance, receiving or renewing an operating license might be associated with mandatory complementary registrations or inspections (e.g. safety or health inspections) in some countries which would bias the mean upwards. The comparison of the dispersion of waiting times across countries, however, does not suffer from this bias since the coefficient of variation (s.d. / mean) corrects for such level differences across each country.

81 The coefficient of variation, which is defined as the ratio of the standard deviation to the mean, is a normalized measure of dispersion of a probability distribution. The coefficient of variation is should be used only for measures which take non-negative values. It is independent of the unit in which the measure has been taken (in contrast to the standard deviation which can only be understood in the context of the mean of the data). Thus, one should use the coefficient of variation instead of the standard deviation for comparison between data with widely different means.
Table 6.4: Averages and dispersion (Coefficients of Variation) of firms’ waiting days for regulatory services

<table>
<thead>
<tr>
<th></th>
<th>Averages (mean / sd)</th>
<th>Coefficient of Variation (mean / sd)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>construction permit</td>
<td>operating license</td>
</tr>
<tr>
<td>Indonesia</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>Jordan</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>Morocco</td>
<td>61</td>
<td>4</td>
</tr>
<tr>
<td>Croatia</td>
<td>182</td>
<td>26</td>
</tr>
<tr>
<td>India</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>94</td>
<td>62</td>
</tr>
<tr>
<td>Turkey</td>
<td>42</td>
<td>37</td>
</tr>
<tr>
<td>Chile</td>
<td>143</td>
<td>84</td>
</tr>
<tr>
<td>Brazil</td>
<td>139</td>
<td>83</td>
</tr>
</tbody>
</table>

Source: ICAs in different years. Survey question: “What was the wait, in days, to obtain a construction permit, operating license, import license, or clear customs for imports?” The dispersions across firms are measured by the coefficient of variation (standard deviation divided by the mean).

**These large variations in Jordan sometimes originate from imperfect rules leading to unequal and discretionary implementations.** For instance, tax officials can grant payment delays to individual firms depending on their past performance, i.e., the accuracy of past tax payments. This well intentioned incentive provides tax officials with some degree of discretion. Effectively, only large firms have been reported to benefit from this clause. Likewise, the waiting time for imports or exports to clear customs depends on the firm’s past performance (problems) at customs. Furthermore, there exist overlapping responsibilities among different government bodies leading sometimes to different interpretations of the same law by officials from different departments. For instance, the commercial registry maintains its own database allocating product classifications for each registered firm. This classification might, however, not comply with the one in the GAM which is using its own classifications. In this case, a request is send back which has been the case for a glass producer who has been assigned with different codes due to the use of alternative cutting practices with diamonds or lasers.

**Likewise some laws provide the implementing agencies with substantial degrees of discretion.** For instance, the customs law gives authorities the right to modify customs duties retroactively. Indeed, authorities recently implemented retroactive customs duties of 30 percent on all software licenses imported to Jordan over the last three years which in the end have been taken back due to pressure from the ICT business association. Moreover, the telecommunication authority and regulatory commission has suddenly raised a “fee for the right of way” for using telecommunication towers to send frequencies. This change in regulation occurred without the issuance of a bylaw which would transparently have regulated the fees for the right of way.

**The large variations in government officials’ implementation of legal regulations in Jordan persist among firms in the same industry; the variations across firms suggest that a number of firms (are able to) struck deals to speed up the implementation of legal procedures.** Figure 6.10 and 6.11 illustrate that 50 percent of firms in the chemical sector (other manufacturing) waited only 1 day (2 days) to obtain their operating license. In contrast, firms between the 50th and 75th (90th) percentile waited between 1 and 7 (15) days in the chemical sector and between 2 and 7 (9) days in other manufacturing. The dispersion within sectors is similar for other regulatory services. In the textile & garment sector, 10 percent of firms
waited only 5 days to obtain a construction permit while the next 80 percent waited between 5 and 120 days. In other manufacturing, the median firm waited 7 days for imports to clear customs while the next 40 percent of firms waited between 7 and 21 days.

**Figure 6.10: Time to obtain an operating license (left) or an import license (right) varies substantially across firms operating in the same industry**

![Diagram showing variability in days to obtain an operating license and import license across different sectors.]

Source: Jordan ICA 2006. Survey question: “In reference to the application for an operating / import license, what was the wait, in days, to obtain that license from the day this establishment applied for it to the day it was granted?”

**Figure 6.11: Time to obtain a construction permit (left) or to clear customs of imports (right) varies substantially across firms operating in the same industry**

![Diagram showing variability in days to obtain a construction permit and clear customs across different sectors.]

Source: ICAs in different years. Survey question: “In reference to the application for a construction permit, what was the wait, in days, to obtain that permit from the day this establishment applied for it to the day it was granted?” “When this establishment imported material inputs, what was the average number of days that it took from the time goods arrived to their point of entry (e.g. port, airport) until the time these goods could be claimed from customs?”

**Regression analysis shows that firms undertake costly actions to deal with policy implementation uncertainty.** The large variations across firms’ access to regulatory services can originate either from privileged access of a subset of firms (e.g. large politically connected firms) or from differences in the performance of officials in the implementing public administration (e.g. GAM). While both factors might play a part in Jordan, regression analysis suggests that firms augment costly actions when they face higher implementation uncertainty suggesting that privileges do exist and pay off. In particular, we group firms by their location, sector, and size. This leads to 30 groups (cells) of firms (each group containing at least 5 firms); we compute the coefficient of variation for the perceived consistency of policy implementation...
across firms in each group. We refer to this explanatory variable as policy implementation uncertainty. In addition, we compute the average management time spent dealing with government officials (lobbying) across firms in each group (dependent variable) which we consider measuring firm actions to influence the outcome of policy implementation. The regression results in Table 6.5 show that the uneven implementation of policies induces firms to spend more management time dealing with officials.

Table 6.5: Regression results show that higher policy implementation uncertainty induces senior managers to spend more time with government officials and report bribes as more commons

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Average management time (in %) spent dealing with officials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient of variation of firm reporting implementation as consistent and predictable</td>
<td>.271** (2.48)</td>
</tr>
<tr>
<td>R-squared</td>
<td>.429</td>
</tr>
<tr>
<td># of location-sector-size firm groups</td>
<td>30</td>
</tr>
</tbody>
</table>

Cells are grouping firms by location, sector, and size. There are 30 location-sector-size cells and each has at least 5 firm observations. The averages and coefficients of variation are computed over all firms in each cell. Each entry reflects the results of a regression including sector dummies and heteroscedasticity robust standard errors; t-values are presented in parenthesis; * and ** indicate significance levels at the 10 percent and 5 percent level, respectively. The correlation coefficient between management time and reported bribes is 0.45.

The percentage of management time dealing with officials is relatively low compared to other emerging countries but varies substantially across firms in Jordan. The high variation in management times dealing with officials (Figure 6.12) suggests that the need or willingness to influence policy implementation by lobbying differs substantially across firms in Amman.

Figure 6.12: Management time dealing with officials: averages (left), coefficients of variation(right)

Source: ICAs in different years (all firms). Survey question: “What percentage of total senior management's time was spent in dealing with requirements imposed by government regulations?” The dispersions across firms are measured by the coefficient of variation (mean divided by the standard deviation).

An alarming 52 percent of all firms based in Amman reported bribes as common in their line of business in 2006. Table 6-6 summarizes firms’ actions to influence officials by type of firms. Firms based in Amman spend more management time dealing with officials and are three times more likely to
report bribes. The share of firms witnessing bribes is particularly large in the textile & garment (45 percent), construction & transport (39 percent), or chemical (36 percent) sectors.82

Table 6.6: Management time dealing with government officials (left), share of firms reporting bribes (right)

<table>
<thead>
<tr>
<th>Firms actions to influence policy implementation across type of firms</th>
<th>Percentage of management time spent dealing with officials</th>
<th>Share of firms agreeing with the statement that “bribes are common”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>7.9% [503]</td>
<td>31% [429]</td>
</tr>
<tr>
<td>Firms located in Amman</td>
<td>11.5% [242]</td>
<td>52% [174]</td>
</tr>
<tr>
<td>Firms NOT located in Amman</td>
<td>4.9% [261]</td>
<td>17% [255]</td>
</tr>
</tbody>
</table>

Source: ICA 2006; number of firms with non-missing values [in brackets].

Regression analysis for Jordan suggests that policy implementation uncertainty reduced (perceived) pressure from domestic competition. We group firms in Jordan by their location, sector, and size. This leads to 30 groups of firms (each containing at least 5 firms). For each group, we compute the coefficient of variation and the spread between the 75th and 25th percentiles of the perceived consistency of policy implementation across firms and refer to this variable as policy implementation uncertainty. In addition, we include control variables in the regressions measuring the (initial) size, location, age, and exporting status of firms.83 We find that higher policy implementation uncertainty is associated with a lower degree of domestic competition. In contrast, it is not correlated with pressure from foreign competition (specification 4); taken together, this suggest an indirect test against spurious correlation since variations (uncertainty) in policy implementation are expected to reduce domestic competition but should not affect competition from imports.

Moreover, the regression results for Jordan show that the higher the disagreement about whether implementation is “consistent and predictable” within a location-sector-size firm group, the lower was the employment growth or probability to innovate of firms in these groups. We measure the probability to innovate with a probit regression whereby the dependent variable is a dummy variable which is equal to one if a firm either introduced a new products, a new process, or licensed a new technology within the last three years and zero otherwise. Around 50 percent of firms in the sample were innovators according to this definition. We find that higher policy implementation uncertainty is negatively correlated with employment growth and the probability to innovate (after controlling for employment effects of size, age, location, or exporting status of firms).

The findings suggest that policy implementation uncertainty restricts economic dynamism and hence employment growth. Recent findings show that fast-growing SMEs (‘Gazelles’), which grew by an average of 20 percent or more over more than four years, create a significant number of private sector jobs in emerging economies, including MENA countries. These firms are typically few in MENA, however, their characteristics seem to indicate that these firms are also more likely to be innovators or

82 Reportedly, informal gifts (to get something done) are sometimes rather understood as a commission ("what is in for me") instead of a bribe.
83 The results for the control variables are consistent with findings in the literature on firm growth. That is, we find that older and initially larger firms had lower employment growth while smaller and exporting firms had higher employment growth.
adopt foreign technologies (Stone and Badawy, 2011). Our results suggest that the additional (implementation) uncertainty prevents firms from undertaking riskier investments such as introducing new products and processes, or licensing new technologies. Similarly, the adverse impact of implementation uncertainty on domestic competition appears to play a role in distorting economic dynamism. These factors help explain the small number of fast-growing SMEs in Jordan and hence the lack of private sector employment growth. Instead of entering new markets (product niches) or adopting new foreign technologies, firms tend to focus on existing markets or processes restricting firm growth.

Table 6.7: Regression results for Jordan show that policy implementation uncertainty reduces competition and firm growth

<table>
<thead>
<tr>
<th>Dependent variables:</th>
<th>Pressure from domestic competition to reduce costs</th>
<th>...from foreign competition</th>
<th>Employment growth 2003-06</th>
<th>Probability to innovate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient of Variation of firms reporting implementation as consistent and predictable</td>
<td>.822</td>
<td>-613*</td>
<td>-647**</td>
</tr>
<tr>
<td></td>
<td>(1.75)</td>
<td>(-.97)</td>
<td>(-2.43)</td>
<td>(-1.76)</td>
</tr>
<tr>
<td></td>
<td>Difference 75-25 percentile firms reporting implementation as consistent and predictable</td>
<td>-.155**</td>
<td>- .034**</td>
<td>- .304**</td>
</tr>
<tr>
<td></td>
<td>(2.04)</td>
<td>(-1.95)</td>
<td>(-1.30)</td>
<td>(-1.85)</td>
</tr>
<tr>
<td>Size of firm</td>
<td>.102</td>
<td>-.125*</td>
<td>-.090</td>
<td>.077</td>
</tr>
<tr>
<td></td>
<td>(-1.57)</td>
<td>(-1.62)</td>
<td>(-1.19)</td>
<td>(-.82)</td>
</tr>
<tr>
<td>Dummy if firm located in Amman</td>
<td>-.011</td>
<td>.012</td>
<td>-.005</td>
<td>.178</td>
</tr>
<tr>
<td></td>
<td>(-.07)</td>
<td>(-.08)</td>
<td>(-.83)</td>
<td>(.77)</td>
</tr>
<tr>
<td>Number of employees in 2003 (log)</td>
<td>.007</td>
<td>.006</td>
<td>.004</td>
<td>.004**</td>
</tr>
<tr>
<td></td>
<td>(1.50)</td>
<td>(1.34)</td>
<td>(.05)</td>
<td>(3.64)</td>
</tr>
<tr>
<td>Dummy if firm exporter</td>
<td>.002</td>
<td>.008</td>
<td>.829**</td>
<td>-.103**</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(.05)</td>
<td>(.59)</td>
<td>(.29)</td>
</tr>
<tr>
<td>R-squared</td>
<td>.113</td>
<td>.120</td>
<td>.122</td>
<td>.336</td>
</tr>
<tr>
<td>Number of firms</td>
<td>468</td>
<td>467</td>
<td>467</td>
<td>419</td>
</tr>
</tbody>
</table>

All regressions include sector dummies (apart from specification (1)), heteroscedasticity robust standard errors that are clustered at the cell level; t-values are presented in parenthesis; * and ** indicate significance levels at the 10 percent and 5 percent level, respectively. The average and standard deviation are computed over grouped firms in each location-sector-size cell. Innovation is a dummy variable equal to 1 if the firm introduced a new product, new process, or licensed a foreign technology in the last 3 years and 0 otherwise (roughly half of the firms in sample innovated).

This chapter concludes that although policy reforms are urgent in some areas, the mix of imperfect rules with the unequal and discretionary implementation and enforcement of these rules is what hinders job creation in higher value added sectors in Jordan. A transparent and systematic approach to policy implementation can increase the expected profitability of higher value added investments. This, in turn, will increase domestic competition triggering firms to invest in the adaptation of new foreign technologies to stay ahead of competitors. Such higher quality of private sector investments is the basis to create productive employment opportunities for the youth and to achieve high and inclusive economic growth.
The challenge for the governments is to implement policies consistently and predictably in order to give clear signals to existing and would-be investors of a more equal level playing field for all. Strengthening and sustaining investment in higher value added products will depend on whether policymakers will be able to convince existing and would-be investors that they are ready to reduce discretionary and discriminatory ways of implementing policies. Only then, policy reforms will have the expected impact on (the quality of) private investments and employment. However, changing expectations of investors by getting at the root of the rents and privileges is a challenging task as it requires, e.g., a reform of Jordan’s public administration. In the following, we highlight specific recommendations to reduce policy implementation uncertainty and improve the level playing field among firms in Jordan.

6.6. Policy recommendations

While the focus in the past has often been on legal reforms modernizing rules and regulations, authorities should focus more on the consistent and non-discriminatory implementation of these rules. Policymakers must acknowledge and account for the fact that legal regulations are not implemented consistently and might potentially even be used to discriminate or benefit certain groups of firms. Hence, it is important to focus on institutional changes that minimize discretion in policy implementation as well as official’s latent incentives to discriminate between firms.

Chapter 2 has already outlined institutional reforms that improve the accountability of the public administration which is a key in Jordan to ensure the consistent implementation of rules and regulations. A public administration reform may include the following additional elements:

- Transfer responsibilities and decision-making to lower tiers of the public administration; at the same time institutionalize the public administration by making (lower tier) civil servants accountable to a broader base instead of a single minister or high rank official.
- Restructure recruitment and promotion schemes in public administrations based on merit or commitment to a national development strategy instead of regional and sectarian considerations.

Increase the capacity of the public administration. For example, public officials dealing with new products (e.g. ICT software, patented pharmaceuticals) must be trained to understand the specifics and caveats affecting the regulations of these products. There exist various cases where the unavailability of specialized personnel at customs offices led to variations in costs. For instance, ICT conferencing equipment recently became subject to customs fees even though it should be exempt being part of ICT equipment. Moreover, international software licenses are subject to 16 percent sales tax because the tax department does not classify software licenses as products. Similarly, firms in the gaming industry should be classified as (content developing) software companies. Instead they are typically classified by government officials as entertainment businesses which are subject to additional fees and penalties.

Temporary laws and the frequent changes in government add to policy implementation uncertainty. Most new laws are temporary, e.g. the new income tax or investment law. Temporary laws and permanent discussions of possible amendments increase uncertainty. For instance, one potential investor indicated that she welcomes the tax exemptions provided in the newly established development zones but she is concerned that the incentives might be removed again in the future. The frequent changes in government add to policy implementation uncertainty. Potential investors anticipate that a new minister might amend temporary laws.
Strengthen the dialogue between the government and the private sector. The dialogue between the government and businesses about new regulations, industrial policies, incentive schemes, etc. should be frequent, systematic, and on an equal basis. Instead, the dialogue has been reported to be predominantly based on personal relations. For instance, firms frequently complain that the government does not consult the private sector appropriately when it issues or amends legislations, e.g., changes in tariffs (see USAID Fiscal Reform Project 2011). In this regard, the specialized business associations of the ICT (Intaj) or the pharmaceutical sector successfully advocate complains about inconsistent policy implementations in their industries. If appropriate, they often successfully lobby for necessary amendments in bylaws or regulations to reduce the discretion of government officials and to close regulatory loopholes. For instance, Intaj uncovered a discrimination of service imports due to an additional seven percent tax on contracting foreign consultants. It is currently negotiating the removal of the fee through the Ministry of ICT. The Chambers of Commerce and Industry should play a similar role for the businesses which they represent. Reportedly, this is merely the case. The representation of SMEs in the Chamber of Commerce or Industry should also be checked and if necessary adjusted.

Streamline the number of authorities and institutions responsible for policy implementation, improve the communication between them, and remove overlapping responsibilities. For instance, three different institutions are officially responsible to clear ICT imports at customs: the customs department, the telecommunication authority, and the institution for standards metrology. Moreover, the communication between different government bodies should be improved to void overlapping responsibilities and ambiguous policy implementation. Reportedly, some ministries still officially communicate with each other by sending letters. In this regard, the recent announcement by the government, that all investment-related agencies will be merged into one entity to facilitate doing business in Jordan, is a step in the right direction.

The propagation of one-stop-shops for different regulatory services is a step in the right direction; however, all representatives from the different government agencies must have the authorities to grant the corresponding approvals while conflicts between regulators must be addressed in order to effectively speed up the length of procedures. For instance, a representative of the municipality of Amman was made present at the company registry of the one-stop-shop which reduced the number of procedures and the time to establish a business. Reportedly, however, not all representatives from government agencies in one-stop-shops (outside of the development or free zones) have the necessary authority to grant the licenses or permits. Instead, they are sometimes required to send the documents to their corresponding agencies to receive the approvals. Furthermore, it has been reported that the communication and coordination between representatives from different government bodies in one-stop-shops is insufficient. A promising approach to improve the performance of one-stop-shops has been recently followed by the development and free zone commission: if requests are not automatically answered in time, they will be granted automatically.

The possibility of stronger privileges and ties between business and public officials in smaller municipalities deserves further study. Reportedly, the majority of the handful of firms in smaller municipalities relies on close personal relations with public officials implying privileged access to local administrations. If this is indeed the case, it would strongly challenge the rational of the potential new municipality law which intends to reduce the size of municipalities.

A new municipality law should provide incentives for local administrations to improve their economic performance. Municipalities are not evaluated based on their economic performance. In contrast, it is
well documented that the alignment of local public officials’ incentives with economic development goals has been very successful in China (e.g. see Li and Zhou 2005 or Whiting 2006). For example, local municipalities could retain the profits that they earned from township or village enterprises. The implementation of these policies has been accompanied with local public administration reforms including transparent performance-based promotion schemes for public officials in municipalities. Based on these reforms, the central government has been able to credibly offer rewards to local officials in exchange for economic growth and private investment. Indeed, officials have been promoted based largely on their achievement of employment and growth objectives.

Our findings, which are based on a firm survey in 2006, would suggest an analysis of the independence of the GAM including the existence of close business relations of officials. The Greater Amman Municipality (GMA) is responsible to issue construction permits or operating licenses for firms based in Amman. The study finds large variations in waiting times for these services across firms in the same industry based in Amman. Hence, it appears necessary to analyze the source of these large variations. Reportedly, the GAM documents any delays in regulatory services which provide a rich source of information to further study the source of variations in policy implementation.

Transparent and broad-base industrial policy can reduce policy uncertainty by changing the business environment in the target sectors from non-transparent case-by-case privileges for selected firms to uniformly implemented transparent regulations for all firms in the industry. We illustrated above that de facto business environments differ even for firms in the same industry. If this is the case, transparent clear-cut industrial policies can reduce policy implementation uncertainty within industries reducing the scope to struck deals and promoting competition. The following section provides a detailed discussion on the practicability of industrial policies in MENA countries.
7.1. Introduction

In discussing structural policies for growth in Jordan, one cannot overlook industrial policy. Indeed, since the government is pro-actively undertaking industrial policy, it is important to evaluate it, highlighting its potential and risks. This chapter reviews current industrial policy initiatives in Jordan and evaluates them based on recently established best practice benchmarks. This report identifies four major different industrial policy initiatives and mechanisms in Jordan which are essentially isolated from each other.

The industrial policy programs exemplify weak or incomplete policy implementation in Jordan since, for instance, rigorous monitoring and evaluation mechanisms minimizing the room for discretion and privileges are largely absent. Some initiatives have constructive design features such as targeting the adoption of new technologies or ensuring a high-level decision process (through the Council of Ministers). However, the selection processes or performance benchmarks to counterbalance granted benefits are typically not transparent. The absence of transparent yardsticks and rules increases the room for discretion and hence also the risk of patronage in the implementation. Likewise, the absence of rigorous evaluation or monitoring systems undermines the authorities’ ability to ensure the overall effectiveness of the implemented program and to avoid the creation of cronyism by phasing out costly support unproductive beneficiaries. Moreover, the different industrial policy initiatives are to a large extent independent of each other and not embedded in a comprehensive national development strategy. This aggravates a successful implementation and coordination of the individual initiatives. For instance, privileges for foreign investors in specific industries are complemented with domestic supplier support programs (in cooperation with foreign investors) to maximize technology transfers.

7.2. What is the role of industrial policy in Jordan?

The role of industrial policies in Jordan is not clear-cut; instead, several ministries and institutions have overlapping responsibilities with respect to fragmented investment promotion and industrial policy strategies. There exist different sector-specific incentive programs with varying objectives. The Ministry of Industry and Trade (MoIT) developed an industrial policy strategy focusing on SMEs. JEDCO is generally responsible for its implementation. The Jordan Investment Board (JIB) has the mandate to improve business environment and provide (tax) incentives to investors. The Development and Free Zones Commission (DFZC) developed a comprehensive strategy for four regional development zones, each of which aims to promote specific industries by granting substantial tax exemptions and providing other incentives. The Central Bank of Jordan implements a credit support program for SMEs, e.g., reducing reserve requirements for private banks equivalent to their total SME loans. Finally, the Council of Ministers can grant additional tax incentives for selected firms or industries.

The industrial policy program of the MoIT assists SMEs in upgrading their technologies and knowledge base; however, it refrains from targeting specific industries or groups of firms with the highest potential to benefit and does not define clear-cut conditions linking government support to SMEs’ performance. The focus of the industrial policy program is consistent with East Asian best practices promoting the adoption of new (foreign) technologies. This objective could be further maximized by explicitly targeting specific industries or other characteristics for groups of firms with the largest potential to gain competitiveness from technology transfers. More importantly, appropriate

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84 The new Investment Law (drafted in 2011) restricts the discretionary freedom to grant ad hoc tax exemptions somewhat (see below).
monitoring and evaluation systems or clear-cut rules benchmarking the performance of benefitting firms are very limited. Donor funded programs are typically better designed including performance benchmarking of benefitting firms. However, these programs are often small and (monitoring and evaluation systems are) not sustainable once the donor support is withdrawn.

The industrial policy program is underfunded. The program focuses on business incubation, training, or technology upgrading for selected SMEs. Reportedly, the MoIT demanded 115 million JD over five years for its implementation but only 14 million JD have been allocated. The program is exclusively funded by the government as the private sector does not contribute.

The DFZC has de facto generated a comprehensive industrial policy strategy by creating industry-specific geographic clusters. The clusters target the following industries: logistic and transport in the “Dry Port in Mafraq, renewable solar energy in Ma’an, medical technology in Irbid, clean technology, ICT and business process outsourcing services (BPO) services in Irbid and Amman, as well as eco-tourism, wellness, and health in the Dead Sea and Ajloun. Firms located in development zones pay an income tax rate of five percent and are exempted from sales, customs, social service, and dividend taxes. They also benefit from sector specific infrastructure services and streamlined implementations of regulatory procedures. In addition, there exist 21 free zones which exempt firms from income, customs, and social service taxes.

These programs and initiatives are essentially isolated from each other and not embedded in an umbrella industrial policy or national development strategy. For instance, the DFZC guarantees substantial tax incentives for industry-specific geographic clusters in the development zones which contrasts to some extent with the intended more “sector neutral” approach of the SME focused strategy of the MoIT.85

The legal framework leaves substantial room for discretion for the Council of Ministers to provide selected firms, industries, or activities with tax benefits or other privileges. Before, 2010, the previous income tax and investment promotion laws entailed a complicated system of tax exceptions which potentially promoted case-by-case exemptions. The new and income tax investment laws reduce variations in income taxes and streamline the number of tax exemptions. Nevertheless, the Council of Ministers can still grant tax exemptions or any other privileges for selected firms, industries, or activities as the corresponding clause is still included in the draft of the new temporary investment law. In particular, Article 4 of the new investment law defines that the Council of Ministers can grant any privileges to economic activities that create jobs for the Jordanians, increase local added value, or contribute to R&D, regional development, and the transfer of technology. The privileges have to be published in an official gazette.

Arguably, the way the Council of Ministers applies this room for discretion entails the most forceful industrial policy program in Jordan. Between 2006 and 2011, 22 companies or initiatives benefitted from privileges granted by the Council of Ministers. These include companies in medical services (Al Afia Company), pharmaceuticals (Sana Pharmaceutical Research Company, Cell Biological Laboratories and Medical Research), garments (Louis Vuitton, Smart Linkages Company), construction (Al Mokhtar Company), automotive industry (Eyas), call centers, investment projects to support craft industries, Mid-East Aviation Academy, or the Jordan Technologies automation services Group. What is more, the clause in the investment law has been used to exempt R&D expenses from taxation and to provide additional incentives for industries considered as promising. For instance, profits from exports are exempted from income tax for firms in the pharmaceutical and ICT service industries.

85 In fact, SME support programs are not sector neutral since the importance of SMEs varies across sectors. The bulk of the SMEs supported by JEDCO are located in only a number of manufacturing industries.
The Council of Ministers balances industry or firm specific privileges with development objectives which is consistent with East Asian approaches; however, it refrains from the definition of clear-cut transparent conditions or the implementation of monitoring and evaluation systems to benchmark the performance of benefitting firms. Reportedly, agreements are negotiated with potential (foreign) investors or business associations of individual industries balancing the provision of privileges with the potential for job creation, local added value, or technology transfers. This practice leaves substantial room for discretion due to the absence of transparent clear-cut conditions determining the eligibility for privileges. Consequently, the extent of privileges might vary with the negotiation skills or influence of individual firms, business associations, or individual government decision makers and officials implementing the agreements.

Jordan does not have a coherent industrial policy strategy. The different fragmented initiatives outlined above occasionally lack an overall direction and are not embedded in a national development strategy. Nonetheless, a general trend in government initiatives towards supporting (foreign) technology transfers and promoting jobs for Jordanians is evident. However, while promising industries or investors are supported with tax exemptions basic soft industrial policies such as R&D subsidies or sector specific infrastructure services (research labs for biotechnology or quality standards licensing for garments) are at times missing. A comparison of the fragmented, non-institutionalized industrial policy components in Jordan with industrial policy strategies in East Asian countries (and successful programs in other regions) suggests a bundling of fragmented initiatives under an umbrella strategy. In the following section, we discuss the experience with more comprehensive industrial policy programs in other regions, highlight the most important pitfalls to implement them, and discuss potential remedies and prerequisites for their successful implementation.

7.3. What should be the role of industrial policy?

Governments played an active role to foster foreign technology transfers by promoting the capacity and providing incentives for domestic firms to engage in “new” (foreign) technologies, processes, or products through different industrial policy instruments in most emerging economies. As indicated in the previous section, emerging East Asian or Eastern European economies managed to achieve high sustained growth through a continuous process of successful foreign technology transfers in specific industries. It is important to note that the transfer of foreign technologies and their adaptation to local market and production conditions did not happen automatically since they are associated with market failures and externalities. Instead, governments provided incentives for domestic firms to diversify into new products and supported their access and capacities to adopt existing superior foreign technologies from foreign investors or exporters to local market and production conditions.

For instance, China provided good infrastructure services, implemented straightforward regulations, and frequently also granted tax incentives for foreign firms in special economic zones for selected industries in exchange for technology transfers through joint production networks or joint ventures. That is, China’s openness to foreign investors was driven by a clear development strategy: to kick-start or upgrade domestic producers. Therefore, foreign investors were required to enter into joint ventures with domestic firms in many new industries (e.g. consumer electronics). This allowed domestic Chinese firms to steadily move away from a simple assembler of components towards integrated production supply chains. Table 8 shows that most firms in China’s consumer electronics sector are joint ventures between foreign and domestic firms while 100 percent foreign owned firms are rare among leading industrial players.

86 For instance, the Ministry of Labor recently signed a cooperation agreement with the Jordan Garments, Accessories & Textiles Exporters’ Association (JGATE), seeking to increase the share of Jordanians working in the sector (25 percent). Reportedly, 16 association company members committed to provide about 1,800 job opportunities while the ministry guarantees JD 45 monthly for each recruited worker for the first twelve months.
At the same time, domestic firms and suppliers operating in these industries received government support to be able to keep up with foreign investors maximizing their ability to adopt foreign technologies. The Chinese government has intervened extensively to promote industrialization using tax subsidies, tariffs, domestic content requirements (joint ventures), or sector-specific infrastructure. The empirical findings of Harrison and Jefferson (2010) suggest that tax holidays were more successful than tariffs as an industrial policy instrument to promote productivity growth in China.

For instance, the Chinese or Indian auto parts industries have been heavily promoted through local content requirements. The Chinese government typically required foreign car companies to achieve 70 percent of domestic production content within three years. This forced the foreign investors to cooperate closely with local suppliers ensuring that their technology and quality were up to par. In his study of the auto supply chain in China, Sutton (2005) found that the domestic first-tier suppliers had achieved quality levels close to international best practice within a few years. One indicator of success is that none of the foreign car manufacturers intended to switch to importing car parts once domestic content requirements were phased out to comply with WTO rules. The author documents a similar success with domestic-content requirements in the Indian auto parts industry.

Moreover, the Malaysian government followed an industrial policy strategy promoting foreign technology transfers from FDI by providing incentives for multinational enterprises (MNEs) to engage with local suppliers. In contrast to China and India, Malaysia did not follow a mandatory domestic content requirement policy but provided policy incentives for MNEs to voluntarily engage with local suppliers. This policy has been successful in particular in the electronics sector where foreign investors helped their local subcontractors to keep pace with modern technologies, e.g., by assigning technicians to suppliers.

These examples are supported by recent academic research which has shown that positive productivity (technology) spillovers from foreign to domestic firms in emerging economies are more likely to diffuse vertically through linkages in production networks instead of horizontally between direct foreign and domestic competitors. In particular, Javorcik (2004) and Javorcik and Spatareanu (2008) provide evidence for robust productivity spillovers through linkages between foreign firms and domestic suppliers (or distribution system) in Lithuania and Romania, respectively. In the latter case, the authors show that vertical productivity spillovers are larger for FDI with shared domestic and foreign ownership. In this regard, the Chinese, Indian, and Malaysian industrial policy strategies and programs seem well targeted.
Table 7.1: Major consumer electronics firms in China by ownership type

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<tr>
<th>Market segment</th>
<th>Foreign owned</th>
<th>Joint venture</th>
<th>Non-FDI</th>
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<tr>
<td>Mobile phones</td>
<td>• Motorola</td>
<td>• Sony</td>
<td>• TCL</td>
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<td></td>
<td>• Nokia/Capital, Southern</td>
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<td>PCs</td>
<td>• HP</td>
<td>• IBM/Great Wall, Toshiba/Toshiba Computer (Shanghai)</td>
<td>• Lenovo (previously Legend)</td>
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<td></td>
<td>• Dell</td>
<td>• Epson/Shent</td>
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<td>• Toshi/Toshiba/OMC/TCL</td>
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<tr>
<td>“Brown” goods</td>
<td>• Sony/SVA</td>
<td>• Chunghong</td>
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<td></td>
<td>• Philips/SHL, CTV</td>
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<td>• Great Wall Electronics/TCL</td>
<td>• Skyworth</td>
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<tr>
<td>“White” goods</td>
<td>• Siemens</td>
<td>• Haier</td>
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<td>• Electrom-Changlu Zhengyi</td>
<td>• Zongshang</td>
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<td>• LG/Changlu</td>
<td>• Gushan/Ming</td>
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<td>• Mitsubishi/Sony</td>
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<td>• Sigma/Ming</td>
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<td>• Hong Leong</td>
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<td>• Toshiba</td>
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<td>• Carrier/Midea</td>
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7.4. What are the pitfalls implementing industrial policy and how to address them?

The theoretical case for industrial policy is a strong one since failures in markets for credit, labor, products, or knowledge are key barriers for economic development. Rodrik (2004, 2008), Lin (2009), Hoff and Stiglitz (2010), and others recently emphasize information externalities can impede economic development. Information externalities are entailed in discovering a country’s latent comparative advantage to diversify into new products embedding foreign technologies. For instance, Chile’s highly successful salmon industry is largely the creation of Fundacion Chile, a quasi-public agency that acted as a venture fund and disseminated the results of public R&D to smaller firms. Moreover, the Indian government supported producers to vertically upgrade from maize production to poultry farming and meat processing by subsidizing agricultural research in breeding and food grain seeds, providing transport infrastructure, and introducing international food quality standards. In other words, market pressures might not naturally push economies toward greater diversification into new labor intensive or higher value added products. Hence, diversifying into new products and climbing up the technological ladder can be facilitated by public incentives for firms to engage in these new activities.

The conventional case against industrial policy rests on practical difficulties with its implementation. Despite various positive examples around the world, there is also a long alarming list of costly failures. For example, Brazil used import substitution policies to create a domestic computer industry and introduced domestic standards to protect its infant electronic industry. These costly efforts failed and were later abandoned. In fact, also Fundacion Chile subsidized several industrial projects which did not succeed. The following two arguments are typically used to question a successful implementation of industrial policies. First, governments lack information relative to the private sector to pick winners. Second, subsidies or protectionist policies create dependencies discouraging competition and entrepreneurship and leading to political capture and corruption (crony capitalism).

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87 Rigorous empirical evidence does not settle the debate; measuring the performance of industrial policies suffers from conceptual difficulties, i.e., a missing counterfactual (what would have happened without the industrial policy).
**How to select potential industries or activities to be targeted?** Rodrik (2004, 2008) and Lin (2009) emphasize that targeting new activities, either the diversification into new higher added value product lines or the adoption of new (foreign) technologies, have the largest potential for spillovers. Lin (2009) formulates a strategy to climb up the technological (value added) ladder. He argues that the government should support the entry into sectors in which the country has a latent comparative advantage and phase out protections to comparative advantage-defying industries gradually. Thereby, the country can obtain a Pareto improvement by achieving stability and dynamic growth simultaneously in the process.

**Lin and Monga (2010) suggest a framework to identify these industries.** It is based on indentifying tradable goods and services that have been produced for several decades in fast growing countries with a similar endowment structure and a per capita income roughly 100 percent higher. The product space analysis following Hausman and Klinger (2006) provides an alternative tool to indentify industries with latent comparative advantage so that moderate government support can push the private sector to diversify into these industries. In addition, the government needs to pay attention to domestic success stories as some domestic private firms might have already entered higher value added industries. Finally, sector case studies and value chain analysis should supplement the evidence-based framework to select industries.

**Once these potential industries have been identified, the government should try to examine and remove the binding constraints to firm growth and firm entry in those industries.** If industries are new the government can provide incentives for foreign firms from higher income (technology) countries to invest in these industries taking advantage of the lower labor costs in Jordan. These incentives may be complemented with policy incentives for foreign investors to engage with local suppliers and incubation programs to catalyze the entry of private domestic firms into these industries.

**The macroeconomic success is, however, based on the fact that the economy has successfully exploited its existing comparative advantages and its endowment structure.** For example, the Chinese or South Korean governments’ programs supporting the formation of consumer electronics, steel, or automobile industries were built upon the success from domestic garments, plywood, wigs, or footwear industries. The success of these labor-intensive industries guaranteed social stability and the accumulation of resources to finance the support of new higher added value activities. Such cross-sectoral subsidies often also take place within firms by reinvesting profits obtained from established products, as in the case of Samsung or Nokia.88

**Instead of “picking winners” is it crucial to withdraw support from “losers”.** The process of entering new industries or adopting new technologies is inherently uncertain and characterized by technological and informational spillovers. Therefore, markets under-provide investment in non-traditional products. The appropriate role for industrial policy is to fill in this market incompleteness by providing incentives for investments in new products or technologies. If successful, these investments will be socially profitable. However, even in flourishing industries not all firms will create high firm growth. For instance, the top few successes of Fundacion Chile (most notably salmon) paid for the entire budget of the organization, including its many failures. Thus, governments need to anticipate a certain (possibly high) failure rate and withdraw support from revealed miscalculations. This is the relevant yardstick against which industrial policies ought to be measured. Consequently, a framework of rules and incentives has to make sure that government officials exit the support for non-performing firms. This leads to the second question of industrial policy design in an evolving institutional environment which we discuss next.

**How to prevent crony capitalism?** Several East Asian countries managed to developed policy designs that addressed market failures for private investors but avoided the pitfall of creating long-term

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88 Nokia started as a timber company, and successively shifted to producing footwear, manufacturing for Philips, then manufacturing its own-brand of household electronics, and finally to producing mobile-phones.
dependencies. It has often been argued that successful industrial policy is only possible after a country installed well-established institutions preventing the creation of long-run public-private dependencies and corruption. However, industry policy has been a cornerstone in the development success of South Korea, Taiwan, China or China where corruption was pervasive.

These countries and others implemented successful industry policy programs based on institutionalized public administrations endowed with civil servants that can be made accountable for their actions (e.g. through merit based promotion systems or commitment to a national development strategy). Policymakers which can be held accountable for the performance of “their” industrial policy program have an incentive to implement a policy design that protects the program from rent-seeking even in weak governance environments. Notably, even relatively minor design details can bring discipline.

Rodrik (2004, 2008) defines three design features based on the experience of East Asian economies that industrial policy needs to address.

- First, a public-private dialog is necessary to overcome the lack of governments’ information. Accordingly, one should think about industrial policy as a discovery process where firms and the government learn about underlying costs and opportunities and engage in strategic coordination. Deliberation councils, investment advisory forums, or private-public venture funds are typical setups for this purpose.
- Second, an incentive and discipline system of carrots-and-sticks is needed to avoid the creation of long-run dependencies. Tax incentives in Taiwan, China and credit subsidies in Korea were conditioned on performance, especially export performance. Non-abiding firms were penalized by withdrawal of subsidies. This generated new activities while phasing out failures over time. Arguably, Latin American countries created new activities but also kept alive many unproductive firms by failing to exert discipline on beneficiaries. Conditionality, sunset clauses (automated exit rules), built-in program reviews, monitoring, benchmarking, and periodic evaluation are desirable features of all incentive programs. Thus, the trick for the government is not to pick winners, but to phase out losers.
- Third, accountability of the government to the general public minimizes the risk for corruption. Bureaucrats implementing industrial policies need to be monitored and provided with appropriate incentives. Accountability can be ensured by transparency (e.g. publication of programs and conditions) and the association of individual ministers, agencies, or institutions with the performance of the industrial policy program.

7.5. Is Jordan well positioned to implement and sustain these design features?

The initiatives of the Jordanian government are generally targeted towards industries with the potential to upgrade technologies or to develop new higher added value product lines. The investment law explicitly conditions privileges to activities that increase local added value and the transfer of technology. Furthermore, the SME support program focuses on technology upgrading and capacity building while the DFZC explicitly targets industries which are new or have high domestic growth potential in the four development zones.

However, the selection processes or the performance benchmarks to counterbalance granted privileges are often not transparent. For instance, while privileges granted by the Council of Ministers are published in an official gazette, the conditions and benchmarks that provide the justification of these privileges are not. The Article 4 of the new investment law stipulates that benefitting firms should increase local added value and the transfer of technology but it remains unclear how these intentions will

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89 In addition, the government conditions its support to domestic job creation for Jordanians or regional development.
be measured or benchmarked; i.e. what is the targeted percentage of local added value content in production, after how many years will it be achieved, and what are the investor’s measures or duties to achieve that target? The absence of transparent benchmarks or targeted industries leads to case-by-case selection increasing the room for inefficiencies. In contrast, as outlined above, China or Malaysia explicitly attracted foreign firms in selected industries with high potential for technology spillovers and defined benchmarks for services in return from benefitting investors. What is more, the absence of transparent yardsticks and rules increases the risk of patronage or randomness discouraging competition.

The partial targeting process also represents the absence of a comprehensive industrial policy program. For instance, in Malaysia privileges for foreign investors in specific industries are complemented with domestic supplier support programs in cooperation with the foreign investors to maximize technology transfers and domestic job creation. These complementary government activities ensure that the benefits for the domestic economy outweigh the costs (granted privileges) over time. In contrast, the (dynamic) effects of FDI are limited if potential domestic suppliers do not exist and domestic firms cannot compete. Thus, it is important that the government coordinates and packages its industrial policy initiatives. Recent developments in the ICT service industry in Jordan provide a positive example. Foreign multinationals such as Microsoft, Oracle, or Cisco Systems collaborate closely with the sectors business association (Intaj)\(^90\) and offer voluntary technological support and training programs for local suppliers and services (e.g. technical call centers). In particular, local firms are granted specific partnership status which allow for comprehensive support packages. Moreover, the multinational firms support the ICT academy which foresees sector specific training programs.

There is an active public-private dialogue in Jordan; however, the extent of the consultation process appears to be driven by the commitment and influence of individual industry-specific business associations. Once industries or activities have been identified, it is crucial that the government closely collaborates with the private sector to identify and remove the binding constraints to firm growth and entry in those industries. In fact, the MoIT consulted various public and private stakeholders including the chambers of commerce and industry to draft the industrial policy strategy focusing on SMEs. Reportedly, however, SMEs are not adequately represented in the Chambers and the dialogue between the government and businesses is not always on an equal level. The private sector does not contribute to the program which might reflect limited expectations and missing commitment. Moreover, it remains unclear to which extend the Council of Ministers or the committee responsible to recommend investment promotion consult the private sector when granting privileges. In this regard, the pharmaceutical and ICT service business associations appear to be pro-active in documenting business constraints and lobbying for their removal. In fact, both sectors are exempted from income tax on profits from exports. For instance, Intaj closely communicates with the Ministry of ICT to file applications to the Council of Ministers to remove business constraints such as reducing customs fees for smart phones or imported intermediate services.

Rigorous evaluation or monitoring systems benchmarking the performance of benefitting firms are typically missing which undermines the authorities’ ability to phase out costly unproductive incentive programs or to avoid the creation of cronism. The carrots are provided through relatively carefully selected individual initiatives but the sticks are absent. The tax exemptions outlined earlier are not linked to performance evaluations of benefitting firms or industries. They represent forgone revenues for the government but their effectiveness is not assessed. For instance, the exemption from income tax on profits from exports for ICT service firms expires 2015 as Jordan’s extension to maintain export subsidies as a WTO member expires. Moreover, the performance of SMEs benefitting from government support programs should be benchmarked with the performance of comparable SMEs in the same industry which

\(^{90}\) For example, all three multinational firms have a representative in board of Intaj.
did not receive such support. In sum, a fundamental element of an appropriate industrial policy design preventing corruption and the creation of long-term dependencies is missing.

*Industrial policy initiatives are to some extent implemented by high ranking officials; nevertheless industrial policy and accompanying monitoring and evaluation systems need to be institutionalized and embedded in a long-term national development strategy.* The arguably most forceful industrial policy initiative of the government is based on a high-level decision process in the Council of Ministers. In addition, the granted privileges must be publicized. This leads to a relatively careful selection of targeted activities. However, the absence of rigorous performance evaluations and monitoring systems prevents the public from holding the officials responsible for the success of the industrial policy initiatives. Instead, the public is forced to base its assessments on observable isolated cases; hence, voters might not be able to distinguish between the overall success of industrial policy programs and publicized individual failures. Jordan recently established the national council for competitiveness and innovation to improve the level of services and facilities provided to investors. It focuses on the implementation of legal reforms and includes the premier minister as well as representatives of various economic areas from public and private sectors. The high ranking council is well positioned to unify Jordan’s industrial policy initiatives under a comprehensive strategy, ensure the coherent implementation of monitoring and evaluation systems, and be accountable for the success of the overall programs.

In sum, industrial policy can contribute to Jordan’s economic development by fostering foreign technology transfers and providing incentives for domestic firms to engage in “new” (foreign) technologies, processes, or products. The analysis shows that the policy recommendations to improve the effectiveness and sustainability of industrial policy initiatives in Jordan are very similar to the ones of the previous chapter. In particular, the process of political participation needs to be enlarged and the accountability of policymakers improved. This can be achieved by making them responsible to elected representative parliaments or to an institutionalized meritocratic public administration (as in East Asian countries). Hence, a reform of the public administration or at least of part of the administration responsible for the industrial policy program is essential to implement an effective industrial policy design outlined in this chapter.

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91 The previous chapter provided an example for an appropriate performance evaluation of the EU funded export promotion program implemented by JEDCO.

92 Moreover, increase the transparency and access to information to augment the accountability of policymakers to the wider public or media. Among others, this includes the following: (i) measure the performance of public agencies and make the results publicly available, (ii) enhancing the public-private consultation process in the preparation of new laws and regulations, (iii) monitor and evaluate the performance of firms that benefit from public interventions (e.g. tax exemptions).
Chapter 8 - Creating an Enabling Environment for Private Sector Innovation

8.1. Introduction

Finally, one key area of structural reform in Jordan is innovation. The importance of innovation for growth in Jordan cannot be overemphasized. In the aftermath of the global crisis, Jordan continues to face energy, water, and significant employment challenges. Better quality and more targeted innovation policy is required to overcome these challenges. For example, water and energy are first and foremost investment challenges: investments are needed to match the rise in demand and avoid shortages in the future. Innovations in managing water and energy can help reduce investment needs. To arrive at such innovations, a broad-based, multi-stakeholder innovation policy, as well as the capacity to implement it, is required – as is an understanding of what innovation entails.

This chapter outlines and analyses the current Jordanian innovation effort. It investigates whether the large number of Jordanian initiatives, institutions and policies in the area of innovation are effective and strategically aligned with the country’s challenges (e.g., employment generation) and opportunities (emerging high value-added sectors)? And do the government and private sector agencies for innovation activities have the capacity, monitoring mechanisms and information they require to support innovation activities?

The chapter first defines ‘innovation’ and ‘innovation policy’, and outlines their contribution to the economy. It then takes a close look at the state of Jordanian innovation policy focused on the innovation governance side, after which it deals with the state of the national innovation effort in the Jordanian private sector. Two critical areas for development in the present national innovation efforts are identified. First, Jordan should develop a stream-lined national innovation strategy with clear investment and program priorities, as well as stream-line the governance structure and positions of innovation leadership in implementing this policy. Second, Jordan should focus on expanding the national innovation effort to support its private sector, especially by improving innovation funding and by raising innovation awareness.

8.2. Current innovation policy in Jordan: an overview

Jordan did implement innovation measures over the last decade as called for by the country’s (i) relatively strong human capital base; (ii) desire to support emerging high value-added sectors. That Jordan’s total factor productivity (TFP) grew by 2.7 percent per year in 2000-2008, contrasting to negative TFP growth in the previous decade, suggests steps taken to support innovation activities. But Jordan lacks an efficient national innovation policy that focuses on adoption and adaptation of technologies, and that is well aligned with the country’s objective and natural resources constraints, as is illustrated by the weak link between what was implemented and what the critical challenges are.

Jordan faces a three-fold problem in pursuing a national innovation policy. Existing reports on Jordan’s national innovation system have highlighted problems with the varied contents of the system,
but even more urgent problems have to do with the scope and processes of innovation policy. These can be outlined as follows:

**Content**: despite a multiplicity of programs, there is a lack of focus and critical mass, and lack of a clear definition of aims of a national innovation policy in Jordan.

**Scope**: Jordan’s innovation policy is narrowly cast – it has primarily focused on R&D and scientific innovation, missing out on creative class and business model innovation.

**Process**: the ways in which innovation activities are sought to be delivered is problematic and not streamlined enough, especially regarding the involvement of the private sector.

Critically, the content issues cannot be addressed without further attention being paid to the scope and process problems. An examination of these factors in existing efforts in innovation governance will provide a basis for recommendations for advancing an innovation policy in the Jordanian context.

8.3. What is ‘innovation’?

The continued requirement for developing economies is to close down the ‘convergence gap’: meaning an economy must perform a structural transformation such that there is a transfer of resources, including labor, from lower productivity sectors to higher productivity sectors. As such, high levels of GDP or TFP over a relatively short period of time are not sufficient evidence of the closing down of a convergence gap. Rather, a structural transformation is said to be required to take place to support growth over a period of time. At that, an efficient innovation policy is well placed to close down the convergence gap.

There has been a gradual broadening in the definition and measurement of innovation, from a traditional focus on creation and commercialization of new-to-the-world frontier technologies to also include catch-up activities, namely the diffusion, adoption and adaptation of existing foreign and national technologies (both new electronics gadgets and “softer” business model innovations) by governments, firms, research institutions and NGOs.

Innovation is now defined broadly as the implementation of a new or significantly improved product (good or service) or process; a new marketing method; or a new organizational method in business practices, workplace organization, or external relations. Furthermore, the concept ‘new’ can mean new to the firm, new to the market, or new to the world. There are four types of innovation: product, process, marketing, and organizational. Finally, innovation concerns the role of linkages and collaboration in innovation: that is, whether innovations are developed mainly by the firm itself, together with others, or mainly by others.

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95 Two studies stand out in particular. GTZ (2009), “Study on the National Innovation System in Jordan,” GTZ on behalf of the Federal Ministry of Economic Cooperation and Development, by Uwe Siedel, Dr. Wolfgang Domröse and Dr. Gerd Meier zu Kocker; and David Tee for EJADA (2006). The only existing report that delves deep into scope and process issues is the 2003 report by CIDA.


8.4. Comprehensive ‘innovation policy’ as a major contributor to productivity and economic growth

The introduction of an efficient innovation policy in several countries shows a quantitative and qualitative step-up in their development trajectories, with three outcomes:\(^{99}\)

- added growth (up to two percent more growth) and more jobs;
- a richer and more sophisticated portfolio of economic activity;
- more sustainable growth models opening new possibilities, especially for the young.

Efficient innovation policy can also build economic capacity and can substantively boost the TFP of an economy,\(^{100}\) in steering better use of technology in production processes, including skills development and entrepreneurial advancement, in turn amplifying productivity across economic sectors.\(^{101}\)

Countries with highly successful innovation policies such as Korea and Finland have focused not only on the supply-side of development of R&D activities and commercialization of new technologies. They importantly emphasize the cross-cutting and integrated nature of innovation policy in order to prepare their economies to meet global challenges, and to ensure sustainable broad-based growth in national productivity and competitive ability. Such a comprehensive approach to innovation policy looks at the full scope of the innovation cycle in the economy, combining supply- and demand-side measures. It sees public administrations in a pivotal role ensuring cross-sectoral collaboration. Such an approach is focused on results: active in maintaining broad-based public support for the policy, and periodically reviewing and adjusting it against changing conditions. A comprehensive innovation policy will have the following ingredients:

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99 Examples in the book ‘Innovation Policy’ are e.g., Chile, Estonia, Finland, Korea, Singapore etc.
100 TFP measures an economy’s outputs not caused by labor and capital inputs.
101 Innovation policy, as such, can function as a productivity factor in the economy. This is because, in principle, the “estimation of return on innovation investment benefits from the inclusion of more information on the technological environment of the firm” (and other learning and production contexts). See: http://elsa.berkeley.edu/~bhhall/EINT/Van_Leeuwen_Klomp.pdf
8.5. **Innovation ‘paradox’ in Jordan**

*There is a paradox at the heart of Jordan’s innovation efforts: Jordan’s innovation performance falls far short of what is expected of a country with such human capital.*

*Furthermore, the country has the beginnings of an excellent innovation eco-system to enable it to become a strong innovation economy contender in the region.* Jordan has strong educational scores by regional standards; the region’s largest proportion of bilingual Arabic-English speakers; highly skilled diasporas; diversified, albeit not high levels of high-tech exports by both sector and destination; some real success stories of innovative companies (incl. Aramex, Estarta, Maktoob and others); and an attractive capital city with good living conditions and drawing power. The Arab Knowledge Report 2009 highlights these facts about Jordan in a regional comparison.
Table 8.1: Arab Knowledge Report 2009, Innovation Results

<table>
<thead>
<tr>
<th>Country</th>
<th>Public spending on education in 2002-05, % of GDP</th>
<th>Enrolment of tertiary students in science, engineering, manufacturing and construction (%)</th>
<th>Internet users (per 1,000 people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jordan</td>
<td>4.9 (20.6% of government spending)</td>
<td>22</td>
<td>118</td>
</tr>
<tr>
<td>Lebanon</td>
<td>2.6 (11.0% of government spending)</td>
<td>24</td>
<td>196</td>
</tr>
<tr>
<td>Tunisia</td>
<td>7.3 (20.8% of government spending)</td>
<td>31</td>
<td>95</td>
</tr>
<tr>
<td>Egypt</td>
<td></td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>Syria</td>
<td></td>
<td></td>
<td>58</td>
</tr>
</tbody>
</table>

Jordan also fares well in regional comparison in the World Bank Knowledge Economy Index (KAM), and Jordan’s capacities for knowledge economy compare well with similar economies in Europe.

Table 8.2: The World Bank Knowledge Economy Index

<table>
<thead>
<tr>
<th>Country</th>
<th>2009 Ranking for Innovation(^{102})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jordan</td>
<td>61</td>
</tr>
<tr>
<td>Lebanon</td>
<td>77</td>
</tr>
<tr>
<td>Egypt</td>
<td>79</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>86</td>
</tr>
<tr>
<td>Israel</td>
<td>9</td>
</tr>
<tr>
<td>Syria</td>
<td>103</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>49</td>
</tr>
<tr>
<td>Romania</td>
<td>60</td>
</tr>
</tbody>
</table>

Yet, Jordan, with a total R&D expenditure of less than 0.5 percent GDP, has only a trickle of patents, has little R&D activity in the private sector (e.g., compared with 20,000 private labs in Korea). Reconfiguring supply-side innovation policy is a necessity for developing a more efficient and outcome-driven innovation policy in Jordan.

8.5.1 Dispersed innovation efforts: excessive volume of content

This relative underdevelopment of Jordanian innovation results/outcomes is not – it is critical to understand – reducible to a volume of content problem. There is a wealth of innovation initiatives, incubators, and institutions sponsored by the government. In fact, there are so many that there is a ‘traffic jam’ problem: total annual R&D spending is less than 0.5 percent GDP, and is spread over a vast number of research centers, innovation incubators, SMEs and so on.\(^{103}\) This vast volume of innovation specific institutions, with small budgets, can be illustrated as follows:

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\(^{102}\) A country’s innovation ranking is measured as the average of Total Royalty Payments and receipts, patent applications granted by US patent and trademark office, and scientific and technical journal articles.

\(^{103}\) A candid review’, p. 5.
Table 8.3: R&D spending in Jordan\textsuperscript{104}

<table>
<thead>
<tr>
<th>Research Center</th>
<th>Total 2006 operations budget *** (in thousands JD)</th>
<th>Total Personnel</th>
<th>Research expenditures (Allocations 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Council for Science and Technology (HCST) – General Secretariat</td>
<td>1,500</td>
<td>41</td>
<td>--</td>
</tr>
<tr>
<td>National Center for Human Resources Development (NCHR)</td>
<td>484</td>
<td>39</td>
<td>132</td>
</tr>
<tr>
<td>National Energy Research Center (NERC)</td>
<td>436</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>National Virtual Center for Biotechnology (NVCB)</td>
<td>100</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Jordan Center for Public Policy Research &amp; Dialogue (JPPRD)</td>
<td>525</td>
<td>6</td>
<td>91</td>
</tr>
<tr>
<td>Jordan Badia Research and Development Center (JBRC)</td>
<td>9,700</td>
<td>668</td>
<td></td>
</tr>
<tr>
<td>National Network for Advanced Materials and Nano-Technology (NNAMNT)</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royal Scientific Society</td>
<td>3,200</td>
<td>416</td>
<td>1000</td>
</tr>
<tr>
<td>Pharmaceutical Research Unit (PRU)</td>
<td>1,300</td>
<td>53</td>
<td>93</td>
</tr>
</tbody>
</table>

Another example illustrating the traffic jam is the number of institutions existing at the intersection between the world of research, S&T, and innovation and the world of SMEs.\textsuperscript{105}

- JEDCO (Jordanian Enterprise Development Corporation, Ministry of T&I)
- IDD (Industrial Development Department of the Ministry of T&I)
- JNCT (Jordan National Competitiveness Team, a.o. dealing with clusters)
- HCST’s Department of Incubators and Scientific Innovation
- HCST’s IDU (Industrial Development Unit)
- NAFES (National Fund for Supporting SMEs, based on Jordan-Japan IDP program)
- ISRDF (Industrial R&D Fund)
- NACTIB (National Consortium for Technology and Incubation of Businesses, with World Bank support)
- ERADA (Enhanced Productivity Program, with two dozen Enhanced Productivity Centers)
- FFF (Faculty For Factory Program)
- JUMP (Jordanian Upgrading and Modernization Program, successor of EJADA)
- SABEQ (Economic Development program funded by USAID)
- iPARK (HCST’s technological incubator)
- JIC Network (Jordan Innovation Centers, a network of incubators)
- SRTD (Support to Research & Technological Development Program, EU-supported)
- EDAMA (private sector program on clean tech exports and FDI)
- And a flurry of special zones, technology transfer centers, smaller incubators…

\textsuperscript{104} Jordan Higher Council of Science and Technology (2006) ‘Science, Technology and Innovation Policy in Jordan’, a report for Evaluation of Scientific and Technological Capabilities in Mediterranean Countries (ESTIME). This is the latest data available for these numbers.

\textsuperscript{105} ‘A candid note’, p. 6
8.5.2 Innovation governance: scope and process woes

Indeed, a persistent characteristic of innovation policy in Jordan concerns its scope problem: innovation policy itself is simply too narrowly cast as a science and technology policy. With R&D investment largely directed toward science and technology actors, a critical mass of innovation incubators is constrained from forming because funding issues. Almost none of this national funding goes to the private sector, and virtually no funding is going to seed, angel and VC funds. This is in contrast with international experience, which shows that a country’s innovation performance depends foremost on whole spectrum of the quantity, quality, and variety of its innovators.

The Jordanian economy, furthermore, benefits from such a variety in abundance. Yet the existing S&T-focused innovation activities fail to play up the strengths of the country’s innovators to national advantage. Jordan has excellent human capital for innovation activities – a wealth of entrepreneurially-minded professionals, and openness to business and organizational model innovations. It could, and should be, delivering a comprehensive innovation policy, focusing on and exploiting not only the talent of its science and research-driven innovators, but also that of Jordanian creative class-driven innovators; and business model reinvention-driven innovators.\textsuperscript{106}

Without addressing these scope and process problems of supplying innovation policy, Jordan risks losing an opportunity of supporting higher levels of productivity, skills development and job creation through innovation. An important step to expand the innovation ecosystem concerns targeted policies for skills development and upgrading, and the advancement of an entrepreneurial culture.

8.5.3 Scope of the ST&I system and the processes of innovation governance

Jordan faces challenges in innovation policy coordination, which depend on defining the exact required scope of innovation activities: i) the need to better understand the capacities of the Jordanian science, technology and innovation (STI) policy system; and ii) the need to better understand the constrains under which the Jordanian STI actors operate and their ability to respond to policy limitations.

A recent study of Jordan’s innovation inputs was undertaken by the Higher Council of Science and Technology (HCST). As a means to assess the current situation of science, technology and innovation in Jordan, the HCST gathered data on STI in a survey, and also conducted an analysis of the STI system, from which new central strategic goals were derived.

The results of the analysis on five factors of the STI system, including institutional framework, S&T infrastructure, human resources, policies and legislation, and STI culture suggest that:

- Jordan’s main source of strength in STI system is the diversity and flexibility of the society, while the weakness stems largely from the closed nature of the STI system, low quality, weak coordination, and authoritarian culture.
- A further complication is the finding that currently, both, innovation process opportunities (new technologies, investors etc.), and threats in innovating (rapid advances in science and technology, etc.) predominantly come from outside the country.\textsuperscript{107}

The lack of an ‘anchor’ for innovation policy within the government is one critical process problem of innovation governance in Jordan, especially as administrations and boards in Jordan change very

\textsuperscript{106} See the annex enclosed in this chapter for three strands of innovators.

often. Another problem concerns funding risks. Programs tend to get added one of top of the other, as is evidenced in the traffic jam problem, and then, in periods of fiscal squeeze, such as now, this risks lowering the priority of innovation policy-related items in the face of budget cutting. In that context, new initiatives might get the axe; proven initiatives might not find resources for another round; even quick wins, which would help justify continued support, may find it increasingly hard to compete for funds with legacy institutions. In periods of fiscal squeeze, or in their aftermath, it is especially important then to ensure a clear functioning of the innovation policy making process, and to identify priorities, likely to be sectoral priorities in the economy, for the innovation policy effort to tackle.108

We may then conclude that the large number of initiatives, institutions and policies in the area of innovation in Jordan are relatively ineffective and should be better strategically aligned with the country’s challenges and opportunities base.

8.6. The lack of a systematic innovation policy effort for the private sector in Jordan

Innovation policy to incentivize the private sector is in its infancy in Jordan. Innovation policy to incentivize the private sector concerns four different areas. First, support for private sector demand of innovation policy concerns awareness raising, demand subsidies and tax incentives for innovation activities.109 Second, public procurement policies involve innovating the public and private consumption. Third, promoting user-driven innovation concerns building innovation dialogue with customers and the market. Finally, good regulation can assist in reducing the costs and risks involved in innovation activities, and contribute to competitiveness.

The weakness of innovation policy targeted at the private sector in Jordan results, on the one hand, from a lack of awareness of the benefits of a fully articulated innovation strategy for the private sector as well as from the whole country. On the other hand, this weakness is implicit in the underdevelopment of the regulatory and financial mechanisms which could support innovation activities and competitiveness in the private sector.

In other words, private sector focused innovation policy is not readily seen nor understood (often by neither the public nor the private sector) as a tool of national productivity enhancement, business development and job creation. Additionally, between 95-97 percent of Jordanian companies are SMEs – often very small ones, and for the most part, family businesses operating in relatively undemanding fields. Having been by and large sheltered from competition in the Jordanian market, most entrepreneurs rarely ask questions about what future survival would require by way of new ideas or solutions. Indeed, few enterprises have an innovation agenda and invest in it.

The Jordanian National Agenda for 2006-2015 puts the development and upgrading of Jordan’s labor-intensive and competitive industries at the heart of the country’s growth strategy for the coming years.110 This agenda now sees the government taking multiple steps in building the infrastructure for business development (simultaneously creating jobs), including the development of economic zones across the country to provide infrastructure to support regional advantages and abilities, to improve the overall (global) competitiveness of the Jordanian economy.111 This plan intends to benefit intra-sectoral development and upgrading of Jordanian industries, critically including the ICT, transportation and

108 See Annex 2 for an overview of the capacities in the ICT sector.
109 As outlined in Table 1 on comprehensive innovation policy.
110 The Ministry of Government Performance of Jordan was established within the Prime Ministry to assist the Council of Ministers to develop the National Agenda, and to monitor and report on its implementation by means of key performance indicators. The preparatory committee involved many participants from outside the government.
renewable energy industries. It is also significant for regulatory and financing improvements for the Jordanian business environment.

Gains in individual growth industries in Jordan and gains for human capital (e.g., employment) would be best sought in the context of a comprehensive national innovation strategy (see Annex 1 for key concepts), supporting already ongoing innovation activities in Jordanian companies, and strengthening incentives for companies to do better through effective innovation governance from the public sector. That such a national strategy is not in effect is evident from a closer look at innovation activities in Jordanian companies.

8.6.1 Lack of pressure on SMEs to compete

The World Bank recently conducted an Enterprise Survey in Jordan which also mapped the state of science, technology and innovation activities in Jordanian companies. Traditionally, mostly pharmaceutical companies have undertaken R&D activities in Jordan. This may be because the pharmaceutical sector is the industry that mostly produces for the export-market in Jordan (75 percent of production is exported, 80 percent of which stays in the Middle East), and mostly employs highly-skilled employees (chemists). CEOs, be it of tourism, ICT or other businesses, have traditionally focused on building 'core business', not on innovation activities. Yet around 70 percent of Jordanian companies are in the services sector industry, including the ICT industry. Around 75 percent of the populace is employed in the services sector, and most service sector companies are small SMEs.

A key obstacle to innovation in Jordanian companies concerns lack of awareness: SMEs do not know about technology development and innovation as an important part of their strategy to promote their productivity and competitiveness, or lack a culture of this kind. The ability of companies to innovate is further constrained by an underdeveloped intellectual property rights regime, and relatively cumbersome process of securing credit.

There were 250 manufacturing and service sector companies to the World Bank survey that explored innovation activities in Jordanian companies, and it came out with the following results:

### Table 8.4: Results on Innovation Policy in Jordanian Enterprise Survey

<table>
<thead>
<tr>
<th>1. Size of the company</th>
<th>50-70 percent of firms have between 10-49 employees (Small firms)</th>
<th>30-41 percent of firms have 50-249 employees (Medium size firms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Location of the company</td>
<td>28.57 percent of manufacturing in Zarqa; only 7.58 percent of services in Zarqa</td>
<td>Up to 93 percent of the services industry is in Amman</td>
</tr>
<tr>
<td>3. In-house R&amp;D activities</td>
<td>31.32 percent of manufacturing companies have taken R&amp;D activities over the past 3 years</td>
<td>Only 13.64 percent of service sector companies have taken R&amp;D activities over the past 3 years</td>
</tr>
<tr>
<td>4. Money spent on R&amp;D (percent of sales over 3 years)</td>
<td>Manufacturing: 4.07 percent</td>
<td>Services: 9.11 percent</td>
</tr>
<tr>
<td>5. Number of employees working on R&amp;D in those companies that invested in R&amp;D</td>
<td>Manufacturing: 21.1 percent</td>
<td>Services: 3.9 percent</td>
</tr>
<tr>
<td>6. High speed internet on premises</td>
<td>Manufacturing: 71.43 percent</td>
<td>Services: 78.9 percent</td>
</tr>
<tr>
<td>7. New or significantly improved products and services brought to the market in the last 3 years</td>
<td>Manufacturing: 36.81 percent</td>
<td>Services: 18.18 percent</td>
</tr>
<tr>
<td>8. Products invented in-house</td>
<td>Manufacturing: 61.19 percent</td>
<td>Services: 58.33 percent</td>
</tr>
<tr>
<td>9. Product based on ideas adapted from elsewhere</td>
<td>Manufacturing: 25.37 percent</td>
<td>Services: 8.33 percent</td>
</tr>
<tr>
<td>10. Products developed in collaboration with other domestic enterprises or institutions</td>
<td>Manufacturing: 5.97 percent</td>
<td>Services: 16.67 percent</td>
</tr>
<tr>
<td>11. Market: where were the products sold?</td>
<td>Manufacturing: 37.1 percent to high end local markets; 21.5 percent to low end local markets; and only 16.3 percent to exports</td>
<td>Services: 67.1 percent to low end local markets; 7.9 percent to high end local markets; 15.0 percent to exports.</td>
</tr>
<tr>
<td>12. International quality certification</td>
<td>Manufacturing: 30.77 percent</td>
<td>Services: 9.09 percent</td>
</tr>
</tbody>
</table>

The data shows more than twice as many manufacturing companies engage in R&D activities as service sector companies, but they invest less of their sales than service sector companies into R&D activities. This divergence may be explained by the content of R&D activities being viewed differently in manufacturing and in the services sector (in the latter this may concern merely ICT applications and internet research, for example). That manufacturing engages over 20 percent of their employees in R&D, whereas only 3.9 percent of service sector employees work in R&D can be seen to point also toward this direction.

The data highlights two further issues: the very small size of Jordanian companies, and the very small share of their production that goes to exports. While the companies seem relatively tech-savvy (with
over 70 percent of companies with high speed internet access on site), it is not clear that the presence of technology has contributed to a scaling up process of the companies’ products and production processes. Productions scale-up is required if Jordanian SMEs are to sell also to high end local markets and to export. Notably, the services sector now sells 67.1 percent of their products to low end local markets.

Manufacturing and service sector companies in comparative economies such as Bulgaria and Romania sell to top local markets; have comparatively higher number of international quality certifications across different industries; although they face similar challenges in exporting their products and services. In Bulgaria, 19 percent of companies have internationally recognized quality certification (an ECA average), while around 48 percent of firms use their own website. 30 percent of them cite in-house R&D capacity, and 27 percent are exporter firms. In Romania, around 25 percent have internationally recognized quality certification (5 percent over ECA average), while around 35 percent use their own webpage. 33 percent of Romanian firms cite in house R&D activity, and 10 percent of Romanian firms are exporter firms.\(^{114}\)

8.6.2 Current innovation support for the private sector in Jordan

The needs of Jordanian SMEs, particularly in scaling up their operations, cannot be met without the government expanding the scope of innovation policy, and implementing policy aimed at the private sector. Innovators, be they located in the public or the private sector, require low start-up costs, and incentives such as competition to scale up their businesses in economically critical sectors.\(^{115}\) The World Bank enterprise survey investigated where information and support for undertaking innovation activities is coming from for SMEs in Jordan.

Table 8.5: How important are the sources of information mentioned below for innovation (in relation to your firm only)?

<table>
<thead>
<tr>
<th>Source</th>
<th>Industry (%)</th>
<th>Services (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers</td>
<td>57.14%</td>
<td>45.45%</td>
</tr>
<tr>
<td>Fairs, exhibitions</td>
<td>43.96%</td>
<td>24.24%</td>
</tr>
<tr>
<td>Internet</td>
<td>32.42%</td>
<td>31.82%</td>
</tr>
<tr>
<td>Own workers</td>
<td>26.37%</td>
<td>37.88%</td>
</tr>
<tr>
<td>Suppliers</td>
<td>23.63%</td>
<td>18.18%</td>
</tr>
<tr>
<td>Technology or know-how transfer from other firms (licenses…)</td>
<td>20.88%</td>
<td>12.12%</td>
</tr>
<tr>
<td>Technology or know-how transfer from parent firms</td>
<td>16.48%</td>
<td>13.64%</td>
</tr>
<tr>
<td>Education, training</td>
<td>11.54%</td>
<td>22.73%</td>
</tr>
<tr>
<td>Recent hires from other firms/industries</td>
<td>9.89%</td>
<td>9.09%</td>
</tr>
<tr>
<td>Consultancy firms</td>
<td>8.79%</td>
<td>15.15%</td>
</tr>
<tr>
<td>Business or industry associations</td>
<td>8.24%</td>
<td>10.61%</td>
</tr>
<tr>
<td>Universities and research institutes</td>
<td>7.69%</td>
<td>13.64%</td>
</tr>
<tr>
<td>Patent and other intellectual property databases</td>
<td>6.04%</td>
<td>4.55%</td>
</tr>
<tr>
<td>Government programs</td>
<td>5.85%</td>
<td>5.03%</td>
</tr>
<tr>
<td>Others</td>
<td>1.65%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

The most poignant result of the above survey is the meager information/support flows from the government to firms (3-4 percent). The result suggests a near absence of private sector focused innovation policy, articulated by the government. This result is also reflected in firms’ reasons for not

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engaging in innovation activities, as around one fifth of Jordanian companies cite ‘no support from public institutions’ as a main reason.

*Furthermee, in addition to very few recent hires from outside of the firm, including limited use of external consultants, the survey evidences relatively weak linkages between companies and universities/research institutes.* This result also goes some way to explain the somewhat unusually high number of R&D activities that gets performed within firms (although it is likely that R&D activities have been overstated by the companies). The relationship between these two facts suggests that a) very little new knowledge and know-how from the cutting edge of academic research is of relevance to business, and b) that academic research remains largely theoretical, and not applicable to the needs of companies. Further cooperative arrangements between business and academia could help improve these factors, now mostly said to contribute only 10 percent to innovation information and efforts.

*The weakness of firms’ innovation networks is not uncommon in comparative economies: in fact, it is shared with countries such as Bulgaria and Romania* (which fare below Jordan in an international comparison of this factor); as well as with regional neighbors Lebanon, Egypt and Syria (all behind Jordan in international comparisons). At the same time, Jordan and Egypt rank in the top thirty percentile in worldwide comparisons of information levels and *availability* of scientists and engineers per country.116

<table>
<thead>
<tr>
<th>Table 8.6: Why does your firm not engage in innovation related activities?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance</td>
</tr>
<tr>
<td>No need: low competition from the local market/products</td>
</tr>
<tr>
<td>It is a too expensive process for my firm</td>
</tr>
<tr>
<td>No support from public institution</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td>No need: low competition from foreign firms/products</td>
</tr>
<tr>
<td>No support from private institutions (business associations...)</td>
</tr>
</tbody>
</table>

*The most common reason for not engaging in innovation activities is that firms perceive innovation to be costly.* Manufacturing companies are equally likely to think that there is no need for innovation activities because of a lack of competitive products/markets. Both of these perceptions reflect the absence of an efficient innovation policy operating in the private sector; of a policy which would incentive companies toward both R&D and other innovation investment and new innovations.

### 8.6.3 Skills development and entrepreneurial training

*If there is a lack of innovation awareness in the private sector in Jordan, there is also a shortage of innovation related skills and entrepreneurial training in the economy as a whole.*117 The higher education system remains heavily focused on delivering theoretical knowledge not directly linked to the job world, and there is a relevance gap between the vocational education and training delivered and the needs of the labor market. National curricula and teacher training should further reflect of national economic and technological developments. Additionally, the culture and institutions of networking


117 *A candid note*, p. xx.
between researchers, academia and business continue to be underdeveloped in Jordan, with for example academic researchers often working alone rather than in teams.\(^\text{118}\)

**Recently, the government and the private sector have begun to address this issue among others in supporting the set up of innovation incubation arrangements, such as BDC and the El Hassan Science City.** The recently founded Jordanian company Oasis 500 also begins to address these problems in building a culture of entrepreneurship from the bottom up, aiming at innovation awareness raising.

### Box 8.1: Oasis 500 – a company at the forefront of entrepreneur support and training in Jordan

Oasis 500 is a for-profit investment and development company that aims at enabling early development stage companies to transform new business ideas into viable businesses. It is focused specifically in investing in the areas of ICT, mobile and digital media development. Oasis 500 aims at training and investing in 500 companies in 5 years. It was formed under the guidance of His Majesty King Abdullah II with a committee of 12 leaders in the Jordanian ICT, digital media and venture capital communities. It obtained seed capital to form the company from King Abdullah II Fund for Development. From seven initial investors and expanding, Oasis 500 seeks to raise its first $6M fund currently (about 60 percent was obtained at June 2011).

The company sites funding gaps in seed/early stage/angel investors’ arrangements in Jordan, and indeed the lack of options for funding for pre-revenue start-ups, to the extent that initial funds must be raised from personal/family contacts by entrepreneurs. The lack of environmental and societal support discourages those willing to attempt start-ups. There are many options later down the line: venture capital firms, private equity funds, and banks are amongst the key ones. To address these issues, and to raise awareness on entrepreneurial careers, Oasis 500 also provides hands-on training and ‘boot camps’ for existing and aspiring entrepreneurs.

*Source: OASIS 500.*

**Innovation incubators such as Oasis 500 not only provide entrepreneurship and managerial training, but they also promote collaboration between different kinds of innovators.** Both are required in Jordan, because according to the World Development Indicators 2011, only 23.9 percent of Jordanian firms were offering formal training programs for their employees, including female employees, to advance on the organizational ladder.\(^\text{119}\)

### 8.6.4 Jordanian innovation funding

**The observed obstacles to further innovation activity in Jordanian firms concern innovation diffusion to and between firms, and the small scale of firms and their markets.** Jordanian companies engaged in innovation would profit from a more business-friendly environment, supported by pro-business (regulative and) financial measures. The innovation priority is for Jordan to consolidate financial mechanisms which can facilitate innovation and growth in the business sector.

**In the World Bank/IFC Doing Business Survey 2012, Jordan ranks 96th out of 183 economies for doing business, 95th for starting businesses, 150th for getting credit, and 130th for enforcing contracts.**\(^\text{120}\) Jordan’s ranking for getting credit has not improved in the past four years, and is far beyond

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\(^\text{118}\) 'A candid note', p. xx.

\(^\text{119}\) Merely 13.1 percent of executive positions Jordanian companies were held by females. *World Development Indicators 2011*, p. 271. Jordanian survey data from year 2006.

\(^\text{120}\) Additionally, companies face particularly high costs in exporting their products, and cargo clearance times are still long, although not above regional average. Predictable and rapid cargo clearance times can benefit the economy immensely, as for instance in Korea (some $2 billion annually).
neighboring Lebanon’s rank of 78. Increased transparency in getting credit is important to reduce discretionary and arbitrary financing which discourages competition.

The Jordanian credit system has been revised to this effect in 2011 with the objective of making it more transparent to benefit entrepreneurs and investors more equally. The reform involves improving the credit information system by setting up a regulatory framework for establishing a private credit bureau as well as lowering the threshold for loans to be reported to the public credit registry. Jordan has also abolished certain taxes and made it possible to file income and sales tax returns electronically, making the system more accountable.121

These revisions in lending law may support innovation activities, but further revisions in funding mechanisms are required to entice private sector innovation activities. As stated, the country’s annual R&D total is less than 0.5 percent of GDP, with almost none of it in the private sector, and virtually no seed, angel and VC funding.122 A lone VC effort is that of The Ministry of Planning and International Cooperation in association with JEDCO, who have continued efforts initiated in 2005 with EU assistance (under the completed Euro-Jordanian Action for the Development Of Enterprise (EJADA) and in collaboration with the European Investment Bank (EIB) in 2007, to undertake a feasibility study to establish the need and demand for equity financing by SMEs in Jordan. Results of that study established that a "substantial financing gap" exists and recommended that the Government of Jordan take the necessary steps to act as a catalyst and facilitate the establishment of the "Venture Capital Services Industry" in Jordan. In 2009, the Jordan Enterprise Venture Capital Programme was launched, aiming at developing the emerging venture capital service industry in Jordan and at improving access to equity and quasi-equity financing for SMEs in Jordan. The Funds have minimum sizes of US$6.9M (Early Stage) and US$27.5M (Capital for Growth), of which 60 percent and 35 percent respectively have been committed in-principle by anchor investors.123

Aside to VC funding, an especially important financial mechanism for Jordan to develop is the improvement of the funding mechanism of credit guarantee systems. Such a mechanism can allow companies in strategically important sectors, such as ICT, to have the courage to try out new business ideas and grow. Jordan’s banking system has not been able to marshal the funding and guarantee support resources for something akin to Lebanon’s successful Kafalat system.124

124 Examples of such systems elsewhere, such as that of Korea, have seen the government planning and operationalizing such a system. See Suh, J. and Chen, D. (2007) Korea as Knowledge Economy: Evolutionary process and lessons learned, ch. 3. Washington: The World Bank.
Box 8.2: Credit Guarantee System Kafalat Lebanon

Kafalat is a Lebanese financial company of public concern which provides SMEs loan guarantees based on business plans/feasibility studies that show the viability of the proposed business activity. It targets innovative start-ups and SMEs in industry, agriculture, tourism, traditional crafts, and high technology. Kafalat guaranteed loans benefit from interest rate subsidies, which are financed by the Lebanese Treasury and administered by the Central Bank of Lebanon. Kafalat explicitly serves the borrower’s interests in using the Kafalat feasibility studies to leverage lower collateral from the lender. Additionally, the borrower benefits from a subsidy on the interest of the loan that is charged by the bank. Kafalat also explicitly serves the lender’s interest in guaranteeing reduced risks on the loan for the bank. Kafalat guaranteed loans in Lebanese Pounds benefit from exemption from the statutory reserve requirement by the Central Bank of Lebanon. This reduces the costs of the lending bank, allowing it to lend to customers with lower interest rates. In consequence, a credit guarantee system such as Kafalat indirectly also contributes to an increase in SMEs and increased domestic investment, output, and employment.

Source: www.kafalat.com

Funding mechanisms, such as experimentation with credit guarantee systems, and public-private funding mechanisms such as matching grants, are important elements in the advancement of innovation activities. Matching grants are export support mechanisms that are short-term and temporary, partial financing activities promoting improvements in advancing innovations in the private sector in particular, and as such may be helpful to kick-off innovation activities in the short-term. They can be explored with a view to move Jordanian SMEs up the value chain, and further toward international markets, as well as to advance skills development and capacity building across sectors.

8.6.5 Tapping into global value chains: technology acquisition and the importance of networks

For companies in developing economies, inclusion in global value chains not only provides new markets for their products, but also provides the supplier (a company) access to knowledge and enhanced learning and innovation.\textsuperscript{125} For Jordanian companies, the innovation benefits that can be accrued from a move up a global value chain would be the following:

- making better products (product upgrading through already functioning R&D practices);
- making them more efficiently (process upgrade to result from adapting new business models by learning from others, and at the same time benefiting from a development of a more friendly business environment);
- or moving to more skilled activities (functional or inter-sectoral upgrading of an enterprise, to result from benefiting from innovation cluster development, and from the establishment of public-private partnerships).

Technology acquisition is an important way for SMEs to improve their business and move up global value chains. The World Bank Enterprise survey of Jordanian companies suggests only 12-14 percent of service sector companies and 16-21 percent of manufacturing companies use technology transfers from other firms or parent firms as a source of support for innovation activities. The introduction of a new technology, be it new communications software, new packaging procedure, or other, can significantly upgrade an SME’s production ability and markets. Government programs, in turn, can provide funding support for SME’s to buy new technology. Buying from parent firms, other international firms, or other local firms, are all ways to link a company to new markets and customers and production chains.

Furthermore, sometimes such a move up a global value chain can develop in international ‘firm to firm’- relationships, but recent experience suggests an efficient national innovation policy to support

This process is very important reference. Firms need strong technological capabilities, as well as engineering and design capabilities and general managerial capacities, such as knowledge management practices and the adoption of flexible structures in organization, in order to move up. Technological abilities are related to the ability to assess and select the more appropriate techs, implement new technologies, network with suppliers and partners, the ability manage knowledge exchange within multi-disciplinary and cross-cultural innovation projects.

Learning from what larger international and national companies in Jordan and elsewhere did is important for local SMEs, although the demands of the most tech-competent, R&D intensive firms will differ from those of SMEs. Business incubation activities performed by the El Hassan Science City, JEDCO and companies such as Oasis 500 are an important step in supporting these activities. The vast and educated Jordanian diaspora, some in international VC networks, also plays an important role in translating between different communities of expertise, and in identifying markets for Jordanian products. Installing advanced SME support networks like the British-European PERA network in Jordan, and scaling up what the Chamber of Industries has initiated, are also important steps forward.

Such networks also support Jordanian companies in commercializing the results of public and private ST&I efforts. For example, JICA focuses on assisting Jordanian companies and NGOs with training and expertise for development. USAID is supporting ongoing development of six innovation clusters, formed to promote proactive dialogue among all stakeholders in targeted sectors, as well as to enhance movement up the value chain, thereby enhancing employment, revenues, exports, and investment.

8.7. Recommendations

There is a large number of innovation related initiatives, institutions and policies in Jordan, but they are not always effective and are seldom strategically aligned with the challenges the country is now facing. The government and private sector agencies for innovation activities have underdeveloped capacities, monitoring mechanisms and information for them to effective support and implement innovation activities.

Furthermore, Jordan needs to consider how to go about broadening, re-calibrating and seriously increasing the potency of its innovation policy – as opposed to just incrementally tweaking what is there. It needs a comprehensive innovation policy, addressing the content, scope and process problems of the current efforts. Innovation governance stream-lining, prioritization and financial support for innovation activities are the key areas to be focused on.

Suggestion 1: Develop a national innovation strategy. Instead of repeating the earlier near-exclusive focalization of innovation policy on the S&T-led strand, the government should adopt a broader, more up-to-date three-strands-of-innovation framework as its organizing principle and checklist of policy ingredients.

Suggestion 2: Establish innovation leadership. To increase the visibility and priority status of innovation on the government’s agenda, the national innovation agenda/strategy needs a central anchor, long-term leadership which outlasts changing governments.

Suggestion 3: National innovation strategy should establish sectoral priorities. Sectoral prioritization will involve a focus on competitiveness enhancing policies. Part of this process in Jordan has already involved breaking down monopolies in productive sectors to enhance competitiveness (e.g., ICT sector, see Annex 2). It may also involve retraining and further skills development, by the public and the private.

126 http://www.jica.go.jp/jordan/english/activities/activity01.html
127 http://www.zawya.com/story.cfm/sidZAWYA20110426111545/USAID_Jordan_Promotes_Prosperity_Methodology_Based_on_Innovation
sectors. There is also a need to streamline the policy with other existing and emergent national plans, such as the National Agenda.

**Suggestion 4: A funding strategy for innovation activities should be created.** There is a need to consider specific financing mechanisms for innovation activities across sectors. This will involve for example the developing a reliable credit guarantee system, in consultation with the private sector to support Jordanian start-ups and SMEs.
Annex 1: The Innovation Map - An illustrative checklist

The Innovation Map: an illustrative checklist

Which innovation outputs?
- New processes
- New products
- New services
- New business models or new ways of doing things

Which type of innovators and innovation?
- S&T-based origination-type innovators (PhDs mostly)
- Creative-recombination-type innovators (degree +/- irrelevant)
- Business model/process reinvention-type innovators (MBAs)

What kind of an environment will they thrive in?
- A growing community of first-rate scientists and engineers
- A critical mass of respected university research centers
- High-caliber, varied and size of the creative-class presence
- An exceptionally favorable environment for startups
- An excellent & number of bold, innovative firms within it

What will attract them into the country or retain them in it?
- A university environment, salary, and social standing as a magnet for elite science types from home and the diaspora
- Outstanding living conditions and a lively creative industries ecology as a magnet for creative types from the world over
- Existing PFI conditions as a magnet for bundles of entrepreneurs and game-changing entrepreneurs from all over the world

Innovator attraction and innovation support policies
- Upgrade a few basic & applied research centers to world-class, SG
- Attractive “hurry” cities, UA
- Catalytic creative industries programs, LX
- Special zones, tax and other steps to attract innovative TNCs, IR, LX
- Neutral & universal R&D incentives, IS
- Comprehensive technological incubator, startup support, and VC funding programs, IS
- Linkage programs for local SMEs around resident TNCs, IR

Innovation personnel development policies
- Vigorous tertiary education and LLB reforms to speed the supply of first-rate S&T, design/entrepreneur, MBA and other graduates, RI, SG
- Upgrade quality and respect for mid-level technicians degrees, IR, NE
- Early childhood, basic, secondary & vocational curriculum changes with a strong pitch towards creativity, design, teamwork, problem-solving, IT, foreign language and other platform skills, RI

Dynamic entrepreneurship policies
- Systematic entrepreneurship training in secondary & tertiary education, SW
- Top-rated business environment, SG, DK
- Suspends business development support services, SG
- Reinforced IPR and MGT regime, DK

Networking and knowledge access policies
- Smart support and good legal setup for academic/research/industry links, IS
- Strong support for global knowledge access & networking (e.g., science attaches, fairs, diaspora networks, study tours), English for all program
- Worldclass, highly competitive ICT services, with high broadband coverage, NL
- IT-related SME support programs, Ambitious IT diffusion and IT literacy programs, Advanced e-government as catalyst, NE

Innovation demand-side policies
- Innovation-promoting public procurement policies, Turning selected government services into innovation powerhouses, and outsourcing others, NZ
- Standards & norms that promote innovation