The Arab Republic of Egypt
Competitiveness Report
2010 update
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Executive Summary

This report, an update of a previous report by the Bank on Egypt’s competitiveness (AfDB (2009), written in November 2010), assesses Egypt’s reform process, how it has translated into performance outcomes along several dimensions putting particular emphasis on how Egypt has fared relative to the average performance of suitably selected comparator groups (countries in the region, large countries in terms of population and countries well-endowed in natural resources). The report evaluates how Egypt’s recent performance supports the medium term objective of sustaining the present high growth rate (7%) to create 4.5 million jobs by 2011, with the private sector as the prime driver of the economy. Policy-makers are hoping to achieve this performance through the continuation of its recent reforms. Before the 2008-2009 economic and financial crises, Egypt’s growth had picked up. Since then, the country has buffered relatively well the impact of the crisis and in August 2010, economic indicators were even suggesting that the economy had rebounded. This accelerated growth and resilience is largely attributable to the efforts made towards the improvement of the private investment climate and the initiation of the transformation from a state-led to a market-oriented economy. To that effect the government has developed a Ten-Point-Action-Program covering the areas of investment, employment, social development, education and research, health services, population growth, natural resources, the basic public service, building an information society and developing the political and legislative environment.

The main conclusions from the analysis in the report are the following:

- Egypt’s growth has picked up in recent years, a reflection of its improved ranking according to several competitiveness indicators: the Global Competitiveness Indicator (GCI) of the WEF, the Ease of Doing Business (EDB), and the Investment Climate Assessments (ICAs).
- Over the long haul covering the period 1962 to 2008, for the largest possible group of countries (83) with available data on a continuous basis, Egypt remained at the bottom of the lower-middle income group during the period 1962-87. During the period 1987-2008, Egypt moved up to the middle of the group of lower-middle income countries. And, compared to others, Egypt had one of the most stable growth rates over the last half-century.
- Compared to others, Egypt has a low investment rate, its overall openness to trade is still low, and the real exchange rate has appreciated recently.
- On the external front, Egypt has made substantial progress in reducing tariffs even though the dispersion in tariffs remains high and Egypt’s use of NTBs is still pervasive with 49% of its tariff lines at the HS-6 level having a technical one (or several) regulation. Also Egypt’s export are still relatively concentrated compared to other countries. The report speculates that policy discretion and incentives changing rapidly might have contributed to this outcome.
- As emphasized in other reports, the quality of its human resources is among the most severe binding constraint on Egypt’s competitiveness. Also Egypt ranks low according to indices of hard infrastructure (ports) and soft infrastructure (reduction of red-tape).

The main suggestions for areas of policy action suggested by this analysis are:

- At the most general level, an institutionalization of reforms and the process of reforms is called for to reduce uncertainty. This should take precedence over short-term incentives and one-time measures.
over establishing a long list of detailed reforms. This will help raise the expected profitability of investment and lengthen export spells (currently the survival rate of new exports of manufactures are very low). Stabilization and/or reduction of the public debt would help reduce uncertainty. A depreciation of the real exchange rate should be contemplated in view of the recent appreciation of the real exchange rate. This would help maintain the overall competitiveness of tradables (the experience of successful export growth episodes shows that these have been accompanied by a sustained depreciation of the real exchange rate).

- Regarding trade policies, the incidence of NTBs is high. These should be reduced. The level and variance in tariffs is also high. The average rate of protection should continue to be reduced and the protection of final goods should be lowered.

- According to several indicators, the quality of Egypt’s infrastructure (hard and soft) is lagging. Improvements in this area should enhance Egypt’s competitiveness.

- An adequate supply of human skills is needed for a successful integration into the World Trading System. Egypt (and the North African general) has been lagging for a long time in this area. A better match of the supply of skills to the evolving demand on the international markets is needed.
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We are pleased to present this report on Egypt’s Competitiveness and thus share the fruits of analytical work and discussions carried out with Egyptian counterparts over the past year. While the social and political changes that have swept across Egypt, and the North Africa at large, have taken center stage in the first months of 2011, the underlying economic dimensions of these changes are critically important to keep in mind. And the topic of this report is, in several ways, at the core of the economic challenges facing Egypt today.

Competitiveness and the productivity with which a nation utilizes its human, capital and natural resources is inextricably linked to a country’s standard of living and, in a dynamic sense, a determining element in any society’s ability to improve living conditions for its people and meet the aspiration of its youth. Cognizant of its importance, Egypt has focused on competitiveness and private sector development through reforms to improve its business climate and further its economy’s competitive edge. These reforms have undoubtedly contributed to the increased growth performance in recent years, with annual average GDP growth rising from below 4 percent in 2003-2006 to above 7 percent in 2007-2009. The long term objective of the Egyptian government is to maintain this higher level of economic growth, with the private sector as the prime driver of the economy. Ensuring strengthened competitiveness of the economy is a critical element in a successful high-growth strategy.

Although prepared and written prior to the recent social and political changes, the report’s conclusions and suggestions for action are more relevant than ever. The report thus argues that there are tangible measures that could be undertaken to improve Egypt’s competitiveness in the world economy and achieve the objective of sustained, higher economic growth. Beyond the well-known but nevertheless critical maintenance of macroeconomic stability, including a prudent public debt policy, the report discusses the importance of reducing barriers to external trade, strengthening Egypt’s infrastructure, and the need to adapt education with a view to build a strong Egyptian labor force. Important as reforms in these areas are, their value is lost without the institutionalization of the reform process, with a particular view to curb perceptions of uncertainty in the domestic and international business community.

We believe that the report will provide entrepreneurs, investors and policy makers with pertinent information on the Egyptian economy and its business climate as well as an update on economic reforms and the private sector. We thus hope that this report will provide a useful contribution to the discussion of how to secure continued and strengthened competitiveness of the Egyptian economy.

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1. Introduction

1.1 Background and Government Objectives

Since 2004, and even earlier, Egypt has engaged in broad-based reforms affecting all sectors and markets in the economy as well as some disengagement of the state (e.g. the privatization of banks). An impressive list of reforms has been carried out. Tariffs and corporate tax rates have been reduced and business entry prerequisites have been streamlined through one-stop shops in major cities. The delays associated with licensing and permits have shortened over successive ICA surveys. A single window was introduced for imports and exports, with automated procedures. Registering property was simplified and the cost was reduced.

A private credit bureau was established. A competition authority has been established and launched important investigations into monopolistic practices in the steel and cement industries. A successful one-stop shop was established in Cairo under the General Authority on Free Trade Zones and Investments (GAFI).

All the competitiveness indicators (GCI, EDB, ICA) show an improvement in Egypt’s ranking suggesting that Egypt is performing relatively better than comparator countries. The detailed comparison of Egypt’s performance to the average of several comparator groups in section 2 confirms that Egypt has outperformed comparators in terms of growth over the 2006-09 period. At the same time, a closer look at the sources of growth and expenditure indicates that Egypt’s trade share is low relative to all comparator groups, including large countries that have smaller trade ratios than other country groupings. Likewise, the investment share in GDP is also low compared to the comparator group averages.

The report also shows, that, contrary to the impression of macroeconomic instability conveyed by surveys because of the perception by the private sector of excessive discretion by policy-makers, Egypt’s growth has been among the most stable across the largest possible sample of countries with complete data since 1960. The report argues that Egypt’s reforms have contributed to the increase in the growth rate from 4% in 2004-6 to 7.2% in 2007-08. Thus, during the 2008 crisis while world GDP fell by 5 percentage points, Egypt’s GDP fell by half that rate, and growth is expected to exceed 5% in 2010-11.

Egyptian authorities intend to keep up this reform momentum. During the recent global financial crisis, Egypt’s minister of finance stressed that “this is no reason for retreating from globalization” and that there is a “need to build the foundation for sustainable long term growth and competitiveness”. Such statements indicate that the crisis has not lead to a change of perception that promoting competitiveness is fundamental to the ability of the economy to grow rapidly, increase employment, and reduce poverty. Because of the perception of the benefits of international trade and export-led growth in an increasingly globalized world, Egyptian policy makers have been comparing how the Egyptian economy has fared compared to its competitors.

1 To take concrete examples of some of the microeconomic reforms, before the reforms in early 2000, customs and other clearance procedures at Egyptian ports delayed cargoes by five to twenty days, compared to one to two days in more efficient ports, resulting in high storage costs and damage to cargo. According to World Bank (1998), these inefficiencies were costing the Egyptian economy about US$1 billion per year. With the reforms that followed, Egypt has become one of the most efficient ports in Africa, the time to export has decreased from 27 to 10 days between 2006 and 2010, and the time to import from 29 to 25 days during the same period (Doing Business website of the World Bank). Likewise, Egypt has lowered its protection. Since 2004, the authorities gradually reduced the trade-weighted tariff from 9.5% to 6.5% in 2008 and further to 5.5% in 2009.
The report assesses the evolution of the competitiveness of the Egyptian Economy against several benchmarks (i.e. averages of selected comparator groups: (i) countries in the region, (ii) middle-income countries according to the World Bank's classification, (iii) oil exporters and (iv) exporters of natural resources). The comparative performance is carried both in recent years (since 1990) for several indicators and over the longer haul (since 1992) for growth and the stability of growth. Wherever possible, the report relies on measurable 'objective' criteria (i.e. investment, indicators of policies—infrastructure, indicators of trade and macro policies, of the quality of physical and human infrastructure). These 'objective' comparisons are completed with the evolution of rankings derived from composite aggregate indicators (the Global Competitiveness Index (CGI) of the WEF, the World Bank’s Ease of Doing Business (EDB) index and the several Investment Climate Assessments (ICAs) carried out for Egypt). Averages of selected comparator groups: (i) countries in the region, (ii) middle-income countries according to the World Bank’s classification, (iii) oil exporters and (iv) exporters of natural resources.

Section 2 starts with a description of the list of ingredients that have been found to be common in successful sustained growth experiences: macroeconomic stability, openness to world markets, physical and human infrastructure and financial sector development. These ingredients serve as a basis for the analysis in the remaining sections. The rest of the section describes the evolution of Egypt’s overall ranking for the G3, EDB and ICA indicators and closes with a measure of Total Factor Productivity (TFP) which is the most widely used measure of a country’s competitiveness in world markets.

Section 3 presents new estimates of Egypt’s growth performance (growth and volatility of growth) compared with that of the largest sample of countries (83) for which continuous data is available since 1960. These comparisons show that Egypt’s growth has been much more stable than the average of any comparator group and that Egypt’s growth has been moving up from the bottom of the lower-middle income group towards the middle of this group. This improvement confirms that the reforms initiated in 2004 are bearing their fruits.

The conclusion from this section is that the improved performance of recent years may not be sustained if the investment rate does not pick up further and if the real exchange rate is further depreciated. As to physical infrastructure, there is also hope that the well-recognized poor performance (growth and volatility of growth) compared with that of the large firms (private and public), but also the relatively underdeveloped poor human and physical infrastructures (section 5).

Section 5 deals with soft (human resources) and hard (physical) infrastructure. Regarding human resources, it has long been recognized that there is pervasive feedback between trade costs that depend on the quality of physical infrastructure and trade volumes. Data from the Logistics Performance Index (LPI) suggest that Egypt’s infrastructure could also be upgraded leading to the overall conclusion that Egypt’s national competitiveness still needs to be improved.
The OECD (2005) defines a country’s competitiveness as a country’s ability to sell goods (under free and fair conditions) in global markets “…while simultaneously maintaining and expanding the real incomes of its people over the long term.”

2. Competitiveness Defined and Measured

Many economists view ‘competitiveness’ as something experienced at the firm level (e.g. Paul Krugman), thereby dismissing the notion of ‘national competitiveness’ that is recognized as important by others (e.g. Michael Porter). While countries may not actually compete in global markets along all dimensions, locations, policies and the overall institutional setting clearly affect firms’ competitiveness through natural endowments, human capital, market access, credibility, reputation and other factors gathered under the term ‘institutional framework’. And while competitiveness is not necessarily a zero-sum game, in traded goods markets, relative competitiveness matters.

If what is actually understood by ‘competitiveness’ is under debate, an accepted working definition of national competitiveness is the country’s total factor productivity (TFP) which determines the rate of return on investment and hence a country’s long term growth prospects. After four years of inquiry, acknowledging that there are “no recipes, just ingredients”, the Commission on Growth and Development went on to identify five common characteristics of successful growth—the fundamentals of competitiveness:

- Full exploitation of the world economy—knowledge acquired in the global economy and exploitation of global demand is the fundamental basis of economic catch up and sustained growth. Promoting FDI and foreign higher education can support knowledge transfer.
- Macroeconomic stability—modest inflation and sustainable public finances.
- High rates of savings and investment—high and sustained investment underpinned to a large extent by domestic savings. Countries that had achieved high sustained growth had impressive rates of public investment in infrastructure, education and health.
- Letting markets allocate resources—policies need to ensure that product and labour markets are flexible enough to allow structural transformation of the economy from agriculture to manufacturing to take place and there is, at minimum, no bias against exports.
- Committed, credible, capable government—governments must have the capacity to devise and implement a growth strategy.

Beyond that, the Commission suggests that policymakers should aim to protect people, through education and training and by establishing forms of social protection that can provide income sources when earnings cease and help people have uninterrupted access to basic services. Governments should seek to contain income inequalities and commit to actively promoting gender equality.

The report folds these ingredients into the assessment of Egypt’s competitiveness by focusing on:

1. Macroeconomic stability (section 3)
2. Openness to the world markets (section 4)
3. Physical and human infrastructure (section 5)
4. Financial Sector Development (section 6)
Understanding a country’s relative performance (overall or at sector level) in terms of its ability to expand the volume of its exports, their diversification (new products and/or new markets) and their quality or sophistication provides a guide of its competitiveness in global markets. Several indices have tried to capture the importance of the ingredients identified by the Commission and other contributors to the debate. These include Porter’s (1990) “diamond” and the twelve pillars of the Global Competitiveness report discussed below. Often constructed as an average of several sub-indices whose values are not independent of one another, they are measured on an ordinal scale. These aggregate indices are helpful to understand a country’s relative performance in terms of “national competitiveness” especially as the rankings evolve over time.1

At the same time, it must be recognized that these indices are often difficult to interpret, even over time. It is best to see them as serving complementary purposes so it is useful to examine all of them briefly. For example, the GCI is useful to get a rough idea of a country’s broad economic competitiveness while others, such as the Ease of Doing Business (EDB) of the Logistics Performance Index (LPI), draw more heavily on hard data that are more focused on a country’s export competitiveness and are easier to interpret (how many procedures to open a business or how many days to open a business).

A second category of indicators, like the Investment Climate Indicators (ICI) administered by the World Bank, also on a regular basis, rely more heavily on perceptions by business. Their interest lies in the evolution of perceptions about the adequacy of the institutional and policy environment to conduct business and thus to dig deeper into the determinants of productivity. However, these indices only capture indirectly any significant market and institutional failures, or coordination failures between public and private activities, or the availability of back-door services.

Both types of indices are available for Egypt for several years. Section 2.1 summarizes the evolution of indicators more focused on overall competitiveness while section 2.2 reports on indicators of changes in perceptions. Section 2.3 reports on indices of Total Factor Productivity (TFP) which is the universally accepted yardstick to measure a country’s competitiveness in the world markets in which its goods compete.

2.1 Competitiveness according to the GCI and EDB Indicators

According to the Global Competitiveness Indicator (GCI) reported in table 1 (whose construction methodology has changed since inception 5 years ago), Egypt is now in transition from stage 1 to stage 2 of development, i.e. it is meeting the “basic requirements” of competitiveness (except for the poor score of a rank of 120 on “macro stability index”). However, according to table 1, its relative position is largely unchanged.

A closer look at the various components indicates a large improvement in the financial index ranking moving up 29 places between 2008 and 2009 to rank of 84th and an even larger fall of 50 places to 124th according to the macro-stability indicator (based on “hard” objective data) because of public debt increase as a result of the central government deficit (an overall deficit close to 10% of GDP) and a primary deficit of 4% of GDP) and the ensuing inflationary pressure.2

As to the evolution of the EDB in the last column of table 1, Egypt does show continuous improvements in its reforms even though it is still in the bottom half of the rankings. Thus according to the recently EDB report issued for 2011, in spite of an improvement of 5 places in the rankings, Egypt remains relatively low in the rankings with regards to significant regulatory areas. Egypt ranks 154th out of 183 economies in “Dealing with Construction Permits”, 136th in the ease of “paying taxes”, 143rd in “Enforcing Contracts” and 131st in closing a business.3

Over the past years, Egypt mainly started a business easier by reducing the paid-in minimum capital requirement by more than 80%, abolishing bank association fees, and automating tax registration by establishing a single window for processing construction permits. A new building code introduced in 2008 was aimed at reducing the procedures and time required for construction-related approvals. Simplified administrative procedures for registering property and new time limits have reduced the time to transfer property in Cairo from 193 days to 72. The port of Alexandria continued to upgrade its facilities and speed up customs clearance, reducing the time to export by 1 day and the time to import by 3. New listing rules for the Cairo Stock Exchange strengthened protections for minority shareholders: now an independent body must assess transactions between interested parties before they are approved. And thanks to new regulations issued by the Central Bank of Egypt, borrowers have the right to inspect their data in the private credit bureau.4

The improvements in these indicators of the Ease of Doing Business represent an important step forward and are probably a significant contributor to the relative improvement of Egypt’s growth performance in the 2006–09 period shown in table 3 as there is a close

Table 1: Egypt’s Historical Performance on the Global Competitiveness Index (GCI) and Ease of Doing Business (EDB)

<table>
<thead>
<tr>
<th>Year</th>
<th>Score (GCI)</th>
<th>Rank (GCI)</th>
<th>Rank (EDB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/05</td>
<td>3.9</td>
<td>47 (104)</td>
<td>165 (175)</td>
</tr>
<tr>
<td>2005/06</td>
<td>4.1</td>
<td>52 (117)</td>
<td>165 (175)</td>
</tr>
<tr>
<td>2006/07</td>
<td>4.1</td>
<td>63 (125)</td>
<td>165 (175)</td>
</tr>
<tr>
<td>2007/08</td>
<td>4.0</td>
<td>77 (131)</td>
<td>126 (175)</td>
</tr>
<tr>
<td>2008/09</td>
<td>4.0</td>
<td>81 (134)</td>
<td>114 (175)</td>
</tr>
<tr>
<td>2009/10</td>
<td>4.0</td>
<td>70 (133)</td>
<td>106 (183)</td>
</tr>
<tr>
<td>2010/11</td>
<td>N.A.</td>
<td>94 (183)</td>
<td>94 (183)</td>
</tr>
</tbody>
</table>

Source: WEF, Financial Development Index 2009 (rounded to 1 decimal); World Bank, Doing Business: How to Reform (several years). Notes: Number of countries in parenthesis next to rank. 1 An alternative approach to competitiveness is the “boundaries constraints” or “diagnostics approach” proposed by Hausman et al. (2000) which can be applied to its exports (see Farole et al. 2010). However, this approach is not suitable for comparing the relative position of a country in terms of its competitiveness. 2 This is because most competitiveness indicators are often ordinal indices (e.g. ranking institutional quality on an integer scale of 1 to 10 for example), are often subjective, and are often averages of composite (for example different weights are given in the aggregation of the indicators entering each one of the 12 pillars of the GCI, e.g. greater weight to basic requirements for policy and environment indicators, the idea being that countries should be evaluated relative to their “technology frontier”). The indicator also often reflect an outcome that is the result of policies and external events beyond the control of government. For example, the cited WEF Global Competitiveness Index (GCI) issued from their annual Global Competitiveness Report (see figure in table 1) has 12 “pillars” (themselves categorized into three groups of indicators per group in parenthesis). Basic requirements (4), Efficiency Enhanc- ers(6), Innovation and sophistication (2). Being inter-related, it is difficult to interpret the evolution of rankings within and across groups. Likewise the EDB ranking is the average of 10 indicators leading some critics to say that countries may find it “easier to change their rankings in Doing Business than to change the underlying business environment”. 3 This relatively stable and lackluster ranking in the GCI is also reflected in the Logistics Performance Indicator (LPI) which is largely based on hard data displayed in table 2. The LPI shows that Egypt still does not rank in the top half of a large sample (92 out of 150 in 2008) suggesting the need for improvement in infrastructure (hard and soft) to be competitive in the global economy. 4 The most recent report emphasized the importance of reforms in dealing with construction permits noting that 60-80 percent of building projects in de- veloping economies are undertaken without the proper permits and approvals and that in the Philippines 57 percent of new construction is considered illegal while in Egypt the share might reach 90 percent. 5 The Egyptian economy grew at pranks in other reports as well. According to the UNCTAD, World Investment Report 2008, Egypt was ranked as the top country in Africa, and the second in the MENA region (after Saudi Arabia) in attracting FDI. These testimonials have contributed to Egypt being the first country in the region to be accepted in the OECD Investment Committee in 2007. See www.oecd.org.
correlation between Ease of Doing Business indicators and indices of corruption (more favorable index of corruption in countries where barriers to entry and exit of firms are lower).

2.2 The Investment Climate

The Investment Climate Assessments (ICAs) questionnaire updated regularly provides a third source of information about competitiveness. First, the collection of firm-level data showed that Egypt’s Total Factor Productivity (TFP) improved greatly in sectors such as garments, chemicals, textiles as well as overall labor productivity reflecting the results of the reforms identified in the other indicators in the EDB indicators above (see chapter 7 of the 2009 ICA report). Second, the report provides information on the perception of business executives on which factors most importantly affect their operation and growth.

According to table 2, the evolving perception of business is that there has been steady progress in reducing the burden of taxes and tax administration identified by firms. Current priorities re-emphasized the need to reduce macroeconomic policy uncertainty, address informality, reduce regulatory policy uncertainty and deepen worker skills. As taxes have receded as a constraint and as firms operate at higher levels of efficiency, worker skills have moved into the forefront as a challenge to enterprise growth.

According to the report, the 2008 results “show the continuing toll on investors of discretion and corruption, in terms of uncertainty, delays and direct costs.” (World Bank (2009), p. 11) According to the report, this uncertainty is the reflection of the perception about general uncertainty about government policy, rather than a reflection of the deterioration in the macroeconomic indicator identified in the GCI presented earlier.

2.3 Improving Total Factor Productivity

If competitiveness is relative and if one has taken into account a country’s overall national competitiveness as captured in the evolving ranking in the overall indicators reviewed above, the evolution of total factor productivity remains the most significant yardstick to measure a country’s competitiveness in world markets.

The evolution of total factor productivity (TFP) is the outcome of a country’s performance, of how policies and the institutional framework translate into its ability to compete in world markets. Figure 1 shows the evolution of TFP computed from the representative survey of over 1000 firms carried out in the context of the Investment Climate Assessments (ICAs) carried out in 2004, 2006, 2008. The successive surveys show that TFP of Egypt has been improving indicating that policy and institutional reforms influencing product and factor markets are facilitating better use of resources, that is, efficiency gains.

As summarized in the last ICA report, TFP in the panel firms have moved up in comparison to a number of other countries in the industries studied with strong evidence of productivity gains in multiple sectors, including garments, textiles and chemicals so that TFP has been elevated to a level comparable to several strong middle-income performers, like Brazil. Yet, in spite of this strong overall performance, Egyptian labor productivity still trails that of fast-growing middle-income countries like India, China, and Brazil (figure 1 does not take into account TFP growth in the comparator group).

Table 2: Constraints Identified Most Frequently as “Very Severe” or “Major”

<table>
<thead>
<tr>
<th>2004</th>
<th>2006</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tax Rates</td>
<td>Macroeconomic Instability</td>
</tr>
<tr>
<td>2</td>
<td>Macroeconomic Instability</td>
<td>Illegal/Informal Competition</td>
</tr>
<tr>
<td>3</td>
<td>Regulatory Policy Uncertainty</td>
<td>Corruption</td>
</tr>
<tr>
<td>4</td>
<td>Tax Administration</td>
<td>Regulatory Policy Uncertainty</td>
</tr>
<tr>
<td>5</td>
<td>Illegal/Informal Competition</td>
<td>Tax Rates</td>
</tr>
<tr>
<td>6</td>
<td>Corruption</td>
<td>Cost Financing</td>
</tr>
<tr>
<td>7</td>
<td>Cost Financing</td>
<td>Tax Administration</td>
</tr>
</tbody>
</table>

Source: Egypt Investment Climate Assessment 2009: Accelerating Private Enterprise-led Growth World Bank (for official Business), Table 1, June 2009

Notes: The evolution of Egypt’s TFP is relative to the unchanged TFP of comparators.

Figure 1: Evolution of Total Factor Productivity, Egypt and Comparators

- Notes: The evolution of Egypt’s TFP is relative to the unchanged TFP of comparators.

Perceptions about constraints vary across sectors. According to the latest ICA, “Service firms have more difficulty with access to land than do other sectors, while hotels are disproportionately constrained by access to water. Small formal manufacturing enterprises are more likely to identify themselves as seriously constrained by a number of factors ranging from informal competition to tax rates to the cost of land access to finance. Informal sector firms agree with formal firms on the top priority – macroeconomic uncertainty. However, the ordering of other constraints is different. The second most commonly identified factor to be rated as “major” or “very severe” is the price of land, followed by tax rates, cost of financing, competition from the informal sector, and corruption” (World Bank (2009), p. 6).
In the wake of the financial crisis, the government’s objective continues to be to raise growth to reach upper-middle-income status (according to the World Bank’s classification of countries) within the next decade. This section starts with a long-run evaluation of Egypt’s growth over close to fifty years to see how it has compared with averages for comparator groups: other lower middle-income countries to which Egypt belongs, other MENA countries and, since 1990, in more detail along several dimensions (inflation, openness, investment, government fiscal stance) with the same groups of countries. Because there is much subjectivity in the selection of country groupings, Egypt’s performance is compared to the average of several groupings.

Two robust conclusions stand out. First, while Egypt’s performance stagnated between 1962 and 1987, its relative performance has improved drastically since 1987 until 2008. Second, contrary to the impressions suggested by the various competitiveness indices in section 2, Egypt’s growth performance has been very stable, its variation in GDP growth being among the lowest in the group of 83 countries used in the comparisons.

3.1 Per-capita Income Mobility

To see how Egypt has moved around the classification of countries, the annex constructs a mobility matrix for the largest possible sample of countries (83) that have complete data over the longest period (1962-2008) choosing the World Bank’s most recent (2009) breakdown for per capita GNI groupings. As shown in table A1, this results in the following classification (abbreviation and number of countries in parenthesis) in 1962: low- (L-22), lower middle- (LM-38), upper middle- (UM-18) and high-income (H-4). Within this sample period, Egypt remained in the LM group throughout the 1962-2008 period.

Table 3: Egypt’s Per Capita Income Mobility 1962-2008

<table>
<thead>
<tr>
<th></th>
<th>1962</th>
<th>1987</th>
<th>2008</th>
<th>Number of countries by income group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using 1962 classification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Among LM countries</td>
<td>36th</td>
<td>28th</td>
<td>28th</td>
<td>38</td>
</tr>
<tr>
<td>Among (LM + L) countries</td>
<td>36th</td>
<td>33th</td>
<td>33th</td>
<td>61</td>
</tr>
<tr>
<td>Using 1987 classification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Among LM countries</td>
<td>19th</td>
<td>20th</td>
<td>19th</td>
<td>22</td>
</tr>
<tr>
<td>Among (LM + L) countries</td>
<td>25th</td>
<td>20th</td>
<td>20th</td>
<td>48</td>
</tr>
<tr>
<td>Using 2008 classification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Among LM countries</td>
<td>10th</td>
<td>10th</td>
<td>10th</td>
<td>19</td>
</tr>
<tr>
<td>Among (LM + L) countries</td>
<td>16th</td>
<td>10th</td>
<td>10th</td>
<td>38</td>
</tr>
</tbody>
</table>

10 During the global economic and financial crisis Egypt’s minister of finance had stressed that “this is no reason for retreating from globalization” and that there is a “need to build the foundation for sustainable long term growth and competitiveness. See The Egyptian National Competitiveness Council, June 2009.
relative performance appears in the last period when Egypt moved up the ladder in the LM group from 20/22 in 1987 to 10/19 in 2008.

3.2 Macroeconomic Stability

Given the importance attached to macroeconomic stability according to the competitiveness indicators discussed in section 2, Egypt’s performance might have been hampered by macroeconomic instability. While recognizing that this perception may relate more to the perception of instability in government policy-making than to aggregate performance indicators, if instability is indeed important, this should be reflected in macroeconomic indicators and in the evolution of Egypt’s performance in comparison with suitably selected countries.

Macroeconomic instability affects growth through its impact on investment. Instability, in the form of high and volatile inflation, exchange rate and interest rate volatility or foreign reserve shortages for example, will increase the risk associated with a given investment. Inflation is damaging to investment and growth and the impact of periods of high inflation on investor perceptions can be hard to dispel. There is also evidence that it may be the volatility of inflation rather than its level that constrains investment; some countries have grown for long periods with inflation of 15-30%. (Commission on Growth and Development, 2008). Policies to promote macro stability particularly relating to the exchange rate and capital markets need to be calibrated to a country’s level of development.

Using the same sample over the 1962-2008 period, table 4 compares Egypt’s growth volatility relative to the average for each one of the comparator group. Five groupings (of which Egypt is classified as belonging to four, i.e. it is classified as belonging to the R-R MENA group) are considered (the groupings and list of countries in each group is given in Annex 1).

It has long been established that low-income countries have had more volatile growth than when the 1962 classification is adopted (that is why they are poor in 2008!). More importantly, the table shows that these countries with poor growth performance are also those with the highest volatility by both indicators of volatility. It has long been established that low-income countries have had more volatile growth and that growth stability characterizes rich countries. Most recently, North, Wallis and Weingast (2009) have shown this to be the case over a long period. Table 4 carries over the same exercise for the sample period above. The exercise demonstrates that, if anything, Egypt’s fluctuations in growth rates have been extremely low. Indeed, comparing Egypt to the LM and L group averages, regardless of the choice of classification, Egypt’s growth rates have been significantly less volatile than the average for all developing country groupings. Even when compared to the smallest group of H countries (Canada, Sweden, Switzerland, United States), Egypt had a slightly lower coefficient of variation than the average for that group.

To check robustness, growth volatility is also compared with groupings according to resource endowments in the bottom of table 4. The comparisons confirm that growth rates for resource rich MENA countries, whatever the definition adopted has been more volatile than for large and resource-poor (R-P) MENA groupings and that Egypt’s growth has been remarkably stable.

The stability of Egypt’s growth rate is also apparent from the evolution of growth rates since 1990 displayed in figure 2. Egypt’s growth rate has been less volatile than the average for other MENA countries and its growth acceleration since 2000 has been greater (and its fall in 2009-9 has been less). The same trend is also apparent when Egypt is compared to the average of large countries, oil exporters and point-source natural-resource abundant countries.

The gain in growth from less volatility would be minimal as is apparent from the simulations reported in table A2 where it is shown that reducing the (already low) volatility in Egypt’s growth would not have led to much higher growth over the 1962-2008 period, while the gain in growth from reduced volatility would have been much greater for the average lower-middle income grouping. If anything, Egypt has had a higher overall growth over the 1962-2008 period because of its very low volatility in growth rates.

3.3 Towards Sustained Growth

The closer look at the comparative performance for the last twenty years is shown in table 5 where 5-year averages are taken to see any longer-term trend. The table confirms that, following the decline in growth during 2001-05, Egypt has been outperforming, whatever the comparator group, during the last four years (2006-09).

Notes: See tab A2. for definition of country groupings. In parenthesis, the number of countries in income groups after each classification.

1 Mean growth is the average growth rate over the period 1961-2009. i.e. approximately 46 observations per country resulting in large samples and in significantly different mean growth rates in each sample.

2 Standard deviation is with respect to the mean growth over the period 1961-2009 (coefficient of variation in parenthesis).

3 Mean change is the absolute mean change in growth rates observed between two years.

Table 3 assesses Egypt’s relative performance using mobility measures. The cells in the table give Egypt’s per-capita GNI rank in three samples, each sample corresponding to the number of countries in the L and LM in 1962, 1987, and 2008 respectively (see last column in the table). The first two rows show Egypt’s rank in the sample of L and LM group in 1962. Out of a total of 38 countries in its LM group, Egypt was second from last. From that group, it moved up twelve notches by 1987 but, because other countries were also progressing up the ladder (see table A1), in 1987 it was still two notches from the bottom. The improvement in progressing up the ladder (see table A1), in 1987 it was from last. From that group, it moved up twelve notches total of 38 countries in its LM group, Egypt was second rank in the sample of L and LM group in 1962. Out of a column in the table). The first two rows show Egypt’s LM in 1962, 1987, and 2008 respectively (see last

Table 4: Growth and its stability (1962-2008)

<table>
<thead>
<tr>
<th>Country</th>
<th>Mean growth</th>
<th>Standard deviation</th>
<th>Mean change in growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>3.03</td>
<td>2.86 (0.94)</td>
<td>2.15</td>
</tr>
<tr>
<td>(a) GNI per capita</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (23)</td>
<td>1.94</td>
<td>5.84 (3.01)</td>
<td>4.56</td>
</tr>
<tr>
<td>Lower Middle (38)</td>
<td>1.86</td>
<td>5.50 (2.98)</td>
<td>4.02</td>
</tr>
<tr>
<td>Upper Middle (17)</td>
<td>2.53</td>
<td>3.76 (1.49)</td>
<td>2.72</td>
</tr>
<tr>
<td>High (4)</td>
<td>1.91</td>
<td>2.17 (1.14)</td>
<td>1.81</td>
</tr>
<tr>
<td>(b) GNI per capita</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (19)</td>
<td>0.23</td>
<td>6.11 (26.57)</td>
<td>4.90</td>
</tr>
<tr>
<td>Low Middle (19)</td>
<td>2.18</td>
<td>5.05 (23.31)</td>
<td>3.83</td>
</tr>
<tr>
<td>Low Middle (18)</td>
<td>2.34</td>
<td>5.47 (23.4)</td>
<td>4.25</td>
</tr>
<tr>
<td>High (26)</td>
<td>3.02</td>
<td>3.78 (12.35)</td>
<td>2.63</td>
</tr>
<tr>
<td>R-P (MENA)</td>
<td>2.29</td>
<td>6.51 (28.4)</td>
<td>5.55</td>
</tr>
<tr>
<td>R-P (MENA)</td>
<td>1.95</td>
<td>8.61 (44.1)</td>
<td>6.92</td>
</tr>
<tr>
<td>Large countries</td>
<td>2.80</td>
<td>5.12 (18.3)</td>
<td>3.45</td>
</tr>
<tr>
<td>Oil exporters</td>
<td>1.24</td>
<td>7.69 (6.20)</td>
<td>5.46</td>
</tr>
<tr>
<td>Point Source resource</td>
<td>1.55</td>
<td>6.23 (40.1)</td>
<td>4.80</td>
</tr>
</tbody>
</table>
Inspecting the averages for the different components of GDP expenditure reveals that Egypt has consistently higher consumption household expenditures than the average of the comparator groups and a lower government final consumption expenditure. The much lower than average government expenditure reflects the fact that only central government expenditures are captured in these statistics.

Egypt differs also with the comparator groups along two other dimensions. First, whereas for most group averages, the investment share in GDP is around or close to 20%, for Egypt it is close, or barely above 20%, even though investment has risen by 20% over the last four years compared to the previous four-year average. While these figures do not take into account any changes in the productivity of investment, nor the average productivity of investment, it is unlikely to be higher in Egypt than the average for comparator groups.

Second, Egypt is relatively closed to foreign trade, as compared to the comparator groups. The relatively low degree of openness a reflection of lack of market access in foreign markets, lack of access of imports to domestic markets? Are production costs high because of inadequate hard and soft infrastructure? Likewise is the fact that only central government expenditures are captured in these statistics.

The above comparisons suggest that if Egypt has been improving relatively, the investment rate is still low, and the economy is still relatively closed to foreign trade. Are the low investment levels the biggest constraint on sustained growth? Are the investment levels low because of low returns on investment or because of high costs of finance? If it is low returns on investment, is it because of government or market failures? Likewise is the relatively low degree of openness a reflection of lack of market access in foreign markets, lack of access of imports to domestic markets? Are production costs high because of inadequate hard and soft infrastructure?

The standard Cobb-Douglas model with labor and capital where the output elasticity of labor is 2/3 gives an idea of how an increase in the investment would translate in higher per capita growth. Increasing the investment rate from 20% to 25% of GDP would raise growth rate in comparative groups

Table 5: Comparative Performance of Egypt (period averages)a

<table>
<thead>
<tr>
<th>Period</th>
<th>Average per capita growth</th>
<th>Household final consumption as % of GDP</th>
<th>Government final consumption as % of GDP</th>
<th>Gross capital formation as % of GDP</th>
<th>Exports as % of GDP</th>
<th>Imports as % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-1995</td>
<td></td>
<td>1.4%</td>
<td>74.3</td>
<td>23.9</td>
<td>25.0</td>
<td>23.5</td>
</tr>
<tr>
<td>1996-2000</td>
<td></td>
<td>2.6%</td>
<td>78.8</td>
<td>22.5</td>
<td>25.0</td>
<td>23.5</td>
</tr>
<tr>
<td>2001-2005</td>
<td></td>
<td>2.0%</td>
<td>62.9</td>
<td>17.4</td>
<td>25.0</td>
<td>23.5</td>
</tr>
<tr>
<td>2005-2009</td>
<td></td>
<td>2.3%</td>
<td>27.5</td>
<td>37.2</td>
<td>25.0</td>
<td>23.5</td>
</tr>
</tbody>
</table>

Notes: Sources: WDI
a. See table A1 for definition of country groupings.
the GDP per capita growth by almost a percentage point (in the absence of technical progress and under the assumption that the labor is absorbed at the current rate of 2.6% per year). Given the low level of domestic savings, attracting foreign investment will be necessary as well as raising the rate of Total Factor Productivity (TFP) growth.

The Five-Year Plan (2007/08-2011/12), is targeting a rate of growth of GDP of 8.5% per year, predicated on an investment of 23% of GDP. Given, the recent investment and GDP growth trends, this growth objective will require sustained technical progress, increased investment and an increase in the rate of absorption of labor. Taking the average investment GDP growth figures over the last four years in table 6, along with an absorption of employment along historical trends of 2.6% per year, it would require a TFP growth of 4.5%, which is a high figure by historical and international standards.

The performance panorama is completed by the evolution of macro indicators in table 6. On the poverty front, Egypt has made progress with the headcount falling by half even though the poverty gap (how much income has to be redistributed from those above the poverty line to those below to bring them to the poverty line) has remained stable. However, government debt as share of GDP remains close to 100% of GDP and Egypt has also been losing in competitiveness in the last period as the real exchange has appreciated by almost 20% in the last four years following the increase in inflation. Since it is widely recognized that an appreciated real exchange rate is to be avoided for a country that is developing its industry and is seeking to be competitive in global markets, these recent developments should be monitored closely. As summarized by Eichengreen (2008) at the end of his appraisal of using the real exchange rate as a tool of industrial policy, if it is not agreed that an undervalued real exchange rate is a successful industrialization policy in the long run, an overvalued real exchange rate is a bad industrial policy in both the short- and the long-run.

Table 6: Macroeconomic Indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>Current account balance (% of GDP)</th>
<th>Central gov. debt (% of GDP)</th>
<th>Inflation (GDP deflator)</th>
<th>Official exchange rate</th>
<th>Real exchange rate</th>
<th>Real interest rate</th>
<th>Poverty headcount 1.25 USD per day</th>
<th>Poverty gap at $1.25 at PPP in %</th>
<th>Unemployment rate (% of total labor force)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-5</td>
<td>4.40</td>
<td>N.A.</td>
<td>12.5</td>
<td>3.3</td>
<td>134.4</td>
<td>1.8</td>
<td>4.5</td>
<td>3.6</td>
<td>10.4</td>
</tr>
<tr>
<td>1996-2000</td>
<td>-1.40</td>
<td>37.4</td>
<td>5.3</td>
<td>3.4</td>
<td>102.6</td>
<td>8.0</td>
<td>2.2</td>
<td>0.5</td>
<td>8.5</td>
</tr>
<tr>
<td>2001-05</td>
<td>2.43</td>
<td>N.A.</td>
<td>5.9</td>
<td>5.26</td>
<td>141.1</td>
<td>7.2</td>
<td>2.00</td>
<td>0.50</td>
<td>10.4</td>
</tr>
<tr>
<td>2006-09</td>
<td>0.03</td>
<td>96.2</td>
<td>10.8</td>
<td>5.6</td>
<td>122.7</td>
<td>1.5</td>
<td>-1.40</td>
<td>4.5</td>
<td>9.4</td>
</tr>
</tbody>
</table>

Notes: Data Sources: WDI indicators. N.A. not available

1 Each indicator is the mean average of values observed over the period.

2 Local currency units per USD.

2 No real exchange rate data was available from the IFS or WDI indicators. The RER index was calculated using the Egyptian official exchange rate to the dollar and CPI inflation rates in Egypt and USA. The series are normalized with 2000 as the base year (RER=100). An increase in the value of the RER implies a real exchange rate depreciation.

11 The ‘rule of one third’ says that an increase in the capital output ratio of 1% translates into a growth in per capita GDP of 1/3 of 1% in the absence of technical progress. Taking a C-D production function, with factors paid their value product, per capita GDP growth is given by: \( \Delta Y/Y = (\Delta K/K) - (1 - \beta) \). With an investment rate of 25%, more in line with the average of comparator groups, and an unchanged average productivity of capital, the worker capital stock growth is about 0.04% while it would increase to 0.06% if the investment rate were raised to 25% of GDP. For further discussion, see Mohieldin (1996).


14 The performance panorama is completed by the evolution of macro indicators in table 6. On the poverty front, Egypt has made progress with the headcount falling by half even though the poverty gap (how much income has to be redistributed from those above the poverty line to those below to bring them to the poverty line) has remained stable. However, government debt as share of GDP remains close to 100% of GDP and Egypt has also been losing in competitiveness in the last period as the real exchange has appreciated by almost 20% in the last four years following the increase in inflation. Since it is widely recognized that an appreciated real exchange rate is to be avoided for a country that is developing its industry and is seeking to be competitive in global markets, these recent developments should be monitored closely. As summarized by Eichengreen (2008) at the end of his appraisal of using the real exchange rate as a tool of industrial policy, if it is not agreed that an undervalued real exchange rate is a successful industrialization policy in the long run, an overvalued real exchange rate is a bad industrial policy in both the short- and the long-run. ■
4. Achieving Deeper Integration into the World Trading System

International trade provides both inputs into production, and markets for outputs. It is widely accepted that export growth, and the import growth it permits, are key ingredients for the sustained growth of output. Up to one-fifth of the 83 episodes of growth accelerations identified by Hausman et al. (2006) in their event analysis have been attributed to export growth. Likewise, in their study of sustained trade liberalizations across the world, Wacziarg and Welch (2008), identified that the growth rate is significantly and the share of investment in GDP are both significantly higher in the 8 years following a major trade liberalization than in the previous 8 years. In sum, the evidence points towards a positive causal relationship flowing from openness to income levels or from trade liberalization and trade volumes to medium-term growth and increases in productivity.

For middle and high-income countries, the majority of export growth takes place at the intensive margin, i.e. by selling more of the same products often to the same markets. But it is also pointed out that productivity increases are primarily achieved through inter-industry spillovers and that these are more likely in certain product groups—i.e. in the product-space language, in the ‘denser’ part of the ‘forest’ where there are greater opportunities for cross-product linkages. Along these lines, Hausmann, Hwang and Rodrik (2008) find that, after controlling for intervening factors, countries with a more diversified export bundle perform better. Others, however (e.g. Harrison and Rodriguez-Clare (2009)) suggest that the linkages between diversity and productivity has not been established and that may be quality upgrading—which is essential to remain competitive in rapidly evolving markets—rather than product diversity that is key. There is thus agreement that a prerequisite for exploiting the trade opportunities conducive to long-run growth, is to reduce barriers to market access by reducing tariffs, quotas and non-tariff barriers (NTBs) both in export markets (beyond the purview of this report) and in the domestic market. What the recent literature suggests is that while necessary, these measures may be insufficient.

Egypt has been actively integrating into the World Trading System by reducing barriers to trade by participating in Regional Integration Agreements (COMESA and the ELRROMED) and by some unilateral reduction in tariffs. However, in assessing a country’s competitiveness, it is the relative policy stance that counts. This section evaluates Egypt’s trade performance along three dimensions: (a) tariff protection, (b) non-tariff barriers and (c) diversification.

4.1 Tariff Reform

Since 2004, the authorities gradually reduced the trade-weighted average tariff rate from 9.5% to 6.5% in 2008, and further to 5.5% in 2009 when tariffs on several items, mainly capital goods, were reduced as part of FY09 fiscal stimulus package. However, there is still large variation in the tariff structure: custom duties can range anywhere between 0 and 40% depending on the product or under which investment law a company is operating, and reach 3-digit level for cars, alcoholic beverages, and tobacco. The government also provides a range of tariff incentives to investors in marked investment zones or Free/Special Economic zones for

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15 “Event analysis” refers to a situation when the data is re-ordered around the ‘event’ which serves as the base year rather than the usual calendar year. In Hausman et al. (2005), data is centered around the year when the growth acceleration started and in the Wacziarg and Welch (2008) study, around the year of the main trade reform.
which it applies reduced or zero tariffs. The weighted average on capital goods is currently 7.7%. Overall, 90% of items are charged with rates between 0%-10%. Egypt ranks low in the MFN Tariff Trade Resevoir Index (TPR) at 5.6% (the average for MENA is 8.9%). However the levels of effective protection for domestic industries in the final goods sectors are higher than what tariff levels would imply because of Egypt’s sizeable energy subsidies for domestic producers in addition to the high level of nominal protection in final-goods activities (see figure 2 below). However, the government has a gradual energy subsidies phase out plan that was resumed in July 2010 and to be completed by 2013.

Even, though the data is for 2005, and hence does not reflect that latest tariff reductions, it is useful to compare Egypt’s tariff structure with that of its COMESA partners, using the WTO’s Integrated Data Base (IDB). Using the WTO definition of processing, figure 2 displays the average tariff levels by stages of processing for Egypt and other members of COMESA. For all countries, processed commodities have higher rates of protection than unprocessed or semi-processed commodities, leading to tariff escalation by level of processing. This in turn, implies high levels and a large variance in effective rates of protection, both contributing to the inefficiency in resource allocation. In effect, Egypt had a very high rate of protection for final-goods producing activities in 2005, a level that is about three times higher than that of Mauritius, a much smaller country, also part of the COMESA FTA, but one that has had a successful industrialization strategy over the last thirty years.

Two reasons explain this pattern of escalation of nominal tariffs by degree of processing. The first is simply the desire to industrialize. In many instances, finished goods are labor intensive and countries can develop a comparative advantage in these activities if they are protected. Semi-processed goods often serve as intermediate inputs into finished commodities. Protecting these activities permits these industries to develop, while at the same time penalize the finished goods industries that use these as inputs. The other reason (which also applies to developed countries) is that finished goods industries oppose the protection of industries that provide them with inputs. Both reasons contribute to explain the high pattern of protection observed in Egypt in 2004, and also the difficulty in reducing protection for final-goods producing activities in Egypt.

Figure 4 compares the average protection of Egypt and other MENA countries with that predicted from a model correlating average tariff levels over a sample of all countries in the WTO TRAINS data base with a population above 0.5 million and with an income below 15,000$ in PPA in 2005 in which the average tariff (t) is regressed on per capita income (yc) to reflect the well-established stylized pattern that tariffs are lower in high per capita income countries. The results below (t-statistics in parenthesis) confirm the expected pattern: low-income countries have higher tariffs.

\[
\text{ti} = -22.48 + 3.23\text{yci} \\
(N=114; \ F=12.33)
\]

\[
\text{ti} = 11.8 - 0.44\text{yci} \\
(N=115; \ F=19.8)
\]

The overall fit is sufficiently good to look at the residuals and plot those for MENA countries. Figure 4 reports the plots of tariffs and the dispersion of tariffs on income per capita. While half of the observations fall within the 95% confidence interval, the other half falls outside the confidence interval with most MENA countries outside (and above) the confidence band. In particular, Egypt falls outside above the 95% confidence interval suggesting that circa 2005, it had a higher average tariff protection than comparator countries in the TRAINS data base circa 2008.

Table 7 shows the distribution of NTMs across the sample of 93 countries that have NTM data. Column 1 gives the frequency distribution when NTBs are defined at the 1-digit NTM code level which corresponds to the ‘core’ definition of the NTB variable used by Kee et al. (2010). These are considered to be those that restrict trade flows the most. Note that 74% of the HS-6 tariff lines only have one ‘core’ NTM and 25% of the lines have two NTMs. Moving to a more disaggregated level, the percentage of tariff lines with only one NTM falls, but not by much and at the most disaggregated level of NTM definition, 39% of the tariff lines only have one NTM.

Table 8 gives the same information for Egypt along with the AdI-valorem equivalent (AVE) of the NTB (i.e. the percentage increase in price due to the NTB as measured by Kee et al (2010). First, although not indicated in the

Figure 3: Tariffs by Processing Level

Source: Data from TPR reports in the WTO IDB

Figure 4: Predicted Protection

Source: Data from TPR reports in the WTO IDB

The overall fit is sufficiently good to look at the residuals and plot those for MENA countries. Figure 4 reports the plots of tariffs and the dispersion of tariffs on income per capita. While half of the observations fall within the 95% confidence interval, the other half falls outside the confidence interval with most MENA countries outside (and above) the confidence band. In particular, Egypt falls outside above the 95% confidence interval suggesting that circa 2005, it had a higher average tariff protection than comparator countries in the TRAINS data base circa 2008.

The conclusion from this comparative exercise is that Egypt still had high tariff barriers in 2005 and that this is likely to still be the case in spite of the recent reductions in tariffs mentioned above. Indeed, one should be skeptical of the meaning of the estimate cited where it was said that ‘since 2004, the authorities gradually reduced the trade-weighted tariff from 9.5% to 6.5% in 2008 and further to 5.5% in 2009’. First, a trade weighted tariff protection will underestimate true protection if high tariffs lead to low imports and prohibitive tariffs carry no weight (the same applied to the comparison of AVEs in table 8 where it is clear that trade-weighted AVEs are much lower than simple averages.

4.2 Non-Tariff Measures (NTMs)

NTMs are broadly defined as any measure that causes a trade distortion but is not a tariff whereby a distortion exists when the domestic price differs from the border price. These include export restraints and export subsidies and the distortions can be intentioned (e.g. a QR) or a side effect of a legitimate regulatory measure (e.g. a sanitary measure). If it is imposed explicitly to protect domestic industry by restricting import demand, it is also known as an NTB. Distortions mostly arise from government-imposed measures, but can also be due to restrictive business practices. An NTB also includes internal (i.e. behind the-border) measure such as a production subsidy and the many juridical and administrative measures covered under the Trade Facilitation negotiations of the Doha Round.

Table 7 shows the distribution of NTMs across the sample of 93 countries that have NTM data. Column 1 gives the frequency distribution when NTBs are defined at the 1-digit NTM code level which corresponds to the ‘core’ definition of the NTB variable used by Kee et al. (2010). These are considered to be those that restrict trade flows the most. Note that 74% of the HS-6 tariff lines only have one ‘core’ NTM and 25% of the lines have two NTMs. Moving to a more disaggregated level, the percentage of tariff lines with only one NTM falls, but not by much and at the most disaggregated level of NTM definition, 39% of the tariff lines only have one NTM.

Table 8 gives the same information for Egypt along with the AdI-valorem equivalent (AVE) of the NTB (i.e. the percentage increase in price due to the NTB as measured by Kee et al (2010). First, although not indicated in the
Table 7: Frequency Distribution of the Number NTBs per HS-6 Product Categories (HS-6 products for 93 countries, over 2002-04)

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<tr>
<td>Prohibitions (70% on basis of origin)</td>
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<td>97.57</td>
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<tr>
<td>Technical regulations</td>
<td>81</td>
<td>4,941</td>
<td>97.93</td>
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<tr>
<td>Total</td>
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<td>9,936</td>
<td>100</td>
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Table 8: Frequency Distribution of the Number NTBs per HS-6 Product Categories (in Egypt over 2002-04)

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Table 7: Frequency Distribution of the Number NTBs per HS-6 Product Categories

<table>
<thead>
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<th>1-digits</th>
<th>Freq.</th>
<th>Percent</th>
<th>Cum.</th>
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<td>73.76</td>
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<tr>
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<td>94,116</td>
<td>73.76</td>
<td>165,511</td>
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<td>3</td>
<td>32,140</td>
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<td>4</td>
<td>7,331</td>
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<td>106,586</td>
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<td>5</td>
<td>4,152</td>
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<td>6</td>
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<td>10</td>
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<td>0.23</td>
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Table 8: Frequency Distribution of the Number NTBs per HS-6 Product Categories

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<th>2-digits</th>
<th>Freq.</th>
<th>Percent</th>
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<td>3</td>
<td>0</td>
<td>119,575</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations from the data base in Carrère and de Melo (2011)
penetration could also reflect Engel effects as domestic consumer request more diverse products as income increases and production for the domestic market has to precede exports. High transaction costs because of behind-the-border measures or simply high transport costs, could also limit the size of the bouquet of countries to which Egypt exports. It could also be simply that high protection and a sufficiently large domestic market results in insufficient incentives to expand the reach goods that they export.

Figure 6 examines the duration of exports by estimating survival functions over the (standard) ten-year period. As in other cases, survival rates of new exports are lowest in the first year, although the survival rate of 50% in the first year for Egypt is very low by international standards. Again, the reasons for this low survival rate by international standards (see Brenton, Pierola, and von Uexkull (2009) for a comparison across countries) are unclear. It could be that policy discretion and incentives changing rapidly and unexpectedly have contributed to this outcome.

Hausman and Rodrik (2003) and Hausman et al. (2006) suggest that growth is driven more by diversity than by comparative advantage in a setting where the entrepreneurial cost-discovery process is private in the case of failure and results in a positive externality in the case where exports survive a sufficiently long time for spillovers from exporting to take place. In that case, diversification is growth-promoting. It would then be tempting to conclude that the reasons for the high death rate of new exports, and the low extent of diversity could be partly due to the “macroeconomic instability” reflecting discretion in policy making and hence uncertainty that has ranked on the top of the “very severe” category in the constraints to growth in the ICA surveys of 2004 and 2008.
5. Enhancing Diversity by Developing Physical and Human Infrastructure

As emphasized by the Commission on Growth and the experience of successful experiences of sustained growth, openness needs to be accompanied by adequate performance or structures in labor markets, business regulation, and education, all of which are important for Egypt.16 Openness to world trade and markets requires sufficient technical and managerial skills. For example, a recent WBI report (World Bank [2010]) of skills and development notes that enterprise surveys show that employer concerns about skill shortages are more often voiced by firms that are newer, faster growing, more outwardly oriented and more eager to move up the technology ladder. Physical and human infrastructure are both necessary to achieve the diversity that is required to integrate the world economy.

5.1 Quality of Human Resources

It is difficult to unravel the direction of causality at the macroeconomic level between higher levels of human development and higher levels of per capita income and there is probably substantial feedback between them, but it is pretty much undisputed that economic growth is needed to deliver improved human development outcomes on a sustained basis. It is also largely accepted that the Middle East countries, including Egypt have failed to deliver the skills required for successful export diversification (see Dhillon and Yousef (2009), ADB (2010)).

There is a consensus that the most defining constraint on Egypt’s competitiveness is the quality of its human resources. In almost all the reports related to economic development in Egypt, skill shortage has been underlined as a deficit that has to be compensated for through educational and training policies. This diagnostic about the deficiency of the quality of human resources has also been observed across the region.17

As Figure 7 shows, 44% of the labor force is either illiterate or semi-illiterate curtailing the ability of the labor force to deal with technology needed to achieve competitiveness in world markets. Also, it contributes to the mismatch between the quality of labor supply and the demand in the labor market. Thus Egypt scored very low on the GCI indicators for basic education, higher education and training, and efficiency of the labor market.18

Although public expenditure on education is relatively high, the quality of learning and schooling conditions continues to be poor. Egyptian national curricula require thorough revision. Teaching techniques are based on memorization and are enforced using indoctrination style teaching methods. A field survey conducted to evaluate elementary education in Egypt revealed that the mastering of basic skills of reading and writing, and mathematics, which is supposed to be acquired through elementary education, is about 40% and 30% respectively lower than they should be.19 The pressure to increase student admission has resulted in an increased emphasis on quantity over quality, and led to a serious deterioration in quality, for both school and university levels. Likewise, perceptions of Egyptian worker productivity fell during the same period. The ten issues of the IEGES Business Barometer published since 1999 consistently reported “insufficient skilled workforce” as one of the major business constraints.20

The poor quality of the education system makes the responsiveness of students/potential workers to training courses very weak. Another major cause of this very low skill rank is the limited availability of training courses and the outdated course contents that are hardly in line with market demands. Furthermore, despite efforts by the Egyptian government, obstacles in vocational education and training still exist. According to an International Labor Organization (ILO) report21, enhancing labor productivity and meeting the requirements of labor demand remain to be a challenge.

In general, the Egyptian training system does not provide skills that are in demand. Training centers are under-equipped and outdated also because enterprises are not involved in their management. Teachers are under-qualified, poorly remunerated and unmotivated. Curricula are not up-to-date with technological developments and labor market requirements and the entire system is geared to public administration employment and not to jobs that would be need to be filled for a private sector seeking to be internationally competitive. Despite the great importance that enterprises seem to place on human resources, investments in training staff are very limited. This is true in particular for informal workers who, after being trained, may decide to move to a better paid job or to start their own businesses.

The failure of education and training institutions to provide an education that produces job-relevant skills22 constrains Egypt’s ability to diversify production, including into new exports. Inadequacies in a range of skills—technical, scientific, managerial, and entrepreneurial—impedes increased production of higher value products. While the government is stepping in to provide technical and vocational education and training schemes, results are still to materialize in export growth and it could be that the lack of appropriate human resources is the binding constraint for Egypt to achieve its sought after competitiveness.23 Indeed, an inspection of the technological structure of exports reveals that, with an export share of high-tech products of 0.9% in 2004, next to Saudi Arabia, Egypt ranked lowest in the MENA region.

5.2 Physical Infrastructure

Infrastructure is critical to growth of firms in developing countries as it enables their firms and enterprises to realize the increasing returns associated with agglomeration and to overcome the disadvantages of “bad geography.”

16 Egypt has a low score on basic education and labor market efficiency in the GCI. Survey results gave very poor marks to the quality of primary education with the country ranking 124th out of 134 countries in 2009 according to this indicator. Egypt was placed 75th out of 77 in 2008 and 126th out of 134 in 2003 in labor market efficiency. The ranking of Higher Education and training is also low. Although education expenditure comes at a relatively acceptable rank of 51 out of 134 in 2008 and 59 out of 134 in 2010; that of the education system as a whole was 119 with a decline in 2010 to 123.
17 UNDP (2003).
18 Egyptian Center for Economic Studies (ECES), Business Barometer, various issues. The results of the ten issues are summarized in ECI 2010, p.9.
and so to fully benefit from international trade. The Commission on Growth and Development found that in fast-growing Asia public investment in infrastructure accounts for 5-7% of GDP and in China, Vietnam and Thailand total investment in infrastructure exceeds 7% of GDP. But many developing countries have neglected infrastructure over several years, investing only about 2% of GDP a year. Low- and lower middle-income countries suffer a huge infrastructure deficit. Egypt has however made progress notably by improving the efficiency of its ports and also of reducing red-tape (e.g. the introduction of a single window for imports and exports, with automated procedures, and a successful one-stop shop for customs and other border agencies).

Figure 8: Egypt's Ranking on the Components of the Infrastructure Pillar in the CGI

Table 9: Logistics Performance Index

<table>
<thead>
<tr>
<th>Component</th>
<th>2008-2009</th>
<th>2009-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of overall infrastructure</td>
<td>61</td>
<td>48</td>
</tr>
<tr>
<td>Quality of roads</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td>Quality of railroad infrastructure</td>
<td>57</td>
<td>68</td>
</tr>
<tr>
<td>Quality of port infrastructure</td>
<td>54</td>
<td>77</td>
</tr>
<tr>
<td>Available seat kilometers (freight data)</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Quality of electricity supply</td>
<td>33</td>
<td>51</td>
</tr>
<tr>
<td>Telephones (fixed data)</td>
<td>78</td>
<td>79</td>
</tr>
</tbody>
</table>


or real-time cost performance data for country of operation.

The LPI index in table 9 measures the performance along the logistics supply chain within a country and has three parts: (i) Perceptions of the logistics environment of trading partner countries, (ii) Information of the logistics environment in the home country of operation and (iii) Real-time cost performance data for country of operation. Egypt ranked 92 out of 150 indexed countries of the world, 5 out of 11 in 2010 among indexed countries of the MENA region and 12 out of the 18 indexed countries of the Arab world. In comparison, Tunisia ranked 61 in 2010. Egypt’s performances were specifically low in the sub-indices of Efficiency of the clearance process by customs and other border agencies (probably reflecting extra payments necessary to clear customs more rapidly), Quality of transport and IT infrastructure and telephone lines. These are two components that weigh heavily in overall transaction costs. At the same time, Egypt is barely in top half of the sample (134 countries) which suggests that its infrastructure is still in need of improvement on a comparative basis.

25. Job relevant skills refer to a set of competencies valued by employers and useful for self-employment. They include: problem solving skills, learning skills, communication skills, personal skills and social skills (World Bank, 2010).
26. Investment in infrastructure has been repeatedly related to economic growth through aggregate production function analysis. The justification for separating out infrastructure from other sorts of capital has been either due to its public good attribute or, more recently, due to the impact that increased investment in infrastructure can have by lowering the costs of related intermediate inputs to the firm or enterprise.
27. Infrastructure is also important for growth, due to the contribution it can make to agglomeration economies since increasing returns to scale and distance have a determining role in the spatial location of firms and production. Spatially concentrated increasing returns are driven by a number of factors - their market effects, knowledge spillovers, sectoral and urban clustering and self-reinforcing improvements in physical and social infrastructure. Infrastructure investment that lowers transport costs may be particularly important for low-income countries if it can offset the detrimental effect that "bad geography" has on a country’s ability to participate in global production processes and, through them international trade.
6. Access to Finance to Accelerate Private Enterprise-led Growth

The financial system provides five broad functions to ease market frictions: (i) produce information ex ante about possible investments and allocate capital, (ii) monitor investments and exert corporate governance after providing finance, (iii) facilitate the trading, diversification, and management of risk, (iv) globalize and pool savings, and (v) ease the exchange of goods and services. Financial development occurs when financial instruments, markets, and intermediaries ameliorate (though do not necessarily eliminate), the effects of information, enforcement, and transactions costs and therefore allow the system to do a correspondingly better job at providing the five financial functions. Because the evidence available deals with surveys administered private firms, the discussion revolves around their experience and how improvements in the financial system will enhance their competitiveness. It should be understood that whether the assessments relating to private firms pertain to publicly-owned firms as well, needs to be investigated since a level-playing field between the two would be necessary for the financial system to perform its role of easing market frictions.

6.1 International Experience

At a macro-economic level, the depth and sophistication of the financial sector and the level of output per head tend to grow together, but there is a reasonable amount of evidence that at least some causation runs from financial development to economic growth. Also, firm and sector level studies show that financial development (stock market liquidity and the size of the banking sector) boosts firm growth, influences the pattern of production towards more higher value added sectors and has a large positive impact on long-run real per capita growth, productivity and capital accumulation. Related to this point, there is strong evidence that domestic financial development spurs growth, primarily through its effect on total factor productivity growth rather than savings and physical capital accumulations.

The evidence that financial development is likely to aid the growth of incomes is quite strong, but translating that into concrete policy recommendations is challenging. There is vigorous debate about stock markets vs. banks as the key sectors for low-income countries, but in truth they may both have a role to play in different circumstances. What is clear, however, is that both routes place formidable demands on regulators and policy-makers. Barth, Caprio and Levine (2006) suggest that the greater the extent to which bank regulations are simple and based on market information, the more effective they are likely to be in poor countries, but even then they are challenging. The international community can provide technical assistance, support peer group meetings among regulators, and support policy relevant research to assist low-income countries strengthen their financial institutions and design and implement appropriate regulations.

6.2 Access to Finance

Against this backdrop from the international experience, the Egyptian financial sector has made substantial progress through a series of comprehensive reforms in the financial sector leading to a growth in lending, particularly to the finance-constrained small-scale

27 For evidence, see Demirgüç-Kunt and Levine (2008) and Levine, Loayza and Beck (2000). As an indication of the results similar across studies, cross-country growth regressions results imply that a country that increased financial sector depth from the mean of the slowest growing quartile of countries (0.2) to the mean of the fastest growing quartile of countries would have increased its per capita growth rate by almost 1% a year.
enterprise sector which grew by 19% in 2008. However, banks are still highly liquid as loans-to-deposit ratio continues to fall (see figure 9) and credit to the private sector is still declining and is one lowest in the MENA region (World Bank (2009), p. 58). Part of the problem is the high (25%) of non-performing loans in State-owned banks are inadequately provisioned for, and various legal and institutional barriers, such as absence of specialized courts, unenforced bankruptcy and foreclosure laws and procedures.

On the demand side, over 50% of Small and Medium-sized Enterprises (SMEs) find the costs of finance to be a serious constraint even though, overall, firms’ perceptions of access and cost of finance as major obstacles has diminished relative to earlier ICAs. Yet, by several measures, the state of financial intermediation in Egypt has worsened as the percentage of firms with loans has declined significantly from 17 percent in the 2004 ICA survey to 11 percent in 2008—one of the lowest rates of financial intermediation in the MENA region and among developing countries. As shown in the ICA report, this decline is not an artifact of the size distribution of the sample, leading to conclusion that the low level of financial intermediation appears to be systematic with, as a result, internal financing becoming more pervasive. Nonetheless, nearly two-thirds of the firms surveyed in 2008 are voluntarily excluded from the credit market i.e. they neither need loans nor want to deal in interest rates (reflecting a rise in Islamic finance), and only five percent of outsiders applied for bank loans in the past year and the ICA report concludes that the low rate of financial intermediation does not appear to be primarily the outcome of the difficulty in obtaining loans (World Bank (2009), p. 68).

**Figure 9: Loans to Deposits Ratio**

![Graph showing loans to deposits ratio from 2002 to 2008](image)

**Figure 10: Domestic Credit to Private Sector**

![Graph showing domestic credit to private sector from 2002 to 2008](image)

**Figure 11: Percentage of Firms with Loans: Panel Data**

![Bar chart showing percentage of firms with loans: SMEs and Large Firms](image)

**Figure 12: Percentage of Firms with Loans: ICA Survey**

![Bar chart showing percentage of firms with loans: SMEs and Large Firms](image)


The large sample (over 1000 firms over three years) allowed for cross-section and panel estimation of the correlates of productivity growth. The analysis shows that high productivity-growth firms complain less of lack of access to finance than inefficient ones (a larger proportion of efficient firms also have loans than inefficient ones). The statistical analysis also indicates that efficiency is a determinant of access to overdrafts, suggesting that banks are selecting better projects (i.e. better credit risks) for financing. As to access to finance, as shown in figure 11, larger firms have more likely to have loans. This is confirmed in the multivariate panel analysis, where firm size is the most influential variable followed by having a bank account, keeping audited books, paying bribes and location.

The ICA survey concludes that SMEs are more likely to identify themselves as constrained, suggesting that there are fundamental conditions in the economy to create scale economies for manufacturing firms, making small scale production more difficult making them worse credit risks that larger firms. The survey provides evidence that small firms are, on average, less successful, efficient and innovative than large firms. By a number of indicators, small firms are less technologically advanced and innovative than large firms. While the contributing factors to this diagnostic remain to be explored, the barriers to entry from foreign competition outlined in section 4 and the relatively underdeveloped poor human and physical infrastructures discussed in section 5 could create the barriers to entry and exit of firms that would contribute to this outcome.
Over the past decade, but especially since 2004, Egypt has been engaged in reforms across the economy. It would be tempting to suggest a long list of reforms accompanied by a detailed plan of action, ranging from macroeconomic to microeconomic policies and then to specifics about accompanying regulation. However, in view of the persisting perception of uncertainty, it seems preferable to start from principles and processes that would include transparency and “institutionalization”. This would help to prevent discretion whereby policies are announced annually but, according to the business community, can be suddenly and unexpectedly introduced, including such measures as sudden export bans of major products (World Bank (2010), p. 85). This has led the most recent ICA report to emphasize the following six principles to move to the next generation of reforms: (i) better information, (ii) better dialogue, (iii) better planning, (iv) better procedures, (v) stronger institutions and (vi) accountability for Actions and Results. Such an approach would likely enhance the credibility of the ongoing reforms and reduce the still high level of uncertainty.

The analysis in this report and the review of other work suggests the following areas for strategic choices

Macroeconomic Policies: Egypt’s inflation has been high, averaging 10% over the period 2006-09 requiring the need to apply fiscal and monetary policy to stabilize the economy and reverse the recent appreciation of the real exchange rate that has led to a loss of competitiveness and to investors’ increased preoccupation about inflation. Moreover, according to business, unexpected government policies have been a source of uncertainty. As noted by a business leader “We can hedge against inflation and exchange rate risk, but not against changes in government policy” (cited in World Bank 2009, p. 85).

It is this general perception of uncertainty about government policy that mediates in favor of the institutionalization and process of policy reform noted above as being potentially more important than the list of reforms themselves. Among the macro levers, the government needs to monitor closely to maintain and/or improve competitiveness:

- Control inflation which is still at 10% on an annual basis in 2010 to limit the real cost of credit.
- Prevent real exchange rate appreciation by appropriate adjustment in the nominal exchange rate (notably not to use the nominal exchange rate as a nominal anchor to reduce inflationary expectations, a policy that has consistently failed elsewhere)

Trade Policies and Competitiveness: By international standards, Egypt is still highly insulated by high tariff and technical regulations (on more than half of its tariff lines at the HS-6 level). The ad-valorem equivalent estimate of the NTBs is close to 50%. Egypt would be well-advised to continue to reduce its barriers to market access, barriers that have probably contributed
to the low level of market penetration of its exports and to the low survival rate of new exports. Egypt's integration into the World Trading System would benefit from:

- Continuing to reduce its tariff, especially on final goods producing activities that have high rates of protection by international standards.
- Undertaking a detailed appraisal of the high incidence of technical regulations, some of which are likely to have protectionist intent.

Human and Physical Infrastructure: Egypt and the MENA region have produced fewer educational outcomes than many competitors in spite of reasonable investments in education. The general diagnosis is that too much focus was put on engineering education and too little on incentives and public accountability (World Bank (2008)). The road ahead should then:

- Focus on incentives and public accountability in addition to the education process itself.
- Strive to close the gap between the supply of educated individuals and labor demand.
- For infrastructure, progress has been made on several fronts. Yet, in spite of improvements in the rankings, Egypt still needs to improve the quality of its infrastructure to improve its competitiveness internationally.

Financial Reform and Access to Finance: Egypt has progressed on the road of reform in the financial sector. At the same time, on a comparative basis, Egypt is still lagging on several standard indicators of the functioning of the financial system: depth of financial sector, loan-to-deposit ratios, perception of access to finance by SMEs that have only minimal access to banks or alternative financial institutions. Clearly, Egypt still needs to work to improve its financial system to work better to serve the private sector. As summarized by World Bank (2010) several steps to enhance financial access and limit the cost of credit, all of which should contribute to raise the profitability of investment, would include:

- Reduce regulatory barriers to entry in the banking sector to encourage competition.
- Encourage expanded and improved coverage by the private and public credit bureaus.
- Strengthen creditor rights, including facilitating the use of movable assets as collateral.
- Improve bankruptcy law and procedures to better protect secured creditors and recover asset value in case of business failure.
- Expand the availability of non-interest bearing finance, to meet the needs of businesses staying out of credit markets because of a desire not to deal in interest.
- Support non-governmental channels of microfinance.
Annex 1. Mobility Analysis and Definition of Country Groupings

Mobility Analysis: Table A1 summarizes the results of an exercise checking Egypt’s mobility within the World Bank’s classification of countries taking inspiration from Winters et al. (2010). The World Bank defines countries into four groups: low- (L), lower middle- (LM), upper middle- (UM) and high-income (H) categories, according to their Gross National Income per capita. The latest income classifications from the World Bank are for 2009 and the earliest are for 1967. In order to see which countries were L and LM at the beginning of the sample period, one must deflate the 1967 thresholds for GNI per capita in terms of US dollars by the US GDP deflator between 1962 (the first year that GNI per capita data are available) and 1987. Table A1 shows the World Bank’s income classification thresholds for 2009 and our estimates for their equivalents in 1962 along with the number of countries in each group at the beginning of the period in the last column (total) of the corresponding row and at the end of the period in the last row (total) for the corresponding group. Thus in 1962, at the beginning of the period, 23 countries were in the L group and only 22 in 1987, this outcome resulting from 7 countries descending from LM group and 8 countries climbing out of the L group. The bottom of the table displays the same information for the period 1987-2008.

Figure A1 gives an estimate of the gains in growth that could be obtained as a result of less instability in GDP growth. Since Egypt’s growth was among the most stable among all the countries, this is mostly illustrative, and if anything, an estimate of the gain in overall growth for Egypt from the stability in its GDP growth.

The simulation halves the difference between the observed growth rate and geometric growth rate of the period if the observed growth rate is lower than the geometric growth rate. Besides the results for Egypt reported in the text, several patterns stand out. First mobility to the top was much greater during the first (4 to 20) than during the second period (20 to 24). Second, this mobility descriptive statistics confirm that there was convergence from the LM and UM groups up the ladder (over the two periods only 3 countries in the two groups combined moved down the ladder). On the other hand, there was little mobility in the L group.

With this recent (2009) definition of classification groupings only four countries were in the H group: in 1962 (Canada, Sweden, Switzerland and the United States). Had we taken an earlier definition for the breakpoints, there would have been more countries in the H group than in 1962 and correspondingly fewer in the L and LM groups which would have made the analysis of Egypt’s relative less interesting as it would have been based on a smaller sample of countries in the LM group.

Between 1962 and 2008, some countries have got richer and others have got poorer. By 2008, ten countries (Botswana, China, India, Oman, Nigeria, Sudan, Republic of Korea, Thailand, Papua New Guinea, and Nicaragua) had grown out of the L and two (Oman and the Republic of Korea) moving from the L to the H group over the 46 years.

Table A1: Per capita Income Mobility 1962-2008*

<table>
<thead>
<tr>
<th>Year</th>
<th>Group</th>
<th>L</th>
<th>LM</th>
<th>UM</th>
<th>H</th>
<th>Total (1962)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962</td>
<td>15</td>
<td>6</td>
<td>2</td>
<td>38</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>7</td>
<td>19</td>
<td>9</td>
<td>13</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>1</td>
<td>3</td>
<td>17</td>
<td>4</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>17</td>
<td>5</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>17</td>
<td>10</td>
<td>10</td>
<td>26</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>8</td>
<td>6</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>15</td>
<td>18</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>19</td>
<td>18</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Notes to table A1: See text for definition of the sample. All GNI data were converted to 1962 dollars, i.e. GNI data deflated by US deflator to 1962. To get the corresponding breakpoints in 2009 multiply by 6.95. UM: Upper middle-income (GNI<1754); H: High-income (GNI>1754) (Switzerland, Sweden, Canada, US were the only countries with a GNI per capita above $1754 in 1962—corresponding to 12196$ measured in 2009$). Canada, US were the only countries with a GNI per capita above $1754 in 1962—corresponding to 12196$ measured in 2009$. (in 1962) is in the lower part of the range. UM: Upper middle-income (568< GNI<1754). H: High-income (GNI>1754) (Switzerland, Sweden, Canada, US were the only countries with a GNI per capita above $1754 in 1962—corresponding to 12196$ measured in 2009$).

Figure A1. Actual and Simulated GDP Paths with Less Variability in Growth Rates
## Table A2: Comparator Groups

<table>
<thead>
<tr>
<th>Category</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle East and North Africa¹</td>
<td>Algeria, Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, Yemen.</td>
</tr>
<tr>
<td>Resource-rich (R-R) countries</td>
<td>Algeria, Iran, Iraq, Libya, Syria, Yemen</td>
</tr>
<tr>
<td>Resource-poor (R-P) countries</td>
<td>Jordan, Lebanon, Mauritania, Morocco, Tunisia</td>
</tr>
<tr>
<td>Large countries²</td>
<td>Bangladesh, Brazil, China, Germany, Ethiopia, France, India, Indonesia, Iran, Italy, Japan, Korea, Mexico, Myanmar, Nigeria, Pakistan, Philippines, Russia, Thailand, Turkey, Ukraine, United Kingdom, United States of America, Vietnam</td>
</tr>
<tr>
<td>Oil exporters³</td>
<td>Angola, Algeria, Canada, Iran, Kazakhstan, Kuwait, Libya, Mexico, Nigeria, Norway, Russia, Saudi Arabia, United Arab Emirates, Venezuela</td>
</tr>
<tr>
<td>Point source natural resources⁴</td>
<td>Algeria, Angola, Botswana, Burkina Faso, Chad, Chile, Congo, Dominican Republic, Ecuador, Fiji, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Jamaica, Jordan, Libya, Malawi, Mauritania, Mauritius, Mexico, Morocco, Namibia, Niger, Nigeria, Oman, Papua New Guinea, Paraguay, Peru, Saudi Arabia, Sierra Leone, South Africa, Sudan, Syria, Togo, Trinidad and Tobago, Tunisia, Venezuela, Dom. Rep. of Congo (Zaire), Zambia</td>
</tr>
</tbody>
</table>

**Notes:**

¹ Middle East and North Africa definition embraces AFDB definition of North Africa and WB definition of MENA region. Djibouti is not considered as being part of the region.

² Large countries are those with population higher or equal to 40 million in 1990.

³ Oil exporters are 15 major oil crude exporters listed by US Energy Information Administration (2005).

⁴ Classification is taken from Isham et al. (2003).
Annex 2. Comparative Advantage in Product-Space

The Product-Space representation proposed by Hidalgo et al. (2007) is an innovative way of representing products in a network layout which simultaneously presents level of exports (in values), product classification, and proximity to other products. Products with larger trade values are represented by bigger nodes and the links between nodes are painted in a color scale according to the proximity among products (red for high proximity, blue, yellow and light blue for low proximity).

Proximity is defined using the Revealed Comparative Advantage (RCA) by product and calculating the conditional probability of exporting product i given that the country exports product j. Moreover, nodes are represented by circles or squares for a given threshold in RCA. Products whose share in national exports is higher than the share in world exports of that product (i.e. with and RCA>1) are drawn as squares instead of circles.

Figure A2 shows the evolution of the Product-Space of Egypt between 1985 and 2000. Relative to the fast-growing countries in Asia, there is little change in the structure of proximity between products. Indeed, both representations have almost an identical network layout. Neither is there evidence on stronger linkages between products. The most relevant changes are in node representation, the number of products having a higher relative share on Egyptian exports increase. This change is particularly concentrated around labor intensive goods such as garments (the green grouping on the left of the map). Few capital intensive goods are exported intensively by Egypt. Traditional exports like oil, unprocessed aluminum, fruits, vegetables and engines remain important in relative terms in Egyptian exports. Only a few sectors, most of them linked to traditional exports, increased their relative importance in Egyptian exports. In sum, Egyptian exports started to diversify but at a slow pace and are still heavily dependent on traditional exports.

Figure A2: Evolution of Egypt’s RCA in Product-Space

References


• World Bank (2008) "The Road not Travelled: Education Reform in the Middle East and North Africa".